



Monroe County Employees Retirement System

5-Year Experience Review

January 1, 2010 through December 31, 2014

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September 21, 2015

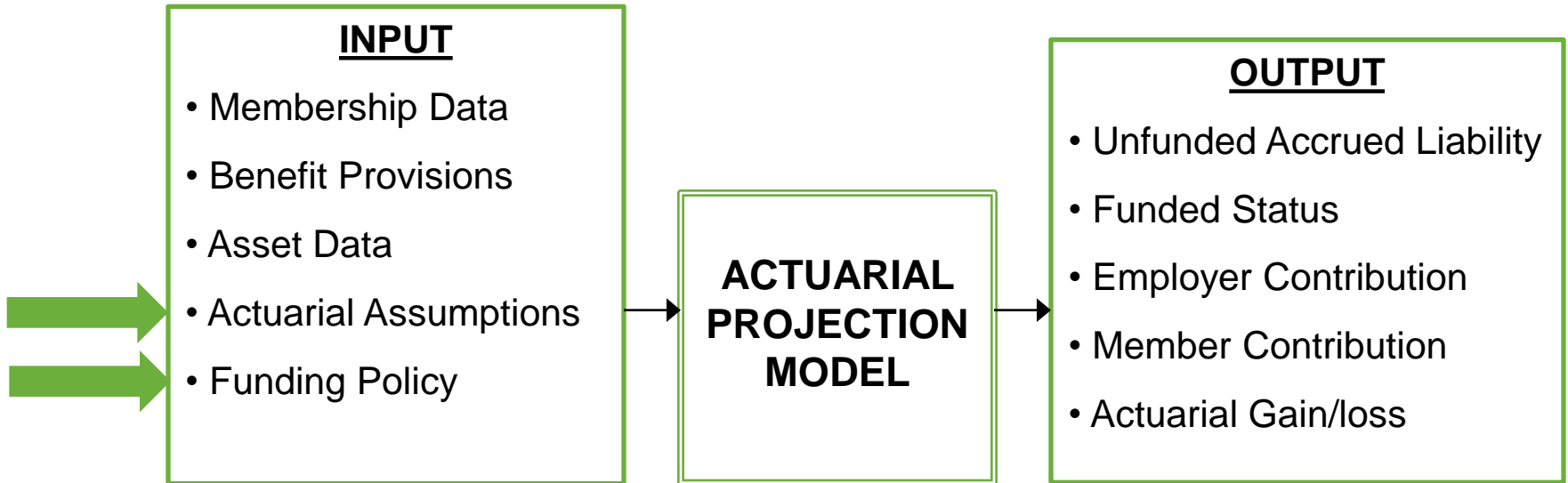
Agenda

- Experience review process
- Assumptions
 - Demographic
 - Economic
- Review of funding policy
- Preliminary valuation results
- Other?

Actuarial Valuation Objectives

- When we present the December 31, 2014 Actuarial Valuation, the following objectives will be satisfied
 - Determine employer contribution for Fiscal Year Beginning January 1, 2016
 - Develop accounting disclosures
 - Check on progress and security of promised benefits with comparison of assets to accrued liability
 - Compare expectations from prior valuation to what occurred during 2014 to determine net actuarial gain or loss

Actuarial Valuation Process



Actuarial Assumptions are used to estimate the present value of benefits estimated to be paid in the future for all current members of the Retirement System. The Funding Policy is the plan for paying off the estimated benefits. These are reviewed periodically through an experience review. This presentation contains the results of our review and recommendations.

Over the short term, contributions are determined by the actuarial valuation based upon estimated investment return, benefits and expenses using assumptions and methods recommended by the actuary and adopted by the Board. Over the long term, contributions are adjusted to reflect actual investment return, benefits and expenses.

Experience Review Process

- Review census information from January 1, 2010 through December 31, 2014
- Compare Experience (“Actual”) with Assumptions (“Expected”)
- Adjust for events that are not likely to be repeated
- Make Judgments About Future Trends:
 - Plan Specific Experience vs. National Trends
 - Long-Term vs. Short-Term Factors
- Recommend changes in assumptions as needed
- Implement for the December 31, 2014 Actuarial Valuation

“Enhancing Reliability of Actuarial Valuations for Pension Plans” by the GFOA

Engage the actuary to perform additional services to validate the actuarial assumptions used for the valuation. Such services include...Actuarial Experience Study. An actuarial experience study reviews the differences between a plan's assumed and actual experience over multiple years (typically 3 to 5), with the goal of examining the trends related to actual experience and recommending changes to assumptions, if needed.

Adjustment for Events That are Not Likely to be Repeated

- The objective of an experience review is to set assumptions that will model future events
- We look to past experience to set these assumptions
- Past experience is not always an indicator of future events
- Some events are not likely to be repeated and should not be reflected in assumption recommendations
- The open window on the purchase of up to five years of service which occurred early in the experience review period resulted in significantly more retirements and terminations than expected.
- Note that more terminations were actually retirement of people that were not eligible for retirement without the purchase of service but became eligible after the purchase
- We are not anticipating that this open window experience will continue in the future
- If stakeholders anticipate a window will happen again, the rates and liabilities will need to be increased

Adjustment for Events That are Not Likely to be Repeated

- The open window increased the actuarial accrued liability of MCERS due to the increase in service for those that purchased service and those members retiring earlier than anticipated. Page A-2 of the December 31, 2010 valuation indicates that the non-investment loss of \$13.2 million reflects the impact of the Early Retirement Incentive Program.
- Members contributed towards the service purchase.
- The GFOA recommends that the net increase in liabilities due to a window be paid in 3 to 5 years; in their analysis, GRS recommended 6 years. Neither of these recommendations were followed by the employer.
- The logic behind the 3 to 5-year period is that the liabilities due to a window should be funded by the short term payroll savings that the window generated.
- Had the window not been implemented, the cost of benefits accruing would have been paid through a combination of member contributions and employer normal cost contributions. Instead, the employer costs of these benefit accruals are being amortized over a rolling 20-year period.

Key Takeaways

- Our recommended change in the mortality assumption to increase life expectancy is the source of the largest increase in costs.
- Our recommended change to decrease the salary increase assumption was the source of the largest decrease in costs, as salaries continued to fall short of the long term assumptions.
- Other recommendations result in modest cost changes.
- Service purchase option from 2009 and 2010 resulted in more retirements and terminations than expected. We have treated this as a one time occurrence that is not expected to continue in the future.
- We do not recommend a change in the current investment return of 7.0%.
- Overall, liabilities increase due to the above recommendations.
- The current Funding Policy does not pay down the unfunded actuarial accrued liability. The Funding Policy should be updated to reflect current practice as discussed at the April 27 Board meeting. Updates include closing the amortization period and reducing the amount of increases in future amortization payments.
- Based on our Funding Policy recommendations, first year contributions will increase. However, all else being equal, our recommended funding policy over the long term is projected to decrease contributions due to lower financing charges.

Actuarial Assumptions

- **Demographic**

- Mortality
- Retirement
- Disability
- Termination

- **Economic**

- Rate of return 7.0%
- Inflation 4.0%
- Salary Increase 4.0%
- Merit & Longevity Pay Increases:

<u>Years of Service</u>	<u>General*</u>	<u>Road Commission</u>	<u>Mental Health</u>
• 1	2.8%	2.0%	7.0%
• 2-4	2.8%	2.0%	4.0%
• 5-6	2.8%	0.5%	4.0%
• 7-8	2.8%	0.5%	0.5%
• 9+	0.5%	0.5%	0.5%

* Includes General, Library, County Agency, Sheriff's Office, and Central Dispatch

This is a summary of the assumptions currently used in the actuarial valuation.

Assumptions are generally split into two broad categories – demographic assumptions and economic assumptions. Demographic assumptions are assumptions related to people, while economic assumptions relate to money.

Mortality

- Mortality for annuitants is a large driver of costs. The longer a member is expected to live, the higher the expected costs
- Historically, pension actuarial practice has varied based on gender
- More recent practice has suggested that rates also vary based on collar (blue or white), geography, and the year you were born
- Use of actual experience of the plan is not common practice. Only the largest of plans are rated based on their experience. Common practice is to select a table based on the population covered
- The longer a member is expected to live, the higher the expected costs. Over the experience review period, early retirement windows have skewed the results

Mortality

Observation on Mortality: The population is not large enough to provide a credible basis to create or even modify a standard mortality table. As such, we recommend that a standard table be adopted for use. Over 70% of the population is blue collar, making the blue collar mortality table a reasonable choice for the Retirement System.

Recommendation: Update from the RP-2000 Mortality Table for males and females, projected 20 years using scale AA to the unadjusted Blue Collar RP-2014 Mortality Table for males and females. This is the latest blue collar table available.

