# NDPERS SPECIAL BOARD MEETING

# Agenda

Bank of North Dakota
1200 Memorial Highway
Bismarck, ND 58505

**September 16, 2015** **Time: 8:30 AM**

I. Finalize Experience Study – Sparb and Segal (Board Action)

II. Medicare Part D Program – Sparb (Board Action)

Any individual requiring an auxiliary aid or service must contact the NDPERS ADA Coordinator at 328-3900, at least 5 business days before the scheduled meeting.

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# Memorandum

**TO:** PERS Board

**FROM:** Sparb

**DATE:** September 16, 2015

**SUBJECT:** Experience Study

At the last meeting we reviewed the Experience Study done by Segal and the returns of the plan with David Hunter. Appendix 1 is the memo from last meeting with attachments including the Experience study presentation, summary of recommendations and projections and the National Association of State Retirement Administrators (NASRA) Issue Brief on Return Assumptions.

Appendix 2 is the updated projections of the plans funded status as requested at the last meeting showing:

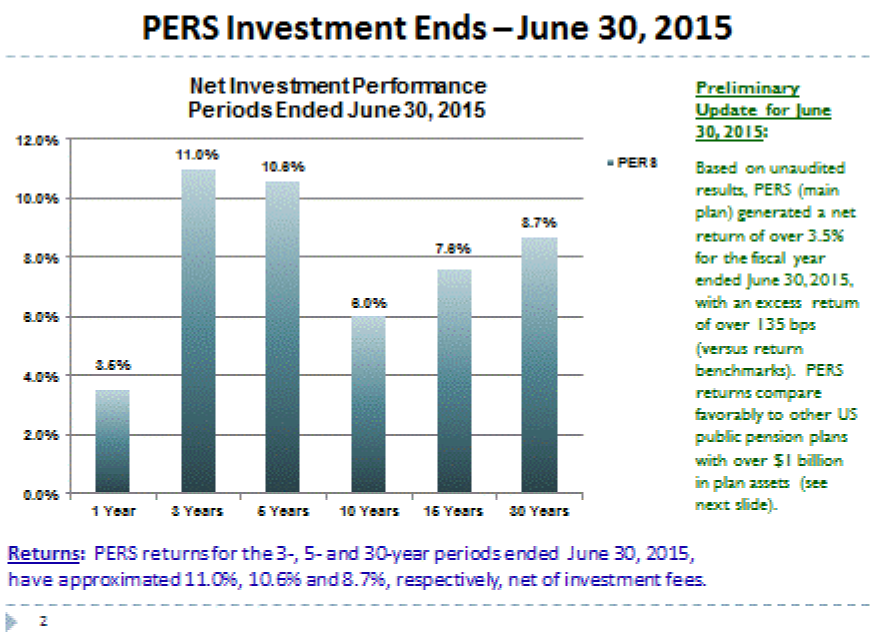
- 7/1/2014 valuation results
- With adoption of all assumptions as recommended by Segal
- With adoption of all assumptions as recommended by Segal except maintaining a 8% return assumption
- With adoption of all assumptions as recommended by Segal except maintaining the current growth assumption
- With adoption of all assumptions as recommended by Segal except maintaining a 8% return assumption and maintaining the current growth assumption

Appendix 3 is the information from David Hunter on the return assumption. Also, page 3 is an update to the returns with a June 30 ending instead of the March ending in the presentation you reviewed last month.

At the last meeting we reviewed the following staff recommendations:

- That the PERS Plan has exceeded the payroll growth assumption over the past 5, 10, 15 and 19 years. **Based on this, staff recommended not to lower this assumption as recommended by Segal.** Segal indicated they did not disagree (refer to Appendix 4 – memo from Segal).

- That the PERS plan has exceeded the 8% return assumption over the past 3, 6 and 30 years (but not this year and not over the last 15 years).  Over the last 16 years it was close at 7.8% (this chart below is the updated chart in David's presentation)




We also reviewed an Issue Brief from the NASRA showing that some retirement plans are moving away from an 8% return.  David also shared with us a projection that at 8% we stood a 48% chance of making that return whereas with the 7.75% recommended by Segal we stood a 52% chance**.  Staff recommends not changing the assumption at this time and to monitor it over the next 5 year period.  Staff further recommends that if we are inclined to change it at this time, we make it contingent on obtaining funding from the legislature to pay the cost of the change, or similar to TFFR, we include it as part of the 4th year of the recovery plan.**

Appendix 4 is letters from Segal and David Hunter with their thoughts on the above for your consideration.

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# Memorandum

Appendix 1

**TO:** PERS Board

**FROM:** Sparb

**DATE:** August 19, 2015

**SUBJECT:** Experience Study

At the May meeting Segal presented the results of their Experience Study review (Attachment #1). North Dakota state law requires:

> "…once every five years make a general investigation of the actuarial experience under the system including mortality, retirement, employment turnover, and other items required by the board, and recommend actuarial tables for use in valuations and in calculating actuarial equivalent values based on such investigation; "

At the May meeting we asked Brad to follow-up on some points and he will be with us to go over those items at this meeting (Attachment #2). Specifically the Board asked Segal to:

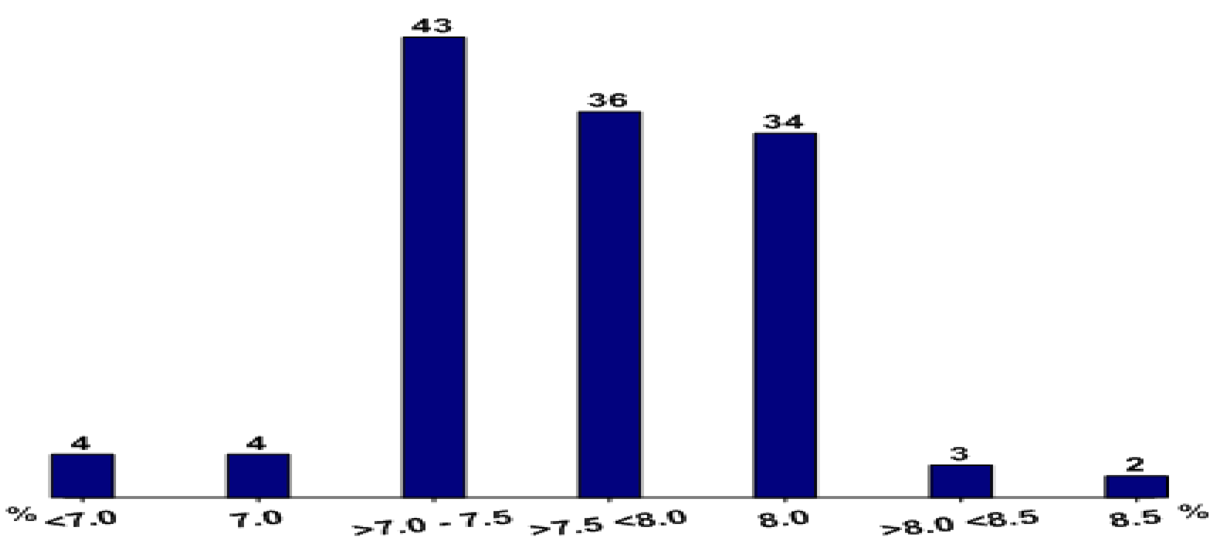
1. Summarize for each plan the existing assumptions and the proposed assumptions. That information is on pages 10-16 of Attachment #2.
2. Determine if the proposed recommendations would have an effect on the Governmental Accounting Standards Boards assumed rate of return for the plan.
3. Determine the long term cost impact if (page 7):
    a. The assumptions change as proposed by Segal where accepted (the blue line is the long term funded status of the plan based upon the current assumptions and the green line is the long term funded status if the Segal assumptions are accepted).
    b. The red line is if all the assumptions of Segal are accepted except the reducing the return assumption from 8% to 7.75%

c. The green dotted line is if all the Segal assumption changes are accepted except the payroll growth assumption.

d. The green dash line is if all the Segal assumption changes are accepted and if $30 Million is deposited into the retirement account.

Concerning item “c” above the payroll growth assumption, staff is recommending we stay with our existing assumption. You note that making this change maintains our funding status on an upward slope going forward. While this is positive, the reason for this recommendation is based upon the data on page 12 of Attachment #1. You will also note that the payroll growth for PERS has been over 6% and over 4% for most periods for the judges. On page 13 is the Segal recommendation to reduce the assumption for PERS/HPRS from 4.5% to 4% and for Judges from 4% to 3.5%. Given the history on page 12, staff is recommending maintaining the existing assumption.

Concerning item “b” changing the return assumption, Mr. David Hunter will be at the meeting and will be giving an overview of our plans’ investment performance for the past year and the implications of changing the return assumption from an investment perspective. The most recent survey done by the National Association of Retirement Administrators shows the following return assumptions for other statewide plans (Attachment #3 is the full Issue Brief):



The Teachers Fund for Retirement recently completed its Experience Study and decided to change its return assumption to 7.75% (please note they are in a better position to do this since they had all 4 years of their recovery plan funded whereas we did not). Staff recommendation would be to include this in proposed legislation next session to determine if the state would like to reduce the return assumption and pay the additional contributions required to support such a change. Please note this cost would be in addition to considerations relating to the need for the 4th year of the recovery plan.

With the exception of the above, staff would recommend adopting the assumption changes recommended by Segal.

At this meeting our goal is to review the information from Segal and staff recommendations. We will also identify any additional information you would like and we will get that by the special meeting in early September. At that time we will have this on the agenda for your final consideration. If you are able to make that determination at that meeting, Segal will do the next valuation based upon the new assumptions. If not, they will not be able to include the new assumptions until the 2016 valuation.

# North Dakota Public Employees Retirement System

## Experience Review: July 2009 – June 2014

## May 21, 2015


*Presented By:*

*Brad Ramirez, FSA, MAAA, FCA, EA*

*Laura L. Mitchell, MAAA, EA*

# Agenda

- Overview
- Economic Assumptions
  - Inflation
  - Payroll Growth
  - Salary Increase
  - Investment Return
  - Miscellaneous Assumptions
- Demographic Assumptions
  - Termination
  - Disability
  - Retirement
  - Mortality
  - Spouse Information
  - Miscellaneous Assumptions
- Funding Policy
- Summary of Economic Assumptions
- Summary of Demographic Assumptions
- Cost Impact
- Actuarial Certification
- Appendix

# Overview: Purpose of an Experience Study

- An experience study provides the basis for developing recommended assumptions to be used in the annual actuarial valuation
  - Performed on a periodic basis, typically every five years
  - Last experience study for PERS and HPRS was conducted in 2009 for the 5-year period ending June 30, 2009
  - Current study is based on the period July 1, 2009 through June 30, 2014
- Actuarial Standards of Practice #27 and #35 provide guidance on best practices for performing assumption-setting analysis
  - Each assumption should be reasonable and the actuary's best estimate
- Segal's role is to make appropriate "best estimate" recommendations to the Board for each assumption
  - The assumptions are ultimately the Board's responsibility and the Board can adopt all, none, or some of the recommendations of the actuary

# Overview: How Assumptions Are Set

- Review past experience
- Compare past experience (“actual”) with assumptions (“expected”)
- Determine trends – make judgments about future
- Develop component parts of each assumption
  - Maintain linkage with investments
  - Maintain internal consistency
- Keep in mind
  - No “right” answer – each assumption is a best estimate
  - Assumptions are long-term

# Overview: Actuarial Assumptions

### Economic

- Inflation
- Salary increase
- Payroll growth
- Investment return
- Miscellaneous

### Demographic

- Termination
- Disability
- Retirement
- Death after retirement
- Death in active service
- Spouse information
- Miscellaneous

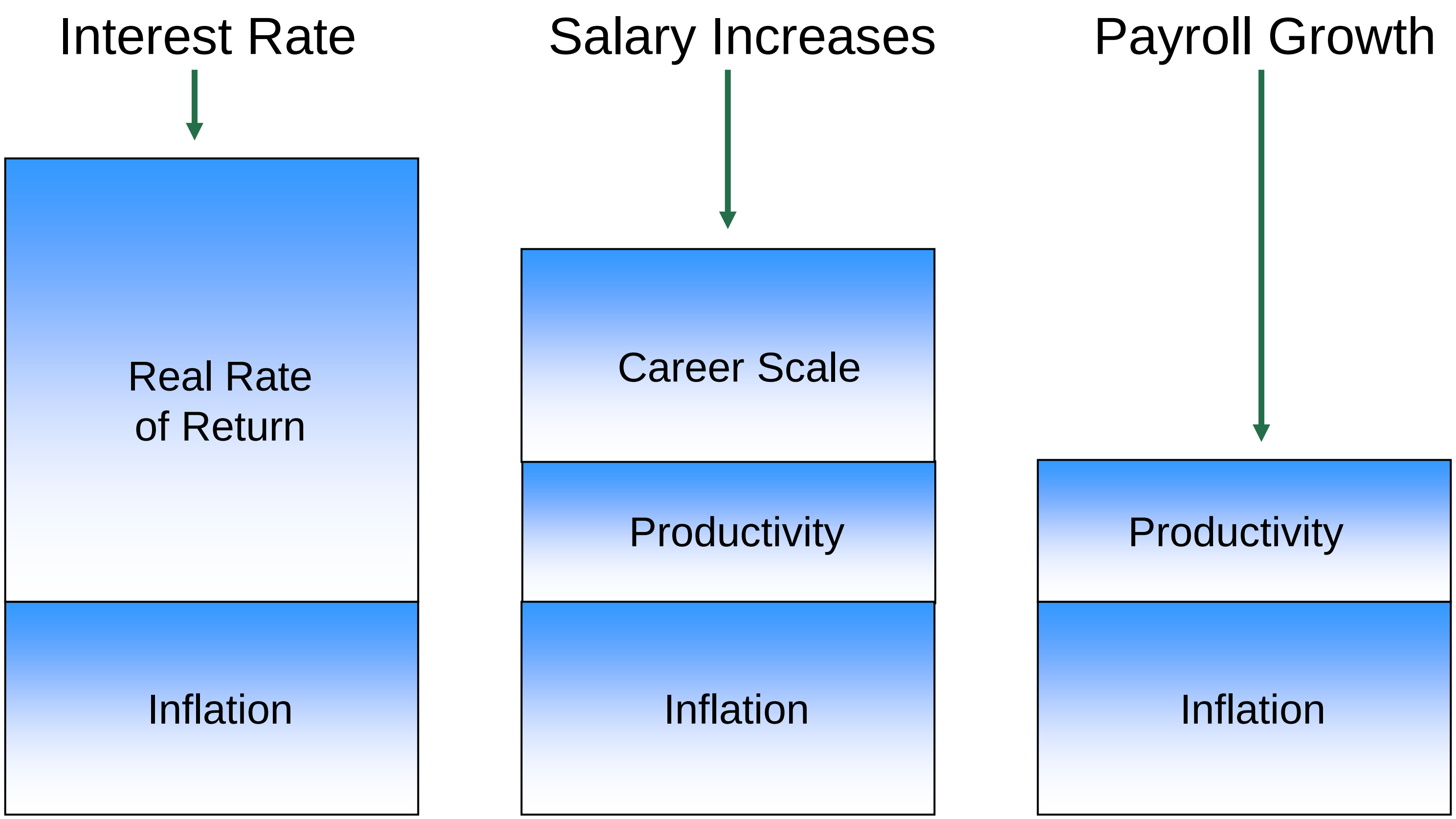
### Funding Policy

- Funding method
- Asset valuation method
- Amortization of Unfunded Actuarial Accrued Liability

**Actuaries make assumptions as to when and why a member will leave active service and estimate the amount and duration of the pension benefits due.**

# Building Block Method –
# Basis for Setting Economic Assumptions

Each economic assumption has 2 or 3 components (or building blocks)




**Building blocks should be consistent across all economic assumptions, but may be adjusted for conservatism.**

# Assumed Rate of Inflation

- Inflation represents the annual increase in the cost of living.
- The inflation assumption, currently 3.50%, indirectly affects the valuation.
  - Inflation is a component of the following economic assumptions:
    - Investment return
    - Payroll growth
    - Individual salary increases
- Segal's recommendation is to lower the long term assumption from 3.50% to 2.75%. This recommendation is based on:
  - Current market expectations indicate that low inflation is expected to continue; and
  - Both Callan and Segal Rogerscasey expect inflation to be less than 2.50% over the next 10-20 years.

# Assumed Rate of Inflation *(continued)*

- As of June 30, 2014, the historical national inflation (CPI-U) averages are:
  - 5-year average - 2.02%.
  - 10-year average - 2.31%.
  - 20-year average - 2.41%.
  - 30-year average - 2.81%.
  - 50-year average - 4.16%.
- In addition to historical inflation, other metrics to consider are current market expectations and inflation assumptions used for similar pension plans.

# Assumed Rate of Inflation *(continued)*

- By observing the difference between the yields on US Treasury bonds with and without inflation indexing, we can directly calculate the rate of inflation that investors may expect.
- As of June 2014, the yields on 30-year Treasury bonds were as follows:
  - Inflation indexed: 1.03%
  - Non-inflation indexed: 3.39%
  - The difference between these figures is 2.36%.
    - This difference of 2.36% represents one measure of the financial market's current expectations of inflation over the next 30 years.
- Social Security uses three inflation assumptions to project its future financial status:
  - Low inflation of 2.0%;
  - Moderate inflation of 2.7%; and
  - High inflation of 3.4%.

# Assumed Rate of Inflation *(continued)*

- The National Association of State Retirement Administrators (NASRA) Public Fund Survey collects general information on 126 public pension systems.
- The median inflation assumption of these 126 systems is 3.00%.
- We recommend that the Board adopt an assumption that falls between:
  - The rate indicated by financial market data; and
  - The median rate used by peer retirement systems.

**We recommend that the Board lower the inflation assumption from 3.50% to 2.75%.**

# Assumed Rate of Payroll Growth

- The amortization of the unfunded actuarial accrued liability (UAAL) is calculated as a level percentage of payroll over a closed period of time.
  - The amortization amount in dollars is expected to increase each year as payroll increases (i.e., amortization payments are back loaded.)
  - The payroll growth assumption is used to estimate the annual increase in total payroll.
- A lower payroll growth assumption is more conservative.
  - A lower payroll growth assumption results in larger amortization payments.
  - For example, a 0% payroll growth assumption uses level amortization payments, similar to a mortgage.
- The current payroll growth assumption is 4% for Judges and 4.50% for all other Systems except Job Service, which does not have a payroll growth assumption. The payroll growth assumption consists of the following components:
  - Inflation: 3.50%
  - Productivity: 1.00% (0.50% for Judges)

# Assumed Rate of Payroll Growth *(continued)*

- As the recommended inflation component is 2.75%, we need to examine the productivity component.
- Productivity can be measured as the excess of the increase in the National Average Wage over inflation.
  - The 20-year average of the National Average Wage is 3.4%.
  - The 20-year average inflation is 2.4%.
  - Therefore, productivity has averaged about 1.0% over the last 20 years.
  - We expect productivity in North Dakota to be greater than the national average due to its overall strong economy.
- We recommend increasing the productivity component of the payroll growth assumption to 0.75% for Judges and 1.25% for all other Systems (except Job Service).

# Assumed Rate of Payroll Growth *(continued)*

- The following table summarizes the Fund's historical payroll and active population growth:

| Year Ended June 30 | PERS (excluding Judges) Covered Payroll ($ in Millions) | PERS (excluding Judges) Active Members | Judges Covered Payroll ($ in Millions) | Judges Active Members |
|---|---|---|---|---|
| 1995* | $300.3 | 15,026 | $3.1 | 52 |
| 1999 | 393.8 | 16,287 | 3.9 | 47 |
| 2004 | 496.6 | 17,590 | 4.4 | 46 |
| 2009 | 692.3 | 19,896 | 5.4 | 47 |
| 2014 | 966.5 | 22,212 | 7.0 | 50 |
| Average Change (5-Year) | 6.9% | 2.2% | 5.1% | 1.2% |
| Average Change (10-Year) | 6.9% | 2.4% | 4.7% | 0.8% |
| Average Change (15-Year) | 6.2% | 2.1% | 4.0% | 0.4% |
| Average Change (19-Year) | 6.3% | 2.1% | 4.3% | (0.2)% |

** Earliest date available*

# Assumed Rate of Payroll Growth *(continued)*

- The following table summarizes the components of the current and recommended payroll growth assumption:

| Component | PERS (without Judges) and HPRS | | Judges | |
|---|---|---|---|---|
| | Current | Recommended | Current | Recommended |
| Inflation | 3.50% | 2.75% | 3.50% | 2.75% |
| Productivity | 1.00% | 1.25% | 0.50% | 0.75% |
| Total | 4.50% | 4.00% | 4.00% | 3.50% |

- We recommend changing the 4.50% payroll growth assumption for PERS and HPRS to 4.00%.
- We recommend changing the 4.00% payroll growth assumption for Judges to 3.50%.
- The Job Service Plan does not currently use a payroll growth assumption because there is no unfunded actuarial accrued liability. We recommend no change.

# Assumed Rate of Individual Salary Increases

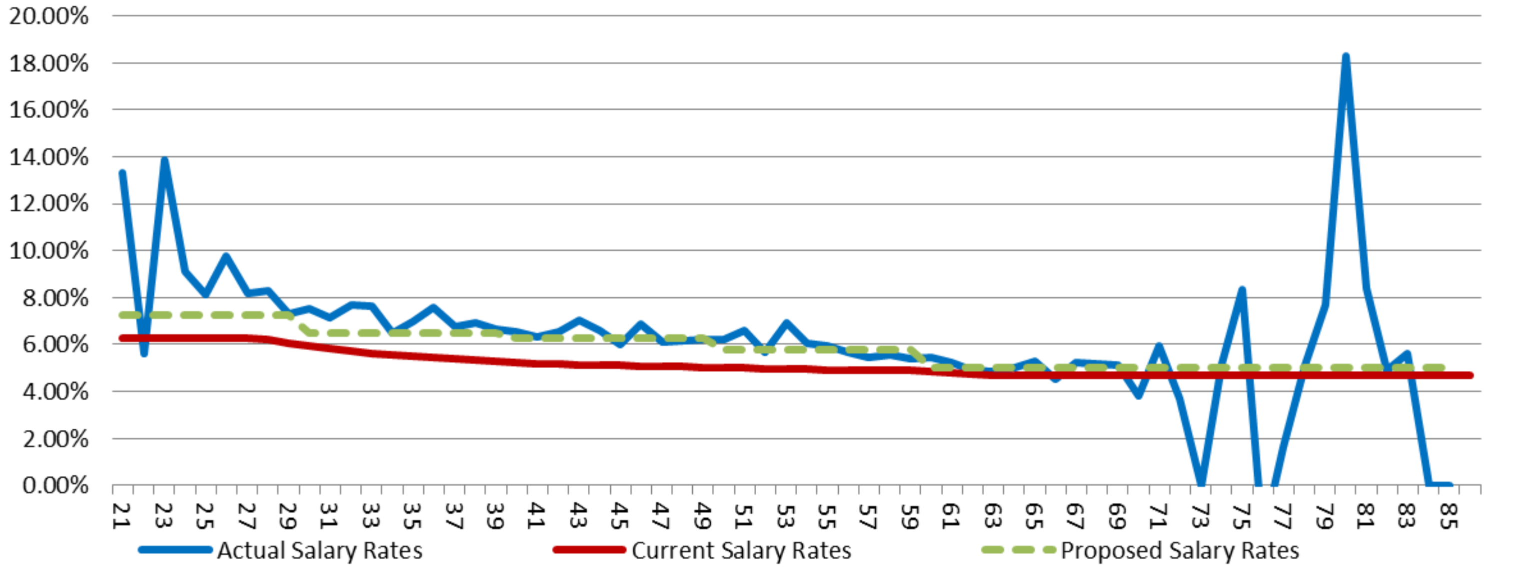
- Individual member salary increases components:
  - Inflation
  - Productivity
  - Promotional and merit increases
- Since promotional and merit increases are unique to each retirement system, as well as State vs. Non-State participants in the Main System, it is appropriate to base this assumption on recent experience.
  - We study the promotional and merit increases (plus productivity) separately from inflation.
  - Between 2009 and 2014, inflation averaged 2.0%.

# Assumed Rate of Individual Salary Increases *(continued)*

- The following tables compare the actual and expected individual salary increases over the past 5 years.
- Based on this experience and the fact that service and salary increases have been sources of losses for the past five years, we recommend changing the promotional and merit (and productivity) portion of individual salary increases.
- In the following pages, tables and graphs reviewing the total actual rates of increase, current assumptions and proposed assumptions for individual salary increase assumption by age or years of service, as appropriate, are summarized.

# Assumed Rate of Individual Salary Increases – Main System – State Employees

For participants with 3 or more years of service:

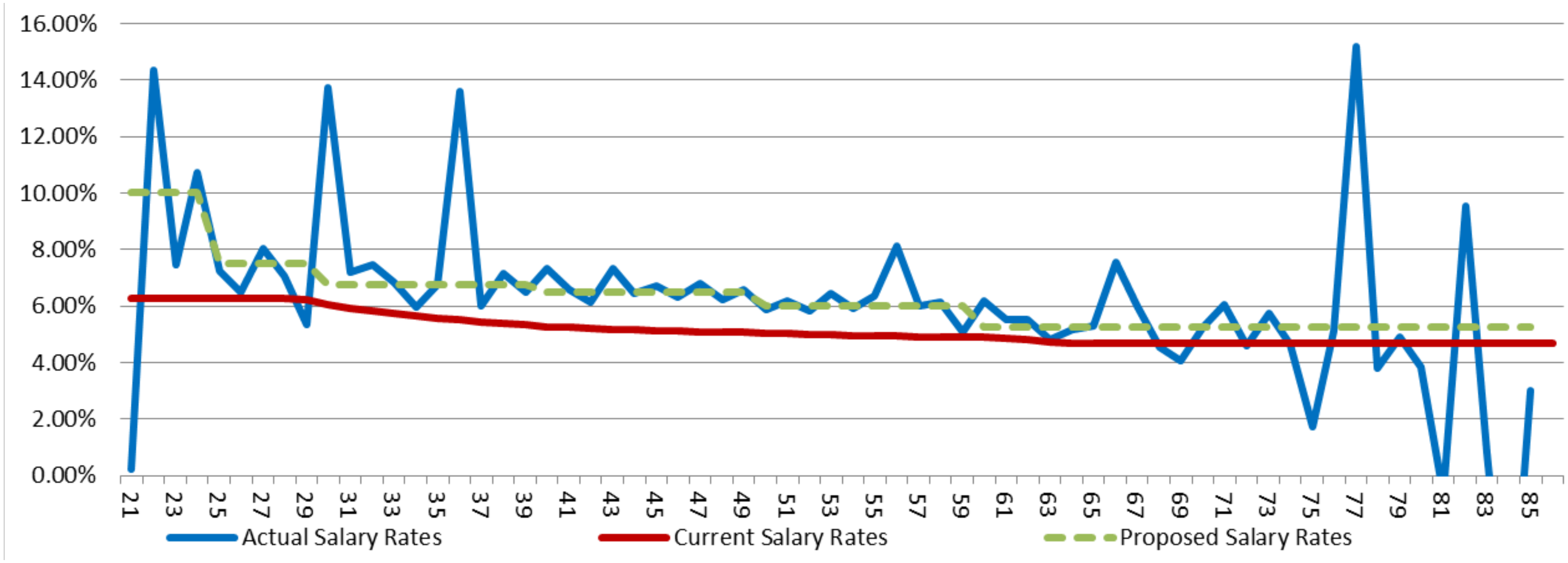



For participants with less than 5 years of service:

| Service Range | Actual Salary Increase Rate | Current Salary Increase Rate | Proposed Salary Increase Rate |
|---|---|---|---|
| Less than 1 | 32.62% | 8.25% | 12.00% |
| 1 | 13.20% | 7.25% | 9.50% |
| 2 | 7.88% | 6.75% | 7.25% |
| 3 | 7.19% | 6.50% | N/A |
| 4 | 7.02% | 6.25% | N/A |
| Weighted Average | 14.46% | 7.08% | 9.69% |

# Assumed Rate of Individual Salary Increases – Main System – Non-State Employees

For participants with 3 or more years of service:

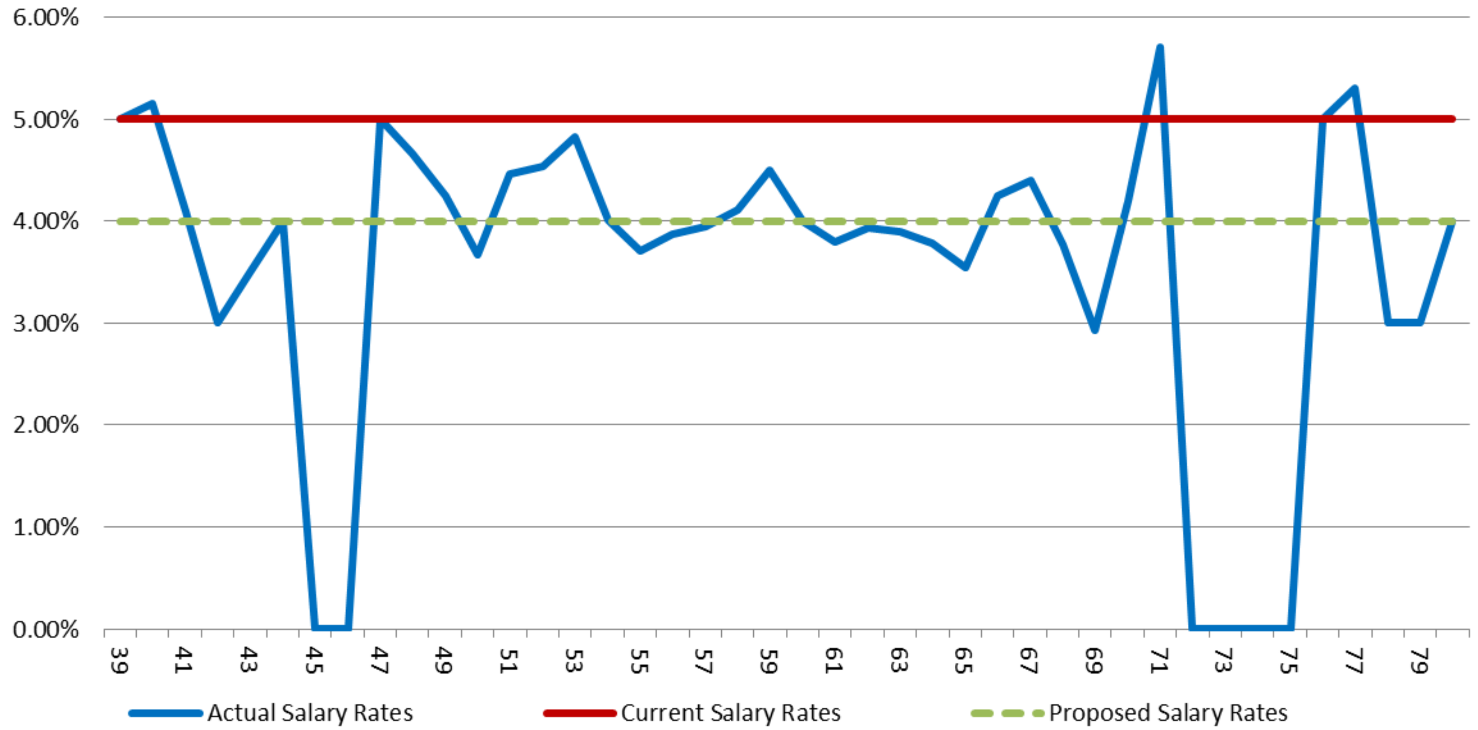



For participants with less than 5 years of service:

| Service Range | Actual Salary Increase Rate | Current Salary Increase Rate | Proposed Salary Increase Rate |
|---|---|---|---|
| Less than 1 | 54.90% | 8.25% | 15.00% |
| 1 | 11.18% | 7.25% | 10.00% |
| 2 | 9.32% | 6.75% | 8.00% |
| 3 | 7.51% | 6.50% | N/A |
| 4 | 7.38% | 6.25% | N/A |
| Weighted Average | 20.66% | 7.13% | 11.27% |

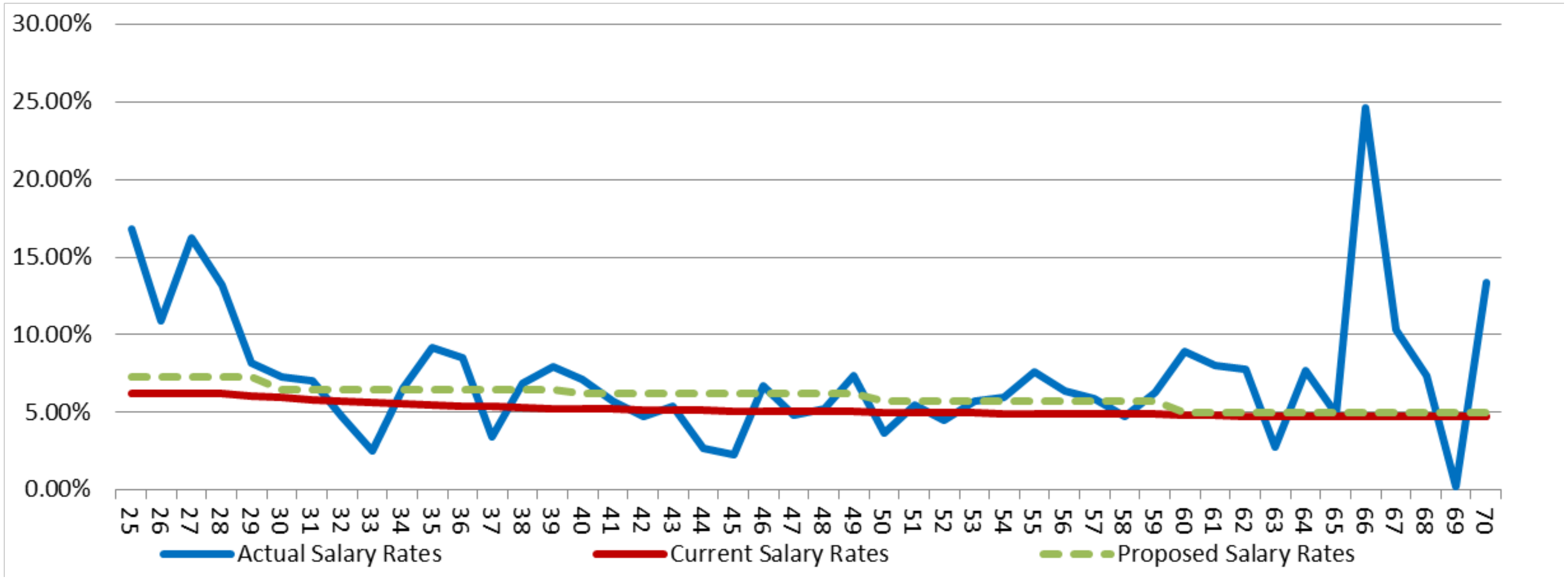
# Assumed Rate of Individual Salary Increases – Judges

For participants with 3 or more years of service:



# Assumed Rate of Individual Salary Increases – National Guard and Law Enforcement (with and without Prior Service)

For participants with 5 or more years of service:

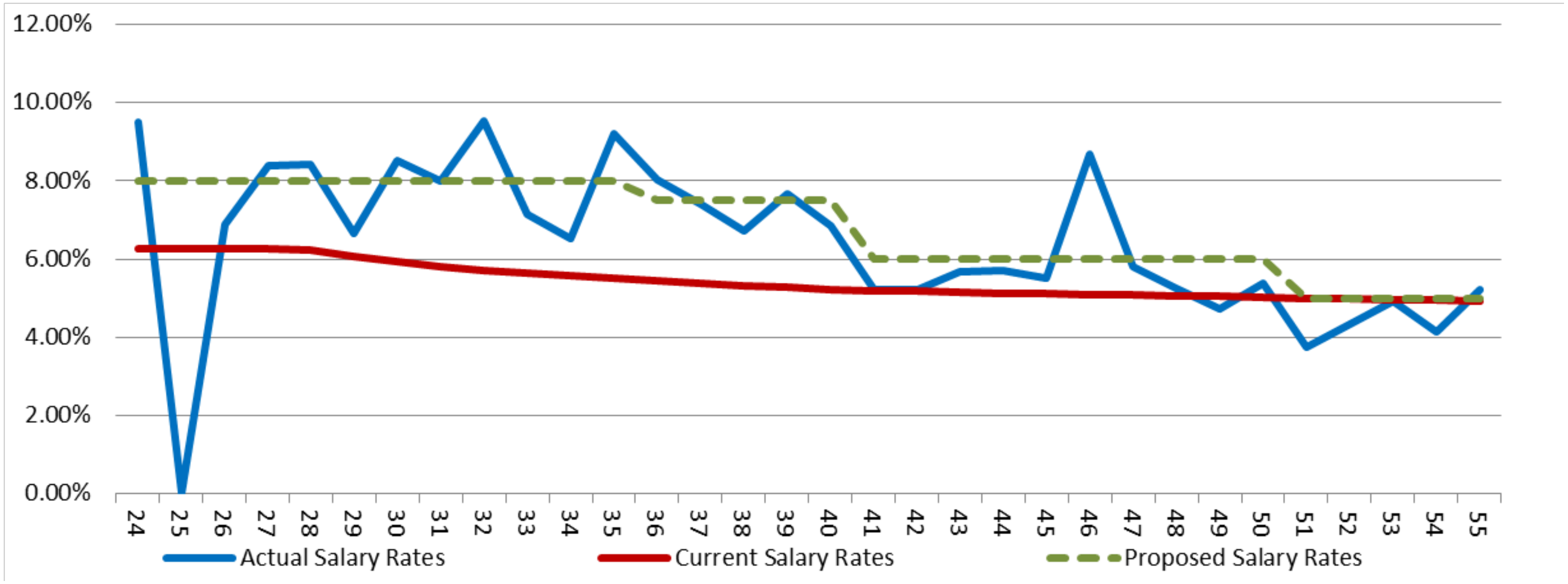



For participants with less than 5 years of service:

| Service Range | Actual Salary Increase Rate | Current Salary Increase Rate | Proposed Salary Increase Rate |
|---|---|---|---|
| Less than 1 | 32.97% | 8.25% | 20.00% |
| 1 | 19.08% | 7.25% | 20.00% |
| 2 | 24.53% | 6.75% | 20.00% |
| 3 | 7.95% | 6.50% | 10.00% |
| 4 | 10.88% | 6.25% | 10.00% |
| Weighted Average | 22.08% | 7.25% | 17.70% |