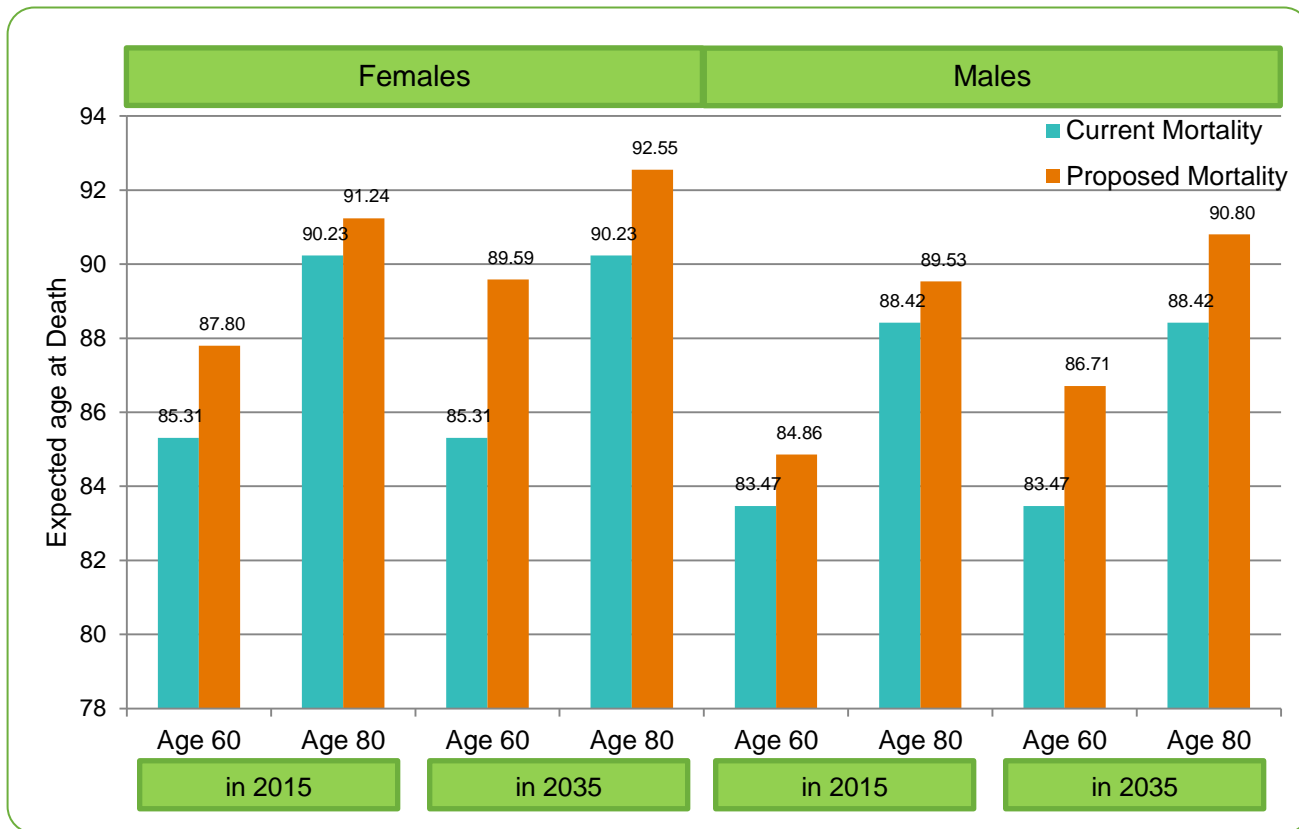
Cost impact: Increase in costs

Observation on Mortality Improvement: Actuarial Standards of Practice No. 35 states that the actuary should “include an assumption as to expected mortality improvement after the measurement date.” Including Mortality Improvement, or generational mortality, will mitigate the need to incur large increases in liabilities due to mortality improvements with future experience reviews.

Recommendation: Recommend that Mortality Improvement Scale MP-2014 be implemented. This is the latest mortality improvement scale available.

Cost impact: Increase in costs

Mortality

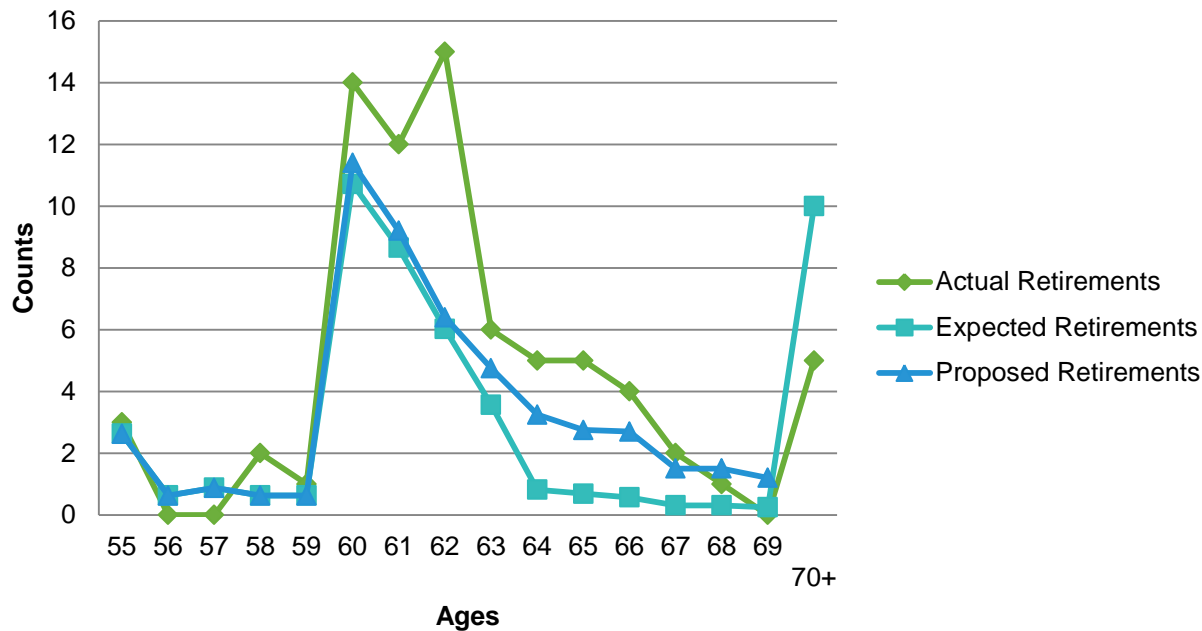


The expected ages at death shown above are based on the current and proposed mortality assumptions at ages 60 and 80, in 2015 and 2035, and for males and females. The ages at death are more than a year longer than current assumptions for the ages and genders shown. Note that we show expected age at death in 2015 and 2035 to illustrate the impact of generational mortality improvement.

Retirement Rates

- The valuation anticipates that members retire, just not at first eligibility
- Rates of retirement can vary significantly from plan to plan
- Use of actual experience of the plan is common practice
- Generally, earlier retirement results in higher costs
- Over the experience review period, early retirement windows have skewed the results
 - We have moderated our recommendations to remove this one time event from future costs
 - That being said, if windows are the new norm, they should be reflected in the valuation

Retirement Rates – General Employees (Includes General County, County Agency, Mental Health and County Library)



Summary Metrics:

Actual: 75

Expected: 47.29

Actual to Expected: 159%

Proposed: 60.03

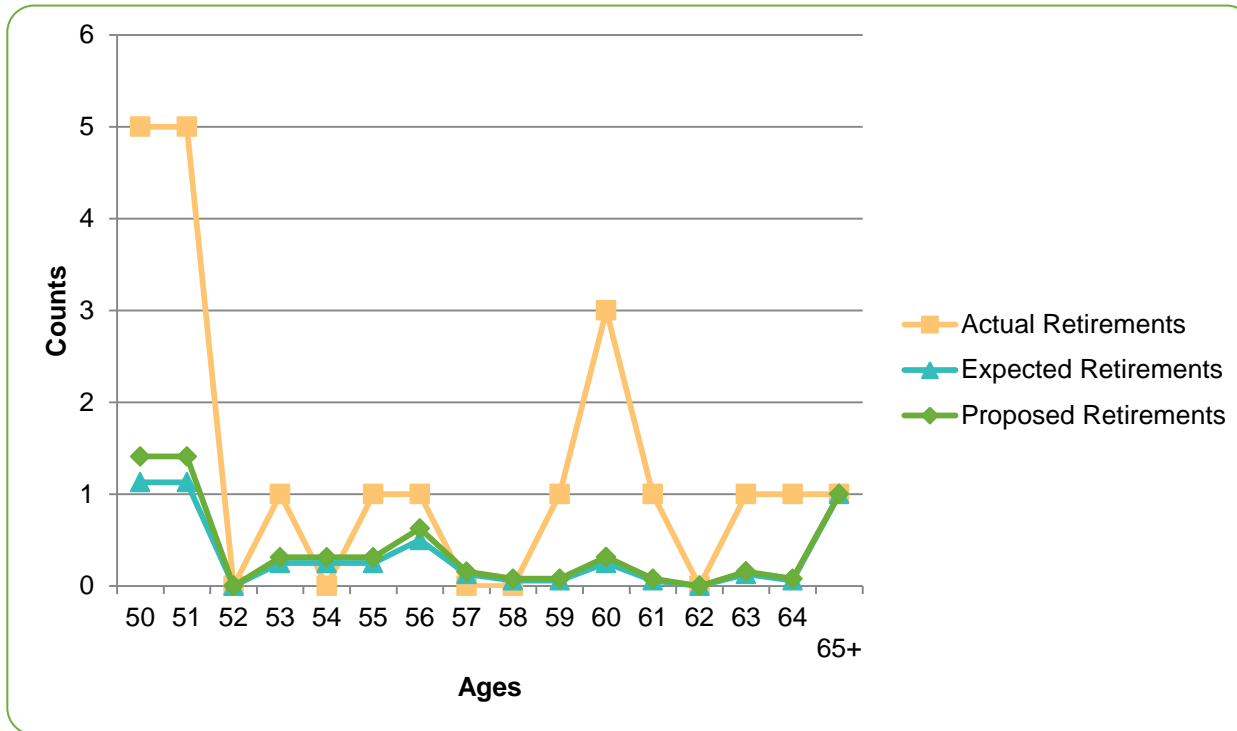
Actual to Proposed: 125%

Observation: There were almost 60% more retirements than expected over the observation period. The current retirement assumption modelled the members that did not take the window rather well. That being said, 47 members retired under the window and much earlier than anticipated under the current rates. An increase in rates is recommended. The proposed rates reflect approximately a 25% increase in rates.