# Assumed Rate of Individual Salary Increases – Highway Patrolmen

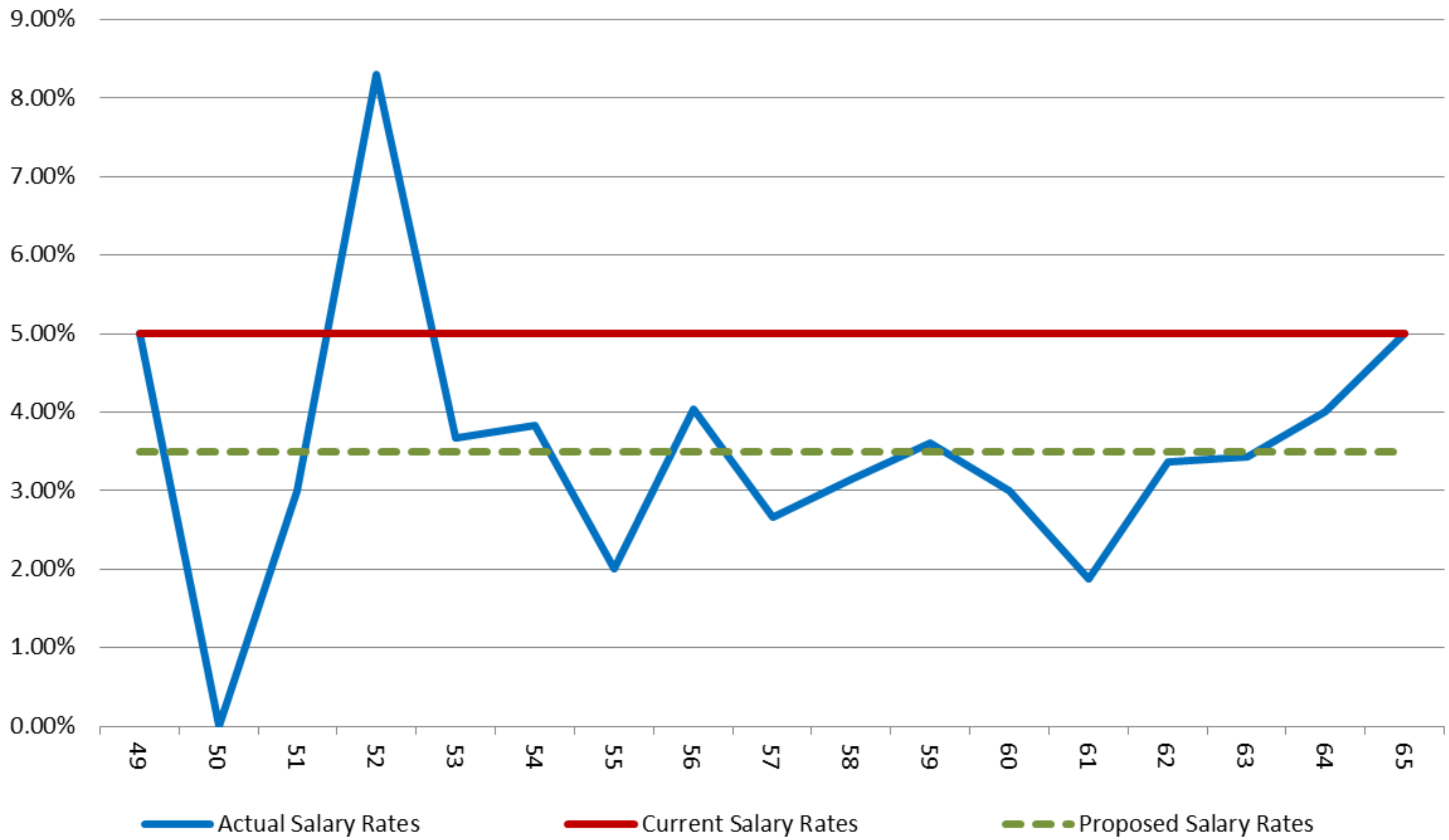
For participants with 3 or more years of service:




For participants with less than 5 years of service:

| Service Range | Actual Salary Increase Rate | Current Salary Increase Rate | Proposed Salary Increase Rate |
|---|---|---|---|
| Less than 1 | 21.30% | 8.25% | 15.00% |
| 1 | 10.57% | 7.25% | 10.00% |
| 2 | 7.90% | 6.75% | 8.00% |
| 3 | 7.81% | 6.50% | N/A |
| 4 | 8.15% | 6.25% | N/A |
| Weighted Average | 10.72% | 6.96% | 10.63% |

# Assumed Rate of Individual Salary Increases – Job Service



# Assumed Rate of Investment Return

- The current investment return assumption of 8.00% consists of two components:
  - Inflation: 3.50%
  - Real rate of return: 4.50%, net of investment expenses
    - Real return represents the excess of what the assets earn over inflation
    - Our approach is to analyze inflation and real return separately
- Currently, the assumed real rate of return is 4.50%, net of expected investment expenses, for all systems except Job Service. For Job Service, the assumed real rate of return is 4.50%, net of expected investment and administrative expenses.
  - For Job Service, we recommend removing the administrative expense from the investment return assumption and adding an explicit load to the normal cost. This approach is required by the Governmental Accounting Standards Board (GASB) for the purpose of producing liabilities used in financial statements.

# Assumed Rate of Investment Return *(continued)*

- The following table shows **administrative expenses** from the draft Statements of changes in Plan Net Position over the last 5 years:

| Year Ended June 30 | Main System | Judges | National Guard | Law Enforcement with Prior Service | Law Enforcement without Prior Service | Highway Patrolmen | Job Service |
|---|---|---|---|---|---|---|---|
| 2014 | $2,096,756 | $10,677 | $3,779 | $21,358 | $6,151 | $27,983 | $31,455 |
| 2013 | 2,021,249 | 10,911 | 4,041 | 14,499 | 8,614 | 29,237 | 30,014 |
| 2012 | 1,811,417 | 16,027 | 4,416 | 16,831 | 8,043 | 26,674 | 25,980 |
| 2011 | 1,763,346 | 9,393 | 3,966 | 14,766 | 5,816 | 22,734 | 26,368 |
| 2010 | 1,182,840 | 10,683 | 2,894 | 5,685 | 12,631 | 18,154 | 24,318 |
| Total | $8,875,608 | $57,691 | $19,096 | $73,112 | $41,255 | $124,782 | $138,135 |
| Average | $1,775,122 | $11,538 | $3,819 | $14,622 | $8,251 | $24,956 | $27,627 |
| Assumed | $1,100,000 | $7,500 | $3,000 | $2,500 | $7,500 | $18,000 | $0 |

- We recommend changing the administrative expense assumption to be equal to the prior year's administrative expenses plus inflation, which will be converted to a percentage of payroll in the actuarially determined contribution rate.
- This assumption will be updated each year.

# Assumed Rate of Investment Return *(continued)*

- We have based our analysis of the expected real rate of return on the "Survey of Capital Market Assumptions"*.
  - This survey compiles and averages the capital market assumptions of 23 investment consultants (including Callan and Segal Rogerscasey).
- The calculation of the expected real rate of return based on the survey assumptions are shown on the following slides.
- Note that expected arithmetic returns are used to determine the expected returns by asset class. The portfolio's expected geometric return is estimated by reducing the arithmetic return by half of the portfolio's expected variance.

* *Published by Horizon (2014 Edition)*

# Assumed Rate of Investment Return *(continued)*

| Asset Class | 20-Year Annual Arithmetic Real Return | Target Allocation | Weighted Real Return |
|---|---|---|---|
| US Equities Large Cap | 7.05% | 24% | 1.69% |
| US Equities Small/Mid Cap | 8.10% | 7% | 0.57% |
| Intl Equities Developed | 7.71% | 16% | 1.23% |
| Emerging Markets Equities | 10.24% | 5% | 0.51% |
| US Bonds Core | 2.48% | 12% | 0.30% |
| US Bonds High Yield | 4.71% | 5% | 0.24% |
| Intl Debt Developed | 2.05% | 5% | 0.10% |
| Cash Equivalents | 1.11% | 1% | 0.01% |
| Real Estate | 4.95% | 15% | 0.74% |
| Infrastructure | 6.16% | 5% | 0.31% |
| Private Equities | 10.97% | 5% | 0.55% |
| **Total** | | **100%** | **6.25%** |
| Adjustment to Geometric | | | (0.62)% |
| **Geometric Real Rate of Return** | | | **5.63%** |

# Assumed Rate of Investment Return *(continued)*

- Using the Fund's target asset allocation and the capital market assumptions from the survey, the expected real rate of return is 5.63%.
  - The expected real rate of return is reduced to account for investment expenses. We do not have specific data on the investment expenses, but for a plan this size, assuming 0.50% to account for investment expenses would be reasonable.
- The expected real rate of return is 5.13%, net of expected investment expenses of 0.50%.

| | |
|---|---|
| Gross Real Rate of Return | 5.63% |
| Less Investment Expenses | (0.50)% |
| Net Real Rate of Return | 5.13% |

# Assumed Rate of Investment Return *(continued)*

- Over a 20-year period, the Fund is expected to earn an annual real rate of return of at least 5.11% half of the time.
- Changing the expected real rate of return to 5.00% will increase the likelihood of meeting the expectation over a 20-year period to 52%.
- The following table shows the components of the current and recommended investment return assumption.

| Component | Current | Recommended | 50/50 | 8.00% | 7.50% |
|---|---|---|---|---|---|
| Inflation | 3.50% | 2.75% | 2.75% | 2.75% | 2.75% |
| Real Rate of Return, net of expenses | 4.50% | 5.13% | 5.13% | 5.13% | 5.13% |
| Risk Adjustment | (0.00)% | (0.13)% | (0.00)% | 0.12% | (0.38)% |
| Total | 8.00% | 7.75% | 7.88% | 8.00% | 7.50% |
| Confidence Level | N/A | 52% | 50% | 48% | 56% |

# Miscellaneous Economic Assumptions

- Interest Crediting Rate – Currently this rate is 7.5% for PERS and HPRS, 0.5% lower than the assumed investment return. The rate is 4.00% for Job Service. These rates are set by the Board. If the assumed investment return is changed, the Board may want to review whether these rates should be changed.

- Judges Disability Offset – Currently 50% of those who retire on a disability pension are assumed eligible for Social Security disability with a 3.5% per annum CPI, 5% per annum wage base increase and no Workers' Compensation offset. There have been no disability retirements from the Judges System in the past 5 years. However, since some of the components are economic, we recommend changing the CPI to 2.75% and the wage base increase to 4.25%.

# Miscellaneous Economic Assumptions *(continued)*

- Indexing Benefits of Inactive Vested Highway Patrolmen – Vested benefits are indexed at a rate set by the Retirement Board based on the increase in final average salary from date of termination to benefit commencement date, as shown below for the past 10 years:

| Year Beginning | Average Annual Increase | Three-Year Average Increase |
|---|---|---|
| 07/01/2005 | 4.00% | 1.33% |
| 07/01/2006 | 4.00% | 2.67% |
| 07/01/2007 | 4.00% | 4.00% |
| 07/01/2008 | 4.00% | 4.00% |
| 07/01/2009 | 5.00% | 4.33% |
| 07/01/2010 | 5.00% | 4.67% |
| 07/01/2011 | 2.00% | 4.00% |
| 07/01/2012 | 2.00% | 3.00% |
| 07/01/2013 | 3.00% | 2.33% |
| 07/01/2014 | 3.00% | 2.67% |
| Ten-year average | 3.10% | |

We recommend reducing the assumption from the current 4.50% to 4.00%.

# Miscellaneous Economic Assumptions *(continued)*

- Job Service COLA – The COLA increases for the past 10 years are as follows:

| Year Beginning | COLA |
|---|---|
| 07/01/2005 | 1.30% |
| 07/01/2006 | 4.60% |
| 07/01/2007 | 3.30% |
| 07/01/2008 | 2.24% |
| 07/01/2009 | 5.80% |
| 07/01/2010 | 0.00% |
| 07/01/2011 | 0.00% |
| 07/01/2012 | 3.30% |
| 07/01/2013 | 1.70% |
| 07/01/2014 | 1.50% |
| Ten-year average | 2.37% |

We recommend reducing the assumption from the current 5.00% to 3.00%.

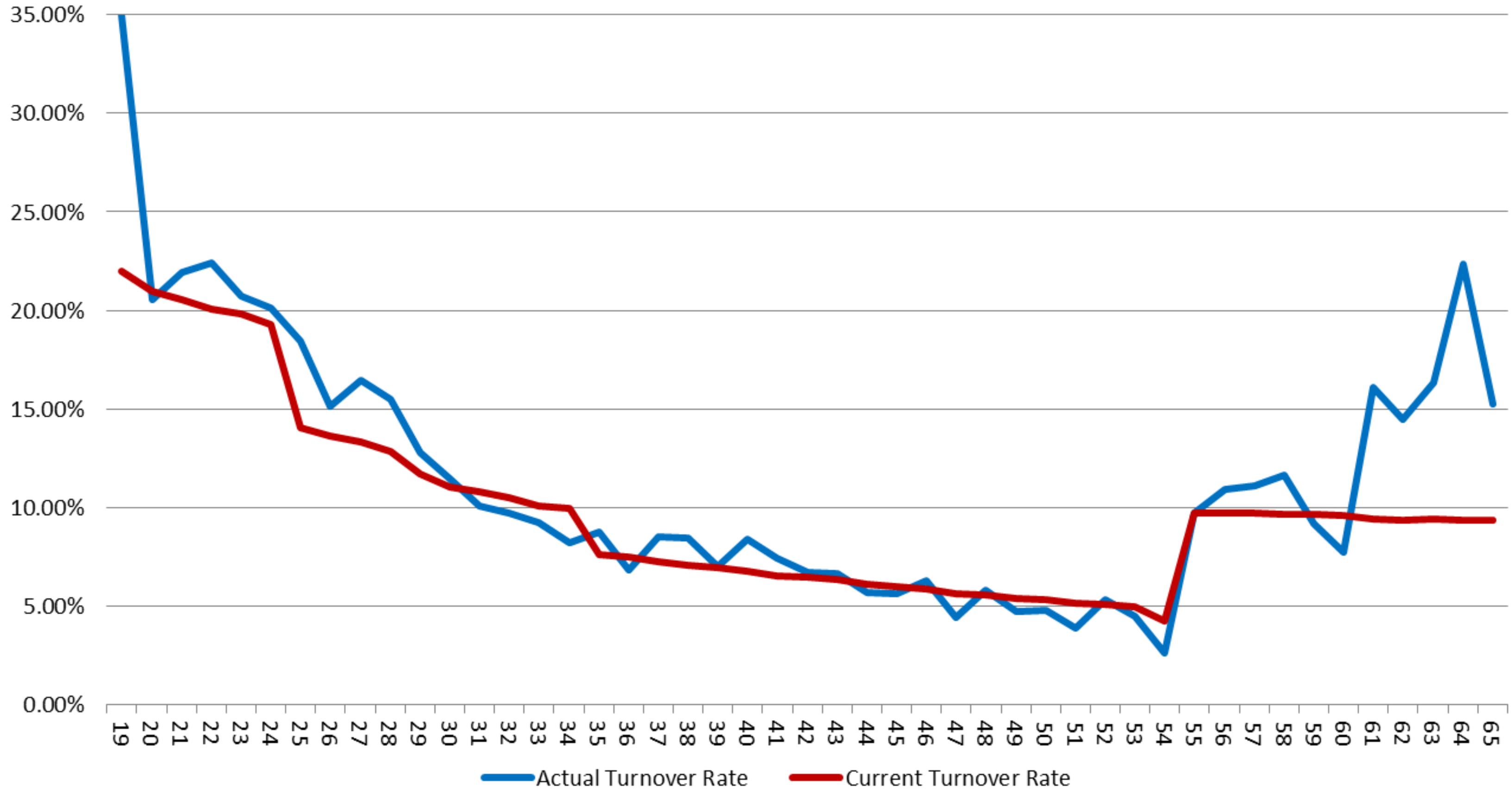
# Demographic Assumptions

- Termination
- Disability
- Retirement
- Death after retirement
- Death in active service
- Spouse information
- Miscellaneous

# Termination – All Systems

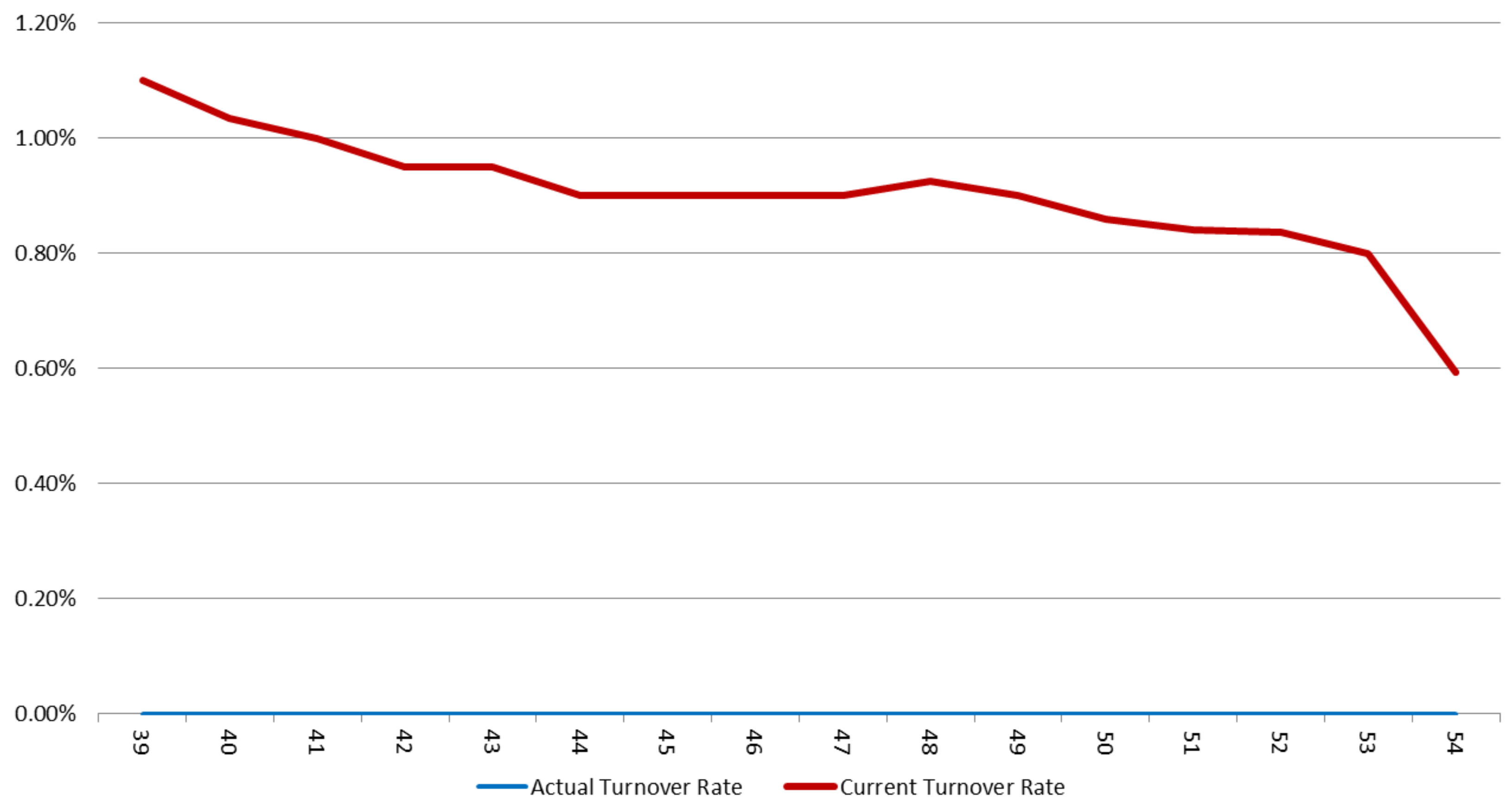
- Current rates are based on age, years of service and System.
- Experience is consistent with the expected rates for all systems except for Judges and National Guard.
- We recommend maintaining the current turnover rates for the Main System.
- No judges have terminated in the past ten years.  We recommend eliminating the turnover rates for Judges.
- While the National Guard System has experienced higher than expected turnover in recent years, we suspect that this is a short-term trend and recommend maintaining the current turnover rates that are used for Law Enforcement and National Guard.
- The graphs on the following pages show the actual, expected, and proposed termination rates based on years of service.
- As of July 1, 2014, all active participants in the Job Service plan had met eligibility for retirement.  Since the Plan is closed to new entrants, this decrement is no longer applicable in the Job Service plan.

# Termination – Main System



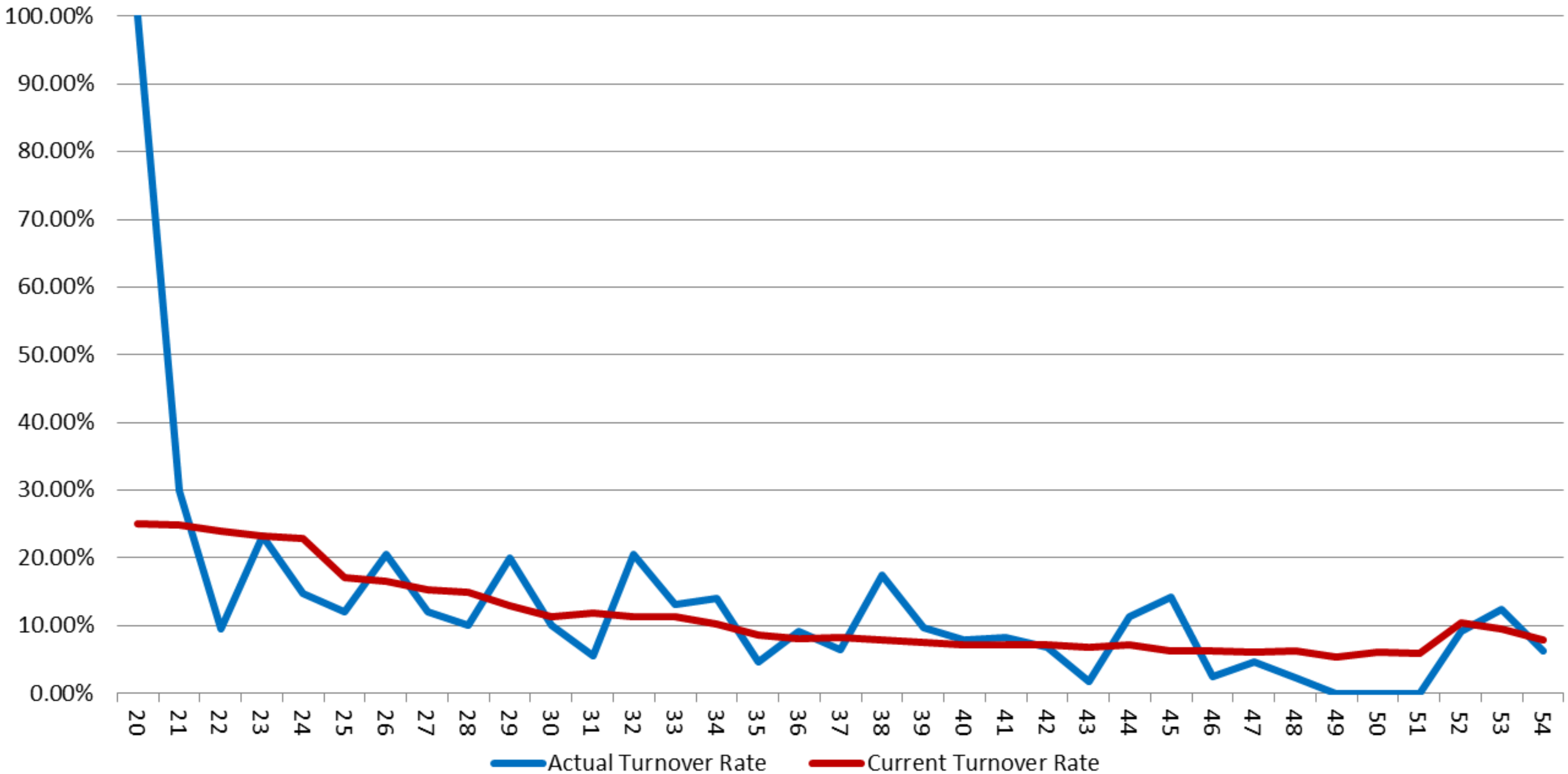

| Exposures | Actual Terminations | Expected Terminations | Actual to Expected | Proposed Terminations | Actual to Proposed |
|---|---|---|---|---|---|
| 76,375 | 6,271 | 5,999 | 105% | No change | No change |

# Termination – Judges




| Exposures | Actual Terminations | Expected Terminations | Actual to Expected | Proposed Terminations | Actual to Proposed |
|---|---|---|---|---|---|
| 93 | 0 | 1 | N/A | 0 | N/A |

# Termination – Law Enforcement*




| Exposures | Actual Terminations | Expected Terminations | Actual to Expected | Proposed Terminations | Actual to Proposed |
|---|---|---|---|---|---|
| 1,893 | 198 | 206 | 96% | No Change | No Change |

** Includes National Guard, Law Enforcement with Prior Service, Law Enforcement without Prior Service and Highway Patrol*

# Disability Retirement – All Systems

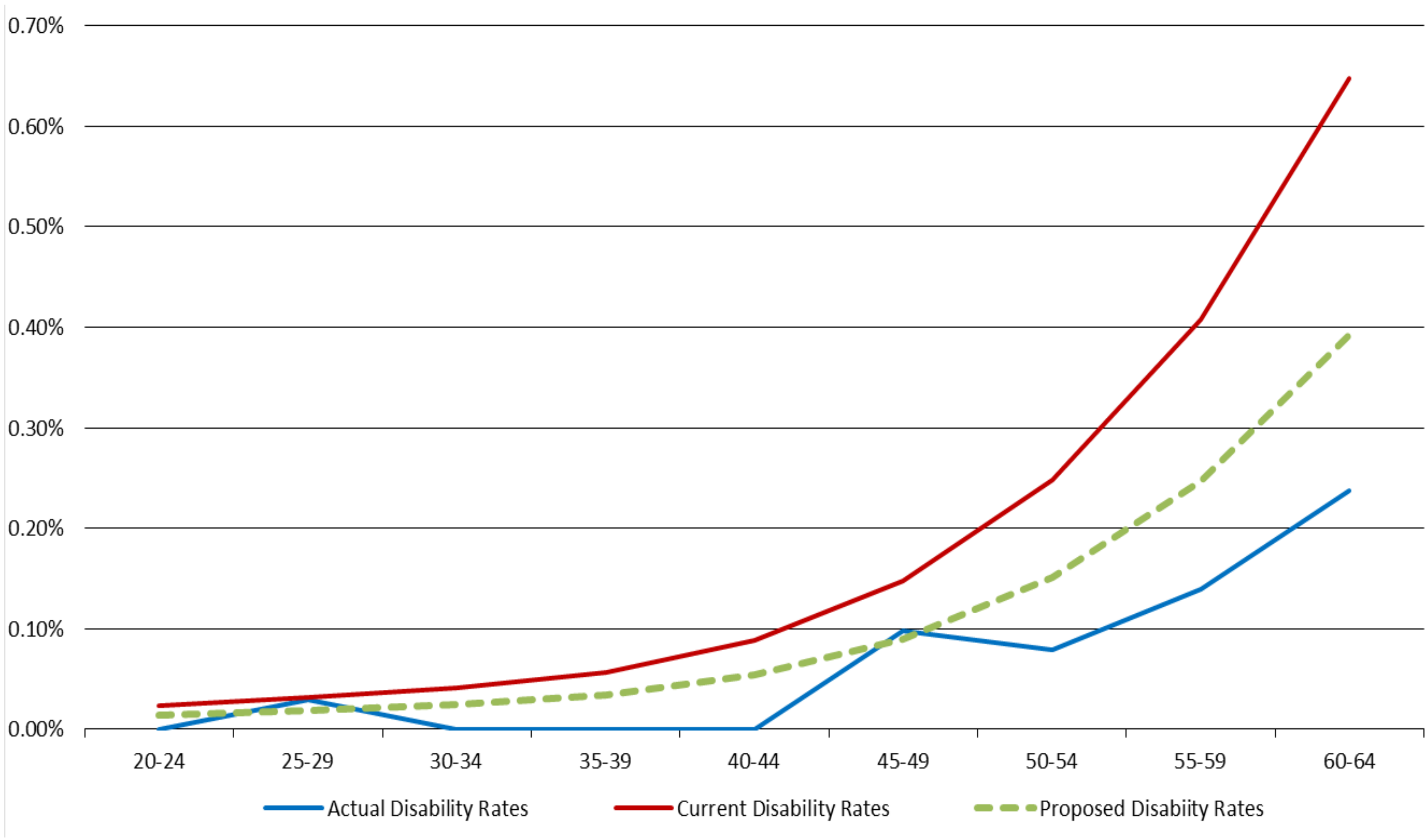
- Rates vary based on member's age.
- From 2009 to 2014:
  - 176 members were expected to start receiving a disability pension; and
  - 58 members actually started receiving a disability pension.
- The experience has been significantly lower than expected.
- From 2004 to 2009, there were 94 new disability pensions awarded.

# Disability Retirement – All Systems *(continued)*

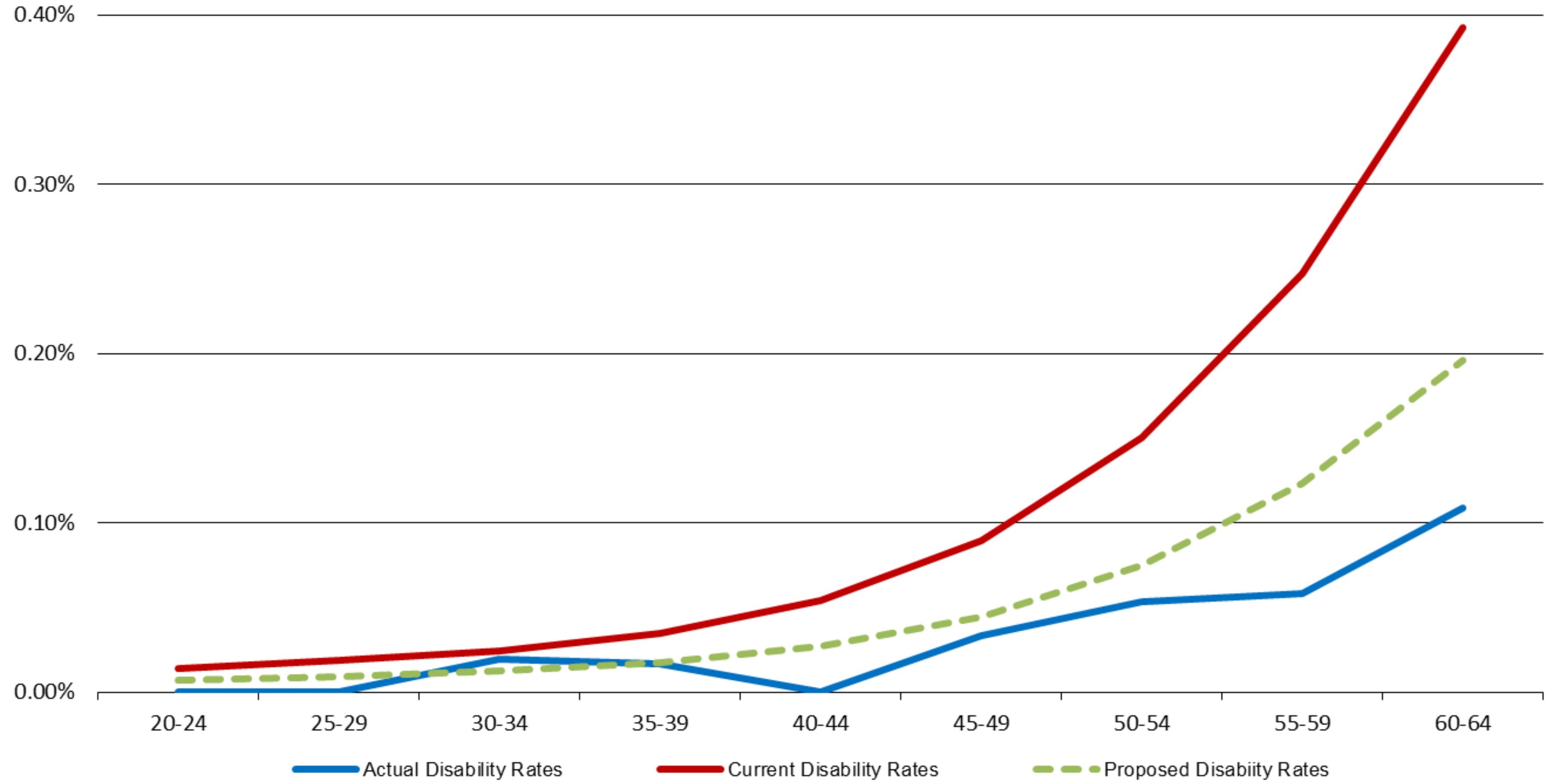
- We recommend lowering the disability rates for all PERS systems as shown below:

| Age | Males | | | Females | | |
|---|---|---|---|---|---|---|
| | Current Rate | Observed Rate | Proposed Rate | Current Rate | Observed Rate | Proposed Rate |
| 20 – 24 | 0.02% | 0.00% | 0.01% | 0.01% | 0.00% | 0.01% |
| 25 – 29 | 0.03% | 0.03% | 0.02% | 0.02% | 0.00% | 0.01% |
| 30 – 34 | 0.04% | 0.00% | 0.02% | 0.02% | 0.02% | 0.01% |
| 35 – 39 | 0.06% | 0.00% | 0.03% | 0.03% | 0.02% | 0.02% |
| 40 – 44 | 0.09% | 0.00% | 0.05% | 0.05% | 0.00% | 0.03% |
| 45 – 49 | 0.15% | 0.10% | 0.09% | 0.09% | 0.03% | 0.04% |
| 50 – 54 | 0.25% | 0.08% | 0.15% | 0.15% | 0.05% | 0.08% |
| 55 – 59 | 0.41% | 0.14% | 0.25% | 0.25% | 0.06% | 0.12% |
| 60 – 64 | 0.65% | 0.24% | 0.39% | 0.39% | 0.11% | 0.20% |

# Disability Retirement - Male



# Disability Retirement - Female

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# Retirement Eligibility

- Eligibility for reduced benefits
  - Main System – Age 55 with three years of service
  - Judges – Age 55 with five years of service
  - National Guard and Law Enforcement – Age 50 with three years of service
  - Highway Patrolmen – Age 50 with ten years of service
  - Job Service
    - Age 52 with five years of service
    - Age 50 with 20 years of service
    - Age 45 with 30 years of service

# Retirement Eligibility *(continued)*

- Eligibility for unreduced benefits
  - Main System and Judges - Age 65 or Rule of 85 (age plus service is greater than or equal to 85)
  - National Guard - Age 55 with three years of service
  - Law Enforcement - Age 55 with three years of service or Rule of 85
  - Highway Patrolmen - Age 55 with ten years of service or Rule of 80
  - Job Service
    - Age 62 with five years of service
    - Age 60 with 20 years of service
    - Age 55 with 30 years of service

# Active Member Retirements

- Current rates:
  - Vary based on member's age and system.
  - Vary depending on whether the member is eligible for a reduced or unreduced benefit in the Main System.
- We have analyzed retirement experience for the following groups:
  - Eligible for a reduced benefit.
  - Eligible for an unreduced benefit (in Main System).
- The retirement rates take into account each individual's eligibility requirements.

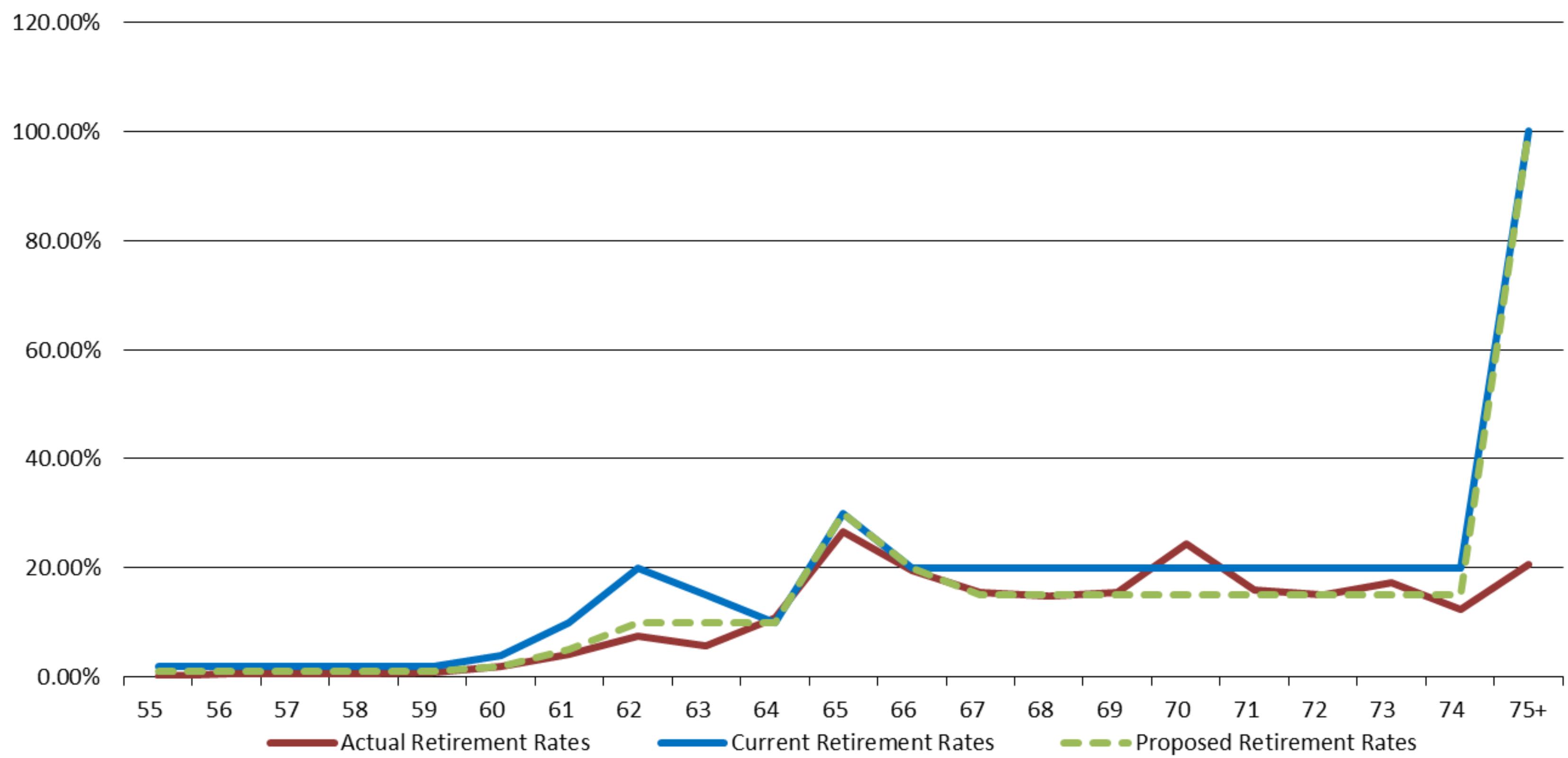
# Active Member Retirements – Summary of Experience

- Main System
  - While there were fewer retirements than expected for those eligible for unreduced retirements, the general pattern of retirements was similar to expected. We recommend minor changes to the rates.
  - There were fewer retirements than expected among those eligible for reduced retirement, so we recommend lower rates at most ages.
- Judges
  - There were fewer retirements than expected at older ages, so we recommend lower rates, primarily at older ages.
- National Guard and Law Enforcement
  - There has not been significant retirement experience, however, there have been more retirements than expected before age 55 and fewer retirements than expected after age 55. We recommend raising rates before age 55 and lowering the rates after age 55.

# Active Member Retirements – Summary of Experience *(continued)*

- Highway Patrolmen
  - There has not been significant retirement experience; however, there have been fewer retirements than expected and there are currently no active participants over age 55. We recommend lowering the rates before age 55.
- Job Service
  - There has not been significant retirement experience, and eligibility for unreduced benefits has not appeared to affect the retirement rates. There is only one active participant who had not reached eligibility for unreduced retirement as of July 1, 2014 valuation. We recommend consolidating to one table of retirement rates as shown on page 50.

# Active Member Retirements – Reduced Benefits for Main System




| Exposures | Actual Retirements | Expected Retirements | Actual to Expected | Proposed Retirements | Actual to Proposed |
|---|---|---|---|---|---|
| 21,975 | 1,143 | 2,033 | 56% | 1,512 | 76% |

# Active Member Retirements – Unreduced Benefits for Main System

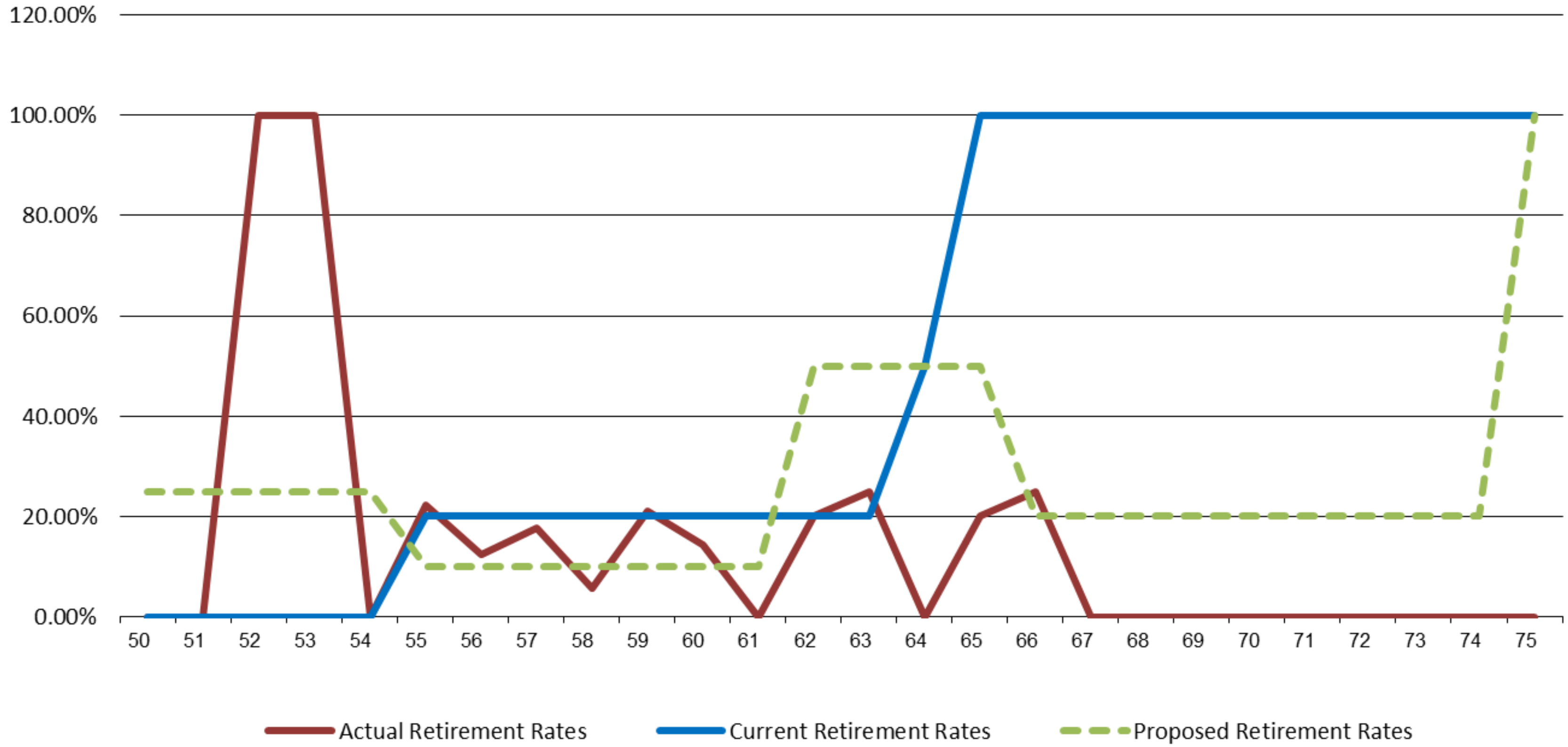

Due to the low number of participants eligible for Rule of 85 for ages less than 53, the difference between the actual and proposed rates is not statistically significant.

| Exposures | Actual Retirements | Expected Retirements | Actual to Expected | Proposed Retirements | Actual to Proposed |
|---|---|---|---|---|---|
| 6,239 | 869 | 1,102 | 79% | 883 | 98% |

# Active Member Retirements – Judges


| Exposures | Actual Retirements | Expected Retirements | Actual to Expected | Proposed Retirements | Actual to Proposed |
|---|---|---|---|---|---|
| 142 | 9 | 29 | 31% | 21 | 43% |

# Active Member Retirements – National Guard and Law Enforcement

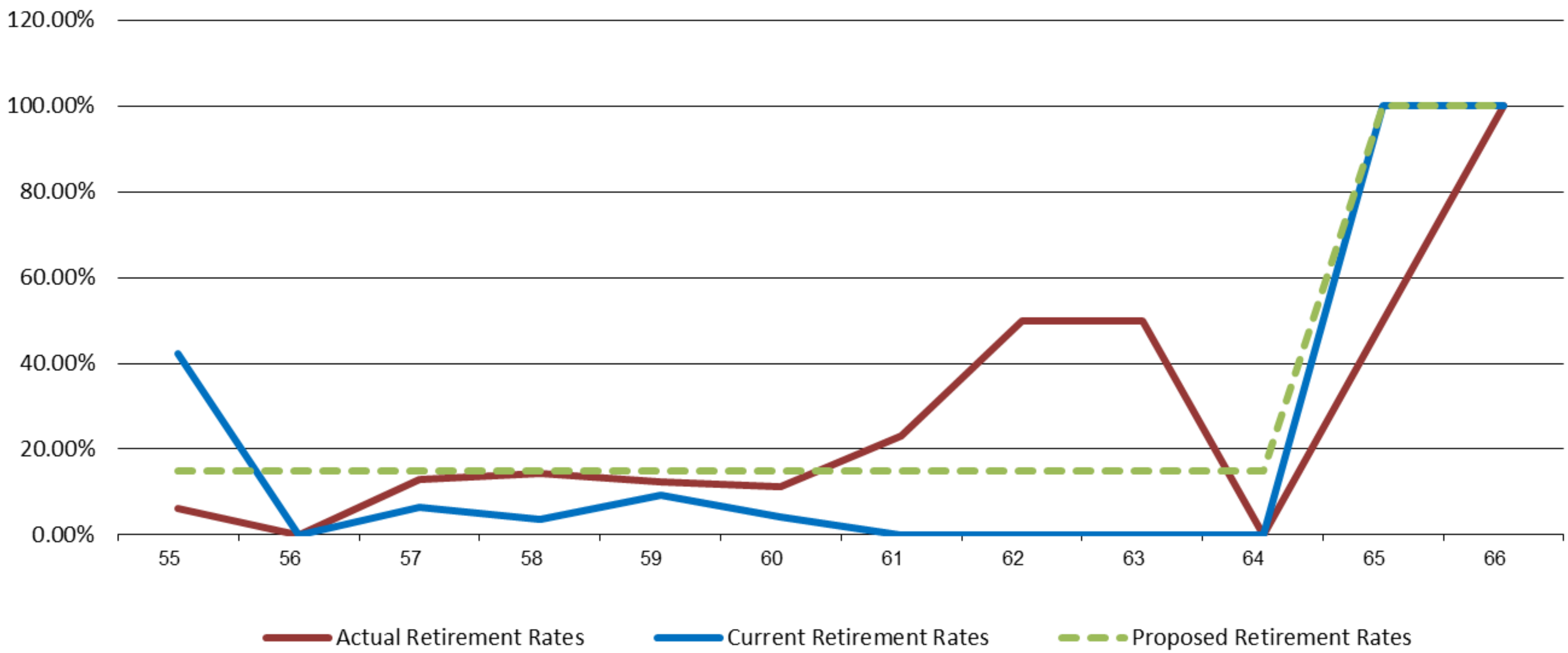



| Exposures | Actual Retirements | Expected Retirements | Actual to Expected | Proposed Retirements | Actual to Proposed |
|---|---|---|---|---|---|
| 159 | 27 | 45 | 60% | 29 | 93% |

# Active Member Retirements – Highway Patrolmen


| Exposures | Actual Retirements | Expected Retirements | Actual to Expected | Proposed Retirements | Actual to Proposed |
|---|---|---|---|---|---|
| 59 | 9 | 20 | 45% | 14 | 64% |

# Active Member Retirements – Job Service




| Exposures | Actual Retirements | Expected Retirements | Actual to Expected | Proposed Retirements | Actual to Proposed |
|---|---|---|---|---|---|
| 139 | 18 | 14 | 129% | 23 | 78% |

**Current retirement rate age bands are shown as zero for groups with no exposures.**

# Inactive Vested Retirements

- The current assumption is that all inactive vested members will retire as follows:
  - Main System and Judges - Earlier of Age 64 and Unreduced Retirement Age
  - National Guard and Highway Patrol - Age 55
  - Law Enforcement - Earlier of Age 55 and Unreduced Retirement Age
  - Job Service – at first optional retirement age
- Main System:
  - From 2009 to 2014, of the 7,513 inactive vested members eligible to commence benefits, 945 elected to retire. Of these, 411 retired with reduced benefits.
  - We recommend a change to retirement rates consistent with those used for active participants.
  - There is a small subsidy in the early retirement benefit, so this approach is more conservative.
  - This approach should better reconcile the cash flow projections with actual benefit payments.

| Exposures | Actual Retirements | Expected Retirements | Actual to Expected |
|---|---|---|---|
| 7,513 | 945 | 1,560 | 61% |

# Inactive Vested Retirements *(continued)*

- Systems other than Main
  - There were very few inactive vested participants in the other systems who were eligible to retire and even fewer that actually retired.
  - We recommend a change to the retirement rates consistent with those used for active participants.

# Death After Retirement (Non-Disabled) - All Systems

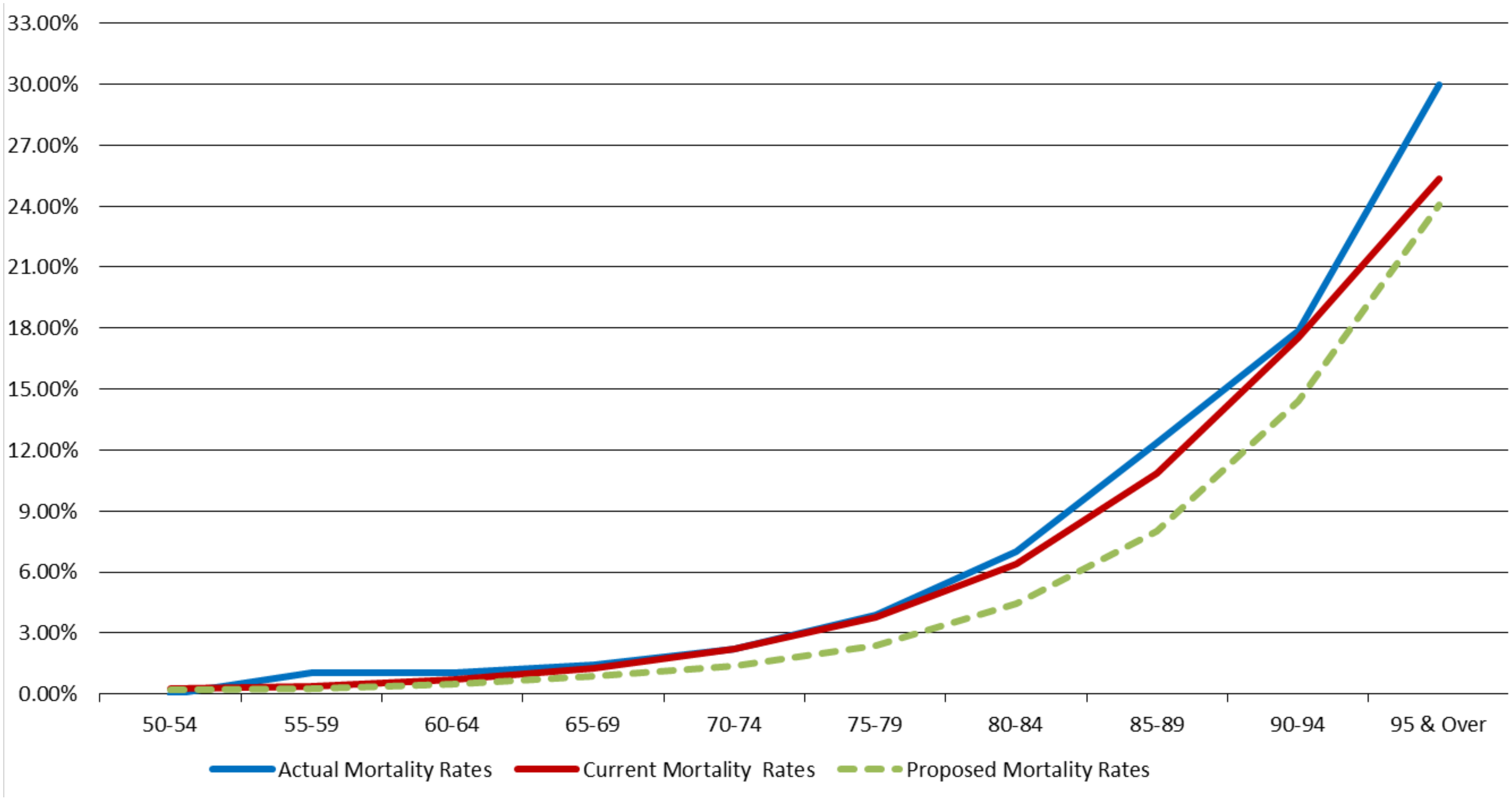
- Rates vary based on gender and age of the annuitant.
- Experience for non-disabled annuitants has been fairly consistent with the current assumption.
- The current male mortality assumption has more than sufficient margin for future mortality improvement. The ratio of actual to expected deaths is 121%. However, the margin in the female mortality assumption has deteriorated to 0%.
- To account for future mortality improvement, we recommend applying the generational mortality improvement scale (SSA 2014 Intermediate Cost) from 2014, for both males and females, and revising the non-disabled mortality assumption for males by changing the setback of the RP-2000 Mortality Table from 3 years to 2 years to reduce the current margin.

# Life Expectancies

- The following table shows the future life expectancy (and expected age at death) at various ages using the current and recommended mortality tables, based on age in 2014.

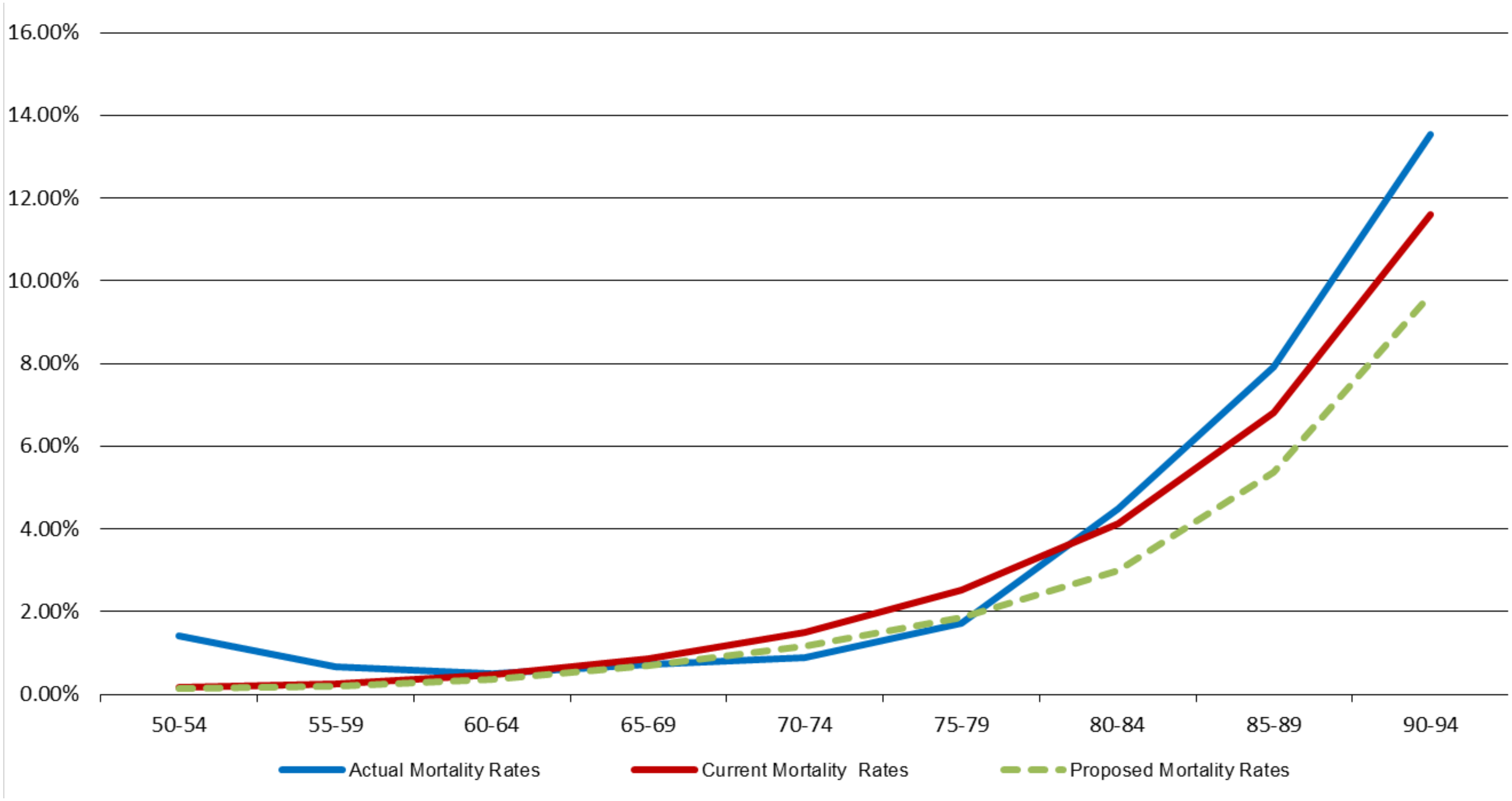
| | Male | | Female | |
|---|---|---|---|---|
| Age | Current | Proposed | Current | Proposed |
| 50 | 33.7 (83.7) | 34.8 (84.8) | 36.5 (86.5) | 38.6 (88.6) |
| 55 | 29.0 (84.0) | 29.8 (84.8) | 31.8 (86.8) | 33.5 (88.5) |
| 60 | 24.4 (84.4) | 25.0 (85.0) | 27.1 (87.1) | 28.6 (88.6) |
| 65 | 20.1 (85.1) | 20.4 (85.4) | 22.7 (87.7) | 23.8 (88.8) |
| 70 | 16.1 (86.1) | 16.2 (86.2) | 18.6 (88.6) | 19.4 (89.4) |
| 75 | 12.5 (87.5) | 12.4 (87.4) | 14.8 (89.8) | 15.4 (90.4) |
| 80 | 9.4 (89.4) | 9.2 (89.2) | 11.5 (91.5) | 11.9 (91.9) |

# Death After Retirement (Non-Disabled) – Male




| Exposures | Actual Deaths | Expected Deaths | Actual to Expected |
|---|---|---|---|
| 14,484 | 546 | 452 | 83% |

# Death After Retirement (Non-Disabled) – Female




| Exposures | Actual Deaths | Expected Deaths | Actual to Expected |
|---|---|---|---|
| 19,622 | 483 | 485 | 100% |

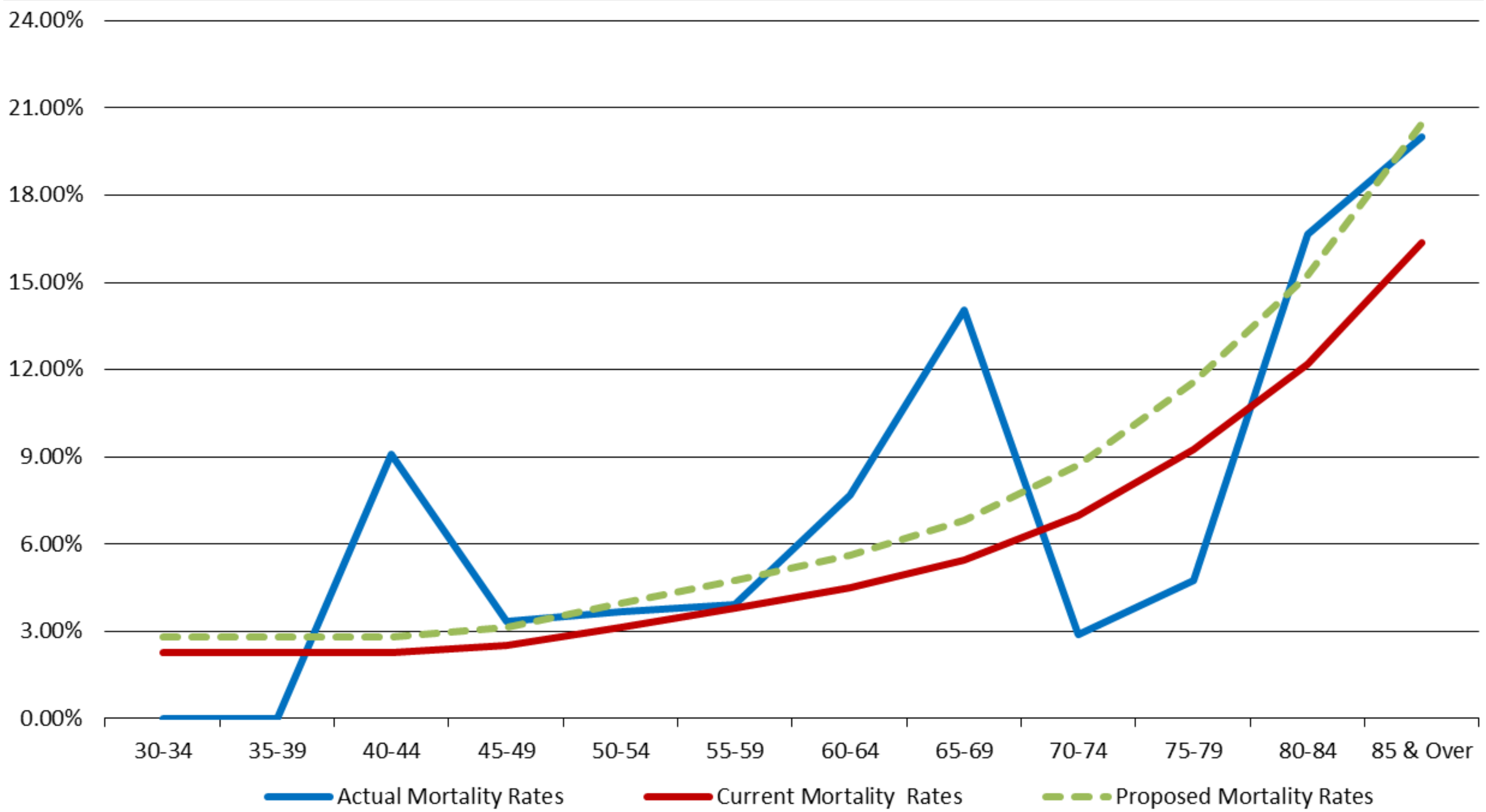
# Death After Retirement (Disabled)

- Rates vary based on gender and age of the annuitant.

- Experience for disabled annuitants has been higher than expected using the current assumption. The ratio of actual to expected deaths is 145%, so there is more than sufficient margin for future mortality improvement.

- We recommend adjusting the current disability mortality table, RP-2000 Disabled Mortality Table, by increasing the mortality rates 25% to match the Fund’s experience and build in sufficient margin for future mortality improvement.

# Death After Retirement (Disabled) – Male




| Exposures | Actual Deaths | Expected Deaths | Actual to Expected | Proposed Deaths | Actual to Proposed |
|---|---|---|---|---|---|
| 800 | 59 | 45 | 131% | 56 | 105% |

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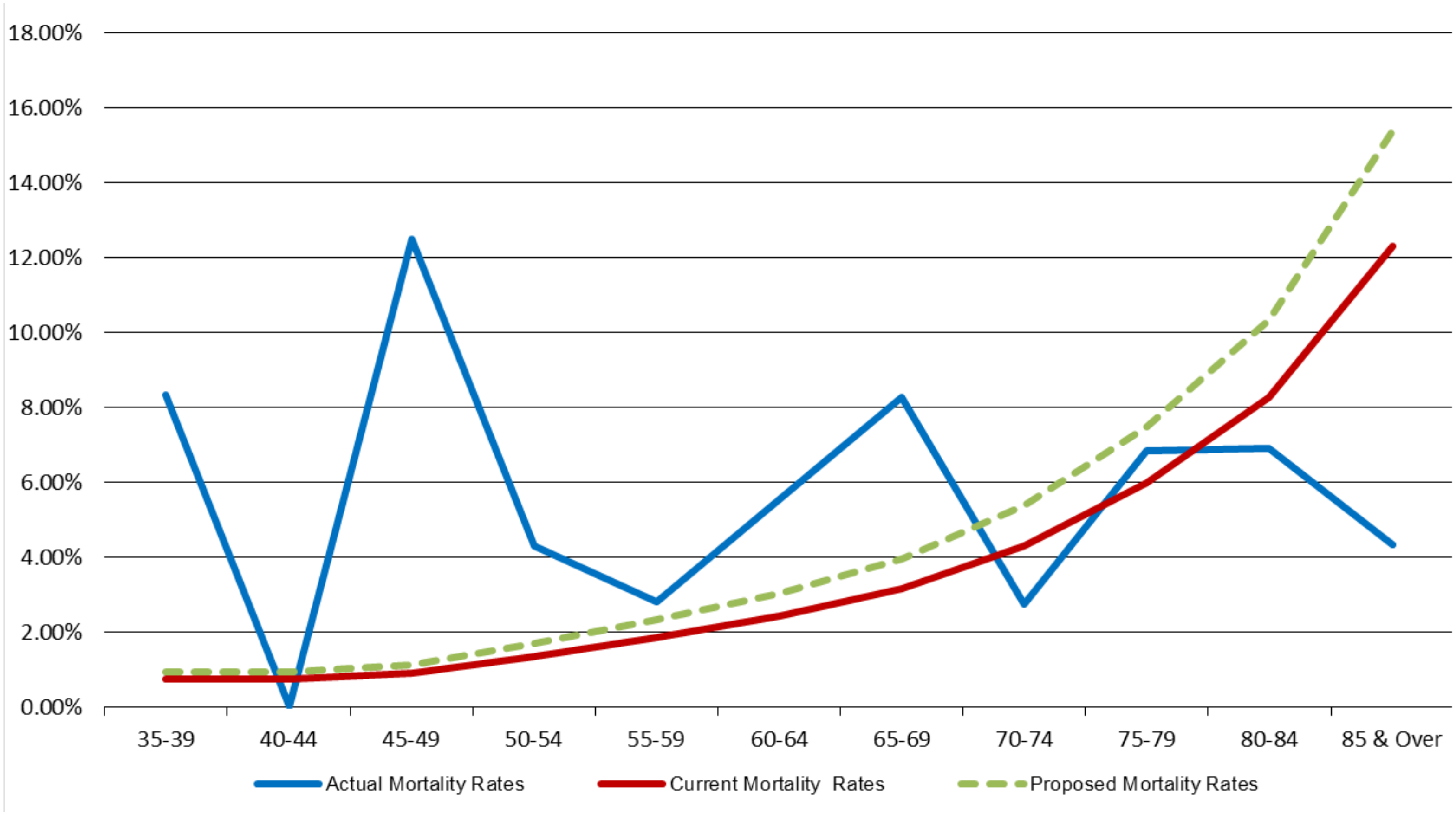
# Death After Retirement (Disabled) – Female




| Exposures | Actual Deaths | Expected Deaths | Actual to Expected | Proposed Deaths | Actual to Proposed |
|---|---|---|---|---|---|
| 949 | 50 | 30 | 167% | 38 | 132% |

# Death In Active Service

- Mortality rates apply to active members
- Very few members die in active service.
  - Liability associated with active death is a small percentage of the total liability
  - Plan experience is insufficient to set an assumption
- Since we are adjusting the current RP-2000 Mortality Table for retired lives, we recommend using the same adjusted table for active members.

# Spouse Information - PERS

- Current assumptions:
  - 100% of Judges, 80% of non-Judge male and 65% of non-Judge female members are married.
  - Male spouses are three years older than female spouses.
  - 100% of spouses are of opposite gender.
- We have limited data on spouse information.  The above assumptions are reasonable and similar to those used by other retirement systems.
- We recommend changing the percent married to 75%, for all members except Judges, to be consistent with similar plans.  We recommend no change to the assumption for Judges.
- In addition, all optional forms of payment are actuarially equivalent, so these assumptions are not materially relevant in the calculation of liabilities. However, the assumptions do have a significant effect on the projections of future cash flow.
- If the Benefit Election assumption we are recommending (see page 64) is adopted, the spousal assumptions will only be used for death benefits.

# Spouse Information – Highway Patrol

- Current assumptions:
  - 90% of members are married.
  - Male spouses are three years older than female spouses.
  - 100% of spouses are of opposite gender.
- We have limited data on spouse information. The above assumptions are reasonable and similar to those used by other retirement systems. However, 95% of the retirees are taking joint and survivor annuities.
- We recommend changing the percent married to 100% for all participants.
- All optional forms of payment are actuarially equivalent, so these assumptions are not materially relevant in the calculation of liabilities. However, the assumptions do have a significant effect on the projections of future cash flow.
- If the Benefit Election assumption we are recommending (see page 64) is adopted, the spousal assumptions will only be used for death benefits.

# Spouse Information – Job Service

- Current assumptions:
  - 85% of members are married.
  - Male spouses are four years older than female spouses.
  - 100% of spouses are of opposite gender.
- We have limited data on spouse information.  The above assumptions are reasonable and similar to those used by other retirement systems.
- We recommend no change to the assumption for Job Service.
- All optional forms of payment are actuarially equivalent, so these assumptions are not materially relevant in the calculation of liabilities. However, the assumptions do have a significant effect on the projections of future cash flow.
- If the Benefit Election assumption we are recommending (see page 65) is adopted, the spousal assumptions will only be used for death benefits.

# Miscellaneous Assumptions

- Benefit Election – Currently 100% of married participants are assumed to elect the 50% joint & survivor annuity and 100% of the unmarried participants are assumed to elect the life annuity in the PERS and HPRS Systems. PERS experience, except Judges, shows that of those eligible for retirement, 50% of the population elect the life annuity, 42% elect a joint and survivor option, 6% elect a refund of employee contributions and 2% elect other options. We recommend changing this assumption for all PERS systems except Judges, as follows:

| | |
|---|---|
| 50% | elect life annuities |
| 45% | elect 50% joint and survivor annuities |
| 5% | elect refund of employee contributions |

  Judges System experience shows that all retirees have elected a joint and survivor annuity. We recommend changing the assumption for Judges to all members elect 50% joint and survivor annuities.

  HPRS experience shows that 95% of all retirees have elected a joint and survivor annuity. We recommend changing the assumption for HPRS to all members elect 50% joint and survivor annuities.

# Miscellaneous Assumptions *(continued)*

- Benefit Election *(continued)* – Currently in the Job Service plan, all participants are assumed to elect the 10-year certain and life annuity. Experience shows that 55% of participants elect the 10-year certain and life annuity and 45% of participants elect the 55% joint and survivor annuity. We recommend changing the assumption to 55% elect the 10-year certain and life annuity and 45% elect the 55% joint and survivor annuity.

- Refund of Employee Contributions (PERS and HPRS) – The current assumption is that vested members terminating from employment will elect a refund of contributions only when the member account balance has a higher value than the annuity they will forfeit by taking a refund. This assumption is consistent with the experience. Of the 559 PERS members who took a refund of employee contributions in fiscal year ending June 30, 2014, only 121 members were vested and only 19 members had 10 or more years of service. We do not recommend changing the assumption regarding which members elect the refund for the PERS systems and HPRS.