Recommendation: Increase rates of retirement to reflect experience

Impact: Increase in costs

Retirement Rates – Sheriff's Office & Central Dispatch



Summary Metrics:

Actual: 21

Expected: 5.26

Actual to Expected: 399%

Proposed: 6.33

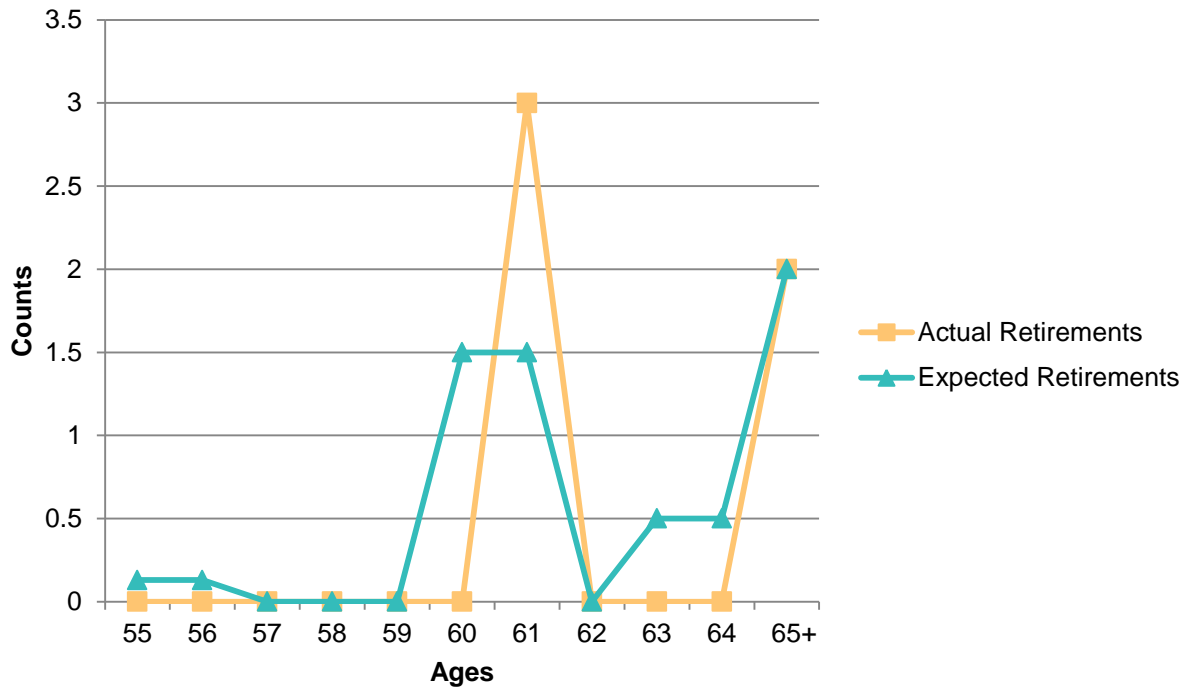
Actual to Proposed: 332%

Observation: There were more retirements than expected but many were likely due to window.

Recommendation: Increase rates of retirement to reflect experience

Impact: Slight increase in costs

Retirement Rates – Road Commission



Summary Metrics:

Actual: 5

Expected: 6.25

Actual to Expected: 80%

Proposed: 6.25

Actual to Proposed: 80%

Observation: No significant differences occurred over the period

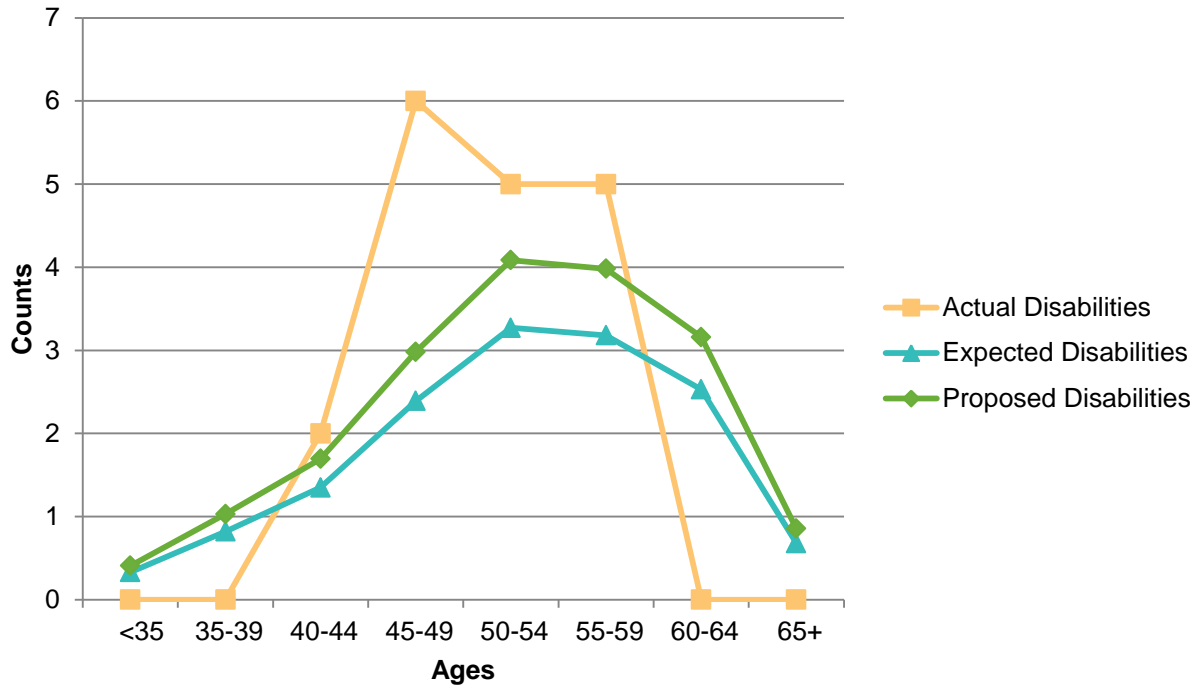
Recommendation: Keep current rates

Impact: No impact

Disability Rates

- The valuation anticipates that some members may become disabled
- Rates of disability can vary significantly from plan to plan generally due to the occupation of the members and/or administration of the benefits
- Use of actual experience of the plan is common practice
- Generally, more disabilities results in higher costs

Disability Rates



Summary Metrics:

Actual: 18

Expected: 14.55

Actual to Expected: 124%

Proposed: 18.19

Actual to Proposed: 99%

Observation: There were more disabilities than expected

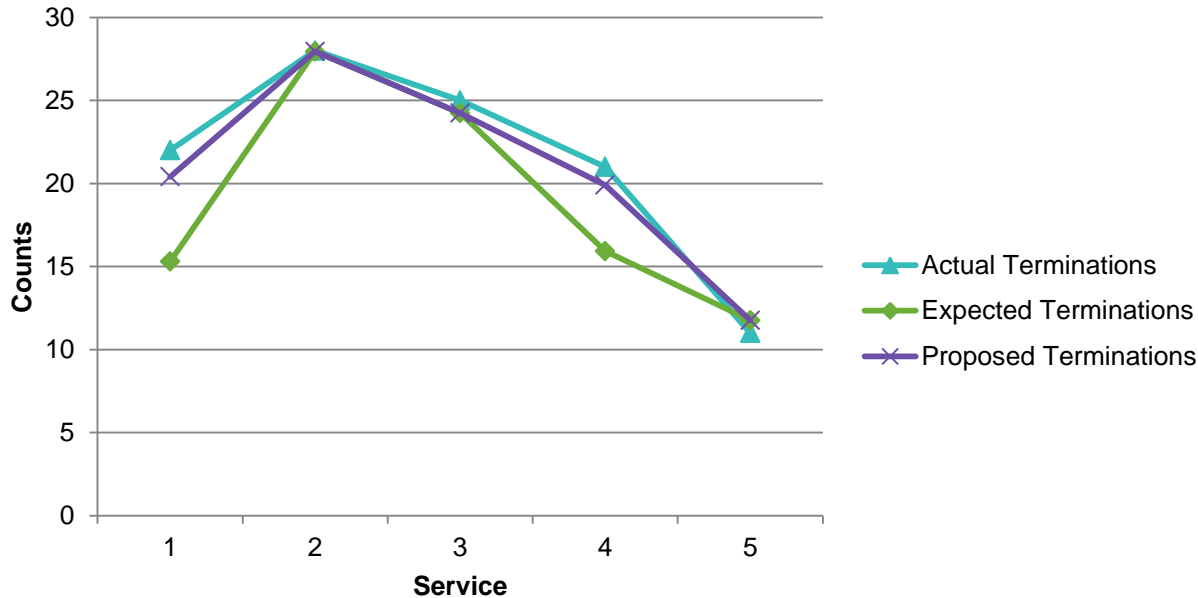
Recommendation: Increase rates of disability to match total experience

Impact: Slight increase in costs

Termination Rates

- The valuation anticipates that members may leave active service for reasons other than retirement, disability and death. We refer to these other reasons as termination.
- Rates of termination can vary significantly from plan to plan
- Use of actual experience of the plan is common practice
- Generally, assuming more terminations results in higher estimated costs
- Rates of termination tend to be higher earlier in a member's career. So we use two sets of rates:
 - A set of rates for members with less than five years of service. These rates are higher than the rates used for members with five or more years of service.
 - A set of rates for members with five or more years of service.
- Over the experience review period, early retirement windows have skewed the results, particularly at later ages where it appears that member who were not eligible to retire
 - We have moderated our recommendations to remove this one time event from future costs.
 - That being said, if windows are the new norm, they should be reflected in the valuation.

Termination Rates (<5 Years Service) – General Employees (Includes General County, County Agency, Mental Health and County Library)



Summary Metrics:

Actual: 107

Expected: 95.17

Actual to Expected: 112%

Proposed: 104.25

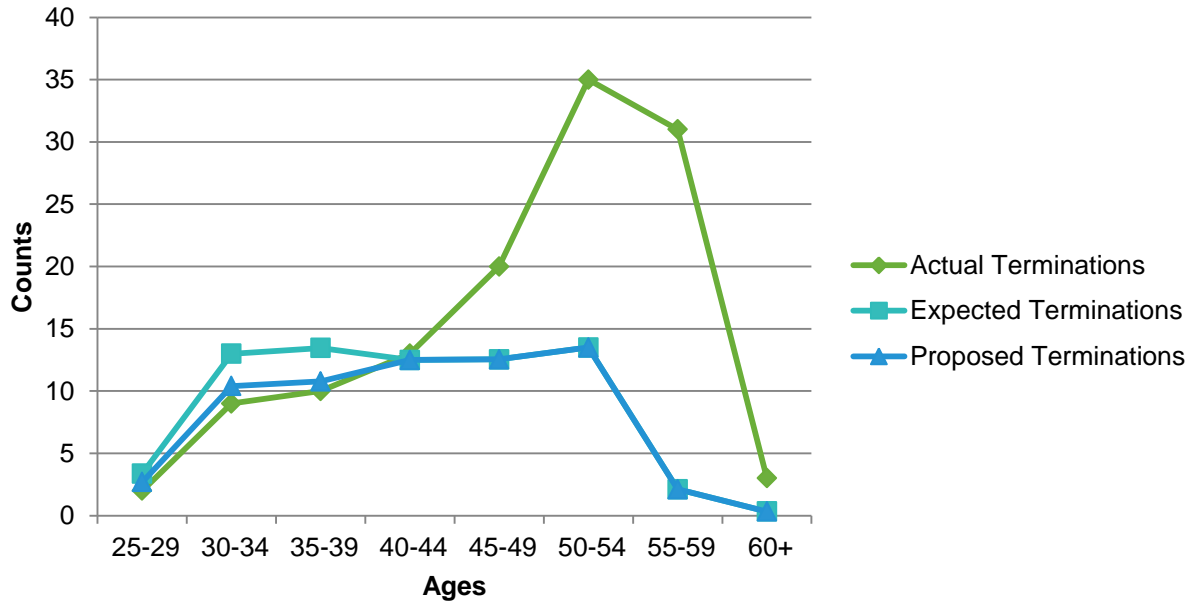
Actual to Proposed: 103%

Observation: There were more terminations than expected

Recommendation: Increase rates of termination to match experience

Impact: Slight decrease in costs

Termination Rates (5+Years Service) – General Employees (Includes General County, County Agency, Mental Health and County Library)



Summary Metrics:

Actual: 123

Expected: 70.82

Actual to Expected: 174%

Proposed: 64.86

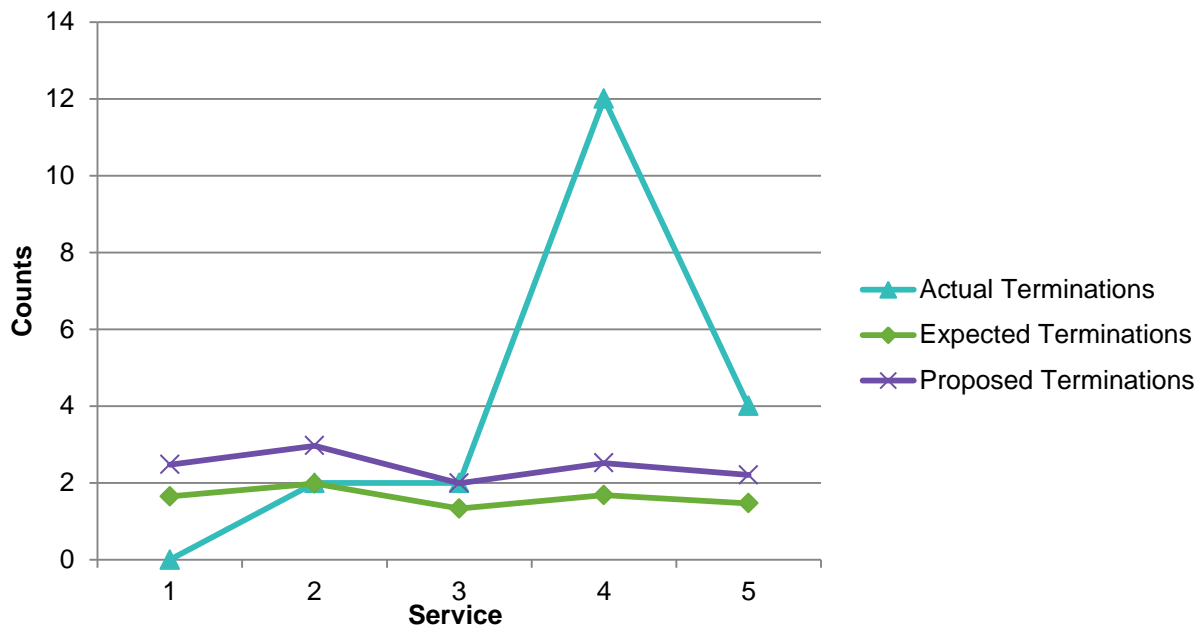
Actual to Proposed: 190%

Observation: There were more terminations than expected but many were likely due to window.

Recommendation: Decrease rates of termination to match experience disregarding the large jump due to the window.

Impact: Slight increase in costs

Termination Rates (<5 Years Service) – Sheriff’s Office and Central Dispatch



Summary Metrics:

Actual: 20

Expected: 8.11

Actual to Expected: 247%

Proposed: 12.17

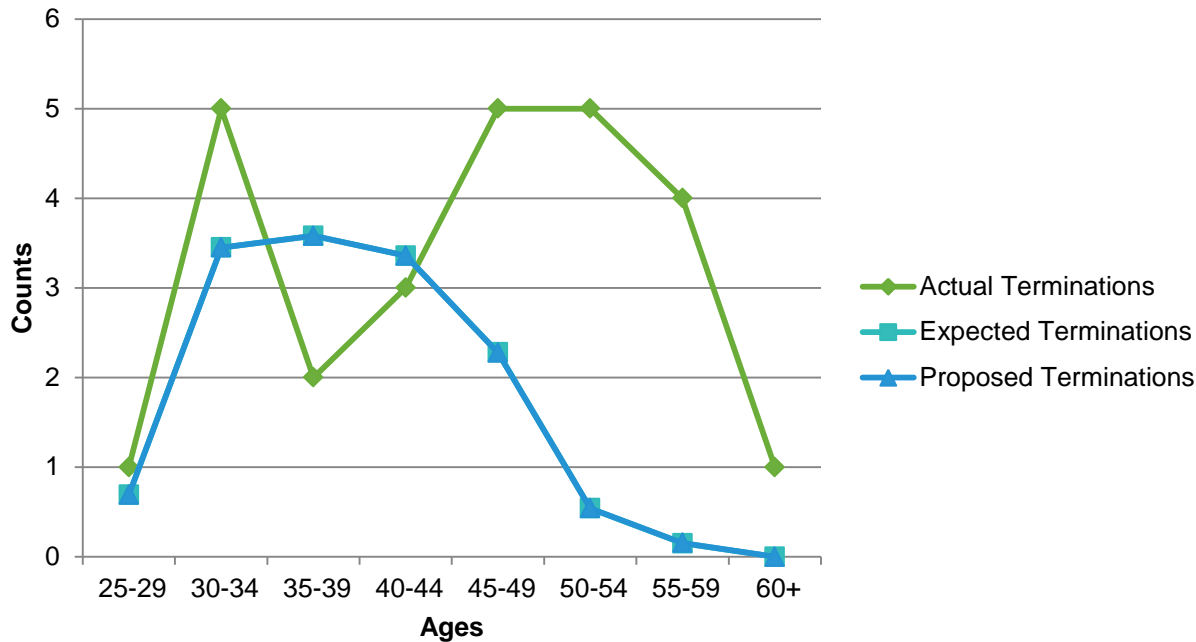
Actual to Proposed: 164%

Observation: There were more terminations than expected

Recommendation: Increase rates of termination to match experience

Impact: Slight decrease in costs

Termination Rates (5+ Years Service) – Sheriff's Office and Central Dispatch



Summary Metrics:

Actual: 26

Expected: 14.05

Actual to Expected: 185%

Proposed: 14.05

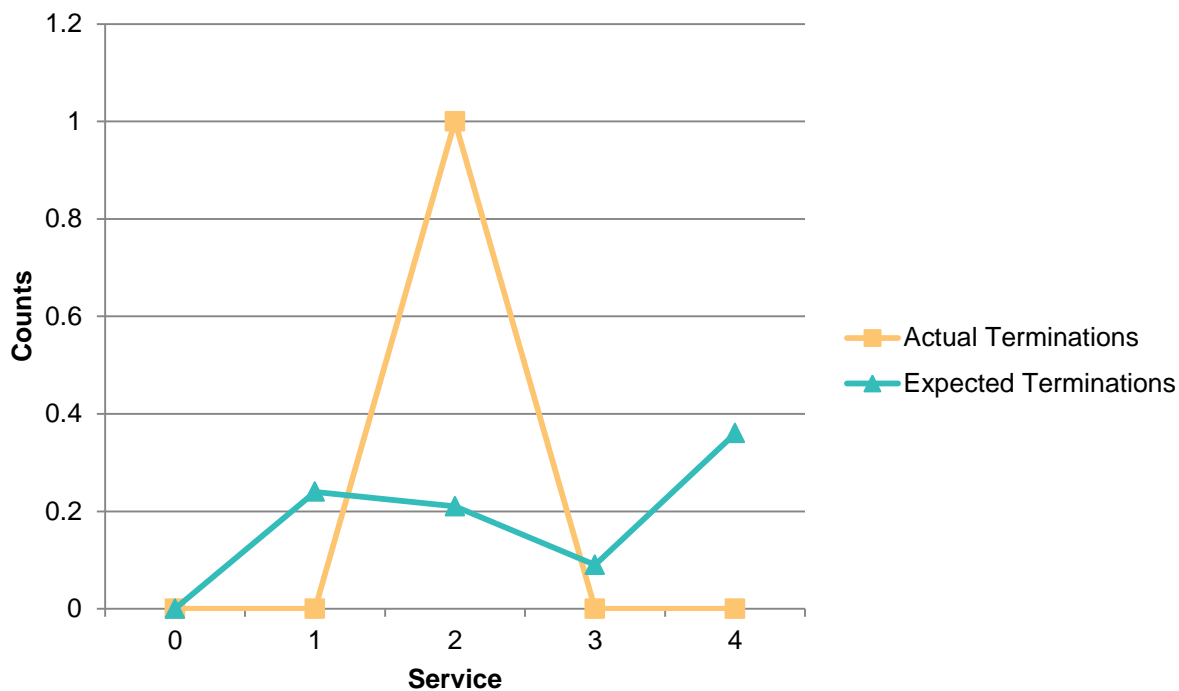
Actual to Proposed: 185%

Observation: There were more terminations than expected but many were likely due to window