# Miscellaneous Assumptions *(continued)*

- Refund of Employee Contributions (PERS and HPRS) *(continued)* - Of the participants who do not take the refund of the employee contributions in PERS, 100% of married participants are assumed to elect the 50% joint and survivor annuity and 100% of unmarried participants are assumed to elect the life annuity. However, we recommend changing the election assumption in the PERS systems for those who do not take the refund of employee contributions to 50% elect life annuities and 50% elect joint and survivor annuities. We recommend no change in this assumption for HPRS.
- Account Balance due to Vested Employer Contributions (PEP) (PERS only) – The current assumption is 100% of those who have contributed to a deferred compensation program will continue to do so, but those who have not contributed will not contribute in the future. Experience shows 37% of the July 1, 2014 active population was contributing to a deferred compensation plan, and only 2% of the continuing actives began contributing during the 2013-2014 plan year. Therefore, we do not recommend changing this assumption.

# Funding Policy

- Funding Method - The current method used for all plans except Job Service is the Entry Age Cost Method determined as if the current benefit accrual rate had always been in effect. We recommend changing the cost method to the Entry Age Cost Method determined based on the same benefit terms reflected in each employee's actuarial present value of projected benefit payments. Our recommendation brings the cost method in line with the cost method required by GASB.

- Asset Valuation Method – The current Asset Method recognizes 20% of each year's total appreciation (depreciation) beginning with the year of occurrence. After 5 years the appreciation (depreciation) is fully recognized. There is no corridor test that limits how far the actuarial value of assets can deviate from the market value of assets. We are not recommending any changes in the asset valuation method at this time.

# Funding Policy *(continued)*

- Amortization of Unfunded Actuarial Accrued Liability (UAAL) - For PERS and HPRS, the Board policy is to amortize the UAAL over an open period of 20 years. **Frequently under this method the UAAL is never paid off, and may increase before it declines. While this is an acceptable method of making payments toward the UAAL, the Board should verify that the method fits with its funding policy goals.**

  The annual payments are determined as a level percent of payroll with payroll expected to increase. The increase, prior to our new recommendations on page 13, was 4.5% per year (4.0% for Judges). Our recommendation is to change the payroll increase to 4.0% per year (3.5% for Judges).

  We recommend that a detailed funding policy review be conducted in the near future to ensure that the funding policy elements meet the Board's objectives.

# Summary of Economic Assumptions – Main System

| Assumption | Current | Proposed |
|---|---|---|
| Inflation | 3.50% | 2.75% |
| Productivity | 1.00% | 1.25% |
| Payroll Growth | 4.50% | 4.00% |
| Salary Scale | Merit rates based on age and years of service plus inflation and productivity. | Less than 3 years of employment:<br>State / Non-State<br>First: 12.00% / 15.00%<br>Second: 9.50% / 10.00%<br>Third: 7.25% / 8.00%<br><br>Remaining years based on age:<br>State / Non-State<br>Ages 18-24: 7.25% / 10.00%<br>Ages 25-29: 7.25% / 7.50%<br>Ages 30-39: 6.50% / 6.75%<br>Ages 40-49: 6.25% / 6.50%<br>Ages 50-59: 5.75% / 6.00%<br>60 & Over: 5.00% / 5.25% |
| Investment Return | 8.00% | 7.75% |
| Administrative Expense | $1,100,000 | Explicit load to normal cost equal to prior year administrative expenses plus inflation. |

# Summary of Economic Assumptions - Judges

| Assumption | Current | Proposed |
|---|---|---|
| Inflation | 3.50% | 2.75% |
| Productivity | 0.50% | 0.75% |
| Payroll Growth | 4.00% | 3.50% |
| Salary Scale | 5% for all years | 4% for all years |
| Investment Return | 8.00% | 7.75% |
| Administrative Expense | $7,500 | Explicit load to normal cost equal to prior year administrative expenses plus inflation. |

# Summary of Economic Assumptions – National Guard

| Assumption | Current | Proposed |
|---|---|---|
| Inflation | 3.50% | 2.75% |
| Productivity | 1.00% | 1.25% |
| Payroll Growth | 4.50% | 4.00% |
| Salary Scale | Merit rates based on age and years of service plus inflation and productivity. | Less than 3 years: 20%<br>4 to 5 years: 10%<br><br>Remaining years based on age:<br>Ages 18 - 29: 7.25%<br>Ages 30 - 39: 6.50%<br>Ages 40 - 49: 6.25%<br>Ages 50 - 59: 5.75%<br>60 & Over: 5.00% |
| Investment Return | 8.00% | 7.75% |
| Administrative Expense | $3,000 | Explicit load to normal cost equal to prior year administrative expenses plus inflation. |

# Summary of Economic Assumptions – Law Enforcement with Prior Service

| Assumption | Current | Proposed |
|---|---|---|
| Inflation | 3.50% | 2.75% |
| Productivity | 1.00% | 1.25% |
| Payroll Growth | 4.50% | 4.00% |
| Salary Scale | Merit rates based on age and years of service plus inflation and productivity. | Less than 3 years: 20%<br>4 to 5 years: 10%<br><br>Remaining years based on age:<br>Ages 18 - 29: 7.25%<br>Ages 30 - 39: 6.50%<br>Ages 40 - 49: 6.25%<br>Ages 50 - 59: 5.75%<br>60 & Over: 5.00% |
| Investment Return | 8.00% | 7.75% |
| Administrative Expense | $2,500 | Explicit load to normal cost equal to prior year administrative expenses plus inflation. |

# Summary of Economic Assumptions – Law Enforcement without Prior Service

| Assumption | Current | Proposed |
|---|---|---|
| Inflation | 3.50% | 2.75% |
| Productivity | 1.00% | 1.25% |
| Payroll Growth | 4.50% | 4.00% |
| Salary Scale | Merit rates based on age and years of service plus inflation and productivity. | Less than 3 years: 20%<br>4 to 5 years: 10%<br><br>Remaining years based on age:<br>Ages 18 - 29: 7.25%<br>Ages 30 - 39: 6.50%<br>Ages 40 - 49: 6.25%<br>Ages 50 - 59: 5.75%<br>60 & Over: 5.00% |
| Investment Return | 8.00% | 7.75% |
| Administrative Expense | $7,500 | Explicit load to normal cost equal to prior year administrative expenses plus inflation. |

# Summary of Economic Assumptions – Highway Patrolmen

| Assumption | Current | Proposed |
|---|---|---|
| Inflation | 3.50% | 2.75% |
| Productivity | 1.00% | 1.25% |
| Payroll Growth | 4.50% | 4.00% |
| Salary Scale | Merit rates based on age and years of service plus inflation and productivity. | Less than 3 years of employment:<br>First: 15.00%<br>Second: 10.00%<br>Third: 8.00%<br><br>Remaining years based on age:<br>Ages 18 - 35: 8.00%<br>Ages 36 - 40: 7.50%<br>Ages 41 - 50: 6.00%<br>Ages 51 & Over: 5.00% |
| Investment Return | 8.00% | 7.75% |
| Administrative Expense | $18,000 | Explicit load to normal cost equal to prior year administrative expenses plus inflation. |

# Summary of Economic Assumptions – Job Service

| Assumption | Current | Proposed |
|---|---|---|
| Inflation | 3.50% | 2.75% |
| Productivity | 1.00% | 1.25% |
| Payroll Growth | N/A | N/A |
| Salary Scale | 5.00% | 3.50% |
| Investment Return | 8.00% | 7.75% |
| Administrative Expense | Implicitly included in the investment return assumption | Explicit load to normal cost equal to prior year administrative expenses plus inflation. |
| COLA | 5.00% | 3.00% |

# Summary of Demographic Assumptions – Main System

| Assumption | Current | Proposed |
|---|---|---|
| Termination | Rates based on age and years of service | No change |
| Disability | Gender-distinct rates based on age | Lower rates at all ages |
| Active Retirements | Rates based on age and eligibility for unreduced benefits | Adjusted rates based on age and eligibility for unreduced benefits |
| Inactive Retirements | Earlier of age 64 and unreduced retirement date | Same as new active rates |
| Healthy Mortality | RP-2000 Combined Healthy Mortality, set back 3 years | RP-2000 Combined Healthy Mortality, set back 2 years for males and 3 years for females, projected generationally using SSA 2014 Intermediate Cost scale from 2014 |
| Disabled Mortality | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) multiplied by 125% |
| Active Mortality | Healthy Post-Retirement Mortality | Healthy Post-Retirement Mortality |
| Spouse Information | 80% of males and 65% of females are married, male spouses are three years older than female spouses, and 100% of spouses are opposite gender. | 75% are married. No other changes. |
| Benefit election | 100% of married elect 50% joint & survivor<br>100% of non-married elect life annuity | 50% elect life annuity<br>45% elect 50% joint & survivor<br>5% elect refund of contributions |
| Refund of Contributions | Only if account balance is higher than value of annuity | No Change |
| Account balance due to vested Employer Contributions (PEP) | 100% of those contributing continue to contribute. Those who haven't contributed will not contribute in the future. | No Change |

# Summary of Demographic Assumptions – Judges

| Assumption | Current | Proposed |
|---|---|---|
| Termination | Rates based on age | Eliminate rates |
| Disability | Gender-distinct rates based on age | Lower rates at all ages |
| Active Retirements | Rates based on age | Adjusted rates based on age |
| Inactive Retirements | Earlier of age 64 and unreduced retirement date | Same as new active rates |
| Healthy Mortality | RP-2000 Combined Healthy Mortality, set back 3 years | RP-2000 Combined Healthy Mortality, set back 2 years for males and 3 years for females, projected generationally using SSA 2014 Intermediate Cost scale from 2014 |
| Disabled Mortality | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) multiplied by 125% |
| Active Mortality | Healthy Post-Retirement Mortality | Healthy Post-Retirement Mortality |
| Spouse Information | 100% of all participants are married, male spouses are three years older than female spouses, and 100% of spouses are opposite gender. | No changes |
| Benefit Election | 100% of married elect 50% joint & survivor<br>100% of non-married elect life annuity | 100% elect 50% joint & survivor |
| Refund of Contributions | Only if account balance is higher than value of annuity | No Change |

# Summary of Demographic Assumptions – National Guard

| Assumption | Current | Proposed |
|---|---|---|
| Termination | Rates based on age and years of service | No change |
| Disability | Gender-distinct rates based on age | Lower rates at all ages |
| Active Retirements | Rates based on age | Adjusted rates based on age |
| Inactive Retirements | Age 55 | Same as new active rates |
| Healthy Mortality | RP-2000 Combined Healthy Mortality, set back 3 years | RP-2000 Combined Healthy Mortality, set back 2 years for males and 3 years for females, projected generationally using SSA 2014 Intermediate Cost scale from 2014 |
| Disabled Mortality | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) multiplied by 125% |
| Active Mortality | Healthy Post-Retirement Mortality | Healthy Post-Retirement Mortality |
| Spouse Information | 80% of males and 65% of females are married, male spouses are three years older than female spouses, and 100% of spouses are opposite gender. | 75% are married. No other changes. |
| Benefit Election | 100% of married elect 50% joint & survivor<br>100% of non-married elect life annuity | 50% elect life annuity<br>45% elect 50% joint & survivor<br>5% elect refund of contributions |
| Refund of Contributions | Only if account balance is higher than value of annuity | No Change |
| Account balance due to vested Employer Contributions (PEP) | 100% of those contributing continue to contribute. Those who haven't contributed will not contribute in the future. | No Change |

# Summary of Demographic Assumptions – Law Enforcement with & without Prior Service

| Assumption | Current | Proposed |
|---|---|---|
| Termination | Rates based on age and years of service | No change |
| Disability | Gender distinct rates based on age | Lower rates at all ages |
| Active Retirements | Rates based on age | Adjusted rates based on age |
| Inactive Retirements | Earlier of age 55 and unreduced retirement date | Same as new active rates |
| Healthy Mortality | RP-2000 Combined Healthy Mortality, set back 3 years | RP-2000 Combined Healthy Mortality, set back 2 years for males and 3 years for females, projected generationally using SSA 2014 Intermediate Cost scale from 2014 |
| Disabled Mortality | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) multiplied by 125% |
| Active Mortality | Healthy Post-Retirement Mortality | Healthy Post-Retirement Mortality |
| Spouse Information | 80% of males and 65% of females are married, male spouses are three years older than female spouses, and 100% of spouses are opposite gender. | 75% are married. No other changes. |
| Benefit Election | 100% of married elect 50% joint & survivor<br>100% of non-married elect life annuity | 50% elect life annuity<br>45% elect 50% joint & survivor<br>5% elect refund of contributions |
| Refund of Contributions | Only if account balance is higher than value of annuity | No Change |
| Account balance due to vested Employer Contributions (PEP) | 100% of those contributing continue to contribute. Those who haven't contributed will not contribute in the future. | No Change |

# Summary of Demographic Assumptions – Highway Patrolmen

| Assumption | Current | Proposed |
|---|---|---|
| Termination | Rates based on age and years of service | No change |
| Disability | Rates based on age | Lower rates at all ages |
| Active Retirements | Rates based on age and eligibility for unreduced benefits | Adjusted rates based on age |
| Inactive Retirements | Age 55 | Same as new active rates |
| Healthy Mortality | RP-2000 Combined Healthy Mortality, set back one year | RP-2000 Combined Healthy Mortality, set back 2 years for males and 3 years for females, projected generationally using SSA 2014 Intermediate Cost scale from 2014 |
| Disabled Mortality | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) multiplied by 125% |
| Active Mortality | Healthy Post-Retirement Mortality | Healthy Post-Retirement Mortality |
| Spouse Information | 90% of non-retired members are married, male spouses are three years older than female spouses, and 100% of spouses are opposite gender. | 100% are married. No other changes. |
| Benefit Election | 100% of married elect 50% joint & survivor<br>100% of non-married elect life annuity | 100% elect 50% joint & survivor |
| Indexing for benefits of inactive members | 4.5% per annum | 4.0% per annum |
| Refund of Contributions | Only if account balance is higher than value of annuity. | No change |

# Summary of Demographic Assumptions – Job Service

| Assumption | Current | Proposed |
|---|---|---|
| Termination | Rates based on age | Not applicable |
| Disability | Rates based on age | Lower rates at all ages |
| Active Retirements | 75% retire when first eligible. The rest retire at Normal Retirement Age | Adjusted rates based on age |
| Inactive Retirements | 100% at first optional retirement age | Same as new active rates |
| Healthy Mortality | 1994 Group Annuity Mortality Table | RP-2000 Combined Healthy Mortality, set back 2 years for males and 3 years for females, projected generationally using SSA 2014 Intermediate Cost scale from 2014 |
| Disabled Mortality | 1983 Railroad Retirement Board Disabled Life Mortality Table | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) multiplied by 125% |
| Active Mortality | Healthy Post-Retirement Mortality | Healthy Post-Retirement Mortality |
| Spouse Information | 85% of all non-retired are married, male spouses are four years older than female spouses, and 100% of spouses are opposite gender. | No change |
| Benefit Election | All participants are assumed to elect the 10-year certain and life annuity | 55% elect 10-year certain and life<br>45% elect 55% joint and survivor |

# Cost Impact on Main System
# Based on the July 1, 2014 Actuarial Valuation

| Description | Current Assumptions | All Proposed Assumptions Except Investment Return | All Proposed Assumptions |
|---|---|---|---|
| Actuarial Accrued Liability | $2,866.5M | $2,769.4M | $2,848.8M |
| Actuarial Value of Assets | $1,837.9M | $1,837.9M | $1,837.9M |
| Unfunded Actuarial Accrued Liability | $1,028.6M | $931.5M | $1,010.9M |
| Funded Percentage | 64.1% | 66.4% | 64.5% |
| Total Normal Cost including Expenses | $99.1M | $119.4M | $123.9M |
| Actuarially Determined Employer Contribution Rate | 11.06% | 12.51% | 13.43% |
| Employer Statutory Rate | 7.12% | 7.12% | 7.12% |
| Margin / (Deficit) | (3.94)% | (5.39)% | (6.31)% |
| Effective Amortization Period | Infinite | Infinite | Infinite |

# Cost Impact on Judges
# Based on the July 1, 2014 Actuarial Valuation

| Description | Current Assumptions | All Proposed Assumptions Except Investment Return | All Proposed Assumptions |
|---|---|---|---|
| Actuarial Accrued Liability | $39.0M | $36.7M | $37.6M |
| Actuarial Value of Assets | $35.5M | $35.5M | $35.5M |
| Unfunded Actuarial Accrued Liability | $3.5M | $1.2M | $2.1M |
| Funded Percentage | 91.0% | 96.7% | 94.4% |
| Total Normal Cost including Expenses | $1.3M | $1.3M | $1.3M |
| Actuarially Determined Employer Contribution Rate | 14.80% | 11.68% | 13.31% |
| Employer Statutory Rate | 17.52% | 17.52% | 17.52% |
| Margin / (Deficit) | 2.72% | 5.84% | 4.21% |
| Effective Amortization Period | 9.7 years | 2.7 years | 5.3 years |

# Cost Impact on National Guard
# Based on the July 1, 2014 Actuarial Valuation

| Description | Current Assumptions | All Proposed Assumptions Except Investment Return | All Proposed Assumptions |
|---|---|---|---|
| Actuarial Accrued Liability | $2,944K | $2,782K | $2,859K |
| Actuarial Value of Assets | $2,586K | $2,586K | $2,586K |
| Unfunded Actuarial Accrued Liability | $358K | $196K | $273K |
| Funded Percentage | 87.8% | 93.0% | 90.5% |
| Total Normal Cost including Expenses | $126K | $152K | $159K |
| Actuarially Determined Employer Contribution Rate | 8.14% | 8.74% | 9.70% |
| Employer Statutory Rate | 7.00% | 7.00% | 7.00% |
| Margin / (Deficit) | (1.14)% | (1.74)% | (2.70)% |
| Effective Amortization Period | Infinite | Infinite | Infinite |

# Cost Impact on Law Enforcement with Prior Service Based on the July 1, 2014 Actuarial Valuation

| Description | Current Assumptions | All Proposed Assumptions Except Investment Return | All Proposed Assumptions |
|---|---|---|---|
| Actuarial Accrued Liability | $28.0M | $26.7M | $27.5M |
| Actuarial Value of Assets | $18.0M | $18.0M | $18.0M |
| Unfunded Actuarial Accrued Liability | $10.0M | $8.7M | $9.5M |
| Funded Percentage | 64.4% | 67.4% | 65.5% |
| Total Normal Cost including Expenses | $1.7M | $2.0M | $2.1M |
| Actuarially Determined Employer Contribution Rate | 9.52% | 10.59% | 11.39% |
| Employer Statutory Rate | 9.81%/10.31%* | 9.81%/10.31%* | 9.81%/10.31%* |
| Margin / (Deficit) | 0.38% | (0.69)% | (1.49)% |
| Effective Amortization Period | 17.9 years | 27.6 years | 44.9 years |

** 10.31% for BCI*

# Cost Impact on Law Enforcement without Prior Service Based on the July 1, 2014 Actuarial Valuation

| Description | Current Assumptions | All Proposed Assumptions Except Investment Return | All Proposed Assumptions |
|---|---|---|---|
| Actuarial Accrued Liability | $2,264K | $2,040K | $2,101K |
| Actuarial Value of Assets | $1,832K | $1,832K | $1,832K |
| Unfunded Actuarial Accrued Liability | $432K | $208K | $269K |
| Funded Percentage | 80.9% | 89.8% | 87.2% |
| Total Normal Cost including Expenses | $440K | $528K | $549K |
| Actuarially Determined Employer Contribution Rate | 7.42% | 8.38% | 9.01% |
| Employer Statutory Rate | 7.93% | 7.93% | 7.93% |
| Margin / (Deficit) | 0.51% | (0.45)% | (1.08)% |
| Effective Amortization Period | 10.7 years | Infinite | Infinite |

# Cost Impact on Highway Patrolmen
# Based on the July 1, 2014 Actuarial Valuation

| Description | Current Assumptions | All Proposed Assumptions Except Investment Return | All Proposed Assumptions |
|---|---|---|---|
| Actuarial Accrued Liability | $75.5M | $75.5M | $77.6M |
| Actuarial Value of Assets | $54.6M | $54.6M | $54.6M |
| Unfunded Actuarial Accrued Liability | $20.9M | $20.9M | $23.0M |
| Funded Percentage | 72.3% | 72.3% | 70.3% |
| Total Normal Cost including Expenses | $2.1M | $2.3M | $2.4M |
| Actuarially Determined Employer Contribution Rate | 21.70% | 23.66% | 25.96% |
| Employer Statutory Rate | 19.70% | 19.70% | 19.70% |
| Margin / (Deficit) | (2.00)% | (3.95)% | (6.26)% |
| Effective Amortization Period | 25.0 years | 34.2 years | 51.4 years |

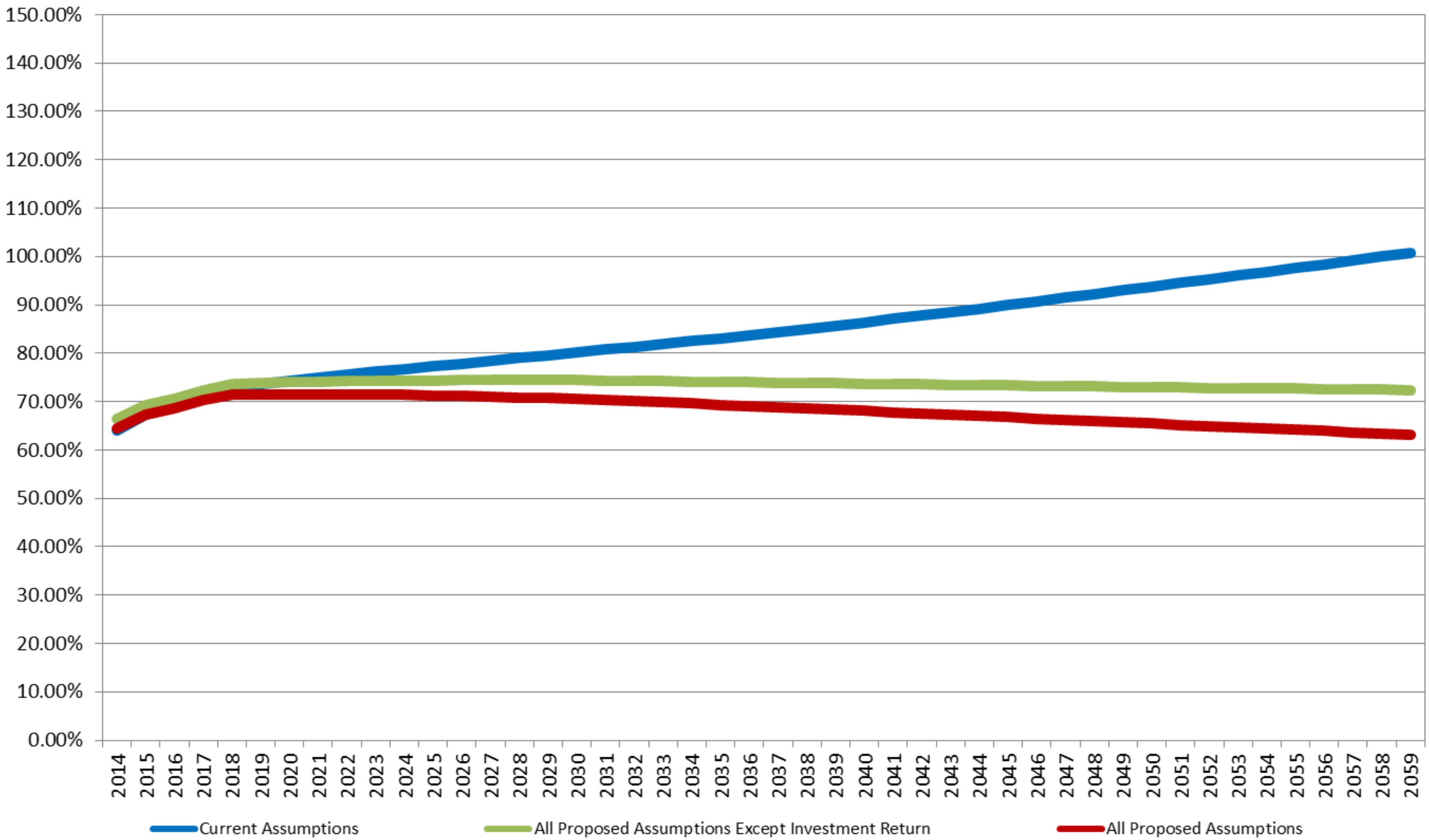
# Cost Impact on Job Service
# Based on the July 1, 2014 Actuarial Valuation

| Description | Current Assumptions | All Proposed Assumptions Except Investment Return | All Proposed Assumptions |
|---|---|---|---|
| Present Value of Benefits | $65.5M | $61.9M | $63.3M |
| Actuarial Value of Assets | $78.2M | $78.2M | $78.2M |
| Unfunded Actuarial Accrued Liability | $(12.7)M | $(16.3)M | $(14.9)M |
| Funded Percentage | 119.4% | 126.3% | 123.4% |
| Total Normal Cost including Expenses | $0.00M | $0.03M | $0.03M |
| Actuarially Determined Contribution Rate | 0% | 0% | 0% |
| Statutory Rate | 0% | 0% | 0% |
| Margin / (Deficit) | N/A | N/A | N/A |
| Effective Amortization Period | N/A | N/A | N/A |

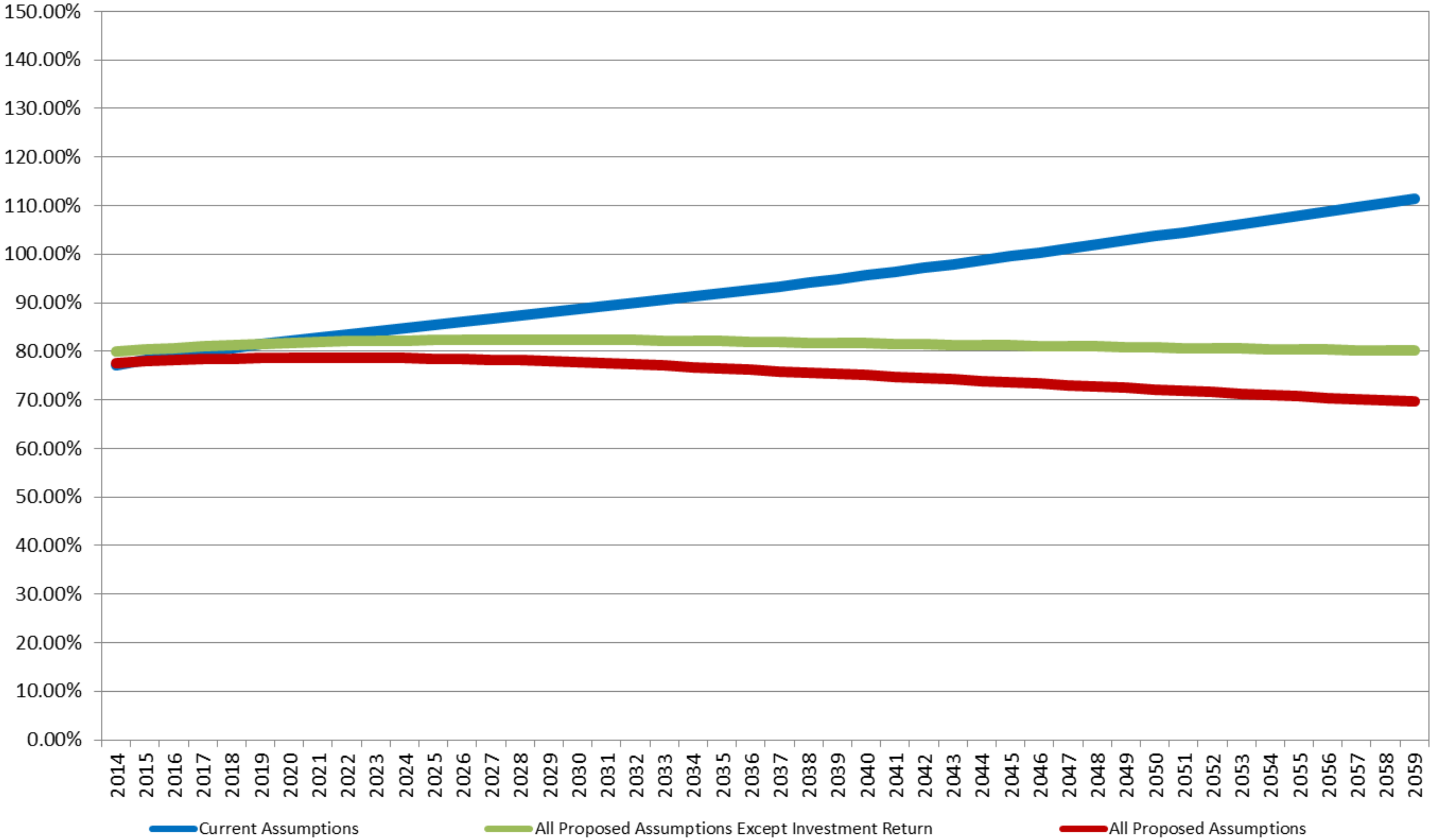
# Cost Impact Projections – Main System

- Projections of estimated funded ratios for 45 years
  - Baseline based on July 1, 2014, actuarial valuation using current assumptions
- Includes contribution rates as follows:
  - Member rate is 7.00% for fiscal year ending June 30, 2015 and thereafter
  - Employer rate is 7.12% for fiscal year ending June 30, 2015 and thereafter

# Projected Funded Ratios (AVA Basis) – Main System



# Projected Funded Ratios (MVA Basis) – Main System



# Questions?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# Actuarial Certification

May 21, 2015

We are pleased to submit this presentation on the actuarial experience of the North Dakota Public Employees Retirement System for the period July 1, 2009, through June 30, 2014. This investigation is the basis for our recommendation of the assumptions and methods to be used for the July 1, 2015, actuarial valuation.

All current actuarial assumptions and methods were reviewed as part of this study. Some of our recommendations reflect changes to the assumptions and methods used in the July 1, 2014, actuarial valuation while other current assumptions and methods remain appropriate.

Our analysis was conducted in accordance with generally accepted actuarial principles as prescribed by the Actuarial Standards Board (ASB) and the American Academy of Actuaries. Additionally, the development of all assumptions contained herein is in accordance with ASB Actuarial Standard of Practice (ASOP) No. 27 (*Selection of Economic Assumptions for Measuring Pension Obligations*) and ASOP No. 35 (*Selection of Demographic and Other Non-Economic Assumptions for Measuring Pension Obligations*).

The undersigned actuaries are experienced with performing experience studies for large public-sector pension plans and are qualified to render the opinions contained in this report.

Sincerely,

| Brad Ramirez, FSA, MAAA, FCA, EA | Laura L. Mitchell, MAAA, EA | Tammy F. Dixon, FSA, MAAA, EA |
|---|---|---|
| Vice President & Consulting Actuary | Vice President & Consulting Actuary | Vice President and Actuary |

# APPENDIX

- Full schedule of proposed new assumption tables
  - Salary Increase
  - Disability rates
  - Unreduced retirement
  - Reduced retirement
  - Healthy mortality
  - Disabled mortality

# APPENDIX
# Proposed Salary Increase (Service-Based Rates)

| Years of Service | Current Total Salary Increase Rate | State Proposed Total Salary Increase Rate | Non-State Proposed Total Salary Increase Rate | National Guard and Law Enforcement Proposed Total Salary Increase Rate |
|---|---|---|---|---|
| 0 | 8.25% | 12.00% | 15.00% | 20.00% |
| 1 | 7.25% | 9.50% | 10.00% | 20.00% |
| 2 | 6.75% | 7.25% | 8.00% | 20.00% |
| 3 | 6.50% | N/A | N/A | 10.00% |
| 4 | 6.25% | N/A | N/A | 10.00% |

For Judges and Job Service, the current salary increase rate is 5.00% regardless of service. The proposed rates are 4.00% for Judges and 3.50% for Job Service regardless of service.