Recommendation: Keep current rates

Impact: No impact

Termination Rates (<5 Years Service) – Road Commission



Summary Metrics:

Actual: 1

Expected: 0.9

Actual to Expected: 111%

Proposed: 0.9

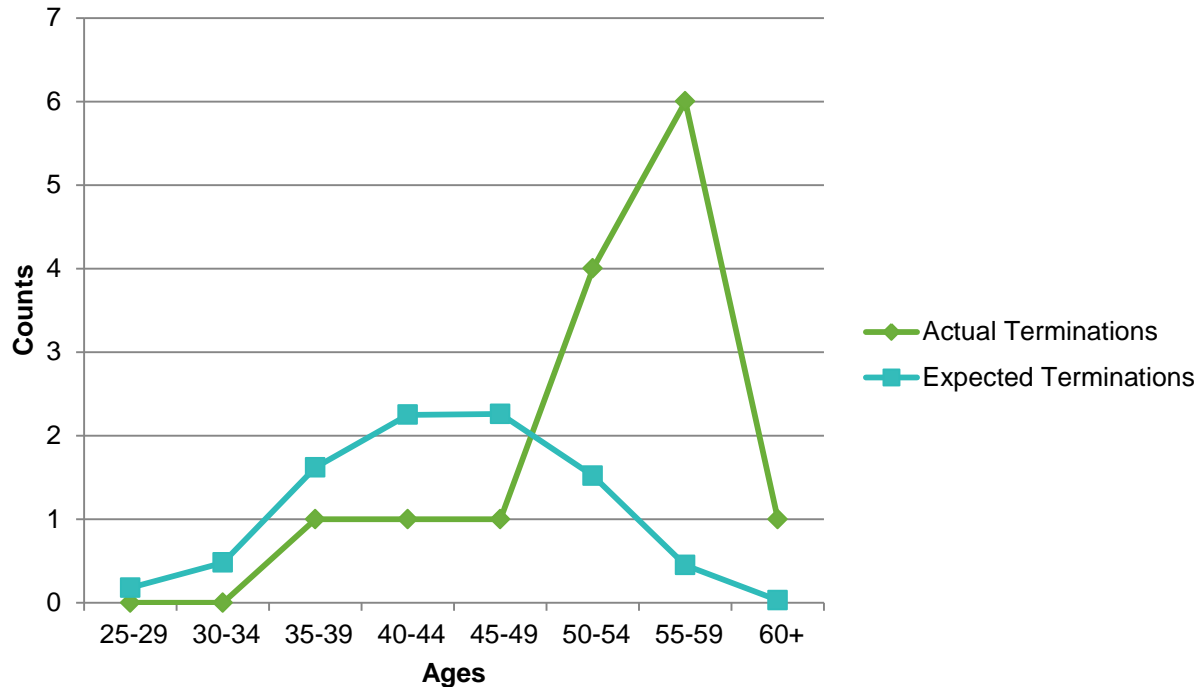
Actual to Proposed: 111%

Observation: No significant differences occurred over the period

Recommendation: Keep current rates

Impact: No impact

Termination Rates (5+ Years Service) – Road Commission



Summary Metrics:

Actual: 14

Expected: 8.79

Actual to Expected: 159%

Proposed: 8.79

Actual to Proposed: 159%

Observation: No significant differences occurred over the period

Recommendation: Keep current rates

Impact: No impact

Setting Economic Assumptions

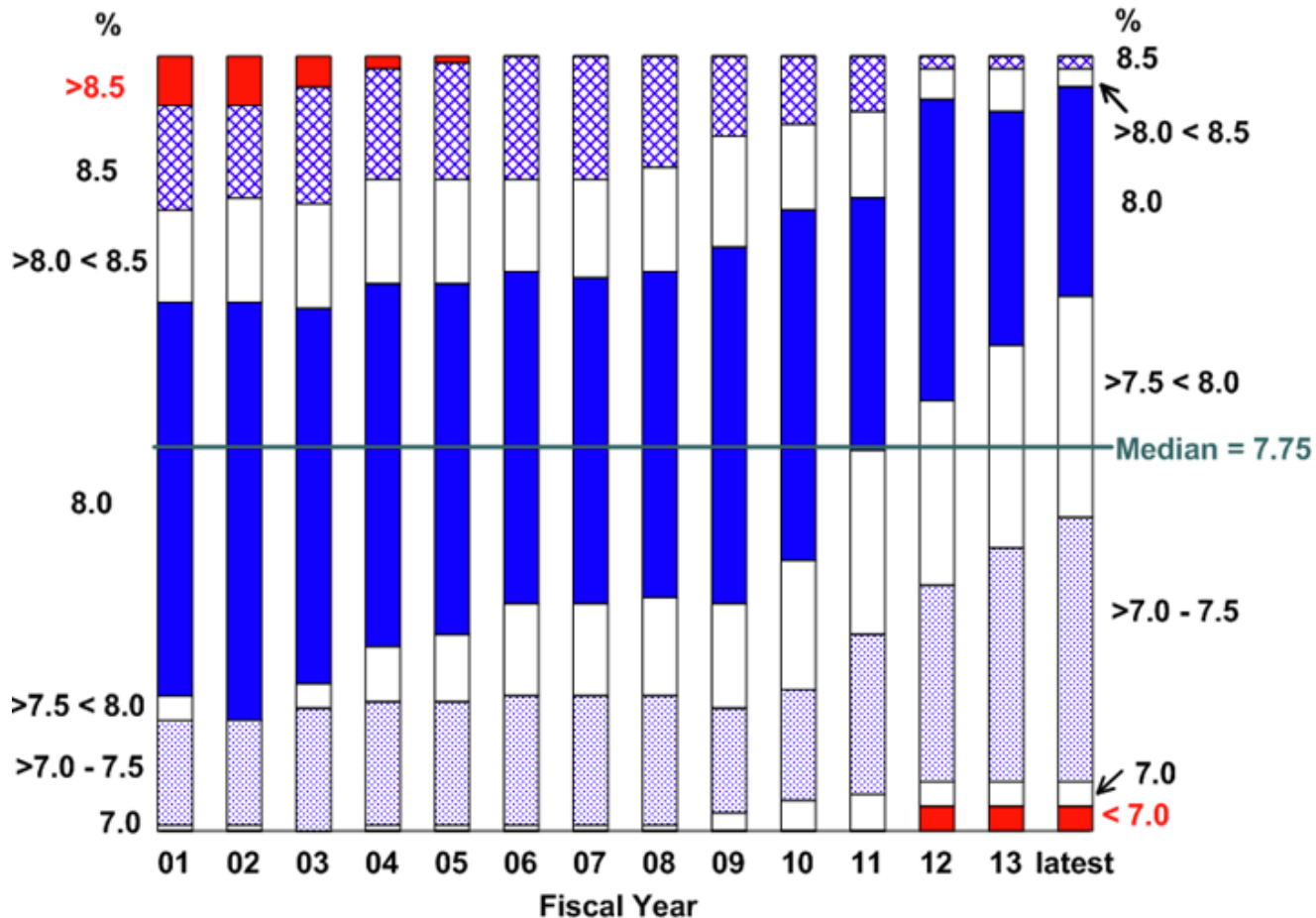
- Review Past Experience
- Review General Practice
- Develop Component Parts of Each Assumption
 - Maintain Linkage With Investments
 - Maintain Internal Consistency
- Make Judgment About Future

Investment Return Assumption - Considerations

- Short-Term Returns Not Indicative of Long-Term Return
- Use Expected Rates of Return by Asset Class Based Upon Accepted Industry Practice
- Determine Aggregate Real Return for Board's Target Asset Allocation Policy
- Include Margin of Conservatism
- All else being equal, a lower return assumption is easier to achieve and has a higher likelihood of securing the benefits by increasing future contributions

Investment Return

Change in distribution of public pension investment return assumptions, FY 01 through May 2015, compiled by NASRA based on Public Fund Survey.



As seen in this survey, the trend in public pension plan investment return assumptions has been a steady decrease over the past 15 years. The current median of 7.75% is higher than the current assumed rate of return of 7.00%. That being said, the plans in the survey are generally larger state-wide system.

Investment Return

Year Ended Dec. 31	Rate of Return Based on	
	Market Value	Actuarial Assets
2010	9.65 %	4.71 %
2011	-2.07	3.48
2012	8.97	3.59
2013	11.89	4.14
2014	4.22	3.19
Average(Arithmetic)	6.53	3.82
Average(Geometric)	6.41	3.82

The current return assumption of 7.00% was first used for the December 31, 2002 valuation and re-evaluated for the December 31, 2008 valuation. The table on the left shows actual investment performance over the most recent five years.

The average geometric rate of return over the last five years is 6.41% and 3.82% based on market value and actuarial assets, respectively.

Investment Return

Asset Class	Allocation
Equity	60.00%
Fixed Income	28.00%
Hedge Funds	5.00%
Real Estate	5.00%
Cash	2.00%
	<hr/>
	100.00%

The assumed rate of return is based on the target asset allocation and the expectation of future asset returns for each asset class. The asset allocation to the left is as of December 31, 2014.

On the next slide we have estimated nominal and real returns over various time periods based on this allocation and Buck's current return expectations.