# APPENDIX – Proposed Salary Increase (Age-Based Rates) - Main*, National Guard and Law Enforcement

| Age | Current Total Salary Increase | Proposed Total Salary Increase | Age | Current Total Salary Increase | Proposed Total Salary Increase |
|---|---|---|---|---|---|
| 18 | 6.25% | 7.25% | 30 | 5.93% | 6.50% |
| 19 | 6.25% | 7.25% | 31 | 5.82% | 6.50% |
| 20 | 6.25% | 7.25% | 32 | 5.72% | 6.50% |
| 21 | 6.25% | 7.25% | 33 | 5.64% | 6.50% |
| 22 | 6.25% | 7.25% | 34 | 5.57% | 6.50% |
| 23 | 6.25% | 7.25% | 35 | 5.50% | 6.50% |
| 24 | 6.25% | 7.25% | 36 | 5.44% | 6.50% |
| 25 | 6.25% | 7.25% | 37 | 5.38% | 6.50% |
| 26 | 6.25% | 7.25% | 38 | 5.32% | 6.50% |
| 27 | 6.25% | 7.25% | 39 | 5.27% | 6.50% |
| 28 | 6.22% | 7.25% | 40 | 5.23% | 6.25% |
| 29 | 6.07% | 7.25% | 41 | 5.20% | 6.25% |

*State Only

# APPENDIX – Proposed Salary Increase (Age-Based Rates) - Main*, National Guard and Law Enforcement *(continued)*

| Age | Current Total Salary Increase | Proposed Total Salary Increase | Age | Current Total Salary Increase | Proposed Total Salary Increase |
|---|---|---|---|---|---|
| 42 | 5.17% | 6.25% | 54 | 4.94% | 5.75% |
| 43 | 5.14% | 6.25% | 55 | 4.93% | 5.75% |
| 44 | 5.12% | 6.25% | 56 | 4.92% | 5.75% |
| 45 | 5.11% | 6.25% | 57 | 4.91% | 5.75% |
| 46 | 5.09% | 6.25% | 58 | 4.90% | 5.75% |
| 47 | 5.07% | 6.25% | 59 | 4.88% | 5.75% |
| 48 | 5.05% | 6.25% | 60 | 4.86% | 5.00% |
| 49 | 5.04% | 6.25% | 61 | 4.81% | 5.00% |
| 50 | 5.02% | 5.75% | 62 | 4.74% | 5.00% |
| 51 | 5.00% | 5.75% | 63 | 4.70% | 5.00% |
| 52 | 4.98% | 5.75% | 64 | 4.70% | 5.00% |
| 53 | 4.96% | 5.75% | 65+ | 4.70% | 5.00% |

*State Only

# APPENDIX – Proposed Salary Increase (Age-Based Rates) - Main Non-State

| Age | Current Total Salary Increase | Proposed Total Salary Increase | Age | Current Total Salary Increase | Proposed Total Salary Increase |
|---|---|---|---|---|---|
| 18 | 6.25% | 7.25% | 30 | 5.93% | 6.50% |
| 19 | 6.25% | 7.25% | 31 | 5.82% | 6.50% |
| 20 | 6.25% | 7.25% | 32 | 5.72% | 6.50% |
| 21 | 6.25% | 7.25% | 33 | 5.64% | 6.50% |
| 22 | 6.25% | 7.25% | 34 | 5.57% | 6.50% |
| 23 | 6.25% | 7.25% | 35 | 5.50% | 6.50% |
| 24 | 6.25% | 7.25% | 36 | 5.44% | 6.50% |
| 25 | 6.25% | 7.25% | 37 | 5.38% | 6.50% |
| 26 | 6.25% | 7.25% | 38 | 5.32% | 6.50% |
| 27 | 6.25% | 7.25% | 39 | 5.27% | 6.50% |
| 28 | 6.22% | 7.25% | 40 | 5.23% | 6.25% |
| 29 | 6.07% | 7.25% | 41 | 5.20% | 6.25% |

# APPENDIX – Proposed Salary Increase (Age-Based Rates) - Main Non-State *(continued)*

| Age | Current Total Salary Increase | Proposed Total Salary Increase |
|---|---|---|
| 42 | 5.17% | 6.25% |
| 43 | 5.14% | 6.50% |
| 44 | 5.12% | 6.50% |
| 45 | 5.11% | 6.50% |
| 46 | 5.09% | 6.50% |
| 47 | 5.07% | 6.50% |
| 48 | 5.05% | 6.50% |
| 49 | 5.04% | 6.50% |
| 50 | 5.02% | 5.75% |
| 51 | 5.00% | 5.75% |
| 52 | 4.98% | 5.75% |
| 53 | 4.96% | 5.75% |

| Age | Current Total Salary Increase | Proposed Total Salary Increase |
|---|---|---|
| 54 | 4.94% | 5.75% |
| 55 | 4.93% | 5.75% |
| 56 | 4.92% | 5.75% |
| 57 | 4.91% | 5.75% |
| 58 | 4.90% | 5.75% |
| 59 | 4.88% | 5.75% |
| 60 | 4.86% | 5.00% |
| 61 | 4.81% | 5.00% |
| 62 | 4.74% | 5.00% |
| 63 | 4.70% | 5.00% |
| 64 | 4.70% | 5.00% |
| 65+ | 4.70% | 5.00% |

# APPENDIX
# Disability Retirement - PERS

| Age | Males | | Females | |
|---|---|---|---|---|
| | Current Rate | Proposed Rate | Current Rate | Proposed Rate |
| 20 – 24 | 0.02% | 0.01% | 0.01% | 0.01% |
| 25 – 29 | 0.03% | 0.02% | 0.02% | 0.01% |
| 30 – 34 | 0.04% | 0.02% | 0.02% | 0.01% |
| 35 – 39 | 0.06% | 0.03% | 0.03% | 0.02% |
| 40 – 44 | 0.09% | 0.05% | 0.05% | 0.03% |
| 45 – 49 | 0.15% | 0.09% | 0.09% | 0.04% |
| 50 – 54 | 0.25% | 0.15% | 0.15% | 0.08% |
| 55 – 59 | 0.41% | 0.25% | 0.25% | 0.12% |
| 60 – 64 | 0.65% | 0.39% | 0.39% | 0.20% |

# APPENDIX
# Proposed Unreduced Retirement – Main System

| Age | Current Retirement Rate | Proposed Retirement Rate |
|---|---|---|
| 50 | 0.00% | 30.00% |
| 51 | 8.00% | 10.00% |
| 52 | 8.00% | 10.00% |
| 53 | 8.00% | 10.00% |
| 54 | 8.00% | 10.00% |
| 55 | 8.00% | 10.00% |
| 56 | 10.00% | 8.00% |
| 57 | 10.00% | 8.00% |
| 58 | 10.00% | 8.00% |
| 59 | 10.00% | 8.00% |
| 60 | 10.00% | 8.00% |
| 61 | 10.00% | 15.00% |
| 62 | 35.00% | 30.00% |
| 63 | 25.00% | 30.00% |
| 64 | 30.00% | 20.00% |
| 65 | 30.00% | 20.00% |
| 66 | 20.00% | 15.00% |
| 67 | 20.00% | 15.00% |
| 68 | 20.00% | 15.00% |
| 69 | 20.00% | 15.00% |
| 70 | 20.00% | 15.00% |
| 71 | 20.00% | 15.00% |
| 72 | 20.00% | 15.00% |
| 73 | 20.00% | 15.00% |
| 74 | 20.00% | 15.00% |
| 75 | 100.00% | 100.00% |

# APPENDIX
# Proposed Reduced Retirement – Main System

| Age | Current Retirement Rate | Proposed Retirement Rate |
|---|---|---|
| 55 | 2.00% | 1.00% |
| 56 | 2.00% | 1.00% |
| 57 | 2.00% | 1.00% |
| 58 | 2.00% | 1.00% |
| 59 | 2.00% | 1.00% |
| 60 | 40.00% | 2.00% |
| 61 | 10.00% | 5.00% |
| 62 | 20.00% | 10.00% |
| 63 | 15.00% | 10.00% |
| 64 | 10.00% | 10.00% |
| 65 | 30.00% | 30.00% |
| 66 | 20.00% | 20.00% |
| 67 | 20.00% | 15.00% |
| 68 | 20.00% | 15.00% |
| 69 | 20.00% | 15.00% |
| 70 | 20.00% | 15.00% |
| 71 | 20.00% | 15.00% |
| 72 | 20.00% | 15.00% |
| 73 | 20.00% | 15.00% |
| 74 | 20.00% | 15.00% |
| 75 | 100.00% | 100.00% |

# APPENDIX
# Proposed Retirement - Judges

| Age | Current Retirement Rate | Proposed Retirement Rate |
|---|---|---|
| 55 | 0.00% | 10.00% |
| 56 | 0.00% | 10.00% |
| 57 | 0.00% | 10.00% |
| 58 | 0.00% | 10.00% |
| 59 | 0.00% | 10.00% |
| 60 | 10.00% | 10.00% |
| 61 | 10.00% | 10.00% |
| 62 | 20.00% | 10.00% |
| 63 | 20.00% | 10.00% |
| 64 | 20.00% | 10.00% |
| 65 | 50.00% | 20.00% |

| Age | Current Retirement Rate | Proposed Retirement Rate |
|---|---|---|
| 66 | 50.00% | 20.00% |
| 67 | 50.00% | 20.00% |
| 68 | 50.00% | 20.00% |
| 69 | 50.00% | 20.00% |
| 70 | 100.00% | 20.00% |
| 71 | 100.00% | 20.00% |
| 72 | 100.00% | 20.00% |
| 73 | 100.00% | 20.00% |
| 74 | 100.00% | 20.00% |
| 75 | 100.00% | 100.00% |

# APPENDIX – Proposed Retirement - National Guard and Law Enforcement

| Age | Current Retirement Rate | Proposed Retirement Rate | Age | Current Retirement Rate | Proposed Retirement Rate |
|---|---|---|---|---|---|
| 50 | 0.00% | 25.00% | 63 | 20.00% | 50.00% |
| 51 | 0.00% | 25.00% | 64 | 50.00% | 50.00% |
| 52 | 0.00% | 25.00% | 65 | 100.00% | 50.00% |
| 53 | 0.00% | 25.00% | 66 | 100.00% | 20.00% |
| 54 | 0.00% | 25.00% | 67 | 100.00% | 20.00% |
| 55 | 20.00% | 10.00% | 68 | 100.00% | 20.00% |
| 56 | 20.00% | 10.00% | 69 | 100.00% | 20.00% |
| 57 | 20.00% | 10.00% | 70 | 100.00% | 20.00% |
| 58 | 20.00% | 10.00% | 71 | 100.00% | 20.00% |
| 59 | 20.00% | 10.00% | 72 | 100.00% | 20.00% |
| 60 | 20.00% | 10.00% | 73 | 100.00% | 20.00% |
| 61 | 20.00% | 10.00% | 74 | 100.00% | 20.00% |
| 62 | 20.00% | 50.00% | 75 | 100.00% | 100.00% |

# APPENDIX
# Proposed Retirement – Job Service

| Age | Current Retirement Rate | Proposed Retirement Rate |
|---|---|---|
| 55 | * | 15.00% |
| 56 | * | 15.00% |
| 57 | * | 15.00% |
| 58 | * | 15.00% |
| 59 | * | 15.00% |
| 60 | * | 15.00% |
| 61 | * | 15.00% |
| 62 | * | 15.00% |
| 63 | * | 15.00% |
| 64 | * | 15.00% |
| 65 | 100.00% | 100.00% |

*75% if first time eligible for optional retirement, otherwise 100% at Normal Retirement Age

# APPENDIX
# Proposed Healthy Mortality – All Systems

**Males**

| Age | Current Mortality Rate | Proposed Mortality Rate |
|---|---|---|
| 50 | 0.17% | 0.19% |
| 55 | 0.27% | 0.29% |
| 60 | 0.47% | 0.53% |
| 65 | 0.88% | 1.00% |
| 70 | 1.61% | 1.79% |
| 75 | 2.73% | 3.04% |
| 80 | 4.69% | 5.21% |
| 85 | 8.05% | 8.97% |
| 90 | 13.60% | 15.06% |
| 95 | 21.66% | 23.37% |
| 100 | 29.99% | 31.53% |

**Females**

| Age | Current Mortality Rate | Proposed Mortality Rate |
|---|---|---|
| 50 | 0.13% | 0.13% |
| 55 | 0.20% | 0.20% |
| 60 | 0.35% | 0.35% |
| 65 | 0.67% | 0.66% |
| 70 | 1.22% | 1.22% |
| 75 | 2.07% | 2.07% |
| 80 | 3.41% | 3.41% |
| 85 | 5.63% | 5.63% |
| 90 | 9.63% | 9.63% |
| 95 | 15.76% | 15.76% |
| 100 | 21.52% | 21.52% |

**Proposed mortality rates above are sample rates for 2014. For actuarial valuation purposes, mortality rates will be projected from 2014 on a generational basis using the SSA 2014 Intermediate Cost Improvement Scale.**

# APPENDIX
# Proposed Disabled Mortality – All Systems

**Males**

| Age | Current Mortality Rate | Proposed Mortality Rate |
|---|---|---|
| 40 | 2.26% | 2.82% |
| 45 | 2.26% | 2.82% |
| 50 | 2.77% | 3.46% |
| 55 | 3.42% | 4.27% |
| 60 | 4.07% | 5.08% |
| 65 | 4.83% | 6.04% |
| 70 | 5.96% | 7.45% |
| 75 | 7.75% | 9.69% |
| 80 | 10.34% | 12.92% |
| 85 | 13.49% | 16.87% |
| 90 | 16.92% | 21.15% |
| 95 | 25.07% | 31.34% |
| 100 | 33.02% | 41.28% |

**Females**

| Age | Current Mortality Rate | Proposed Mortality Rate |
|---|---|---|
| 40 | 0.75% | 0.93% |
| 45 | 0.75% | 0.93% |
| 50 | 1.15% | 1.44% |
| 55 | 1.65% | 2.07% |
| 60 | 2.18% | 2.73% |
| 65 | 2.80% | 3.50% |
| 70 | 3.70% | 4.70% |
| 75 | 5.22% | 6.53% |
| 80 | 7.23% | 9.04% |
| 85 | 10.02% | 12.53% |
| 90 | 14.00% | 17.51% |
| 95 | 19.45% | 23.41% |
| 100 | 23.75% | 29.68% |

# North Dakota Public Employees Retirement System

## Experience Review: Follow-Up Information

Presented By:

Brad Ramirez, FSA, MAAA, FCA, EA

June 18, 2015

*This document has been prepared by Segal Consulting for the benefit of the Board of the North Dakota Public Employees Retirement System and is not complete without the presentation provided at the June 18, 2015 meeting of the Board. This document should not be shared, copied or quoted, in whole or in part, without the consent of Segal Consulting, except to the extent otherwise required by law. Except where otherwise specifically noted, the actuarial calculations and projections were completed under the supervision of Tammy F. Dixon, FSA, MAAA, Enrolled Actuary.*

# Overview: Impact of Recent Bills on Experience Study Results

This report summarizes our proposed assumptions based on the experience study and plan costs reflecting the new legislative bills.

Legislative bills SB2015 and HB1062 were passed changing the retirement eligibility requirements for Main System employees. For employees enrolled after December 31, 2015,

- Attainment of age 65, or age plus service equal to at least 90 (Rule of 90) with for ages 60 or later is required to meet Normal Service Retirement Eligibility.
- The early retirement benefit is equal to the Normal Service Retirement benefit reduced by 8% per year before the earliest of 65 or the age at which Rule of 90 is met.
- DC participants may elect to transfer back into the DB plan within a 3-month period upon payment of the entire account balance back into the DB plan.

Changes to final average compensation definitions, service requirements for retirement from the National Guard System, and USERRA changes were also made.

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# Cost Impact on Main System
# Based on the July 1, 2014 Actuarial Valuation

| Description | Current Assumptions | All Proposed Assumptions | All Proposed Assumptions Except Investment Return | All Proposed Assumptions Except for Payroll Growth |
|---|---|---|---|---|
| Actuarial Accrued Liability | $2,866.5M | $2,848.8M | $2,769.4M | $2,848.8M |
| Actuarial Value of Assets | $1,837.9M | $1,837.9M | $1,837.9M | $1,837.9M |
| Unfunded Actuarial Accrued Liability | $1,028.6M | $1,010.9M | $931.5M | $1,010.9M |
| Funded Percentage | 64.1% | 64.5% | 66.4% | 64.5% |
| Total Normal Cost including Expenses | $99.1M | $123.9M | $119.4M | $119.4M |
| Actuarially Determined Employer Contribution Rate | 11.06% | 13.43% | 12.51% | 13.13% |
| Employer Statutory Rate | 7.12% | 7.12% | 7.12% | 7.12% |
| Margin / (Deficit) | (3.94)% | (6.31)% | (5.39)% | (6.01)% |
| Effective Amortization Period | Infinite | Infinite | Infinite | Infinite |

# Governmental Accounting Standards Board (GASB) Statement No. 67 - Main System

| Basis for Main System | Current Plan and Assumptions | All Proposed Assumptions | All Proposed Assumptions Except for Investment Return |
|---|---|---|---|
| 1. Total pension liability | $2,846,579,777 | $2,848,771,678 | $2,769,388,164 |
| 2. Plan fiduciary net position | 2,211,858,402 | 2,211,858,402 | 2,211,858,402 |
| 3. Net pension liability/(asset) | 634,721,375 | 636,913,276 | 557,477,682 |
| 4. Plan fiduciary net position as a percentage of the total pension liability | 77.70% | 77.64% | 79.87% |
| 5. Discount Rate | 8.00% | 7.75% | 8.00% |

- Based upon calculations required by Statement 67 paragraphs 40-45, the Plan's Fiduciary Net Position is projected to be sufficient to make projected benefit payments. Therefore, the discount rate used to determine the TPL and NPL was determined to be the same as the Plan's long-term expected rate of return on investments, 8.00% or 7.75%, as applicable.

Note: The payroll growth assumption does not affect the calculation of the TPL and NPL for the Main System.

# Governmental Accounting Standards Board (GASB) Statement No. 67 - Main Systems

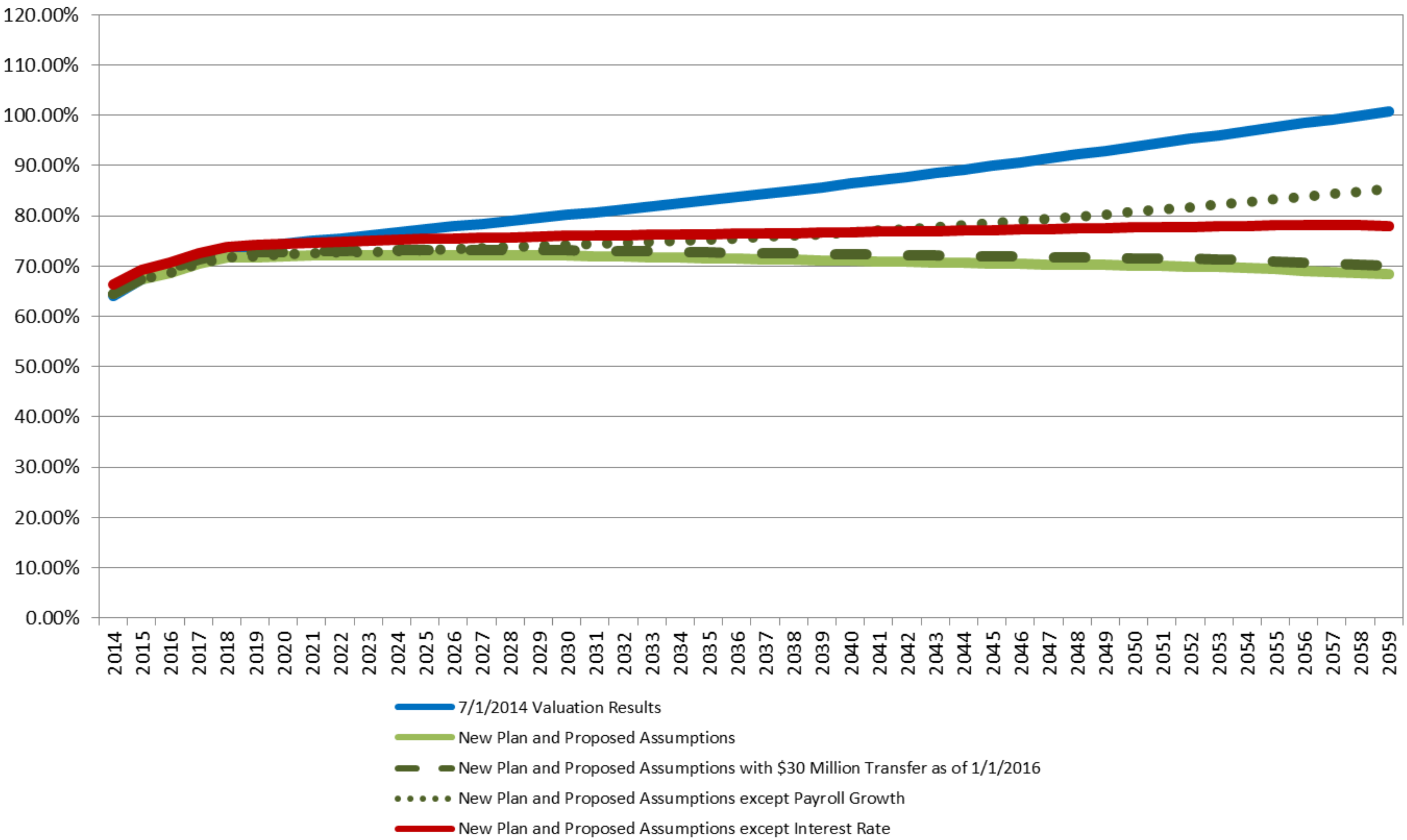
| Basis for Main Systems | Current Plan and Assumptions | All Proposed Assumptions Except for Investment Return | All Proposed Assumptions |
|---|---|---|---|
| 1. Total pension liability | $2,846,579,777 | $2,769,388,164 | $2,848,771,678 |
| 2. Plan fiduciary net position | 2,211,858,402 | 2,211,858,402 | 2,211,858,402 |
| 3. Net pension liability/(asset) | 634,721,375 | 557,477,682 | 636,913,276 |
| 4. Plan fiduciary net position as a percentage of the total pension liability | 77.70% | 79.87% | 77.64% |
| 5. Discount Rate | 8.00% | 8.00% | 7.75% |

- Based upon calculations required by Statement 67 paragraphs 40-45, the Plan's Fiduciary Net Position is projected to be sufficient to make projected benefit payments. Therefore, the discount rate used to determine the TPL and NPL was determined to be the same as the Plan's long-term expected rate of return on investments, 8.00% or 7.75%, as applicable.

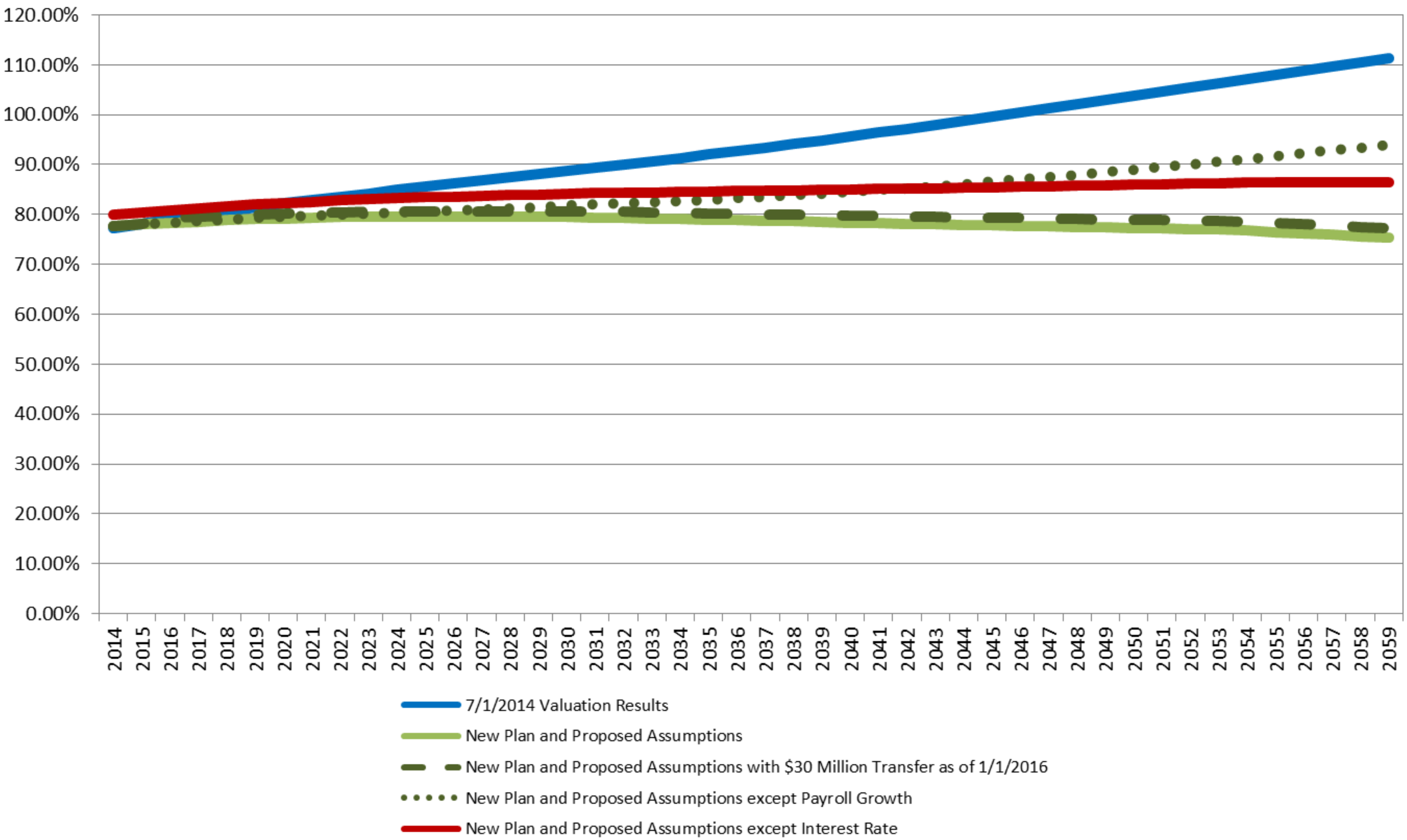
# Cost Impact Projections – Main System

- Projections of estimated funded ratios for 45 years
  - Baseline based on July 1, 2014 actuarial valuation results using current assumptions
- Includes the current contribution rates as follows:
  - Member rate is 7.00% for fiscal years ending June 30, 2015 and thereafter
  - Employer rate is 7.12% for fiscal years ending June 30, 2015 and thereafter
- Includes the legislative plan changes adopted in legislative bills SB2015 and HB1062 as "New Plan".
- Both the funded ratios under the actuarial value of assets (AVA) and market value of assets (MVA) are shown for:
  - New Plan and Proposed Assumptions
  - New Plan and Proposed Assumptions except Payroll Growth
  - New Plan and Proposed Assumptions with $30 Million Transfer as of 1/1/2016
  - New Plan and Proposed Assumptions except Interest Rate

# Projected Funded Ratios (AVA Basis) – Main System



# Projected Funded Ratios (MVA Basis) – Main System



# Summary of Assumptions

- The following exhibits summarize the economic and demographic assumptions for each system. The descriptions have been shortened for ease of reference. Full details of the assumptions are available in the Experience Review: July 2009 – June 2014 Presentation dated May 21, 2015.

- Projections, by their nature, are not a guarantee of future results. The modeling projections are intended to serve as illustrations of future financial outcomes that are based on the information available to us at the time the modeling is undertaken and completed, and the assumptions and methodologies described herein. Emerging results may differ significantly if the actual experience proves to be different from these assumptions or if alternative methodologies are used. Actual experience may differ due to such variables as demographic experience, the economy, stock market performance and the regulatory environment.

  The projections were made using generally accepted actuarial practices and are based on the July 1, 2014 Actuarial Valuation. Calculations were completed under the supervision of Tammy F. Dixon, FSA, MAAA, Enrolled Actuary.

# Summary of Assumptions – Main System

| Assumption | Current | Proposed |
|---|---|---|
| Inflation/Productivity | 3.50%/1.00% (4.50% Payroll Growth) | 2.75%/1.25% (4.00% Payroll Growth) |
| Salary Scale | Based on age/service | Based on age/service, split by State/Non-State |
| Investment Return | 8.00% | 7.75% |
| Administrative Expenses | $1,100,000 | Load based on prior year |
| Termination | Based on age/service | No change |
| Disability | Gender-distinct rates based on age | Lower rates at all ages |
| Active Retirements | Based on age/eligibility for unreduced benefits | Adjusted rates at some ages |
| Inactive Retirements | Earlier of age 64 and unreduced retirement | Same as active rates |
| Active/Inactive Healthy Mortality Table | RP-2000 Combined Healthy, with setback | RP-2000 Combined Healthy, with setback, projected generationally using SSA 2014 Intermediate Cost scale from 2014 |
| Disabled Mortality | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) multiplied by 125% |
| Spouse Information | 80% of males and 65% of females married, male spouses are three years older | 75% are married. No other changes. |
| Benefit election | Married elect 50% joint & survivor, non-married elect life annuity | 50% elect life annuity, 45% elect 50% joint & survivor, 5% elect refund of contributions |
| Refund of Contributions | Only if account balance is higher than value of annuity | No Change |
| Account balance due to vested Employer Contributions (PEP) | Those contributing continue to contribute. Those who haven’t contributed will not contribute in the future. | No Change |

# Summary of Assumptions – Judges

| Assumption | Current | Proposed |
|---|---|---|
| Inflation/Productivity | 3.50%/0.50% (4.00% Payroll Growth) | 2.75%/0.75% (3.50% Payroll Growth) |
| Salary Scale | 5% for all years | 4% for all years |
| Investment Return | 8.00% | 7.75% |
| Administrative Expenses | $7,500 | Load based on prior year |
| Termination | Rates based on age | Eliminate rates |
| Disability | Gender-distinct rates based on age | Lower rates at all ages |
| Active Retirements | Rates based on age | Adjusted rates based on age |
| Inactive Retirements | Earlier of age 64 and unreduced retirement | Same as active rates |
| Active/Inactive Healthy Mortality Table | RP-2000 Combined Healthy, with setback | RP-2000 Combined Healthy, with setback, projected generationally using SSA 2014 Intermediate Cost scale from 2014 |
| Disabled Mortality | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) multiplied by 125% |
| Spouse Information | 100% of all participants are married, male spouses are three years older than female spouses | No changes |
| Benefit election | Married elect 50% joint & survivor, non-married elect life annuity | All elect 50% joint & survivor |
| Refund of Contributions | Only if account balance is higher than value of annuity | No Change |

# Summary of Assumptions – National Guard

| Assumption | Current | Proposed |
|---|---|---|
| Inflation/Productivity | 3.50%/1.00% (4.50% Payroll Growth) | 2.75%/1.25% (4.00% Payroll Growth) |
| Salary Scale | Based on age/service | Based on age/service, adjusted for recent experience |
| Investment Return | 8.00% | 7.75% |
| Administrative Expenses | $3,000 | Load based on prior year |
| Termination | Based on age/service | No change |
| Disability | Gender-distinct rates based on age | Lower rates at all ages |
| Active Retirements | Rates based on age | Adjusted rates based on age |
| Inactive Retirements | Age 55 | Same as active rates |
| Active/Inactive Healthy Mortality Table | RP-2000 Combined Healthy, with setback | RP-2000 Combined Healthy, with setback, projected generationally using SSA 2014 Intermediate Cost scale from 2014 |
| Disabled Mortality | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) multiplied by 125% |
| Spouse Information | 80% of males and 65% of females married, male spouses are three years older | 75% are married. No other changes. |
| Benefit election | Married elect 50% joint & survivor, non-married elect life annuity | 50% elect life annuity, 45% elect 50% joint & survivor, 5% elect refund of contributions |
| Refund of Contributions | Only if account balance is higher than value of annuity | No Change |
| Account balance due to vested Employer Contributions (PEP) | Those contributing continue to contribute. Those who haven't contributed will not contribute in the future. | No Change |

# Summary of Assumptions –
# Law Enforcement with Prior Service

| Assumption | Current | Proposed |
|---|---|---|
| Inflation/Productivity | 3.50%/1.00% (4.50% Payroll Growth) | 2.75%/1.25% (4.00% Payroll Growth) |
| Salary Scale | Based on age/service | Based on age/service, adjusted for recent experience |
| Investment Return | 8.00% | 7.75% |
| Administrative Expenses | $2,500 | Load based on prior year |
| Termination | Based on age/service | No change |
| Disability | Gender-distinct rates based on age | Lower rates at all ages |
| Active Retirements | Rates based on age | Adjusted rates based on age |
| Inactive Retirements | Earlier of age 55 and unreduced retirement | Same as active rates |
| Active/Inactive Healthy Mortality Table | RP-2000 Combined Healthy, with setback | RP-2000 Combined Healthy, with setback, projected generationally using SSA 2014 Intermediate Cost scale from 2014 |
| Disabled Mortality | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) multiplied by 125% |
| Spouse Information | 80% of males and 65% of females married, male spouses are three years older | 75% are married. No other changes. |
| Benefit election | Married elect 50% joint & survivor, non-married elect life annuity | 50% elect life annuity, 45% elect 50% joint & survivor, 5% elect refund of contributions |
| Refund of Contributions | Only if account balance is higher than value of annuity | No Change |
| Account balance due to vested Employer Contributions (PEP) | Those contributing continue to contribute. Those who haven’t contributed will not contribute in the future. | No Change |

# Summary of Assumptions – Law Enforcement without Prior Service

| Assumption | Current | Proposed |
|---|---|---|
| Inflation/Productivity | 3.50%/1.00% (4.50% Payroll Growth) | 2.75%/1.25% (4.00% Payroll Growth) |
| Salary Scale | Based on age/service | Based on age/service, adjusted for recent experience |
| Investment Return | 8.00% | 7.75% |
| Administrative Expenses | $7,500 | Load based on prior year |
| Termination | Rates based on age/service | No change |
| Disability | Gender-distinct rates based on age | Lower rates at all ages |
| Active Retirements | Rates based on age | Adjusted rates based on age |
| Inactive Retirements | Earlier of age 55 and unreduced retirement | Same as active rates |
| Active/Inactive Healthy Mortality Table | RP-2000 Combined Healthy, with setback | RP-2000 Combined Healthy, with setback, projected generationally using SSA 2014 Intermediate Cost scale from 2014 |
| Disabled Mortality | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) multiplied by 125% |
| Spouse Information | 80% of males and 65% of females married, male spouses are three years older | 75% are married. No other changes. |
| Benefit election | Married elect 50% joint & survivor, non-married elect life annuity | 50% elect life annuity, 45% elect 50% joint & survivor, 5% elect refund of contributions |
| Refund of Contributions | Only if account balance is higher than value of annuity | No Change |
| Account balance due to vested Employer Contributions (PEP) | Those contributing continue to contribute. Those who haven’t contributed will not contribute in the future. | No Change |

# Summary of Assumptions – Highway Patrolmen

| Assumption | Current | Proposed |
|---|---|---|
| Inflation/Productivity | 3.50%/1.00% (4.50% Payroll Growth) | 2.75%/1.25% (4.00% Payroll Growth) |
| Salary Scale | Based on age/service | Based on age/service, adjusted for recent experience |
| Investment Return | 8.00% | 7.75% |
| Administrative Expenses | $18,000 | Load based on prior year |
| Termination | Based on age/service | No change |
| Disability | Rates based on age | Lower rates at all ages |
| Active Retirements | Based on age/eligibility for unreduced benefits | Adjusted rates at some ages |
| Inactive Retirements | Age 55 | Same as active rates |
| Active/Inactive Healthy Mortality Table | RP-2000 Combined Healthy, with setback | RP-2000 Combined Healthy, with setback, projected generationally using SSA 2014 Intermediate Cost scale from 2014 |
| Disabled Mortality | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) multiplied by 125% |
| Spouse Information | 90% of non-retired members are married, male spouses are three years older than female spouses | 100% are married. No other changes. |
| Benefit election | Married elect 50% joint & survivor, non-married elect life annuity | 100% elect 50% joint & survivor |
| Indexing for benefits of inactive members | 4.5% per annum | 4.0% per annum |
| Refund of Contributions | Only if account balance is higher than value of annuity | No Change |

# Summary of Assumptions – Job Service

| Assumption | Current | Proposed |
|---|---|---|
| Inflation/Productivity | 3.50%/1.00% | 2.75%/1.25% |
| Salary Scale | 5.00% | 3.50% |
| Investment Return | 8.00% | 7.75% |
| Administrative Expenses | Implicitly included in the investment return assumption | Load based on prior year |
| COLA | 5.00% | 3.00% |
| Termination | Rates based on age | Not applicable |
| Disability | Rates based on age | Lower rates at all ages |
| Active Retirements | 75% retire when first eligible. The rest retire at Normal Retirement Age | Adjusted rates based on age |
| Inactive Retirements | 100% at first optional retirement age | Same as active rates |
| Active/Inactive Healthy Mortality Table | 1994 Group Annuity Mortality Table | RP-2000 Combined Healthy, with setback, projected generationally using SSA 2014 Intermediate Cost scale from 2014 |
| Disabled Mortality | 1983 Railroad Retirement Board Disabled Life Mortality Table | RP-2000 Disabled Mortality Table set back one year for males (no setback for females) multiplied by 125% |
| Spouse Information | 85% of all non-retired are married, male spouses are four years older than female spouses | No change |
| Benefit election | All participants are assumed to elect the 10-year certain and life annuity | 55% elect 10-year certain and life,<br>45% elect 55% joint & survivor |

# NASRA Issue Brief:
# Public Pension Plan Investment Return Assumptions

**Updated May 2015**

**As of December 31, 2014, state and local government retirement systems held assets of $3.78 trillion.[1] These assets are held in trust and invested to pre-fund the cost of pension benefits. The investment return on these assets matters, as investment earnings account for a majority of public pension financing. A shortfall in long-term expected investment earnings must be made up by higher contributions or reduced benefits.**

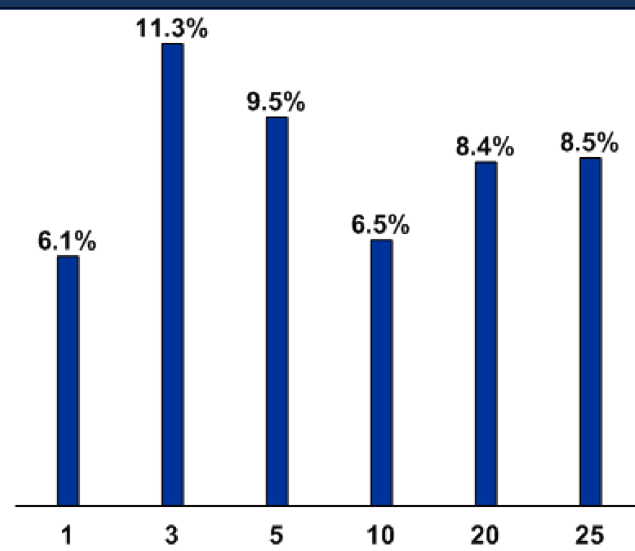
**Funding a pension benefit requires the use of projections, known as actuarial assumptions, about future events. Actuarial assumptions fall into one of two broad categories: demographic and economic. Demographic assumptions are those pertaining to a pension plan's membership, such as changes in the number of working and retired plan participants; when participants will retire, and how long they'll live after they retire. Economic assumptions pertain to such factors as the rate of wage growth and the future expected investment return on the fund's assets.**

**As with other actuarial assumptions, projecting public pension fund investment returns requires a focus on the long-term. This brief discusses how investment return assumptions are established and evaluated, and compares these assumptions with public funds' actual investment experience.**

Some critics of current public pension investment return assumption levels say that current low interest rates and volatile investment markets require public pension funds to take on excessive investment risk to achieve their assumption. Because investment earnings account for a majority of revenue for a typical public pension fund, the accuracy of the assumption has a major effect on the plan's finances and actuarial funding level.

An investment return assumption that is set too low will overstate liabilities and costs, causing current taxpayers to be overcharged and future taxpayers to be undercharged. A rate set too high will understate liabilities, undercharging current taxpayers, at the expense of future taxpayers. An assumption that is significantly wrong in either direction will cause a misallocation of resources and unfairly distribute costs among generations of taxpayers.

Figure 1: Median public pension annualized investment returns for period ended 12/31/2014



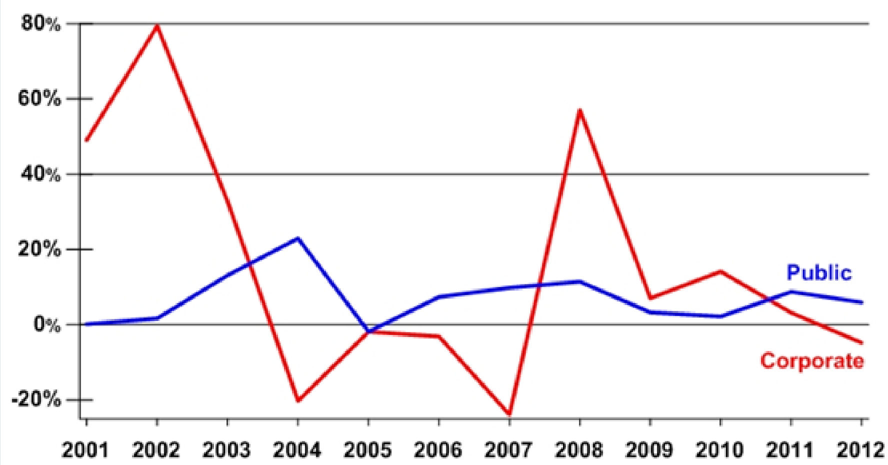

*Source:* Callan Associates

Although public pension funds, like other investors, experienced sub-par returns in the wake of the 2008-09decline in global equity values, median public pension fund returns over longer periods meet or exceed the assumed rates used by most plans. As shown in Figure 1, the median annualized investment return for the 3-, 5-, 20- and 25-year periods ended December 31, 2014, exceeds the average assumption of 7.68 percent (see Figure 5), while the 10-year return is below this level.