Buck Estimate Nominal and Real

Compound (Geometric) Returns over Projected Periods

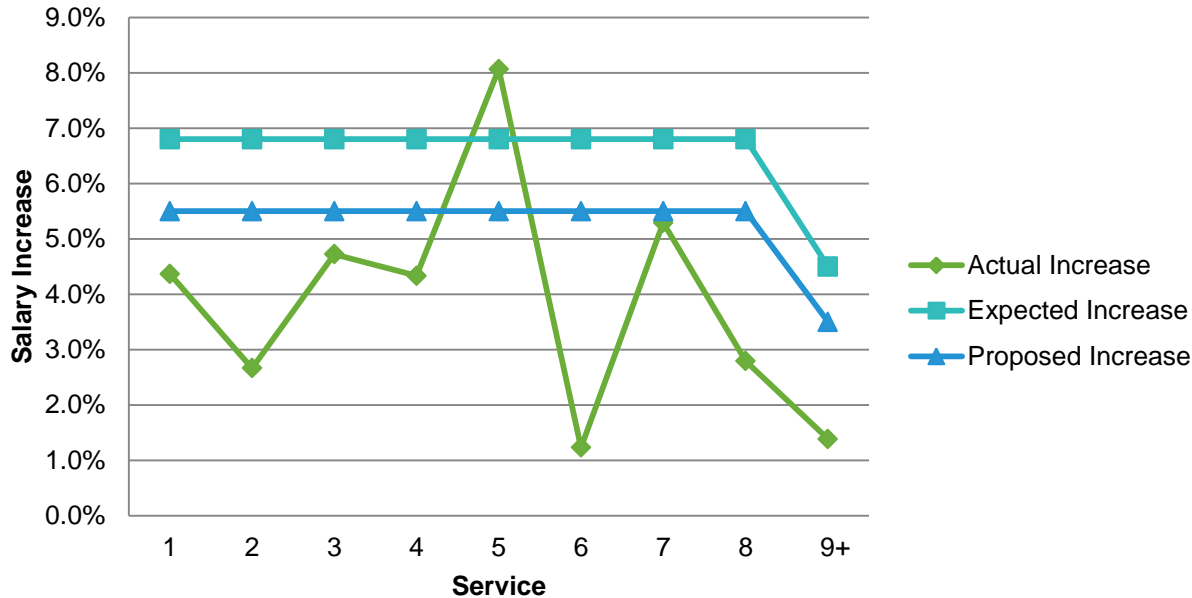
	1-Year	5-Year	10-Year	15-Year	20-Year	25-Year	30-Year
Nominal							
75th Percentile	10.10%	8.97%	8.96%	9.26%	9.43%	9.61%	9.75%
60th Percentile	7.30%	7.07%	7.61%	8.03%	8.27%	8.62%	8.72%
50th Percentile	5.71%	6.12%	6.80%	7.30%	7.68%	8.02%	8.19%
40th Percentile	3.92%	4.99%	5.93%	6.65%	7.07%	7.35%	7.60%
25th Percentile	0.91%	2.98%	4.62%	5.52%	6.03%	6.38%	6.64%
Real							
75th Percentile	8.06%	7.01%	6.70%	6.67%	6.72%	6.70%	6.64%
60th Percentile	5.38%	5.17%	5.40%	5.56%	5.60%	5.74%	5.83%
50th Percentile	3.68%	3.98%	4.46%	4.83%	5.02%	5.17%	5.30%
40th Percentile	1.81%	2.80%	3.63%	4.05%	4.34%	4.53%	4.71%
25th Percentile	-1.33%	0.82%	2.03%	2.85%	3.25%	3.55%	3.57%

Based on 2014 assumptions. Amounts shown are net of investment expenses at 50 bp.

The current assumption of 7.00% is expected to be achieved under 50% of the time over the next 10 years. In addition, there are currently unrecognized asset losses which will offset any gains that may occur in the future, making it more difficult to achieve the 7.00% return. Over longer periods, we expect the return to be achieved over 60% of the time based on Buck expectations.

Current standards of practice suggest the use of an assumption that falls within the 40th and 50th percentile of projected returns based on the long term asset allocation. Based on the above, the 7.00% investment return assumption can be maintained.

Salary Increases – General Employees (Includes General County, County Agency, County Library, Sheriff’s Office, and Central Dispatch)



Summary Metrics:

Actual: 3.20%

Expected: 5.43%

Actual to Expected: 59%

Proposed: 4.26%

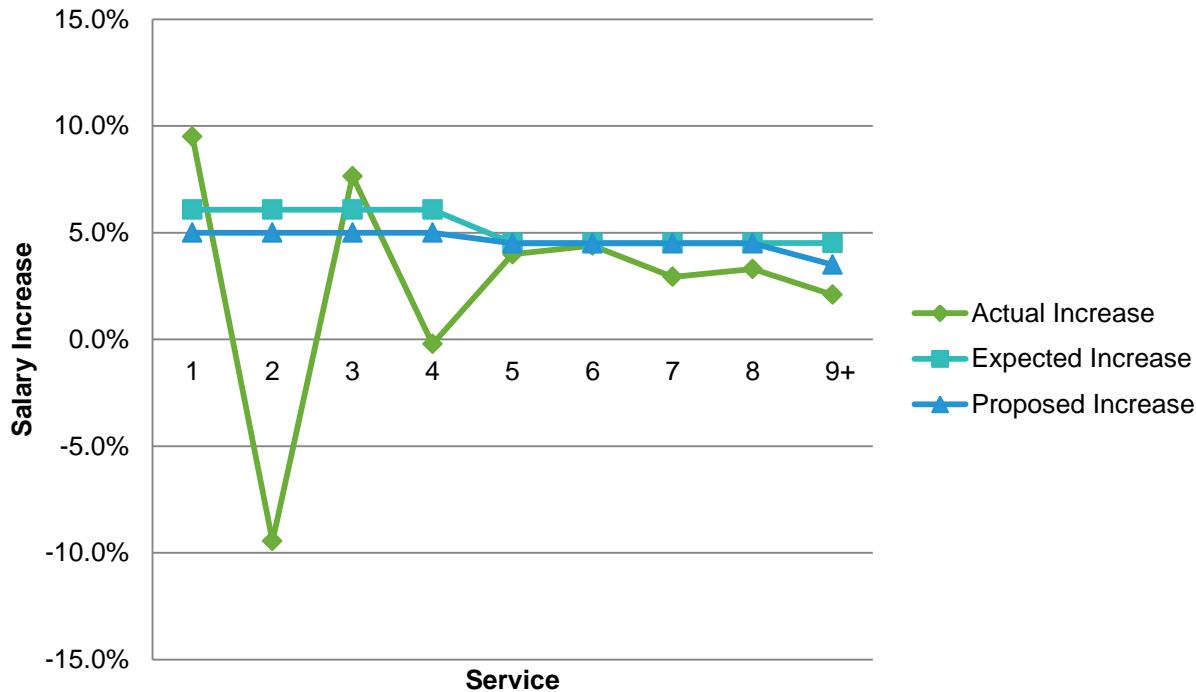
Actual to Proposed: 75%

Observation: Salary increases were less than expected

Recommendation: Decrease salary growth rates to match experience

Impact: Slight decrease in costs

Salary Increases – Road Commission



Summary Metrics:

Actual: 2.61%

Expected: 4.58%

Actual to Expected: 57%

Proposed: 3.71%

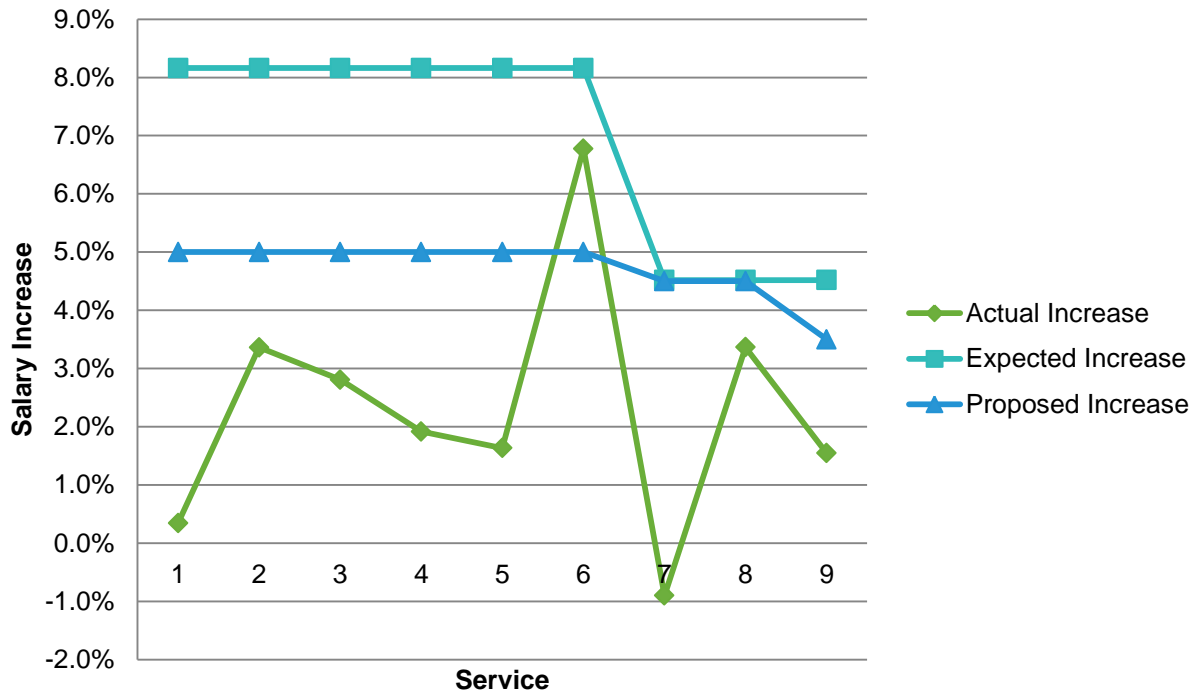
Actual to Proposed: 70%

Observation: Salary increases were less than expected

Recommendation: Decrease salary growth rates to match experience

Impact: Slight decrease in costs

Salary Increases – Mental Health



Summary Metrics:

Actual: 4.35%

Expected: 6.53%

Actual to Expected: 67%

Proposed: 4.34%

Actual to Proposed: 100%

Observation: Salary increases were less than expected

Recommendation: Decrease salary growth rates to match experience

Impact: Slight decrease in costs

Inflation

- Forecasts of inflation:
 - The 2015 OASDI Trustees Report projects that over the long-term (75 years), inflation will average between 2.0% and 3.4%
- Based on Buck's projection of inflation using a forward looking model, the median projected inflation over 30 years is 3.01%
- Based on the available data, we recommend an inflation assumption at 3.00%

Preliminary Results – Asset Allocation

		Allocation of Retirement Systems Assets for 2014							
		General County	County Agency	Sheriff's Office	County Library	Road Commission	Mental Health	Central Dispatch	Total
(1)	Valuation assets at start of year	76,852,485	6,763,700	46,564,485	14,874,764	22,809,525	24,500,071	3,180,724	195,545,754
(2)	Employee contributions	328,786	3,587	276,327	-	130,836	-	34,270	773,806
(3)	Employer contributions	2,611,031	382,673	2,073,767	465,000	959,392	627,471	156,464	7,275,798
(4)	Benefits paid	6,376,170	744,096	3,211,254	860,348	1,508,965	1,092,636	251,159	14,044,628
(5)	Refund of contributions	85,503	-	95,965	-	-	1,786	120,407	303,661
(6)	Administrative expense	60,821	5,353	36,851	11,772	18,052	19,389	2,517	154,756
Allocated on BOT asset value									
(7)	Average valuation assets [(1)+0.5*{(2)+(3)-(4)-(5)-(6)}]	75,061,147	6,582,106	46,067,497	14,671,204	22,591,131	24,256,901	3,089,050	192,319,036
(8)	Investment income Allocated on average valuation assets	2,391,511	209,711	1,467,750	467,437	719,773	772,845	98,420	6,127,448
(9)	Transfer in	-	-	-	-	-	-	-	-
	Transfer out	-	-	-	-	-	-	-	-
	Net transfer of assets	-	-	-	-	-	-	-	-
(10)	Valuation assets at end of year* [(1)+(2)+(3)-(4)-(5)-(6)+(8)+(9)]	75,628,194	6,604,597	47,027,634	14,935,081	23,022,509	24,786,576	3,095,170	195,099,761

* Does not include 13th Check amounts, which are passed through the ERS

Comparison of Actuarial Accrued Liability with Impact of Proposed Changes

	General County	County Agency	Sheriff's Office	County Library	Road Commission	Mental Health	Central Dispatch	Total
December 31, 2013	\$ 104,092,627	\$ 11,729,186	\$64,539,963	\$ 17,172,489	\$ 28,414,740	\$24,952,930	\$4,277,934	\$ 255,179,869
<u>December 31, 2014:</u>								
Before recommended changes	\$ 104,855,187	\$ 11,777,697	\$66,190,713	\$ 16,352,136	\$ 28,063,670	\$25,008,445	\$4,632,632	\$ 256,880,480
Change due to Mortality	3,619,813	126,153	752,578	727,128	641,569	938,968	19,528	6,825,737
Change due to Salary Increase	(1,629,071)	(189,133)	(1,339,298)	(310,212)	(744,794)	(437,869)	(132,542)	(4,782,919)
Change due to other Decrements	1,307,201	98,782	1,374,676	286,483	4,720	327,059	92,433	3,491,354
After recommended changes	108,153,130	11,813,499	66,978,669	17,055,535	27,965,165	25,836,603	4,612,051	262,414,652

Comparison of Unfunded Actuarial Accrued Liability and Funded Ratio with Impact of Proposed Changes

	General County	County Agency	Sheriff's Office	County Library	Road Commission	Mental Health	Central Dispatch	Total
<u>Unfunded Liability</u>								
December 31, 2013	\$ 27,240,142	\$ 4,965,486	\$ 17,975,478	\$ 2,297,725	\$ 5,642,336	\$ 452,859	\$ 1,097,210	\$ 59,671,236
<u>December 31, 2014:</u>								
Before recommended changes	\$ 29,226,993	\$ 5,173,100	\$ 19,163,079	\$ 1,417,055	\$ 5,041,161	\$ 221,869	\$ 1,537,462	\$ 61,780,719
Change due to Mortality	3,619,813	126,153	752,578	727,128	641,569	938,968	19,528	6,825,737
Change due to Salary Increase	(1,629,071)	(189,133)	(1,339,298)	(310,212)	(744,794)	(437,869)	(132,542)	(4,782,919)
Change due to other Decrements	1,307,201	98,782	1,374,676	286,483	4,720	327,059	92,433	3,491,354
After recommended changes	32,524,936	5,208,902	19,951,035	2,120,454	4,942,656	1,050,027	1,516,881	67,314,891
<u>Funded Ratio</u>								
December 31, 2013	73.8%	57.7%	72.1%	86.6%	80.1%	98.2%	74.4%	76.6%
<u>December 31, 2014:</u>								
Before recommended changes	72.1%	56.1%	71.0%	91.3%	82.0%	99.1%	66.8%	75.9%
Change due to Mortality	-2.4%	-0.6%	-0.8%	-3.9%	-1.8%	-3.6%	-0.3%	-1.9%
Change due to Salary Increase	1.1%	0.9%	1.5%	1.7%	2.1%	1.6%	2.0%	1.3%
Change due to other Decrements	-0.9%	-0.5%	-1.5%	-1.5%	0.0%	-1.2%	-1.4%	-1.0%
After recommended changes	69.9%	55.9%	70.2%	87.6%	82.3%	95.9%	67.1%	74.3%

Funding Policy Recommendation

We discussed the funding policy at the April 27 Board meeting. The current policy does not pay down the unfunded actuarial accrued liability. That discussion is in the appendix. A summary of the recommendations is as follows:

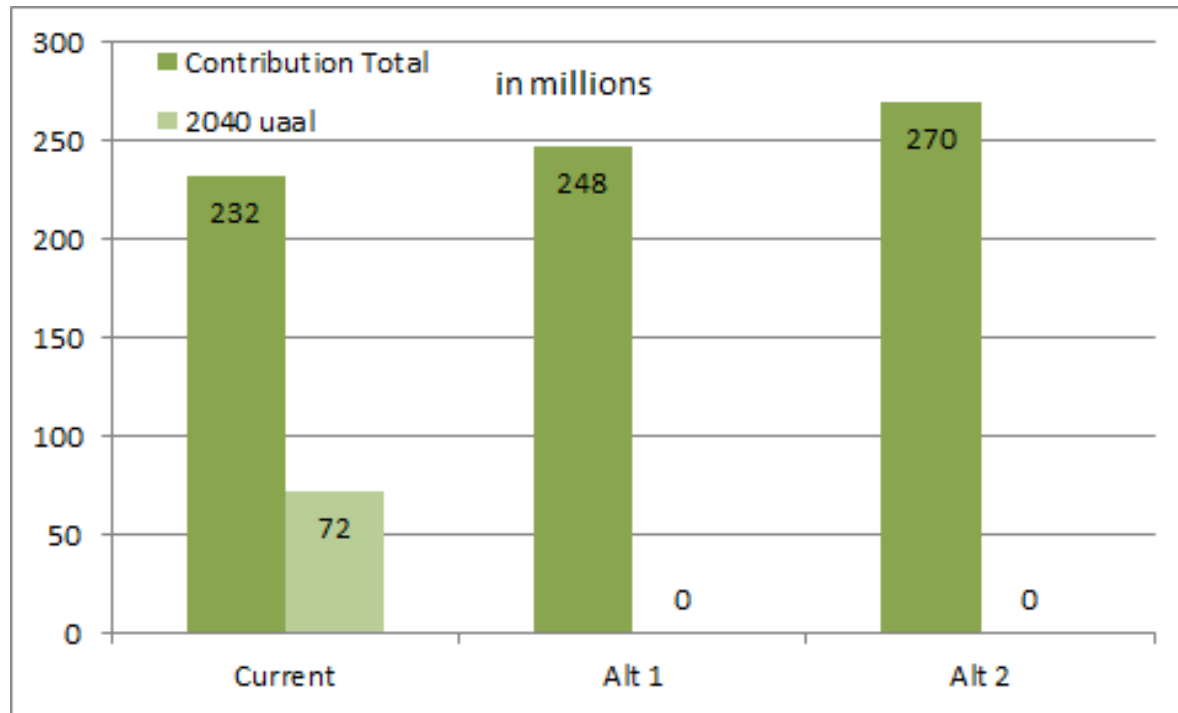
- Maintain the use of the entry age normal cost method
- Keep the current asset valuation method, although other methods can be reviewed
- Update amortization policy as follows:
 - 20 year closed amortization of UAAL
 - Use layered amortization, with new UAAL being amortized over 20 years regardless of source
 - Amortization payments increase at the rate of revenue growth. For purposes of this policy, we assume revenue grows at 2% per year. More input is welcome.
 - Minimum total contribution is no less than the normal cost in any given year; anticipate expense load of 0.50%

Comparison of Total Contribution Rates

	General County	County Agency	Sheriff's Office	County Library	Road Commission	Mental Health	Central Dispatch
December 31, 2013	26.19%	37.77%	29.40%	14.00%	22.72%	609,357	21.59%
December 31, 2014							
Before recommended changes	27.37%	39.29%	29.89%	13.17%	21.50%	522,718	24.88%
After recommended changes:							
Recommended assumptions	28.74%	38.67%	28.24%	13.99%	19.66%	565,309	22.50%
Assumptions & Funding Policy Alt 1	31.78%	43.57%	30.84%	14.58%	21.00%	565,309	24.13%
Assumptions & Funding Policy Alt 2	29.38%	39.69%	28.78%	14.12%	19.94%	556,615	22.84%

- We show two reasonable funding policy alternatives above:
 - Alt 1 is based on 20 years and 2% increases
 - Alt 2 is based on 25 years and 2% increases

Comparison of Total Contribution Rates



- Under the current funding policy, contributions of \$232 million are projected over the next 25 years. Because the unfunded is refinanced every year, it remains virtually unchanged at \$72 million in 25 years. Both recommended funding policies are projected to achieve full funding, with Alt 1 requiring less contributions than Alt 2 because it uses a 20-year period instead of 25 years for Alt 2.

Key Takeaways (repeated from earlier)

- Our recommended change in the mortality assumption to increase life expectancy is the source of the largest increase in costs.
- Our recommended change to decrease the salary increase assumption was the source of the largest decrease in costs, as salaries continued to fall short of the long term assumptions.
- Other recommendations result in modest cost changes.
- Service purchase option from 2009 and 2010 resulted in more retirements and terminations than expected. We have treated this as a one time occurrence that is not expected to continue in the future.
- We do not recommend a change in the current investment return of 7.00%.
- Overall, liabilities increase due to the above recommendations.
- The current Funding Policy does not pay down the unfunded actuarial accrued liability. The Funding Policy should be updated to reflect current practice as discussed at April 27 Board meeting. Updates include closing the amortization period and reducing the amount of increases in future amortization payments.
- Based on our Funding Policy recommendations, first year contributions will increase. However, all else being equal, our recommended funding policy over the long term is projected to decrease contributions due to lower financing charges.