[1] Federal Reserve, *Flow of Funds Accounts of the United States: Flows and Outstandings, Fourth Quarter 2014*, Table L.118

Public retirement systems typically follow guidelines set forth by the Actuarial Standards Board to set and review their actuarial assumptions, including the expected rate of investment return. Most systems review their actuarial assumptions regularly, pursuant to state or local statute or system policy. Actuarial Standards of Practice No. 27 (Selection of Economic Assumptions for Measuring Pension Obligations) (ASOP 27) prescribes the considerations actuaries should make in setting an investment return assumption. As described in ASOP 27, the process for establishing and reviewing the investment return assumption involves consideration of various financial, economic, and market factors, and is based on a very long-term view, typically 30 to 50 years. A primary objective for using a long-term approach in setting public pensions' return assumption is to promote stability and predictability of cost to ensure intergenerational equity among taxpayers.

Figure 2: Annual change in contributions from prior year, corporate vs. public pensions

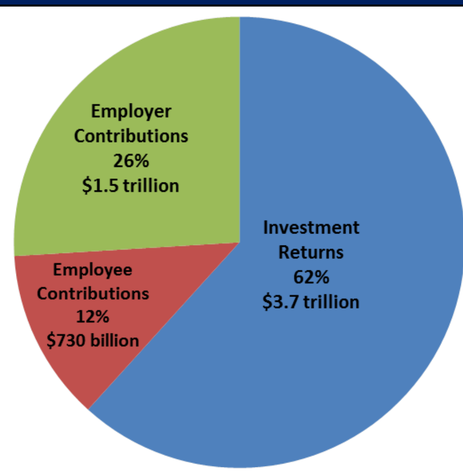



*Source:* Compiled by NASRA based on U.S. Department of Labor and U.S. Census Bureau data

Unlike public pension plans, corporate plans are required by federal regulations to make contributions on the basis of current interest rates. As Figure 2 shows, this method results in plan costs that are volatile and uncertain, often changing dramatically from one year to the next. This volatility is due in part to fluctuations in interest rates and has been identified as a leading factor in the decision among corporations to abandon their pension plans. By focusing on the long-term and relying on a stable investment return assumption, public plans experience less volatility of costs.

As shown in Figure 3, since 1984, public pension funds have accrued an estimated $5.9 trillion in revenue, of which $3.7 trillion, or 62 percent, is estimated to have come from investment earnings. Employer contributions account for $1.5 trillion, or 26 percent of the total, and employee contributions total $730 billion, or 12 percent.[2]

Figure 3: Public Pension Sources of Revenue, 1984-2013




*Source:* Compiled by NASRA based on U.S. Census Bureau data

Public retirement systems operate over long timeframes and manage assets for participants whose involvement with the plan can last more than half a century. Consider the case of a newly-hired public school teacher who is 25 years old. If this pension plan participant elects to make a career out of teaching school, he or she may work for 35 years, to age 60, and live another 25 years, to age 85. This teacher's pension plan will receive contributions for the first 35 years and then pay out benefits for another 25 years. During the entire 60-year period, the plan is investing assets on behalf of this participant. To emphasize the long-term nature of the investment return assumption, for a typical career employee, more than one-half of the investment income earned on assets accumulated to pay benefits is received *after* the employee retires.

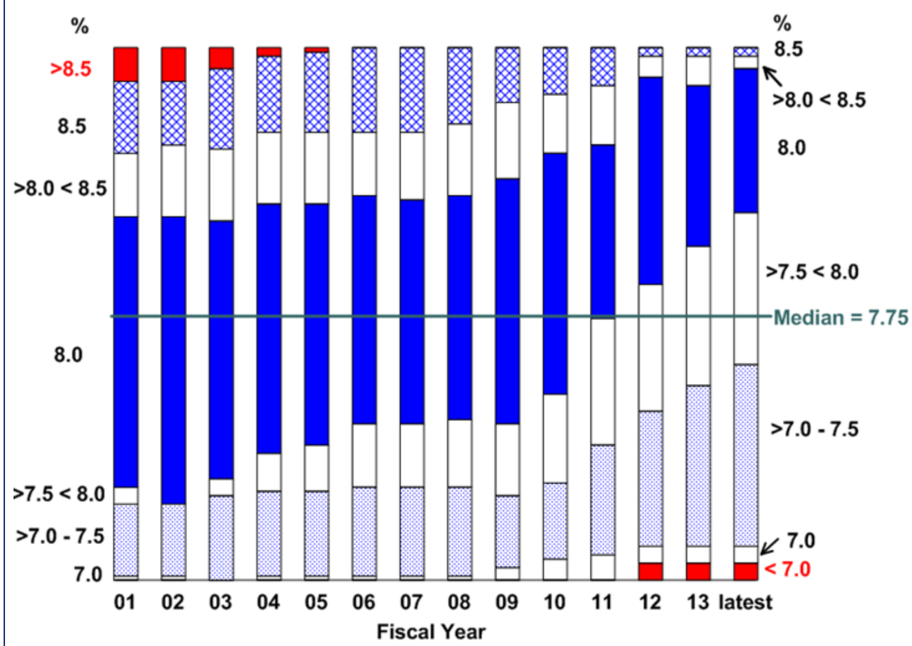
[2] US Census Bureau, Annual Survey of Public Pensions, State & Local Data

The investment return assumption is established through a process that considers factors such as economic and financial criteria; the plan's liabilities; and the plan's asset allocation, which reflects the plan's capital market assumptions, risk tolerance, and projected cash flows.

Standards for setting an investment return assumption, established and maintained by professional actuaries, recommend that actuaries consider a range of specified factors, including current and projected interest rates and rates of inflation; historic and projected returns for individual asset classes; and historic returns of the fund itself. The investment return assumption reflects a value within the projected range.

As shown in Figure 4, many public pension plans have reduced their return assumption in recent years. Among the 126 plans measured in the Public Fund Survey, more than one-half have reduced their investment return assumption since fiscal year 2008. The average return assumption is 7.68 percent. Appendix A details the assumptions in use or adopted by the 126 plans in the Public Fund Survey.

Figure 4: Change in distribution of public pension investment return assumptions, FY 01 through May 2015

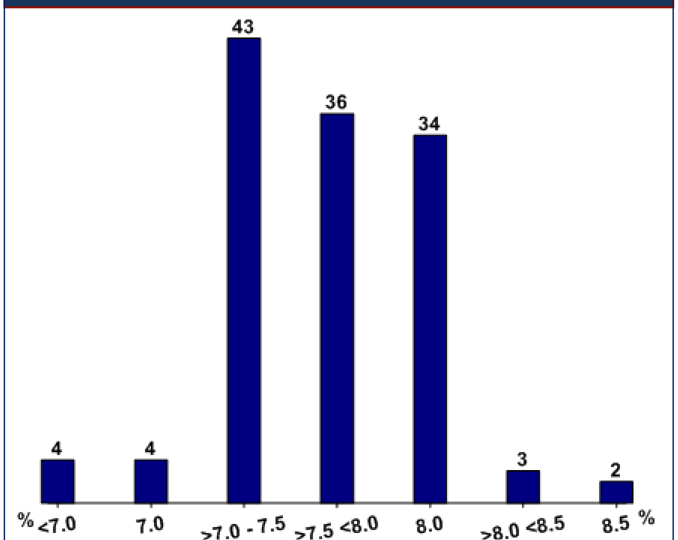



*Source:* Compiled by NASRA based on Public Fund Survey

## Conclusion

Over the last 25 years, a period that has included three economic recessions and four years when median public pension fund investment returns were negative, public pension funds have exceeded their assumed rates of investment return. Changes in economic and financial conditions are causing many public plans to reconsider their investment return assumption. Such a consideration must include a range of financial and economic factors while remaining consistent with the long timeframe under which plans operate.

Figure 5: Distribution of investment return assumptions




*Source:* Compiled by NASRA based on Public Fund Survey, May 2015

### See Also:

- Actuarial Standards of Practice No. 27, Actuarial Standards Board
- The Liability Side of the Equation Revisited, Missouri SERS, September 2006
- The Public Fund Survey is sponsored by the National Association of State Retirement Administrators (registration required).

### Contact:

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Alex Brown, Research Manager, alex@nasra.org
National Association of State Retirement Administrators

## Appendix A: Investment Return Assumption by Plan

(Figures reflect the nominal assumption in use, or announced for use, as of May 2015)

| Plan | Rate (%) |
|---|---|
| Alaska PERS | 8.00 |
| Alaska Teachers | 8.00 |
| Alabama ERS | 8.00 |
| Alabama Teachers | 8.00 |
| Arkansas PERS | 7.75 |
| Arkansas Teachers | 8.00 |
| Arizona Public Safety Personnel | 7.85 |
| Arizona SRS | 8.00 |
| Phoenix ERS | 7.50 |
| California PERF | 7.50 |
| California Teachers | 7.50 |
| Contra Costa County | 7.25 |
| LA County ERS | 7.50 |
| San Diego County | 7.75 |
| San Francisco City & County | 7.50 |
| Colorado Affiliated Local | 7.50 |
| Colorado Fire & Police Statewide | 7.50 |
| Colorado Municipal | 7.50 |
| Colorado School | 7.50 |
| Colorado State | 7.50 |
| Denver Employees | 8.00 |
| Denver Public Schools | 7.50 |
| Connecticut SERS | 8.00 |
| Connecticut Teachers | 8.50 |
| DC Police & Fire | 6.50 |
| DC Teachers | 6.50 |
| Delaware State Employees | 7.20 |
| Florida RS | 7.65 |
| Georgia ERS | 7.50 |
| Georgia Teachers | 7.50 |
| Hawaii ERS | 7.75 |
| Iowa PERS | 7.50 |
| Idaho PERS | 7.00 |
| Chicago Teachers | 7.75 |
| Illinois Municipal | 7.50 |
| Illinois SERS | 7.25 |
| Illinois Teachers | 7.50 |
| Illinois Universities | 7.25 |
| Indiana PERF | 6.75 |
| Indiana Teachers | 6.75 |
| Kansas PERS | 8.00 |
| Kentucky County | 7.75 |
| Kentucky ERS | 7.75 |
| Kentucky Teachers | 7.50 |
| Louisiana SERS | 7.75 |
| Louisiana Teachers | 7.75 |
| Massachusetts SERS | 7.75 |
| Massachusetts Teachers | 7.75 |
| Maryland PERS[1] | 7.65 |
| Maryland Teachers[1] | 7.65 |
| Maine Local | 7.13 |
| Maine State and Teacher | 7.13 |
| Michigan Municipal | 8.00 |
| Michigan Public Schools | 8.00 |
| Michigan SERS | 8.00 |
| Duluth Teachers | 8.00 |
| Minnesota PERF | 8.00 |
| Minnesota State Employees | 8.00 |
| Minnesota Teachers[2] | 8.40 |
| St. Paul Teachers | 8.00 |
| Missouri DOT and Highway Patrol | 7.75 |
| Missouri Local | 7.25 |
| Missouri PEERS | 8.00 |
| Missouri State Employees | 8.00 |
| Missouri Teachers | 8.00 |
| St. Louis School Employees | 8.00 |
| Mississippi PERS | 8.00 |
| Montana PERS | 7.75 |
| Montana Teachers | 7.75 |
| North Carolina Local Government | 7.25 |
| North Carolina Teachers and State Employees | 7.25 |
| North Dakota PERS | 8.00 |
| North Dakota Teachers | 8.00 |
| Nebraska Schools | 8.00 |
| New Hampshire Retirement System | 7.75 |
| New Jersey PERS | 7.90 |
| New Jersey Police & Fire | 7.90 |
| New Jersey Teachers | 7.90 |
| New Mexico PERF | 7.75 |

| | |
|---|---|
| New Mexico Teachers | 7.75 |
| Nevada Police Officer and Firefighter | 8.00 |
| Nevada Regular Employees | 8.00 |
| New York City ERS | 7.00 |
| New York City Teachers | 8.00 |
| New York State Teachers | 8.00 |
| NY State & Local ERS | 7.50 |
| NY State & Local Police & Fire | 7.50 |
| Ohio PERS | 8.00 |
| Ohio Police & Fire | 8.25 |
| Ohio School Employees | 7.75 |
| Ohio Teachers | 7.75 |
| Oklahoma PERS | 7.50 |
| Oklahoma Teachers | 8.00 |
| Oregon PERS | 7.75 |
| Pennsylvania School Employees | 7.50 |
| Pennsylvania State ERS | 7.50 |
| Rhode Island ERS | 7.50 |
| Rhode Island Municipal | 7.50 |
| South Carolina Police | 7.50 |
| South Carolina RS | 7.50 |
| South Dakota PERS[3] | 7.25 |
| TN Political Subdivisions | 7.50 |
| TN State and Teachers | 7.50 |

| | |
|---|---|
| City of Austin ERS | 7.75 |
| Houston Firefighters | 8.50 |
| Texas County & District | 8.00 |
| Texas ERS | 8.00 |
| Texas LECOS | 8.00 |
| Texas Municipal | 7.00 |
| Texas Teachers | 8.00 |
| Utah Noncontributory | 7.50 |
| Fairfax County Schools | 7.50 |
| Virginia Retirement System | 7.00 |
| Vermont State Employees[4] | 8.10 |
| Vermont Teachers[4] | 7.90 |
| Washington LEOFF Plan 1[5] | 7.90 |
| Washington LEOFF Plan 2 | 7.90 |
| Washington PERS 1[5] | 7.90 |
| Washington PERS 2/3[5] | 7.90 |
| Washington School Employees Plan 2/3[5] | 7.90 |
| Washington Teachers Plan 1[5] | 7.90 |
| Washington Teachers Plan 2/3[5] | 7.90 |
| Wisconsin Retirement System | 7.20 |
| West Virginia PERS | 7.50 |
| West Virginia Teachers | 7.50 |
| Wyoming Public Employees | 7.75 |

1. The Maryland State Retirement Agency Board of Trustees began, with the actuarial valuation dated June 30, 2013, a phased reduction in the assumption used for its PERS and Teachers plans from 7.75 percent, by .05% each year until reaching 7.55.

2. The Minnesota Legislature is responsible for setting the investment return assumption for plans in the state. Legislation approved in 2015 established a rate of 8.0 percent for all plans except the TRA, which is using a select and ultimate rate pending completion of an actuarial experience study. For more information on select-and-ultimate rates, please see Actuarial Standards of Practice No. 27: http://www.actuarialstandardsboard.org/pdf/asops/asop027_145.pdf.

3. The SDRS set the rate at 7.25% through FY 2017, after which the rate will rise to 7.50% unless the SDRS board takes action otherwise.

4. The Vermont retirement systems adopted select-and-ultimate rates in 2011; the rates shown reflect the single rates most closely associated with the funding results for the respective plans, based on their projected cash flows.

5. For all Washington State plans except LEOFF Plan 2, the assumed rate of return will be reduced to 7.8% on July 1, 2015, and to 7.7% on July 1, 2017.

# Cost Impact Projections – Main System

- Projections of estimated funded ratios for 45 years
  - Baseline based on July 1, 2014 actuarial valuation results using current assumptions
- Includes the current contribution rates as follows:
  - Member rate is 7.00% for fiscal years ending June 30, 2015 and thereafter
  - Employer rate is 7.12% for fiscal years ending June 30, 2015 and thereafter
- Includes the legislative plan changes adopted in legislative bills SB2015 and HB1062 as “New Plan”.
- Both the funded ratios under the actuarial value of assets (AVA) and market value of assets (MVA) are shown for:
  - New Plan and Proposed Assumptions
  - New Plan and Proposed Assumptions except Payroll Growth
  - New Plan and Proposed Assumptions except Interest Rate
  - New Plan and Proposed Assumptions except Interest Rate and Payroll Growth

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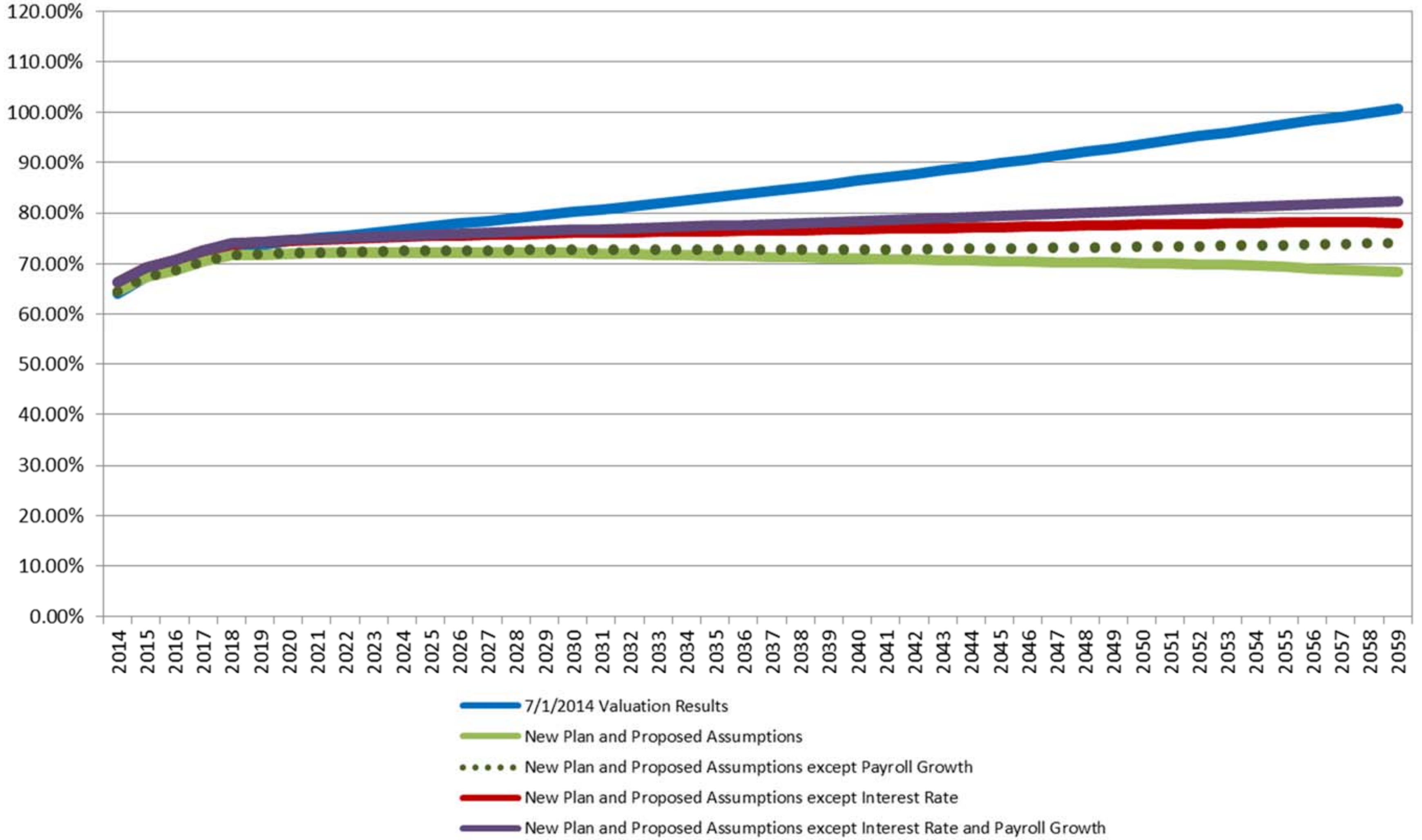
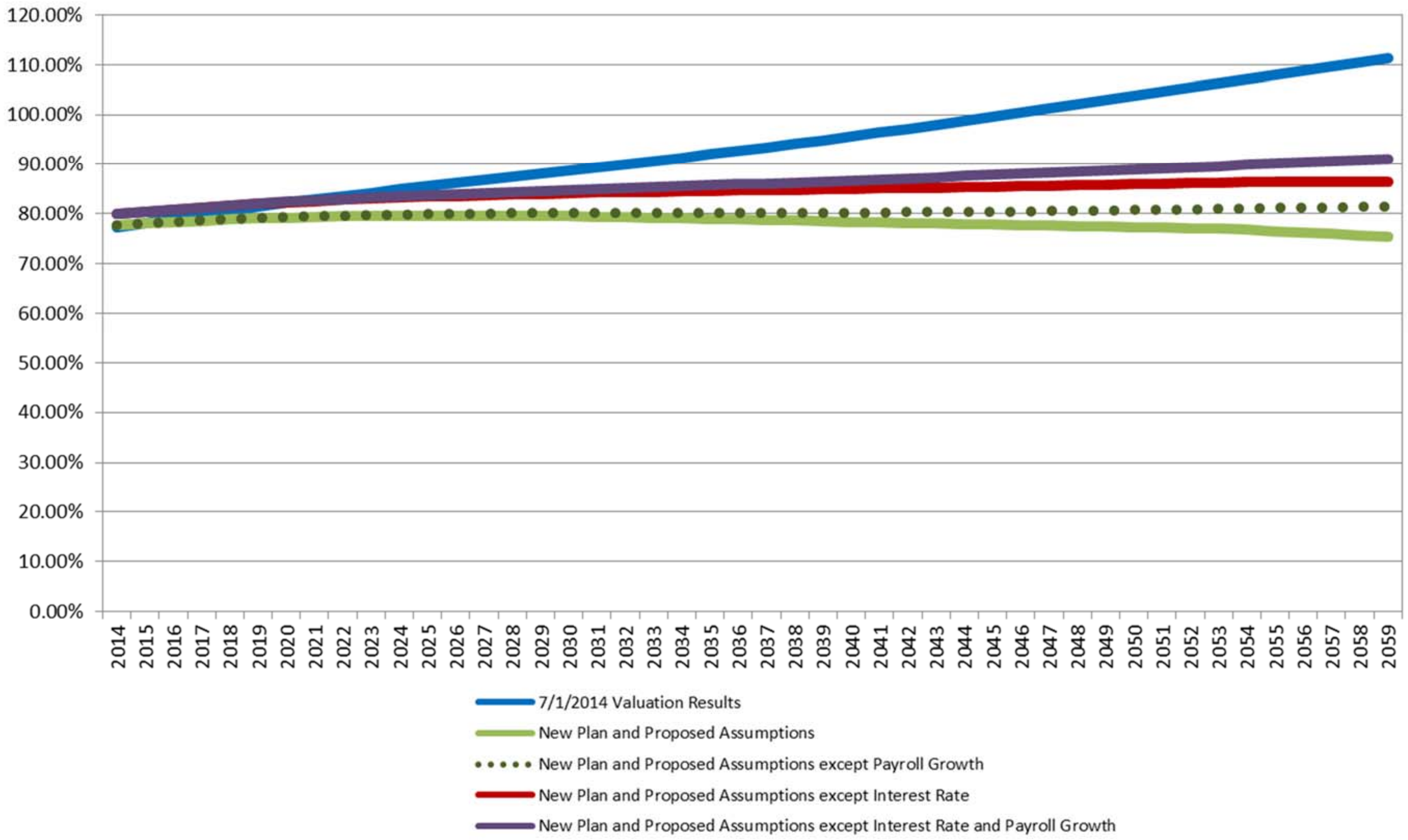
# Projected Funded Ratios (AVA Basis) – Main System



# Projected Funded Ratios (MVA Basis) – Main System



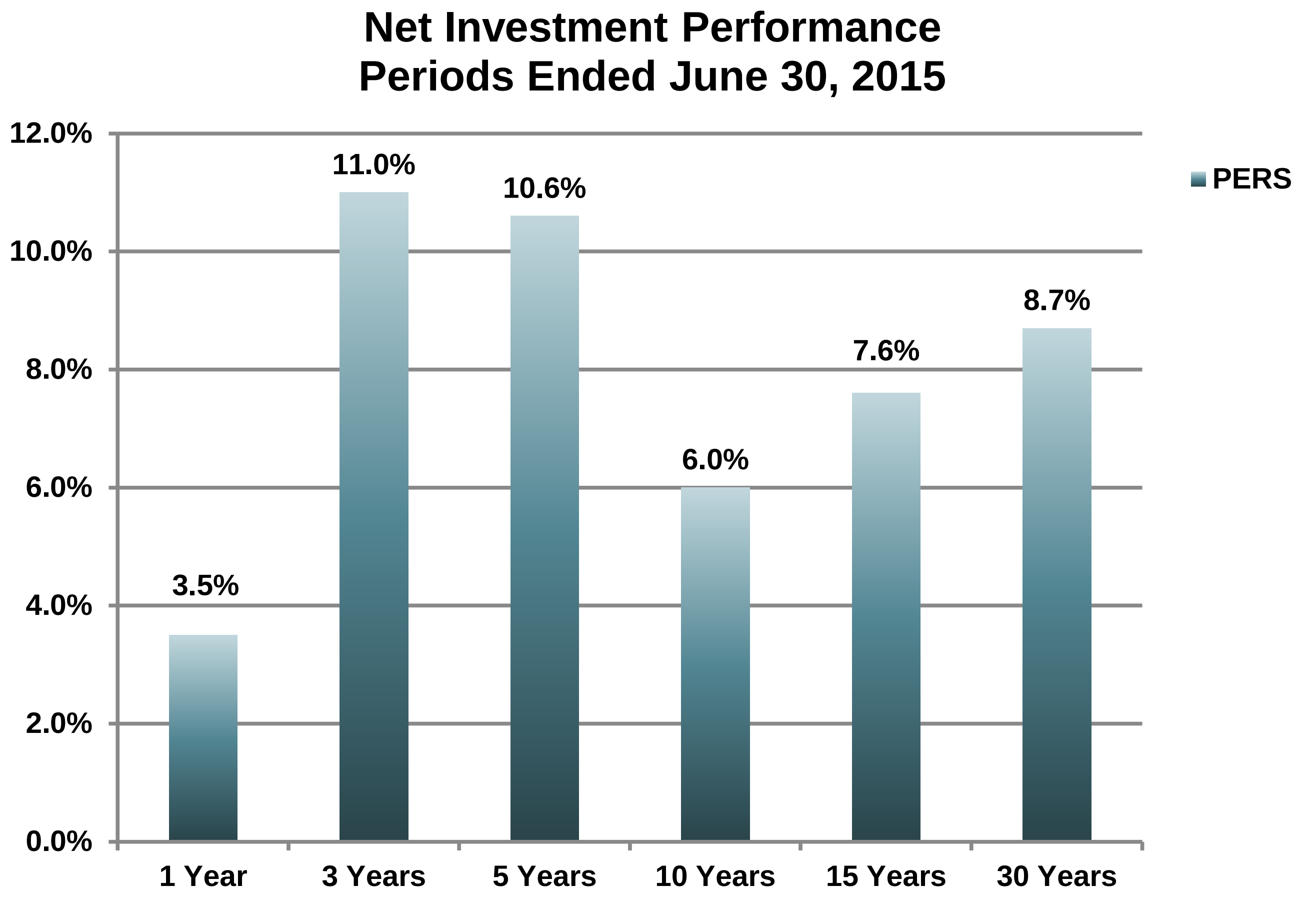
# PERS Investment Update

September 9, 2015
Appendix 3

**Note:** This supplement contains PERS results for the fiscal year ended June 30, 2015, and are unaudited valuations.

Dave Hunter - Executive Director/CIO
Darren Schulz - Deputy Chief Investment Officer
ND Retirement & Investment Office (RIO)
State Investment Board (SIB)

# PERS Investment Ends – June 30, 2015



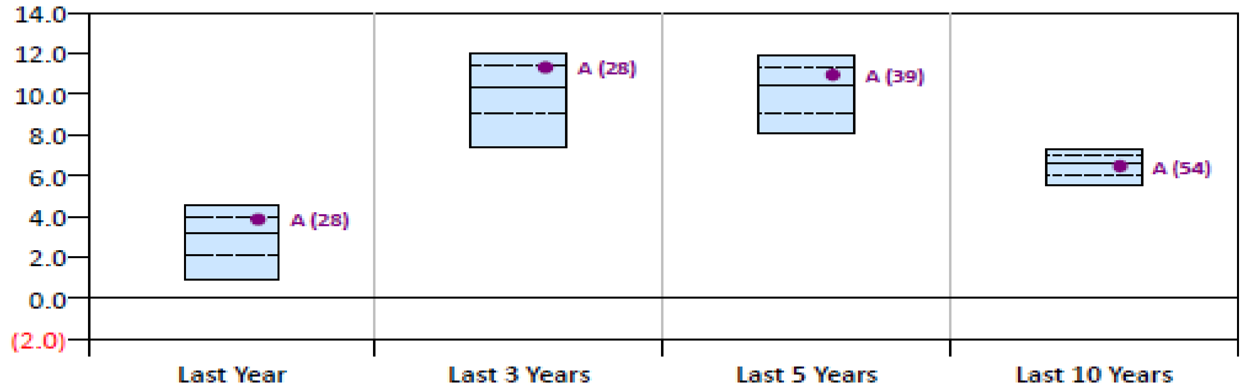

**Preliminary Update for June 30, 2015:**

Based on unaudited results, PERS (main plan) generated a net return of over 3.5% for the fiscal year ended June 30, 2015, with an excess return of over 135 bps (versus return benchmarks). PERS returns compare favorably to other US public pension plans with over $1 billion in plan assets (see next slide).

**Returns:** PERS returns for the 3-, 5- and 30-year periods ended June 30, 2015, have approximated 11.0%, 10.6% and 8.7%, respectively, net of investment fees.

# PERS - 2nd Quartile Returns with 4th Quartile Risk

Gross of Fee Returns
for Periods Ended June 30, 2015
Group: CAI Public Fund Sponsor Database

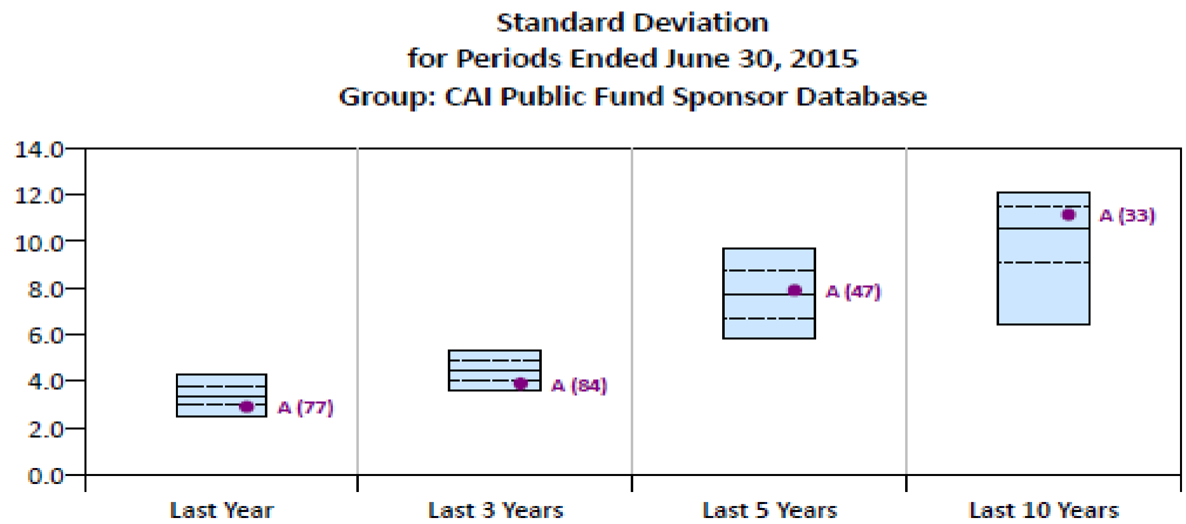



| | Last Year | Last 3 Years | Last 5 Years | Last 10 Years |
|---|---|---|---|---|
| 10th Percentile | 4.6 | 12.0 | 11.9 | 7.3 |
| 25th Percentile | 3.9 | 11.4 | 11.3 | 7.0 |
| Median | 3.2 | 10.3 | 10.4 | 6.6 |
| 75th Percentile | 2.1 | 9.1 | 9.1 | 6.1 |
| 90th Percentile | 1.0 | 7.4 | 8.0 | 5.5 |
| Member Count | 256 | 236 | 220 | 191 |
| Total Fund-PERS ● A | 3.9 | 11.3 | 11.0 | 6.5 |

**Positive Risk Adjusted Returns: PERS has generated 2nd quartile returns** (28th percentile) **in the last 3 years while using 4th quartile risk levels** (see next slide).

# PERS Main Plan - 2nd Quartile Returns with 4th Quartile Risk

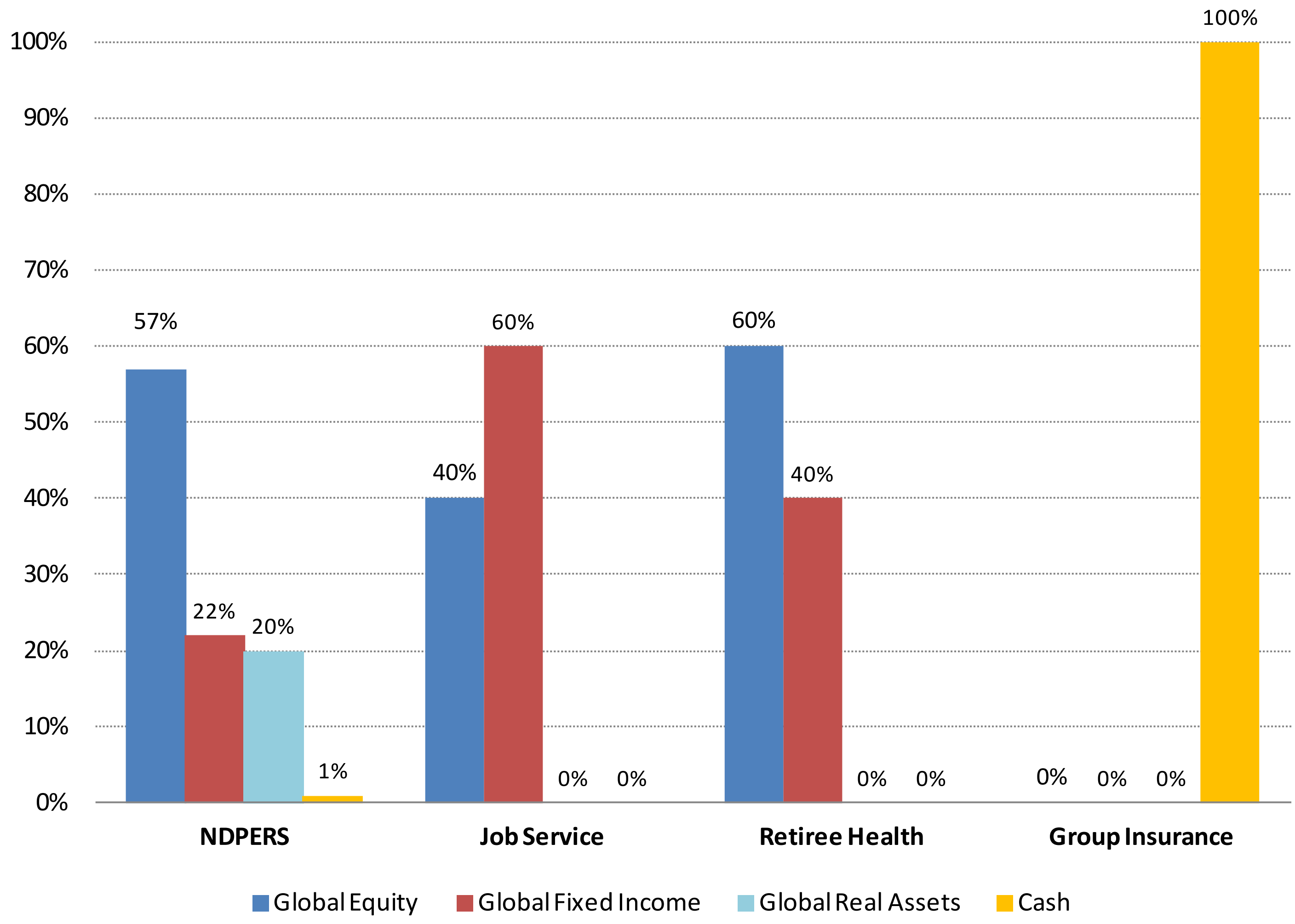
Standard Deviation is a commonly used risk metric used to monitor volatility.




| | Last Year | Last 3 Years | Last 5 Years | Last 10 Years |
|---|---|---|---|---|
| 10th Percentile | 4.3 | 5.3 | 9.7 | 12.1 |
| 25th Percentile | 3.8 | 4.9 | 8.7 | 11.5 |
| Median | 3.4 | 4.5 | 7.7 | 10.6 |
| 75th Percentile | 3.0 | 4.1 | 6.7 | 9.1 |
| 90th Percentile | 2.5 | 3.6 | 5.8 | 6.4 |
| Member Count | 256 | 236 | 220 | 191 |
| Total Fund-PERS ● A | 2.9 | 3.9 | 7.9 | 11.1 |

**PERS risk, as measured by standard deviation, has declined from the 2nd quartile in the last 5 to 10 years down to the 4th quartile in the last 3 years.**

# PERS Funds Target Allocations - Asset Allocation is the # 1 Driver of Investment Returns



# PERS and Job Service Returns and Risk Levels – June 30, 2015

| | 1 Yr Ended 6/30/2015 | 3 Yrs Ended 6/30/2015 | 5 Yrs Ended 6/30/2015 | Risk 5 Yrs Ended 6/30/2015 | Risk Adj Excess Return 5 Yrs Ended 6/30/2015 |
|---|---|---|---|---|---|
| **PERS (Main Plan)** | | | | | |
| Total Fund Return - Net | **3.5%** | 11.0% | **10.6%** | 7.9% | **0.2%** |
| Policy Benchmark Return | 2.2% | 9.7% | 10.0% | 7.6% | |
| **EXCESS RETURN** | **1.4%** | 1.3% | **0.6%** | **104%** | |
| **JOB SERVICE** | | | | | |
| Total Fund Return - Net | **3.3%** | 9.4% | **9.5%** | 6.0% | **0.6%** |
| Policy Benchmark Return | 1.6% | 7.4% | 8.3% | 5.7% | |
| **EXCESS RETURN** | **1.7%** | 2.0% | **1.1%** | **106%** | |

**Risk Adjusted Excess Return** measures a portfolio's excess return adjusted by its risk relative to a benchmark portfolio. This metric is positive if returns are due to "smart" investment decisions or negative if driven by excess risk.

**Net Investment Returns:** Current year returns of approximately **3.5%** for PERS and **3.3%** for Job Service are below long-term expectations largely as a result of weak economic conditions in the international markets combined with escalating levels of uncertainty in China and the European Union. Longer term results have met, or exceeded expectations with net investment returns approximating **10.6%** for PERS and **9.5%** for Job Service over the last 5-years. Excess Return has consistently exceeded **0.6%** for PERS and Job Service during this time.

**Risk:** Favorable results have been achieved while adhering to prescribed risk management guidelines which limit portfolio risk (as measured by standard deviation) to 115% of policy. PERS actual risk level approximated **104%** while Job Service approximated **106%** of policy for the 5-years ended June 30, 2015.

# PERS - Actual vs. Target Returns – June 30, 2015

## Actual Asset Allocations are consistent with Approved Targets

### One Year Relative Attribution Effects

| Asset Class | Effective Actual Weight | Effective Target Weight | Actual Return | Target Return | Manager Effect | Asset Allocation | Total Relative Return |
|---|---|---|---|---|---|---|---|
| Domestic Equity | 23% | 21% | 8.64% | 7.26% | 0.30% | 0.06% | 0.36% |
| Domestic Fixed Income | 19% | 17% | 3.40% | 1.22% | 0.41% | (0.02%) | 0.38% |
| Real Estate | 9% | 10% | 15.78% | 12.98% | 0.25% | (0.07%) | 0.17% |
| Infrastructure | 4% | 5% | 1.23% | (0.38%) | 0.05% | 0.01% | 0.07% |
| Timber | 4% | 5% | 3.94% | 10.02% | (0.24%) | (0.07%) | (0.31%) |
| International Equity | 15% | 15% | (2.53%) | (4.37%) | 0.29% | (0.05%) | 0.25% |
| International Fixed Incom | 5% | 5% | (9.37%) | (13.19%) | 0.21% | 0.03% | 0.23% |
| Private Equity | 4% | 5% | (5.37%) | (5.37%) | 0.00% | 0.07% | 0.07% |
| World Equity | 16% | 16% | 4.67% | 1.43% | 0.50% | (0.01%) | 0.49% |
| Cash & Equivalents | 1% | 1% | 0.07% | 0.02% | 0.00% | (0.01%) | (0.01%) |
| **Total** | | | **3.86% =** | **2.15% +** | **1.77% +** | **(0.06%)** | **1.71%** |

- **PERS (Main Plan) generated an "Actual (Callan Gross) Return" of 3.86%** for the year ended June 30, 2015. Actual Returns of every Asset Class exceeded their performance benchmark excluding Timber. Actual asset allocations were within 1% to 2% of approved targets without exception. Strong absolute returns in Real Estate (+15%), Domestic Equity (+8.6%), World Equity (+4.7%) and Domestic Fixed Income (+3.4%) were materially offset by sharp declines in International Fixed Income (-9.4%), Private Equity (-5.4%) and International Equity (-2.5%).

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.

# PERS Five Year Return Attribution – June 30, 2015

## Five Year Annualized Relative Attribution Effects

| Asset Class | Effective Actual Weight | Effective Target Weight | Actual Return | Target Return | Manager Effect | Asset Allocation | Total Relative Return |
|---|---|---|---|---|---|---|---|
| Domestic Equity | 29% | 28% | 17.94% | 17.49% | 0.04% | 0.13% | 0.17% |
| Domestic Fixed Income | 21% | 20% | 6.65% | 4.88% | 0.30% | (0.06%) | 0.24% |
| Real Estate | 8% | 9% | 16.18% | 12.72% | 0.26% | 0.02% | 0.28% |
| Timber | 4% | 4% | - | - | (0.30%) | (0.05%) | (0.35%) |
| Infrastructure | 3% | 4% | - | - | 0.15% | 0.10% | 0.25% |
| Interntional Equity | 16% | 16% | 9.50% | 7.33% | 0.33% | (0.07%) | 0.26% |
| International Fixed Incom | 5% | 5% | 3.75% | 1.08% | 0.15% | (0.01%) | 0.14% |
| Private Equity | 5% | 5% | 4.87% | 4.87% | 0.00% | (0.06%) | (0.06%) |
| World Equity | 9% | 9% | - | - | 0.10% | (0.05%) | 0.05% |
| Cash & Equivalents | 1% | 1% | 0.09% | 0.08% | 0.00% | (0.03%) | (0.03%) |
| **Total** | | | **10.96% =** | **10.00% +** | **1.02% +** | **(0.06%)** | **0.96%** |

- **PERS (Main Plan) generated an "Actual (Callan Gross) Return" of 10.96%** for the 5-years ended June 30, 2015. Actual Returns of every Asset Class exceeded their performance benchmark excluding Timber. After adjusting the Callan's gross "Actual Return" for investment management and performance fees, the net return for PERS Main Plan was 10.6% over the last five-years.

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.

# Retiree Health & Group Insurance Returns & Risk - June 30, 2015

| | 1 Yr Ended 6/30/2015 | 3 Yrs Ended 6/30/2015 | 5 Yrs Ended 6/30/2015 | Risk 5 Yrs Ended 6/30/2015 | Risk Adj Excess Return 5 Yrs Ended 6/30/2015 |
|---|---|---|---|---|---|
| **PERS RETIREE HEALTH** | | | | | |
| Total Fund Return - Net | **3.1%** | 11.3% | **11.5%** | **8.6%** | **-0.22%** |
| Policy Benchmark Return | **3.6%** | 10.5% | **10.8%** | **8.0%** | |
| **EXCESS RETURN** | **-0.5%** | 0.8% | **0.6%** | **108%** | |
| **PERS GROUP INSURANCE** | | | | | |
| Total Fund Return - Net | **0.01%** | 0.10% | **0.17%** | **0.07%** | **0.04%** |
| Policy Benchmark Return | **0.02%** | 0.06% | **0.08%** | **0.03%** | |
| **EXCESS RETURN** | **-0.01%** | 0.03% | **0.09%** | | |

**Risk Adjusted Excess Return** measures a portfolio's excess return adjusted by its risk relative to a benchmark portfolio. This metric is positive if returns are due to "smart" investment decisions or negative if driven by excess risk.

**Net Investment Returns:** Current year returns have been below our performance benchmarks and long-term return expectations. Over the past five years, net investment returns approximated **11.5%** for Retiree Health and **0.17%** for Group Insurance. Active management has been responsible for generating **0.6%** of Excess Return for Retiree Health and **0.09%** of Excess Return of Group Insurance over the last 5-years.

**Risk:** Results have been achieved while remaining generally consistent with policy expectations (as measured by standard deviation). PERS Retiree Health actual risk level approximated **108%** while Group Insurance was within **0.04%** (i.e. 0.07% versus 0.03%) of policy for the 5-years ended June 30, 2015.

# PERS Long Term Results Meet or Exceed Expectations

## The PERS Pension Plan is a Long Term Investor

Net investment returns for PERS Main Plan continue to exceed 8% over the past 3-, 5- and 30-year periods despite disappointing conditions in the international equity and debt markets which declined by over 4% and 13%, respectively, during the most recent fiscal year end.

**ND RETIREMENT AND INVESTMENT OFFICE**
**ND STATE INVESTMENT BOARD**
**INVESTMENT PERFORMANCE SUMMARY**
**AS OF JUNE 30, 2015**

| | | Investment Performance (net of fees) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Fiscal Years ended June 30 | | | | | Periods ended 6/30/15 (annualized) | | | | |
| Fund Name | Market Values as of 6/30/15 | FYTD 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 3 Years | 5 Years | 10 Years | 25 Years | 30 Years |
| **PERS (Main Plan)** | 2,422,579,596 | **3.53%** | 16.38% | 13.44% | -0.12% | 21.27% | 13.67% | **10.98%** | **10.61%** | 5.98% | 8.01% | **8.68%** |
| Job Service | 96,392,560 | 3.30% | 13.54% | 11.71% | 3.09% | 16.39% | 13.63% | 9.42% | 9.47% | 6.16% | * | * |
| Group Insurance | 39,653,686 | 0.01% | 0.06% | 0.27% | 0.24% | 0.31% | 0.36% | 0.11% | 0.18% | 1.55% | * | * |
| Retiree Insurance | 97,671,059 | 3.06% | 16.53% | 14.80% | 2.62% | 21.65% | 16.86% | 11.30% | 11.47% | 6.11% | 7.53% | * |

* These funds do not have the specified periods of history under SIB management.

Note: Asset allocation largely drives investment performance. Each fund has a unique allocation that takes into consideration return objectives, risk tolerance, liquidity constraints, and unique circumstances. Such considerations must be taken into account when comparing investment returns. **All figures are preliminary and subject to revision.**

# RIO's Overview on Long-Term Return Expectations

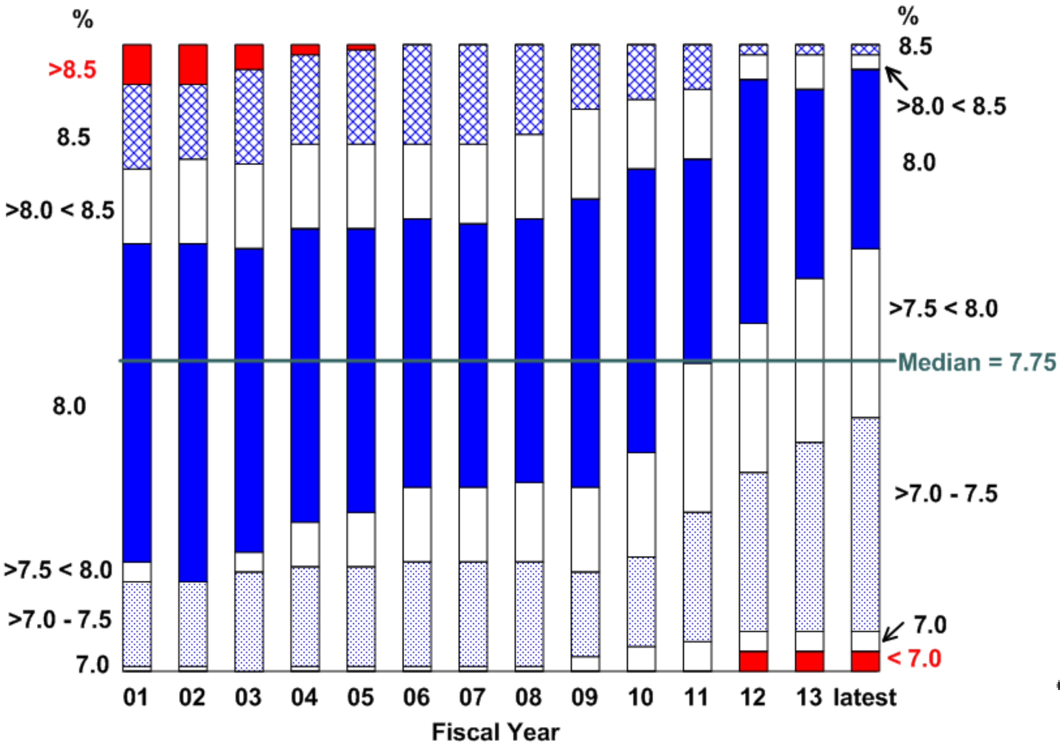
**Summary: RIO can reasonably support a long-term return expectation of up to 8% noting that Segal provided a target estimated rate of 7.88%** (see last page);

1) During the past year, the median long-term expected investment return for U.S. public pension plans has declined to 7.75%;
2) Segal has preliminarily proposed a 7.75% rate versus the current 8% assumption in connection with its experience study (selected excerpts follow);
3) In the past, many plan sponsors have accepted return expectations which have a 50% probability along with a variance ranging from +/- 2% to 4% (i.e. 48% to 52%);
4) The vast majority of plan sponsors set long-term return expectations in one-quarter percent increments (i.e. 7.75% or 8.00%);
5) It is interesting to note that the TFFR target estimate was 7.86% and they elected to round down to 7.75% (the nearest quarter percentage point);
6) **Actuaries do not provide any credit or benefit with regards to a manager's ability to generate excess return versus an underlying benchmark; and**
7) **Segal's estimate includes a 5.0% real rate of return plus a 2.75% inflation expectation.**

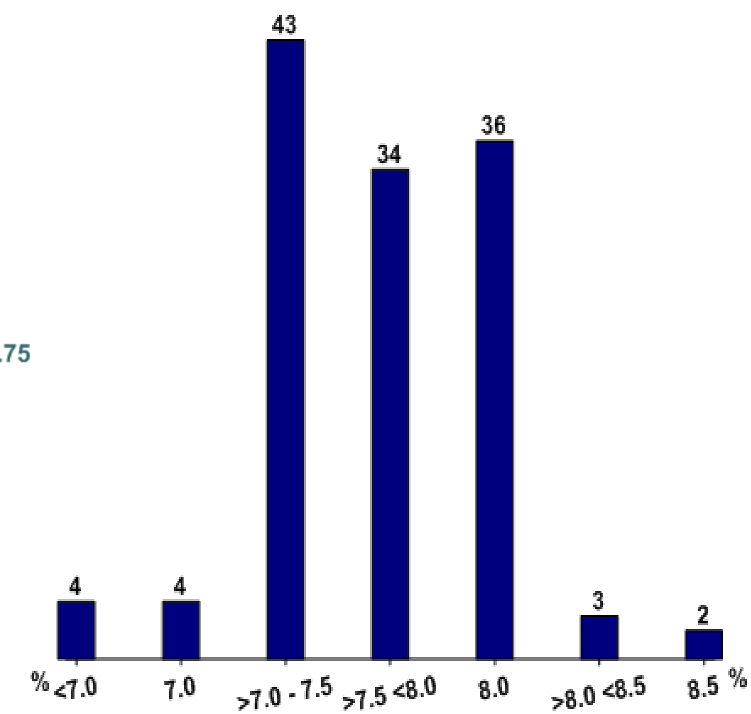
# NASRA Issue Brief: Public Pension Plan Return Assumptions

National Association of State Retirement Administrators - May 2015 Update

**Change in distribution of public pension investment return assumptions from 2001 to May 2015:**




**Distribution of investment return assumptions:**




*Source: http://www.nasra.org/files/Issue%20Briefs/NASRAInvReturnAssumptBrief.pdf*

# Assumed Rate of Investment Return *(continued)*

- We have based our analysis of the expected real rate of return on the "Survey of Capital Market Assumptions"*.
  - This survey compiles and averages the capital market assumptions of 23 investment consultants (including Callan and Segal Rogerscasey).
- The calculation of the expected real rate of return based on the survey assumptions are shown on the following slides.
- Note that expected arithmetic returns are used to determine the expected returns by asset class. The portfolio's expected geometric return is estimated by reducing the arithmetic return by half of the portfolio's expected variance.



** Published by Horizon (2014 Edition)*

# Assumed Rate of Investment Return *(continued)*

| Asset Class | 20-Year Annual Arithmetic Real Return | Target Allocation | Weighted Real Return |
|---|---|---|---|
| US Equities Large Cap | 7.05% | 24% | 1.69% |
| US Equities Small/Mid Cap | 8.10% | 7% | 0.57% |
| Intl Equities Developed | 7.71% | 16% | 1.23% |
| Emerging Markets Equities | 10.24% | 5% | 0.51% |
| US Bonds Core | [illegible] | 12% | 0.30% |
| US Bonds High Yield | 4.[illegible]1% | 5% | 0.24% |
| Intl Debt Developed | 2.05% | 5% | 0.10% |
| Cash Equivalents | 1.11% | 1% | 0.01% |
| Real Estate | 4.95% | 15% | 0.74% |
| Infrastructure | 6.16% | 5% | 0.31% |
| Private Equities | 10.97% | 5% | 0.55% |
| **Total** | | **100%** | **6.25%** |
| Adjustment to Geometric | | | (0.62)% |
| **Geometric Real Rate of Return** | | | **5.63%** |

# Assumed Rate of Investment Return *(continued)*

- Using the Fund's target asset allocation and the capital market assumptions from the survey, the expected real rate of return is 5.63%.
  - The expected real rate of return is reduced to account for investment expenses. We do not have specific data on the investment expenses, but for a plan this size, assuming 0.50% to account for investment expenses would be reasonable.
- The expected real rate of return is 5.13%, net of expected investment expenses of 0.50%.



| | |
|---|---|
| Gross Real Rate of Return | 5.63% |
| Less Investment Expenses | (0.50)% |
| Net Real Rate of Return | 5.13% |

# Assumed Rate of Investment Return *(continued)*

- Over a 20-year period, the Fund is expected to earn an annual real rate of return of at least 5.11% half of the time.
- Changing the expected real rate of return to 5.00% will increase the likelihood of meeting the expectation over a 20-year period to 52%.
- The following table shows the components of the current and recommended investment return assumption.

| Component | Current | Recommended | 50/50 | 8.00% | 7.50% |
|---|---|---|---|---|---|
| Inflation | 3.50% | 2.75% | 2.75% | 2.75% | 2.75% |
| Real Rate of Return, net of expenses | 4.50% | 5.13% | 5.13% | 5.13% | 5.13% |
| Risk Adjustment | (0.00)% | (0.13)% | (0.00)% | 0.12% | (0.38)% |
| Total | 8.00% | 7.75% | 7.88% | 8.00% | 7.50% |
| Confidence Level | N/A | 52% | 50% | 48% | 56% |

**TO:** Sparb Collins, PERS Executive Director

# Appendix 4

**FROM:** Dave Hunter, RIO Executive Director / CIO

**DATE:** September 8, 2015

**SUBJECT:** PERS Long-Term Expected Return on Asset Assumption

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**Summary:**

RIO can reasonably support a long-term expected return on asset assumption of up to 8.00% noting that the plan actuary (Segal) provided a point estimate of 7.78% on August 27, 2015. Segal assigned a 50% confidence level to the 7.78% estimate and a 48% confidence level to the existing 8.00% rate. During the past year, Callan Associates also noted the reasonableness of an 8.00% return assumption over the next 80-years. RIO notes that plan actuaries do not provide any credit or benefit with regards to an investment manager's ability to generate excess return versus an underlying benchmark index. PERS generated over 50 basis points (0.50%) of excess return due to active investment management for the 5-years ended June 30, 2015.

**Background[1]:**

The expected return for the PERS Plan depends on its asset allocation and the returns for each component of the capital markets. The 8% return assumed for PERS assumes the current asset allocation is held going forward, with a majority of the assets invested in growth. Over the very long term (back to 1926), annualized historical returns for US stocks have averaged 10.5% while bonds averaged 6%.

Looking forward, shorter term (5-to-10 year) forecasts provided by investment consultants including Callan are much lower than the historical averages. Specifically, consensus forecast approximate 7.5% for stocks and 3% for bonds. However, most consultants assume that long-term future returns will revert to long-term historical averages. The point is that an 8% return over the very long term is a reasonable expectation, but only if the Plan retains a substantial exposure to growth assets to achieve this goal.

Using Callan's 2014 capital market projections, which have a time horizon of 10 years, not the 80 years in the actuarial study, we calculate an expected arithmetic return of 7.9% and compound 10-year geometric return of 7.1%, along with an expected annual volatility for the portfolio of 14.1%. If we extend the time horizon to 80 years and assume a reversion toward long term historical mean returns for stocks and bonds, an 8% return assumption is more likely. If we assume inflation of 3% rather than the 4.5% experienced during the 1926-2013 period, a long term compound return

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[1] Excerpt from Callan Associates "NDPERS Long Term Return Assumption" memo dated November 7, 2014.

assumption for stocks equal to 9% and for bonds equal to 5% would be consistent with long term average real returns for both broad asset classes.

The current diversified asset allocation is roughly similar in underlying risk exposure to a 75% equity/25% fixed income; such a portfolio using these longer term return assumptions would generate a 9% arithmetic return and a 10-year compound return of 8.35%. The 8% return assumption is therefore not unreasonable, although we reiterate that the investment portfolio required to generate such a return requires a substantial allocation to growth assets, with the attendant volatility.

Should the Plan seek to reduce return volatility to mitigate the potential for a funding shortfall, the expected return for the investment portfolio will need to be reduced, thereby raising the required contribution to fully fund the Plan in the expected case. In other words, the Plan can reduce the exposure to growth assets to reduce return volatility, but the return in the expected case will come down, and the expected return on assets must be reduced in the funding calculation.

**Conclusion**[2]

To summarize, history suggests that a portfolio with a tilt toward growth assets similar to that employed by PERS can support an 8% return expectation over the long term. However, this tilt toward growth comes with substantial return volatility, with the attendant potential to require additional contributions to restore funding in order to pay out the Plan liabilities. De-risking the investment program over time to reduce return volatility will require lowering the discount rate and thereby increasing the required contribution in the expected case. Once a plan becomes “fully funded”, a de-risked portfolio is typically close to 100% fixed income, which is meaningfully different in both composition and return/risk characteristics from the current investment program.

[2] Excerpt from Callan Associates “NDPERS Long Term Return Assumption” memo dated November 7, 2014.

Segal Consulting

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T 303.714.9900 www.segalco.com

September 10, 2015

Mr. Sparb Collins
North Dakota Public Employees Retirement System
400 East Broadway, Suite 505
Bismarck, ND 58502

**RE: Experience Study/Actuarial Assumptions**

Dear Sparb,

As you know, Segal recently performed an experience study to evaluate the assumptions to be used in the NDPERS annual actuarial valuations. We understand that the NDPERS Board is considering adopting all of Segal's recommended assumptions except for the Investment Rate of Return (Discount Rate) and the Payroll Growth Assumptions.

The NDPERS Board has the full authority to select the actuarial assumptions for the annual valuations. However, Segal's actuaries are governed by Actuarial Standards of Practice as set by various actuarial organizations. These standards require Segal to highlight in our valuation reports any assumptions that we believe are unreasonable.

Based upon discussions with System staff and the state's Investment Office, we believe that the current assumptions for Investment Rate of Return (8.00%) and Payroll Growth (4.50% for PERS) are reasonable and will not require additional disclosures under the Actuarial Standards of Practice.

Please let me know if you have any questions.

Sincerely,

Brad Ramirez, FSA
Vice President and Consulting Actuary

/cz

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**Sparb Collins**
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# Memorandum

**TO:** PERS Board

**FROM:** Sparb

**DATE:** September 11, 2015

**SUBJECT:** Part D Plan

At this meeting we will continue our discussion of the Part D Plan. Please note that the information in Appendix 7 is new. At the last meeting we discussed how to move forward with the plan in the future. Appendix 1 is a copy of the board memo from the August meeting that summarizes what we discussed. In addition we noted that it was the recommendation of the retiree committee to unbundle the product going forward (see retiree meeting minutes – attachment #2 in Appendix 1). We are meeting with the retiree committee again on September 11 to continue to review the Part D product. I will send you a memo at the beginning of the week of the 14th with an update on their considerations and recommendations.

Appendix 2 is the rate information from ESI/Sanford on the price increase for our existing PDP. Details on that increase are in attachments #1 & #2 (rate increase and our consultant reviews). On September 8 we met with Sanford, ESI and Deloitte concerning the rate increase. ESI agreed to re-project the premiums if we can get the most recent 12 months of experience from BCBS. They did supply us information on September 8 that was forwarded to ESI. As of yet, we are not sure that this contains all the information necessary for ESI to do the re-projection. We will provide an update to you at the Board meeting.

Given the size of the increase and your direction at the last meeting to pursue an “unbundled” approach for our product, staff had a follow-up meeting with the ND Insurance Department to discuss what resources they have available to assist our retirees during the Part D open enrollment. We found that assistance will be available through the State Insurance Department’s State Health Insurance Counselling (SHIC) program. SHIC services are provided by counselors, trained by the North Dakota Insurance Department, who are acting in good faith to provide independent, impartial information about health insurance policies and benefits. Counselors do not sell any type of health care coverage nor do they endorse or recommend any specific plan or policy. Assistance is available through personal appointment or over the phone by calling 888-575-6611 or '211' number. Appendix #3 is a copy of their intake form and the type of information they send to retirees comparing plans. Also at http://www.q1medicare.com/PartD-SearchPDPMedicare-2015PlanFinder.php?state=ND you will find a list of the 30 PDPs available in ND during 2015. The site also includes premium information for the various products. Appendix 4 includes information on the BCBS MedicareBlue Rx plans, although these are different from our current plan. By unbundling, our retirees will have the option to select our product, or any of the 30 offered by other companies in the state. Prices for these other products vary based upon plan design with a range from around $40 up to a high close to the proposed price of our ESI product.

Appendix 5 is a high level plan for implementation of an unbundled product. We are reviewing this with the retiree committee on September 11 to get their thoughts.

Appendix 6 is a memo from Jan on the board's authority to unbundle. She will review this at the board meeting.

Note that under CMS guidelines, members can still discontinue their PDP with NDPERS at any time, even outside of the open enrollment period for individual plans. In addition, staff would like to note that pursuant to NDCC 54-52.1-03, 54-52.1-03.3 and NDAC 71-03-03-05, by unbundling, it is not the intent to create an independent opportunity for spouse's to elect individual participation in the group health plan or prescription drug plan outside of their existing opportunities which occur if the retiree elects either type, or both types, of coverage upon a qualifying event.

If moving forward with ESI, we need to make decisions on the following:

1) **Low Income Subsidy (LIS)**: ESI provides a service that has not been available to us previously regarding LIS recipients. We have the option to continue billing LIS recipients as we have done previously or having ESI reimburse these recipients directly for the LIS amount. To give a little background, CMS determines if an individual is eligible for a LIS and notifies the vendor of the amount of credits they are to receive. These credits equate to a dollar amount, varying from $7.90 to $31.50 per LIS eligible recipient. If there is more than one eligible recipient on a contract, each can receive a credit with variance in amounts. We currently have approximately 150 contracts with LIS credits being applied. The following details our current process and the additional option available to us through ESI:

   Current process: Our current process is that upon notification from the vendor, NDPERS enters the individual's LIS credit into our business system. The system then reduces their gross premium by the amount of the credit. Therefore, we bill the member the net premium amount.
   One of the difficulties with administering LIS relates to retroactive adjustments received from CMS that impact the amount of LIS that a member is eligible to receive.

At times, CMS notifies the vendor, who notifies the client that a member is no longer eligible to receive the LIS and the change is retroactive. When this occurs, NDPERS has to collect the underpayment in premium. The opposite can also happen when we are notified that someone is eligible for the LIS retroactive and, therefore, an overpayment of premium occurs. In this case, the overpayment of premium is refunded to the member.

ESI administered option: ESI offers a service where NDPERS would not need to reduce the premium billed to the retiree by the LIS credit amount. Rather, NDPERS would bill the full premium amount and ESI would reimburse the member directly for their LIS credit. This reimbursement would occur by the end of the 1st week of each month. The reimbursement is paid to the member by check as direct deposit is not an option.

In the cases where an LIS is modified retroactively, under this option, ESI would attempt to recover the overpayment of LIS credit or would issue the reimbursement for an underpayment of the credit. However, if it is an overpayment and ESI is unable to recoup the funds from the member, ESI will bill the outstanding balance to NDPERS.

If we move forward with ESI, staff does not have a recommendation either way, but is seeking the board's input as to how they would like us to move forward with low income subsidies and the reimbursement process for the credits.

2) **LEP Creditable Coverage Attestation**: NDPERS must sign either a Global LEP Attestation or an Initial LEP Attestation regarding creditable coverage and late enrollment penalties (LEP). NDPERS is aware of approximately 45 individuals that are subject to a LEP that NDPERS is currently paying based on previous board action.

Global Attestation eliminates the possibility of any new LEP being assessed for all NDPERS members as part of enrollment in the ESI PDP. Any previously assessed LEPs will remain, so this does not eliminate the existence of any LEPs already in place. Once LEP penalties are in place, they follow members from plan to plan, unless the member is or becomes eligible for LIS. By completing a global attestation, NDPERS would be indicating that they have verified that all new enrollees onto the plan had creditable coverage within the 63 days prior to enrollment in the PDP. NDPERS does request creditable coverage verification if the member is not on the NDPERS medical coverage. However, there are times that the creditable coverage cannot be obtained or verified.

Initial Attestation reduces the number of new penalties that could occur and will eliminate the possibility of any new LEPs for members that are already enrolled in the PDP up through 1/1/16. Any previously assessed LEPs will remain, so this does not eliminate the existence of any LEPs already in place. For new enrollees after 1/1/16, individuals who CMS determines may have a gap of more than 63 days in their creditable coverage will appear on a monthly report. NDPERS will have the option to review a monthly list of individuals that are being questioned by CMS and attest for them if NDPERS can verify that they had creditable coverage. For those that NDPERS does not attest for, the member's will receive a letter requesting proof of creditable coverage and if not provided, may be subject to the additional LEP as determined by CMS. Upon notification that the LEP should be applied, NDPERS will add this penalty into the monthly premium billing to the member.

If we move forward with ESI, staff recommendation is to sign Initial Attestation since there are circumstances where NDPERS cannot verify or obtain proof of previous creditable coverage.

Appendix 7 is an unsolicited renewal offer from BCBS for the Part D product that was received on September 9. In the email that came along with it, BCBS stated:

*Sparb, I know the NDPERS Board will be discussing the 2016 Part D renewal options this month. We prepared a 2016 Part D proposal for NDPERS with a monthly premium of $80.10, for NDPERS to consider. This would assume that the product would remain coupled with a MedSupp product.*

Jan will be at the meeting to discuss your options relating to this offer from a legal perspective. Staff will also be prepared to discuss this and the ESI proposal as well.

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# Memorandum

## Appendix 1

**TO:** PERS Board

**FROM:** Sparb

**DATE:** August 20, 2015

**SUBJECT:** Medicare Part D – Prescription Drug Plan (PDP)

At todays meeting we will begin discussion of the Medicare Part D – Prescription Drug Plan (PDP) for 2016. Our goal today will be to go over the material, options and other considerations. We will look to you to determine what other information you need to make a determination at our special meeting on September 16. As many of you know this task is always one that is compressed into a short time frame since the final information from the federal government is not available until late summer and the open enrollment starts in October for this program if a change was to occur.

First let me start by giving you some background on this program:

- Historically, PERS has offered a Medicare Supplement Plan that includes drug coverage. This was the case before Part D was created by the federal government. Our coverage is bundled, which means it includes medical and Rx and in electing this coverage, the member has to take both.
- When Part D was enacted, BCBS developed a product for us that captured the Part D Subsidy, retained our existing plan of benefits for Rx, and had no doughnut hole. We continued to offer our plan as bundled only.
- The Part D plan premiums run on a calendar year basis instead of a biennial basis like the other parts of the medical health plan.

The following table provides a history of our Medicare Part D premiums:

| | Part -D |
|---|---|
| 2005 | $0.00 |
| 2006 | $49.00 |
| 2007 | $60.14 |
| 2008 | $56.40 |
| 2009 | $63.70 |
| 2010 | $63.70 |
| 2011 | $69.50 |
| 2012 | $74.90 |
| 2013 | $57.20 |
| 2014 | $57.40 |
| 2015 | $77.90 |

- You will note that the rate for 2014 to 2015 went up by about 30%. This was due to:
  - Rates for 2014 were inadequate due to higher than expected claim trends.
  - Specialty drugs are very costly and the main driver of increased claim trends. For the NDPERS PDP members, the average cost of a specialty drug claim increased by $918 per script to $4,500 from July of 2013 to July of 2014.
  - In 2015, more specialty drug therapies are expected to become available, which translates into higher utilization and costs.
  - Required Affordable Care Act fees also contributed to increased premium costs.

With the change to Sanford from BCBS our proposal anticipated the need to change the Medicare Part D – prescription drug plan. In the rebid Sanford proposed using ESI for the PDP plan and a preliminary premium estimate was approximately $120. However, we note that only estimates can be given that far in advance and are based on assumed rebates, trends, administrative costs, and CMS subsidy payments. Actual rates are calculated in August of each year with updated information. Our present premium is about $79. The proposed contract we received from ESI this month was for the same amount as presented in the rebid with no reduction in premium, however, they had not recalculated the rate.

Given the above, what are our options at this point:

1. Accept the proposed increase from ESI and implement.
2. Consider issuing a quick RFP for an insured EGWP.

3. Unbundle our retiree medical and Rx coverage and allow our retirees to enroll in either one or both or neither.
4. Drop our Medicare Part D Coverage completely.

**Accept the proposed increase from ESI and implement.**
The dilemma is this is a significant increase for our retirees and our present bundled plan design does not allow them to drop this coverage without losing their medical insurance coverage. That is, you must take both or none.

I have asked ESI for a breakdown of their proposed pricing for Deloitte to review. That information was received on August 18 and Deloitte is now reviewing it. We have asked for the most recent 12 months of data for the Part D plan from BCBS and are asking ESI to re-project the rates.

**Consider issuing a quick RFP for an insured EGWP (Employer Group Waiver Plan).**
Jan is reviewing this idea to determine if it is an option for us given the RFP and other considerations. Time would be very limited to pursue this option. I have asked Deloitte to look into the feasibility and timelines to complete this task if it is selected by the Board and they will have more information at the Board meeting.

**Unbundle our retiree medical and Rx coverage and allow our retirees to enroll in either one or both or neither.**
If we took this approach our retirees would no longer be required to take our Part D product in order to stay on the medical plan and could decide to enroll in another product during the Medicare Part D open enrollment if they believe the price is too high. Recently our retiree group heard a presentation from David Zimmerman the Director of the Consumer Assistance Division of the North Dakota Insurance Department (Attachment #1) discussing the Part D process. Slides 5-14 discuss the Medicare Part D open enrollment. After discussing this option and others, our Retiree Committee felt we should unbundle the Rx coverage from the medical (see Attachment #2 – Retiree Meeting Minutes). We need to confirm with ESI that this is an option for them without changing the pricing, but initial conversations between ESI and Sanford seem to indicate it is.

**Drop our Medicare Part D Coverage completely**.
The Retiree Committee discussed this option, but was not in favor of it at this time (however, they were not aware of the proposed rate increase at that time).

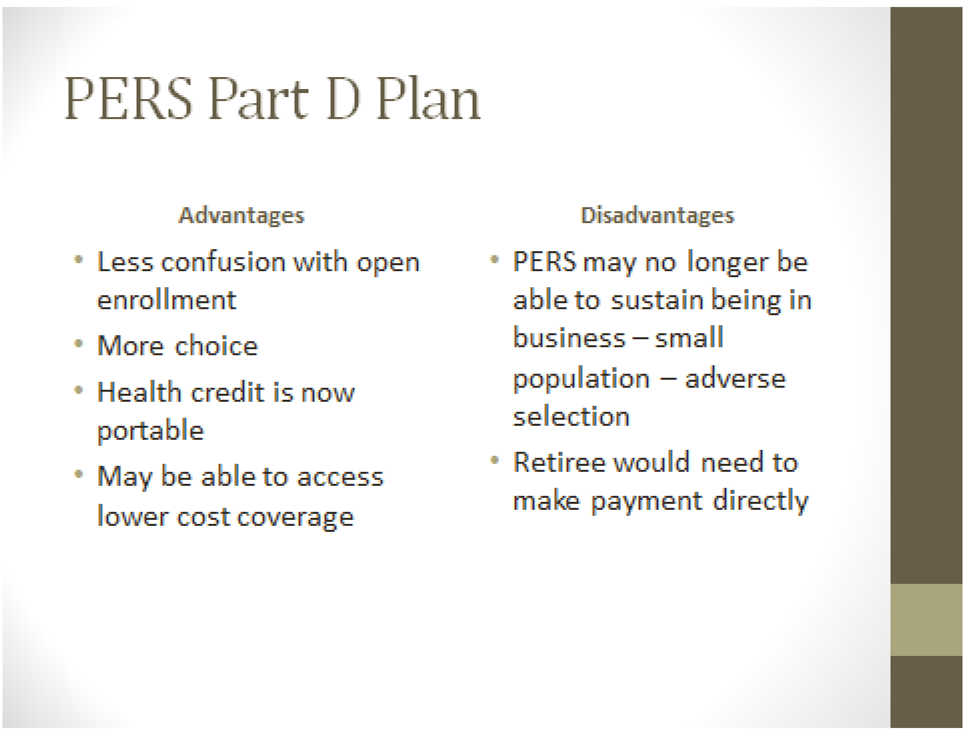
At the PERS Board meeting in March we also discussed this option with the Board due to the administrative issues with this program (see attachment #3). Those issues included the following:

- When Part D was implemented, Medicare retirees were offered an annual open enrollment wherein they are provided the opportunity to select Rx coverage from numerous Rx products in the market place with varying plan designs, formularies, and pricing.
- This open enrollment has resulted in confusion because our members receive information on the federal open enrollment and think this is something they can do and will enroll for other Part D coverage. Because a member cannot be enrolled in

two Part D products, CMS notifies BCBS that they have cancelled the member's Part D coverage with PERS. The unintended outcome of this action is that the member's eligibility for continued medical coverage has been jeopardized because we cannot cancel Rx coverage without also cancelling the medical coverage because the product is bundled. This results in PERS contacting the member to inform them of this policy and providing them the opportunity to reconsider their action.