Next Steps

- Adopt recommended assumptions or provide guidance to Buck
- Adopt recommended funding policy or review other policies with Buck
- Buck to complete report
- Other?

Certification

The results were prepared under the direction of Larry Langer who meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. These results have been prepared in accordance with all applicable Actuarial Standards of Practice, and we are available to answer questions about them.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law.

Larry Langer, FCA, ASA, EA, MAAA
Principal, Consulting Actuary

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Disclosures

- Buck's work product contained herein was prepared exclusively for the Board of Trustees and Staff of MCERS. It is a complex, technical analysis that assumes a high level of knowledge concerning the operations of MCERS.
- No third party recipient of Buck's work product should rely upon Buck's work product absent involvement of Buck or without our approval. Furthermore, because of past experience with previous work we have prepared for MCERS, we feel obliged to strongly discourage third party recipients from misstating the results set forth in this work product. Third parties recipients inclined to present our work product should engage MCERS and Buck during the presentation process to ensure that this work product is appropriately represented. If this is not desirable, such recipients should engage qualified professionals for advice appropriate to their own specific needs.
- The consultants who worked on this assignment are pension actuaries with significant experience in public funds like MCERS. Buck's advice is not intended to be a substitute for qualified legal or accounting counsel.

THANK YOU!!

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Ready For Real Business

Appendix

Funding Policy Discussion from April 27, 2015

Funding Policy

- There is no mandated funding policy within the public sector
- For years, the accounting standards under GASB 25 and 27 served as the de facto funding policy of public plans: pay for the cost of benefits accruing and pay off the pension debt over a perpetual period of 30 years or less.
- There are some nice papers on this topic which have been issued in the past few years given the passing of the GASB 25 and 27 standards
- These papers are not binding
- See the next slide for links to some of these papers

Public Sector Retirement System Funding Policy Resources

- Conference of Consulting Actuaries Public Plans Community White Paper "Actuarial Funding Policies and Practices for Public Pension Plans" <http://www.ccaactuaries.org/publications/news/cca-ppc-white-paper.cfm>
- American Academy of Actuaries Issue Brief "Objectives and Principles for Funding Public Sector Pension Plans" http://www.actuary.org/files/Public-Plans_IB-Funding-Policy_02-18-2014.pdf
- California Actuarial Advisory Panel White Paper "Model Actuarial Funding Policies and Practices for Public Pension and OPEB Plans" http://www.sco.ca.gov/Files-ARD/BudLeg/CAAP_Funding_Policies_w_letter.pdf
- Report from the Pension Funding Task Force 2013 (convened by the Center for State and Local Government Excellence) "Pension Funding: A Guide for Elected Officials" http://www.nctr.org/pdf/PensionFundingGuideBrief_Final.pdf
- GFOA Best Practice "Funding Defined Benefit Pensions" <http://www.gfoa.org/funding-defined-benefit-pensions> (no PDF)
- GFOA Best Practice "Core Elements of a Pension Funding Policy" <http://www.gfoa.org/core-elements-funding-policy> (no PDF)
- Society of Actuaries Blue Ribbon Panel on Public Pension Plan Funding "Report of the Blue Ribbon Panel on Public Pension Plan Funding" (report, summary, video and guide) <https://www.soa.org/blueribbonpanel/>

Funding Policy Discussion

Actuarial Methods Framework Remains Unchanged...

The current framework remains intact under the Funding Policy White Papers:

Actuarial Methods describe the funding policy for the Retirement System. Actuarial Methods generally are comprised of the three components below:

- Actuarial Cost Methods allocate costs to the past, current and future to allow for systematic payment of the costs over a member's career
- Amortization Payment for UAAL Methods determine the payment schedule for unfunded actuarial accrued liability
- Asset Valuation Methods smooth or average the market value returns over time to alleviate contribution volatility that results from market returns that differ from the investment return assumption used in the actuarial valuation

Actuarial methods allow for a considerable amount of flexibility in paying off the costs of a Retirement System. The funding policy selected by the Retirement Board should strike a balance between contributions that are stable from year to year but satisfy the actuarial needs of the Retirement System.

...but the Following Considerations Were Followed

There are four broad considerations when establishing a funding policy for a pension plan

- Sufficiency - The funding target should be the value of benefits accrued to date
- Intergenerational equity – taxpayers should pay for workers' pensions while those workers are providing their services – fund for benefits over the worker's career.
- Stability of contributions – while stable contributions are easy to budget for, stability should not be achieved at the expense of the first two
- Accountability and transparency – each component of the funding policy should be clear on the intent and effect

White Papers have Different Strengths

- "Actuarial Funding Policies and Practices for Public Pension Plans" - more of an actuaries guide; the CAPP document with better formatting
- "Objectives and Principles for Funding Public Sector Pension Plans" – five page read suitable for policy makers
- "Model Actuarial Funding Policies and Practices for Public Pension and OPEB Plans" – CAPP document, forerunner to first document
- "Pension Funding: A Guide for Elected Officials" – this may be more suitable for policy makers – five pages with more pictures
- "Funding Defined Benefit Pensions" – seems too brief, but pre-cursor to next paper on list
- "Core Elements of a Pension Funding Policy" – may be just right, concise reading on closed plans
- "Report of the Blue Ribbon Panel on Public Pension Plan Funding" – out there, with broader future potential

“Core Elements of a Pension Funding Policy”

- GFOA Best practice
- Provides direct parameters for each of the core elements of pension funding policy:
 - Actuarial Cost Method
 - Asset valuation Method
 - Amortization Method

Let's see how your system stacks up on the next few slides...

Funding Policy (Actuarial Methods)

- The Funding Policy of the Retirement System has 3 actuarial methods components:
- Actuarial Cost Methods allocate total costs to past service (the actuarial accrued liability , or how much money you should have in the ERS) and current years service (normal cost , or the cost of benefits accruing during the year)
 - Board has adopted Entry Age Normal as its actuarial cost method – used by over 85% of public sector plans
 - Develops normal costs that stays level as a % of payroll
- Asset Valuation Methods smooth or average the market value returns over time to alleviate contribution volatility that results from market returns
 - Smoothing period for Retirement System is 7 years
 - Asset corridor of 20% - actuarial value of assets is constrained to range of 80% and 120% of market,
- Amortization Methods determine the payment schedule for unfunded actuarial accrued liability (UAAL)
 - Divisions that are overfunded: 10 years open, as a level percent of pay
 - Divisions that are underfunded: 20 years open, as a level percent of pay
 - Note that mental health UAAL payments do not increase with payroll

The funding policy is generally reviewed with the experience review, but reviewing during transition is appropriate as well.

“Core Elements of a Pension Funding Policy”

- Actuarial Cost Method
- “The actuarial cost method selected for funding purposes should conform to actuarial standards of practice and allocate normal costs over a period beginning no earlier than the date of employment and should not exceed the last assumed retirement age. Moreover, the selected actuarial cost method should be designed to fully fund the long-term costs of promised benefits, consistent with the objective of keeping contributions relatively stable and equitably allocating the costs over the employees’ period of active service. While not the only method that would satisfy this criterion, the entry age method—level percentage of pay normal cost—is especially well suited to achieving this purpose.”
- The Monroe County Employees Retirement System complies with this GFOA policy by using the entry age level percent of pay method



“Core Elements of a Pension Funding Policy”

- Asset Smoothing parameters should:
 - Be unbiased relative to market. Thus, for example:
 - The same smoothing period should be used for both gains and losses, and
 - Market corridors (a range beyond which deviations are not smoothed), if used, should be symmetrical
 - Provide for smoothing to occur over fixed periods (the use of rolling periods normally should be avoided), ideally of five years or less, but never longer than ten years.
 - Provide for a market corridor if smoothing is to occur over a period longer than five years.
- The Monroe County Employees Retirement System complies with this GFOA policy by using seven year period with a 20% corridor
- That being said, corridors can result in more contribution volatility, particularly in times of prolonged bull or bear markets. Consideration should be given to using a 5 year period without corridor



“Core Elements of a Pension Funding Policy”

- Amortization of unfunded actuarial accrued liability should:
 - Use fixed (closed) periods
 - Use a period that never exceed 25 years, but ideally fall in the 15-20 year range;
 - Use a layered approach for the various components to be amortized (that is, an approach that separately tracks the different components to be amortized); and
 - Emerge as a level percentage of member compensation or as a level dollar amount.
- The Monroe County Employees Retirement System does not comply with this GFOA policy because
 - The period used is open. In English, an open amortization policy says “Our funding policy does not pay off our unfunded actuarial accrued liability.” Note that this policy will likely result in the GASB discount being lowered.
 - And even though I give a thumbs up, having payments which grow with payroll (which is projected at 4% in the valuation), may result in these payments growing faster than County revenue. In English, using 4% growth rate suggests “Our funding policy is projected to result in payments which will require a larger portion of the County Budget in future years.”
 - While not specific to the GFOA paper, the deeper papers suggest that windows should not be amortized over 20 years



One Potential Recommendation

- Consider changes to the funding policy:
 - For Asset Smoothing
 - Implement a five year amortization without corridor
 - For amortization of unfunded actuarial accrued liability
 - Implement closed amortization payments so that the unfunded actuarial accrued liability is projected to be paid off
 - Consider reducing future increases in payments from current 4% per year to expected revenue growth so that pensions are not projected to become an increasingly larger portion of future County budgets
 - Pay off windows over a period of less than 5 years
 - Transition as needed to help budgeting; this could include:
 - Increasing the initial amortization to 25 years
 - Phasing in the 5 year asset smoothing

Ideally changes would occur in time to avoid lower discount rate (and higher liabilities) under GASB 67/68, but we are to deliver those in the next two weeks