- Since Part D was enacted, we have found the federal government to be very difficult to deal with concerning enrollments and disenrollments.

The Board directed us at that time to begin a dialogue with the Retiree Committee. We reviewed the above with the committee and following advantages and disadvantages of getting out of Part D:




As noted earlier, the Retiree Committee felt it would be too early to do this option and was in favor of unbundling. However, they were not aware of the rate increase.

**PERSLink Considerations**

- Accept the proposed increase from ESI and implement. This option would be the same as what we previously had in place with BCBS. We know that our system is not currently able to handle the billing issues when the enrollment/disenrollment date for Part D is different than the medical coverage and we are unable to bill for the Late Enrollment Penalty (LEP). We are currently having discussions with Sanford to see how we would handle these discrepancies going forward and what system modifications may be required. We also know that ESI needs enrollment information for our retiree's by October 21, 2015 in order to send out required mailings regarding the transition.  Therefore, if system modifications are necessary, they will need to be in place within the next 60 days.

- Consider issuing a quick RFP for an insured EGWP. If this option resulted in awarding the plan to a different vendor, we anticipate this would require system modifications in order to provide enrollment and premium payment information with the new vendor's specifications. Assuming that the October 21, 2015 date would be the same for any vendor, implementing system changes within this short of a timeframe would be difficult.

- Unbundle our retiree medical and Rx coverage and allow our retirees to enroll in either one or both or neither. This option would require significant modifications to separate the enrollment and billing functions for the medical and Rx plans. By separating the plans, we would also be able to address the enrollment/disenrollment date discrepancies as well as build in functionality to bill for the LEP.  Our vendor has estimated the effort for this enhancement to be approximately 750 hours.  We are currently having discussions with Sanford to see if their system would be able to accommodate this option. The October 21, 2015 timeframe for providing enrollment information would apply here as well.

- Drop our Medicare Part D Coverage completely.  This option would not require any system changes.  This would be handled by updating our rate tables to remove the Part D premium so that the retiree is only billed for the medical premium.

Given the above information, staff is seeking your direction on what other information you need to make a decision on this issue at the special PERS Board meeting in September.

# Medicare Part D & Open Enrollment

North Dakota Insurance Department's
Consumer Assistance Division
*David R. Zimmerman, Director*

# Program Dedicated to Medicare

- North Dakota Insurance Department's **S**tate **H**ealth **I**nsurance **C**ounseling (SHIC) program
  - A federally funded program under the oversight of the **A**dministration for **C**ommunity **L**iving
  - Primary tenet: To provide free & unbiased counseling to Medicare beneficiaries of all ages
  - Program's focus is to help beneficiaries of all ages to navigate through the confusing information regarding Medicare

North Dakota
INSURANCE
DEPARTMENT
PROTECTING THE PUBLIC GOOD
ADAM HAMM, COMMISSIONER

# What SHIC Does for Beneficiaries

- Provides educational materials & brochures
- Helps people understand Medicare, organize their records, file claims and appeal decisions
- Encourages people to assess their individual needs so they can make **informed decisions** about health insurance policies
- Informs people as to their rights & benefits as a beneficiary or health insurance policyholder
- Shows them how to evaluate Medicare Part D, Supplements & other Medicare health plans if available
- Holds statewide open enrollment events for Part D
- Trains **volunteers** that counsel people across the state

North Dakota Insurance Department
PROTECTING THE PUBLIC GOOD
Adam Hamm, Commissioner

# SHIC – Part of Consumer Assistance & ND Insurance Department

- To contact us:
  - 888-575-6611 toll-free long distance, or
  - 701-328-2440, or
  - Email us at ndshic@nd.gov
- Location – Consumer Assistance Center
  - 1701 S. $12^{th}$ Street


North Dakota
Insurance
Department
Protecting the Public Good
Adam Hamm, Commissioner

# 2016 Overview

- Part D Deductible goes up to **$360** (was $320 in 2015)
- Initial Coverage Level – The amount you & the plan spend on Medications before going into the "donut hole" is **$3,310**
- Out-of pocket threshold; when you get out of the "donut hole" is **$4,850**
  - Donut hole scheduled to be phased out by 2020

# Medicare Open Enrollment – *(not to be confused with ACA)*

- From **October 15 to December 7** you can
  - Join or switch a Medicare Prescription Drug Plan
  - Join or switch a Medicare Advantage Plan
- Take time to review health and drug plan choices
  - Choose the plan that fits your needs
- Coverage begins on January 1, 2016
  - You'll receive the membership card; billing information; and the Plan's Drug Formulary
  - *Unfortunately not many people take advantage of this*

North Dakota Insurance Department
PROTECTING THE PUBLIC GOOD
Adam Hamm, Commissioner

# Comparing Plans

- Each year Medicare Plans can change costs and coverage
  - Premium amounts may change
  - Deductible amounts may change
  - Formularies may change
  - If you do nothing
    - You may have unanticipated increases in costs
    - You may have medications that are no longer covered
- Some plans may choose to leave Medicare
  - Plans mail notice of non-renewal
  - Members may have a Special Enrollment Period

# Things to Consider

- **Coverage**
  - Are the services or drugs you need covered?
  - Do you have or are you eligible for other health and drug coverage?
- **Costs**
  - Premiums, coinsurance, copays, and deductibles
  - What is the out-of-pocket limit for medical care?
- Are your **doctors/hospitals** part of the plan?
- Are your **prescription drugs** covered?
- What are the **plan's quality ratings**?
- Are the offices/pharmacies/hospitals convenient?
- Do you **travel** for long periods during the year?

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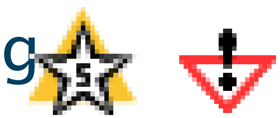
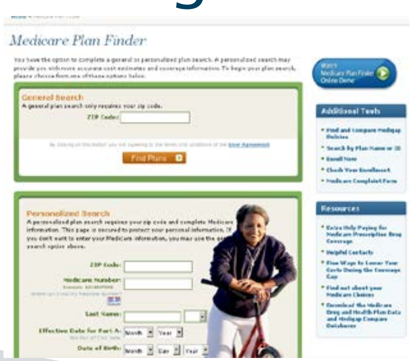
# Where to Get Plan Information

1. Medicare Plan Finder on [Medicare.gov]
2. The plan's website
3. *Medicare & You* handbook
4. 1-800-MEDICARE (1-800-633-4227)
5. State Health Insurance Assistance Program (SHIP) – North Dakota's program is called "SHIC" – State Health Insurance Counseling and is managed by the North Dakota Insurance Department

# Medicare Plan Finder (*MPF*)

- More detailed comparison using Medicare Plan Finder
  - **[Medicare.gov](#)**, select “Find Health and Drug Plans”
  - Check the plan’s quality summary rating 
    - 5-Star and low-performing plan icons
  - See which drugs are on the plan’s formulary
  - Compare the cost ranges for plans in your area



# Low-Performing Medicare Plans

- Plans that receive a summary rating of less than 3-Stars for at least 3 years in a row
  - Ratings are on Medicare Plan Finder
  - *Medicare & You* doesn't have full, updated ratings
- Low-performing plans
  - No online enrollment for low-performing plans
  - No enrollment through 1-800-MEDICARE
  - Must contact plan directly to enroll
- Enrolled beneficiaries can call 1-800-MEDICARE and ask to move to a higher quality plan

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# *Medicare & You* Handbook

- Has basic plan information
  - Mailed mid-October to beneficiary households
  - Good for quick comparison
  - Plan information not comprehensive
    - Only one quality rating
- Mailed by mid-September
- CMS Product No. 10050


**Note:** The star rating in the handbook is the percent of people who rated their plan as the best. Does not reflect the true rating.

# General Medicare Assistance

## How can I get help paying for my Medicare costs?

- If you need help with your Part A and B costs, you can apply for a **M**edicare **S**avings **P**rogram (**MSP**). This is done through an application with your County Social Services office (Medicaid).
  - If you qualify at a minimum your Part B premium will be paid for
  - At most qualifying could also cover all premiums, deductibles and co-pays

- If you need "**Extra Help**" to pay for Medicare prescription drug costs, call your local Social Security Office; or apply online at www.ssa.gov; or call Social Security at 1-800-772-1213.

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# Low Income Subsidy; "*Extra Help*" – 150% FPL

| | | | |
|---|---|---|---|
| Single (Individual) | Income | $ 17,655 | $1,471.25/mo. |
| | *Assets* | *$ 13,640* | |
| Couple | Income | $ 23,895 | $1,991.25/mo. |
| | *Assets* | *$ 27,250* | |

# Medicare Savings Program (MSP) – 100-135% FPL

| Qualified Level | IND Income (Mo.) | IND Income *(Year)* | Couple Income (Mo.) | Couple Income *(Year)* | Asset Limits | Helps Pay Your … |
|---|---|---|---|---|---|---|
| QMB (100% FPL) | $1,001 | *$12,012* | $1,348 | *$16,176* | IND $7,280<br>Couple $10,930 | Part A & B Premiums + Cost sharing |
| SLMB (120% FPL) | $1,197 | *$14,364* | $1,613 | *$19,356* | | Part B Premium only |
| QI (135% FPL) | $1,345 | *$16,140* | $1,813 | *$21,756* | | Part B Premium only |

*Based on 2015 FPL*

# Deciding on Medicare: *Traditional*

- Part A – Hospital Insurance; generally free (worked at least 10 years) otherwise premium could be **$407**/month ($224 if worked 30-39 credits)
  - Part A deductible **$1,260** for each "benefit period"

- Part B – Medical Insurance (all out-patient related care) monthly premium deducted from SSA benefits

  - 2015 Amount **$104.90** – *same as 2013 & 2014*
  - Can delay Part B if other employer group coverage is available
  - Part B annual deductible **$147** – *same as 2013 & 2014*
- Part D – Drug Coverage; avg. premium/mo. = **$33** (deductible up to $360; plus copays)

- Medigap or Supplement-lowest initial monthly premium 65 y/o ♂, non-smoker **$120**/month ("F")

**Avg. combined premium cost ~$258***

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# Supplement Benefits / type of Plan

| Medigap benefits per Type of Plan | A | B | C | D | F* | G | K | L | M | N |
|---|---|---|---|---|---|---|---|---|---|---|
| Basic benefits | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓**** | ✓**** | ✓ | ✓ |
| Part A: Inpatient hospital deductible | | ✓ | ✓ | ✓ | ✓ | ✓ | 50% | 75% | 50% | ✓ |
| Part A: Skilled-nursing facility co-insurance | | | ✓ | ✓ | ✓ | ✓ | 50% | 75% | ✓ | ✓ |
| Part B: Deductible | | | ✓ | | ✓ | | | | | |
| Foreign travel emergency** | | | 80% | 80% | 80% | 80% | | | 80% | 80% |
| Part B: Excess charges | | | | | 100% | 100% | | | | |
| 2015 out-of-pocket limit | | | | | | | $4,940 *** | $2,470 *** | | |

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# Deciding on Medicare: *Non-Traditional*

- **Part C** – Health insurance provided by private insurance companies rather than by the federal government
  - **Medicare Advantage Plans** – Provides Medicare Part A & B coverage; plus MAY cover benefits not provided by Medicare (*such as Dental, Vision & Hearing*)
    - May include Part D as part of the insurance coverage; if NOT then you can get a standalone plan
    - Premiums for 2015 range from $0 to $87 (subsidized)
    - Generally have out-of-pocket costs with Part C; Maximum OOP range is from $3,000 to $6,700
  - **Medicare Cost Plans** – provides coverage for Part B &/or Part A
    - Premiums range from $65 to $129 depending on benefits
    - May include Part D for additional premiums

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## Step 1: Decide how you want to get your coverage

### ORIGINAL MEDICARE

**Part A**
Hospital Insurance
usually Free

**Part B**
Medical Insurance
Premium= $104.90

**Part C**

### MEDICARE ADVANTAGE PLAN
(like an HMO or PPO)

Provides Part **A**, Part **B** and **usually** Part D (lower premiums) 2015 range **$0 - $87**

## Step 2: Decide if you need to add drug coverage

**Part D**
Prescription **D**rug Coverage (Avg. = **$33**)

**Part D**
Prescription Drug Coverage if not already included

## Step 3: Decide if you need to add supplemental coverage

**Medigap**
(Medicare Supplement Insurance) **Policy**
(Premium at 65= **$120**)

**If you join a Medicare Advantage Plan, you do not need and cannot be sold a Medigap policy.**

**Other Options**
**Cost Plans** –Covers B & maybe **A**; optional Part D 2015 Range **$65 - $129**)

# Questions?

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# NDPERS RETIREE BENEFITS COMMITTEE

**July 20, 2015**

**MINUTES**

* - Present

**BOARD MEMBERS:** *Yvonne Smith

**STAFF:** *Sparb Collins, *Bryan Reinhardt, *Kathy Allen, *Rebecca Fricke, *MaryJo Steffes, *Sharon Schiermeister

**Guests:** *David Zimmerman – Insurance Department

**Interest Groups:** Bill Kalanek - AFPE/NASW, Stuart Savelkohl - NDPEA

**Membership Representatives:**

*Dave Zentner, *Weldee Baetsch, *David Gunkel, *Bill Lardy,
Ron Leingang Howard Sage, Denae Kautzman

## Minutes

1:10 – Sparb thanked everyone for coming. The purpose of the meeting was to look at the Medicare Part-D coverage in the NDPERS Retiree Health Plan. Sparb covered the PowerPoint presentation. The NDPERS Retiree Health Plan is bundled in that a member must take the medical and the Part-D prescription drug coverage. Could NDPERS do both? Would it attract a broader cross-section of people or lead to adverse selection? There are really three options:

1. Continue to offer coverage as we do now.
2. Allow members to take the NDPERS Part-D coverage or not (medical portion only).
3. Drop Part-D coverage and only offer the medical portion.

Dave Zimmerman from the insurance department covered handouts of an overview of the Part-D process in North Dakota. The "Donut Hole" is being phased out by 2020. Medicare plans do change in both coverage and cost. A person can make a change to a 5-star plan once a year (best plans). Some people with special conditions can enroll more often. Mr. Gunkel asked about the late enrollment penalty. It was noted that the credible coverage rule applies and NDPERS does fit this. It was noted that there are currently no plans w/o the donut hole. There was discussion about the NDPERS plan. The BCBS Medicare Blue RX plan is a 5-star plan, and the NDPERS plan might also be. The plan now through Sanford might be different. It might be the same plan design, but the formulary is different. There is no ESI plan in ND to compare to. The group discussed varying premiums for Part-D plans. After guaranteed issue, there are underwriting options for plans.

2:00 – There has been a reduction in plans offered in the last 5 years (42 to about 32). Sanford Health Plan is an unknown. The group discussed if there is sufficient time to educate the members. Enrollment is October 15 to December 7 for coverage effective January 1st. It was noted that the timing to unbundle is good if the NDPERS Board decides to go that direction. The group felt unbundling would be the first step to get out of the Part-D business due to likely adverse selection.

The group felt there was not sufficient time to completely drop the Part-D coverage. Some discussion continued and some of the group felt there was sufficient time, but overall the group thought it would be best to phase in any change.

The group felt there was time to offer an unbundled option. This would require NDPERS system changes, but staff felt this could be done. The group felt this should be explored with the provider. Could this be done w/o a change to the rates? This would be a first step and give time to study if NDPERS should stop offering this coverage.

Staff will go to the NDPERS Board with the three options and the recommendations from the committee. Sparb noted that the retiree committee will likely meet again sometime around October to discuss other issues.

2:35 – Adjourn

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# Memorandum

**TO:** PERS Board

**FROM:** Rebecca

**DATE:** March 12, 2015

**SUBJECT:** Medicare Part D

At its February 19th meeting, the Board reviewed billing issues related to the MedicareBlue Rx Prescription Drug Plan (PDP). The issues involved discrepancies with the Low Income Subsidy (LIS) as well as discrepancies with enrollment and disenrollment effective dates. The board approved NDPERS reimbursing BCBS for the underpayments in premium that resulted from these issues in lieu of requesting repayment from the affected plan members.

At this time, staff would like to discuss with the Board the following information related to the PDP:

1) Late Enrollment Penalties (LEP) and additional discrepancies related to LIS and enrollment.
2) The administration of the product from July 1, 2015 through December 31, 2015 as it will remain with MedicareBlue Rx during this time.
3) The future administration of the product after January 1, 2016.

Regarding the LEP, these are penalties that the Center for Medicare and Medicaid Services (CMS) determines a participant is assessed if they did not enroll in a PDP when first eligible. CMS determines the amount of the penalty and when it should be applied. The amounts vary from member to member and do not appear to be based on any type of schedule or table. As far as we are aware, these are monthly penalties that are ongoing unless the member successfully appeals to CMS to have the penalty removed.

CMS provides details to MedicareBlue Rx identifying these participants and requires that the penalty be paid by MedicareBlue Rx. MedicareBlue Rx has been paying these penalties through BCBS who has recently provided the details to NDPERS. . At this time, there is a total of $7,162.92 in outstanding penalties. Of this amount, $2,393.32 is being reviewed by

BCBS to determine if the penalty is still required.  The remaining $4,769.60 are penalties that members have been assessed due to LEPs that should be reimbursed to BCBS.

NDPERS can attempt to recover the underpayments according to the administrative rules that we discussed at the February meeting; however, the same business system issues that we discussed previously apply.  We don't currently have functionality built into PERSLink to bill the members for these additional amounts and track the subsequent repayment of the underpayment. .

Regarding Item # 2, the product will continue to be through MedicareBlue Rx through December 31, 2015 even after the medical plan transitions to Sanford Health Plan on July 1st.  Therefore, staff has been exploring options for the billing of the PDP because our current policy is to bill the medical and PDP premiums as a bundled product.  This will no longer be an option as of July 1st since the administration of the products will be between two different carriers.  At this time, it appears we have the following options related to the billing:

1) Split the products on PERSLink and bill each premium separately.  If this option is selected, programming will be required for our business system and also may be necessary on BCBS's system.  In addition,   programming will also be included to allow a billing process for the LEP, LIS and enrollment/disenrollment issues.  Staff will research the potential cost to modify our system and will also obtain more information from BCBS on the interface prior to the meeting so it can be shared with the Board.
2) As of July 1st, the RHIC will be paid through a 3rd party vendor rather than deducted from premium by NDPERS. It appears there is an option to have MedicareBlue Rx bill the member directly.  If this option is selected, members would be billed for their medical insurance through NDPERS and would receive a separate billing from MedicareBlue Rx for the PDP.  A benefit of this option is that it does not appear to require programming on PERSLink. It would also address the ongoing collection of LEP from members as MedicareBlue Rx would include any LEPs in the monthly billing to impacted members.  Staff will be obtaining additional information on this option from BCBS prior to the meeting so it can be shared with the Board.

Regarding the future administration of the PDP after 12/31/15, staff has asked Sanford Health Plan for information regarding options for the billing of the PDP once Express Scripts begins administration of the product on January 1, 2016.  These options will be shared with the Board at the meeting as they were not available at the time of memo preparation.

In addition, staff has previously visited with the board regarding the future of the PDP as a product offered and administered by NDPERS.  Specifically, the issues previously discussed which involve the billing and penalties, as well as the difficulty in administering the program within CMS compliance.  Therefore, another option the Board may want to consider is whether NDPERS should continue to offer the PDP.  With this option members could have medical insurance through NDPERS and PDP coverage would be purchased in the insurance marketplace.  Open enrollment for PDP products occurs each October through early December with coverage effective January 1.  Therefore, if the Board opted to discontinue the product, members could shop for a product that best meets their needs during open enrollment and would not face any lapse of coverage issues.

At this time, staff is seeking Board direction regarding:

1) The ongoing underpayments due to LIS, LEPs, enrollment and disenrollment effective date issues and whether staff should attempt to recover these amounts from the member or waive the collection and direct staff to pay the amounts due to BCBS.

   **Staff recommendation:** Waive the collection of these underpayments, based on previous precedent, until either the current PERSLink business system can be modified to properly bill and account for the payments or until the PDP billing is moved to MedicareBlue Rx.

2) Since the medical & PDP product must be unbundled for billing purposes, direct staff regarding which billing option staff should pursue.

   **Staff recommendation:** If MedicareBlue Rx can bill the member directly, we recommend that the billing be administered by the carrier. It would also be necessary that Express Scripts confirm they can administer the billing if the Board determines we will continue to offer the PDP as of January 1, 2016.

3) Determine if the PDP will continue to be offered through NDPERS as of January 1, 2016.

   **Staff recommendation:** Begin a process to review this issue further. Specifically, staff recommends that we convene the Retiree Advisory Committee to discuss this issue further and report back to the board their observations.

**Board Action Requested:**

Determine how staff should proceed with the above items.

| Enrollment on 6/30/2014 | 2015 Monthly Premium | 2015 Annual Income | 2016 Monthly Premium | 2016 Annual Income | Rate Change |
|---|---|---|---|---|---|
| 8265 | $77.90 | $7,726,122 | $128.40 | $12,734,712 | 64.8% |

**Notes for 2016 Proposal:**

The Centers for Medicare and Medicaid Services (CMS) reported on July 29, 2015 the national average monthly bid amount for standard Part D individual coverage of $64.66 and the Part D base beneficiary premium for 2015 (average individual premium) of $34.10.

Further information on this topic can be found at the CMS website:
http://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Downloads/PartDandMABenchmarks2016.pdf

The NDPERS Group Prescription Drug Plan (GPDP) has been rated for 2016 based on prior claim experience from 7/1/2013 - 6/30/2014.

**2016 Rate Development**

| | |
|---|---|
| 1. Allowed Claims Amounts (Incurred 7-1-13 thru 6-30-14) | 18,728,565 |
| 2. Incurred Allowed Claims for base period | 18,728,565 |
| 3. Member Months Exposed (7-1-13 thru 6-30-14) | 97,049 |
| 4. Adjusted Experience Period Allowed Claims PMPM [ (2) / (3) ] | 192.98 |
| 5. AWP Inflation and Utilization Trend [ 30 months @ 15.0% annual ] | 1.411 |
| 6. Rating Period Allowed Claims PMPM [ (4) x (5) ] | 272.26 |
| 7. Member Cost Share and Manufacturer Discount PMPM [ (6) x 0.332 ] | 90.46 |
| 8. Rating Period Plan Paid PMPM [ (6) - (7) ] | 181.80 |
| 9. Estimated 2016 Rx Drug Rebate PMPM | 19.45 |
| 10. 2016 Plan Payments PMPM [ (8) - (9) ] | 162.35 |
| 11. 2016 Anticipated Loss Ratio | 84.2% |
| 12. 2016 Gross Premium to ESI [ (10) / (11) ] | 192.84 |
| 13. CMS Payments to ESI | 64.44 |
| 14. Calculated Member Premium [ (12) - (13) ] | 128.40 |
| 15. Rounded to Nearest $0.10 | 128.40 |

**2013 and 2016 projected risk scores for NDPERS**

| | |
|---|---|
| 2013 Risk Score | 0.825 |
| 2016 Projected Risk Score | 0.7944 |

**2016 CMS Payments to ESI**

| | |
|---|---|
| Reinsurance : | 47.52 |
| Low Income Subsidy Cost Sharing (LICS) : | incl. in member share above |
| Coverage Gap Discount : | 18.59 |
| Direct Subsidy Amount: | 16.92 |

Deloitte.

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# Memo

Appendix #2, Attachment 2

**Date:** September 2, 2015

**To:** Sparb Collins

**From:** Drew Rasmussen, Josh Johnson, and Pat Pechacek

**Subject:** 2016 FULLY-INSURED PDP RATE PROPOSAL

The following summarizes our review of the proposed 2016 fully-insured PDP rate proposal provided by Express Scripts/ Sanford Health Plan:

## OVERVIEW OF 2016 PDP RATE PROPOSAL

Sanford Health Plan was selected and implemented as the administrator for the NDPERS medical benefit program effective July 1, 2015. Sanford Health Plan was also awarded the opportunity to administer the fully-insured PDP program through their relationship with Express Scripts effective January 1, 2016.

Through Express Scripts, Sanford Health Plan has proposed a fully-insured PDP rate of $128.40 per member per month (PMPM), which is a <u>64.8% increase to the current 2015 rate</u> of $77.90 PMPM.

In 2015, NDPERS implemented a 35.7% increase to the fully-insured PDP rate compared to the $57.40 PMPM rate effective in 2014.

NDPERS has asked Deloitte to review the proposed rate to determine the reasonability of the increase.

## REVIEW OF 2016 PDP RATING FACTORS

Deloitte reviewed the rating assumptions provided by Express Scripts which include; AWP Inflation and Utilization Trend, Member Cost Share and Manufacturer Discount, Estimated 2016 Drug Rebate, Anticipated Loss Ratio, and CMS Payments to Express Scripts.

Based on the review, a primary driver of the 64.8% increase is the 15% annual AWP Inflation and Utilization Trend assumption applied over a 30 month projection period. This trend rate is inconsistent with our expectation based on Deloitte's experience working with employers and health plans on 2016 PDP renewals. Deloitte suggests that a reasonable trend rate for this segment would be between 6%-10%.

Prior to the selection of Sanford Health Plan and Express Scripts as the PDP provider, BCBSND provided a preliminary fully-insured cost proposal that included a 2016 PDP trend rate assumption of 7%, which is more in line with our experience.

One reason for higher trend is the introduction of high cost specialty products to the market, however, a review of NDPERS PDP claims show that the assumed trend rate is conservative even when we account for rapid cost inflation in the specialty segment. Data from July 2013 to June 2014 indicates that specialty drug cost represents approximately 20% of NDPERS gross paid claims. Applying 20% trend to these claims and 6% to traditional drug claims yields a trend rate between 8%-9%. Building in even further conservatism by applying 30% trend to specialty claims yields an annual trend rate between 10%-11%.

The Estimated 2016 Drug Rebate of $19.45 PMPM is significantly lower than the rebates in the preliminary quote provided by BCBS.

Express Scripts assumes 84% retention. While not unreasonable, we would like to understand the component pieces including; profit, insurer fees, and administration costs to validate that the margin is not excessive.

# Medicare Plan Finder

Sample: Medicare standalone drug plan for an individual in the 58501 Zip Code with currently 8 prescriptions. For 2015 there are currently 27 plans from which to choose. Once data is entered they are arranged from least out-of-pocket cost to beneficiary to the most expensive. The goal is to find the plan that covers their medications and at the least cost.

## Plan Detail - Drug Costs and Coverage

Note: The drug costs displayed are only estimates and actual costs may vary based on the specific quantity, strength and/or dosage of the drug, the order in which you buy your prescriptions, and the pharmacy you use.

# Appendix #3

**Your Search Details**

Zipcode:**58501**

Current Plan:**Original Medicare**

Current Subsidy:**No Extra He**

This information can be used to access your list of medication and pharmacy of choice

Drug List ID:**6546627392**

Password Date: **9/30/2014**

| | |
|---|---|
| **Symphonix Value Rx (PDP)** | **Specific Plan Name** |
| S0522-042 | **Plan ID number** |

**Members:**

1-855-355-2280

711 (TTY/TDD)

**Non-Members:**

1-855-355-2280 **If not already a member with this company this is the number a person would call to enroll**

711 (TTY/TDD)

**Plan Website:** www.symphonixhealth.com

| **Fixed Costs** | |
|---|---|
| **Monthly Premium** | $30.20 |
| **Annual Drug Deductible** **About half the plans have deductibles – if they do the maximum they can have for 2016 is $360** | $320.00 |

| Your Drug Information (This table provides a list of medications/doses so beneficiary can verify all has been entered correctly. This also identifies those that are brand name | | | | |
|---|---|---|---|---|
| **Drug Name** | **Quantity** | **Frequency** | **Brand / Generic** | **Original Drug Entry** |
| Androderm DIS 4MG/24HR | 2 X Box of 30 patches | Every 1 Month | Brand | Androderm |
| Hydrochlorothiazide TAB 25MG | 30 | Every 1 Month | Generic | Hydrochlorothiazide |
| Hydrocortisone TAB 10MG | 90 | Every 1 Month | Generic | Hydrocortisone |
| Levothyroxine Sodium TAB 112MCG | 30 | Every 1 Month | Generic | Levothyroxine Sodium |
| Lyrica CAP 200MG | 60 | Every 1 Month | Brand | Lyrica |
| Omeprazole CAP 20MG | 30 | Every 1 Month | Generic | Omeprazole |
| Tamsulosin Hcl CAP 0.4MG | 30 | Every 1 Month | Generic | Tamsulosin Hcl |
| Tramadol Hcl TAB 50MG | 180 | Every 1 Month | Generic | Tramadol Hcl |

**If not on the plan's formulary (list of medications the plan covers) it would be noted in the column entitled "Tier (Formulary Status)"**

| Plan's Drug Coverage Information (Formulary Status and Restrictions) Restrictions defined on last page | | | | |
|---|---|---|---|---|
| **Selected Drugs** | **Tier (Formulary Status)** | **Prior Authorization** | **Quantity Limit** | **Step Therapy** |
| **Androderm DIS 4MG/24HR** | Tier 3: Preferred Brand | Yes | Yes | |
| **Hydrochlorothiazide TAB 25MG** | Tier 1: Preferred Generic | | | |
| **Hydrocortisone TAB 10MG** | Tier 2: Non-Preferred Generic | | | |
| **Levothyroxine Sodium TAB 112MCG** | Tier 1: Preferred Generic | | | |
| **Lyrica CAP 200MG** | Tier 3: Preferred Brand | | Yes | |

| Plan's Drug Coverage Information (Formulary Status and Restrictions) Restrictions defined on last page | | | | |
|---|---|---|---|---|
| **Selected Drugs** | **Tier (Formulary Status)** | **Prior Authorization** | **Quantity Limit** | **Step Therapy** |
| **Omeprazole CAP 20MG** | Tier 2: Non-Preferred Generic | | Yes | |
| **Tamsulosin Hcl CAP 0.4MG** | Tier 2: Non-Preferred Generic | | Yes | |
| **Tramadol Hcl TAB 50MG** | Tier 3: Preferred Brand | | Yes | |

| Estimate of What YOU Will Pay for Drug Plan Premium and Drug Costs at CVS Pharmacy - Standard Cost Sharing (This is the out-of-pocket costs for the full year with this plan or in this example if enrolled in September 2015 what the cost would be for the last 3 months of the year). Note this is the cost at this particular pharmacy. | |
|---|---|
| January Enrollment | $3,454.74 **(These figures include all premiums paid for the year as well as copays you pay to the pharmacist)** |
| Enrollment Today | $982.50 **(This is total out-of-pocket for last 3 months)** |

This table represents what the beneficiary may pay to the pharmacy. The **FULL COST** represents the cost paid by you and the insurance plan. Until the **DEDUCTIBLE** is met full cost of medications may be paid. After the deductible is met the **INITIAL COVERAGE** is your copay to the pharmacy. If you enter the **DONUT HOLE,** or **COVERAGE GAP**; then these are the copays to the pharmacy. If a person gets out of the Donut Hole during the year then they enter the **CATASTROPHIC PHASE** where they pay %5 of the total cost of their medication as copay.

**Estimated Drug Cost Details at CVS Pharmacy - Standard Cost Sharing**

| | Full Cost of Drug | Deductible | Initial Coverage Level | Coverage Gap | Catastrophic Coverage |
|---|---|---|---|---|---|
| Androderm DIS 4MG/24HR | $811.40 | $811.40 | $30.00 | $365.13 | $40.57 |
| Hydrochlorothiazide TAB 25MG | $2.42 | $2.42 | $2.00 | $1.57 | $2.42 |
| Hydrocortisone TAB 10MG | $36.85 | $36.85 | $5.00 | $23.95 | $2.65 |
| Levothyroxine Sodium TAB 112MCG | $14.39 | $14.39 | $2.00 | $9.35 | $2.65 |
| Lyrica CAP 200MG | $317.02 | $317.02 | $30.00 | $142.66 | $15.85 |
| Omeprazole CAP 20MG | $7.88 | $7.88 | $5.00 | $5.12 | $2.65 |
| Tamsulosin Hcl CAP 0.4MG | $17.91 | $17.91 | $5.00 | $11.64 | $2.65 |
| Tramadol Hcl TAB 50MG | $16.50 | $16.50 | $16.50 | $10.72 | $6.60 |
| MONTHLY TOTALS: | $1,224.37 | $1,224.37 | $95.50 | $570.14 | $76.04 |

## Estimated Monthly Cost Comparison Charts (based on January Enrollment) at CVS Pharmacy - Standard Cost Sharing

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $410 | $126 | $447 | $600 | $600 | $600 | $140 | $106 | $106 | $106 | $106 | $106 |

## Estimated Monthly Cost Comparison Charts (based on enrollment today) at CVS Pharmacy - Standard Cost Sharing

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | $410 | $126 | $447 |

**NOTE THE NEXT COUPLE OF PAGES IS THE SAME INFORMATION FORMAT JUST USING A DIFFERENT PHARMACY SO A COMPARISON OF COSTS CAN BE MADE. Some pharmacies are considered "Preferred" meaning they have a special contract that may offer more savings to a beneficiary. In this example they are both "Standard Cost Sharing" pharmacies so neither has "Preferred" status.**

| Estimate of What YOU Will Pay for Drug Plan Premium and Drug Costs at Gateway Health Mart Pharmacy North - Standard Cost Sharing **(If a person entered a second pharmacy – they could see if there were any cost differences)** | |
|---|---|
| January Enrollment | $3,446.70 **(About $8.00 less than CVS in this example)** |
| Enrollment Today | $987.45 |

**Estimated Drug Cost Details at Gateway Health Mart Pharmacy North - Standard Cost Sharing**

| | Full Cost of Drug | Deductible | Initial Coverage Level | Coverage Gap | Catastrophic Coverage |
|---|---|---|---|---|---|
| Androderm DIS 4MG/24HR | $814.31 | $814.31 | $30.00 | $366.44 | $40.72 |
| Hydrochlorothiazide TAB 25MG | $2.37 | $2.37 | $2.00 | $1.54 | $2.37 |
| Hydrocortisone TAB 10MG | $36.80 | $36.80 | $5.00 | $23.92 | $2.65 |
| Levothyroxine Sodium TAB 112MCG | $14.34 | $14.34 | $2.00 | $9.32 | $2.65 |
| Lyrica CAP 200MG | $318.16 | $318.16 | $30.00 | $143.17 | $15.91 |
| Omeprazole CAP | $7.82 | $7.82 | $5.00 | $5.08 | $2.65 |

| Estimated Drug Cost Details at Gateway Health Mart Pharmacy North - Standard Cost Sharing | | | | | |
|---|---|---|---|---|---|
| | **Full Cost of Drug** | **Deductible** | **Initial Coverage Level** | **Coverage Gap** | **Catastrophic Coverage** |
| 20MG | | | | | |
| Tamsulosin Hcl CAP 0.4MG | $17.86 | $17.86 | $5.00 | $11.61 | $2.65 |
| Tramadol Hcl TAB 50MG | $16.45 | $16.45 | $16.45 | $10.69 | $6.60 |
| MONTHLY TOTALS: | $1,228.11 | $1,228.11 | $95.45 | $571.77 | $76.20 |

| Estimated Monthly Drug Cost at Gateway Health Mart Pharmacy North - Standard Cost Sharing | |
|---|---|
| **Month** | **Your Cost** |
| **1st** | $410.20 (Deductible met) |
| **2nd** | $125.65 |
| **3rd** | $451.60 (Donut Hole reached) |
| **4th** | $601.97 |
| **5th** | $601.97 |
| **6th** | $601.97 |
| **7th** | $121.34 (Catastrophic met) |
| **8th** | $106.40 |
| **9th** | $106.40 |
| **10th** | $106.40 |
| **11th** | $106.40 |
| **12th** | $106.40 |

## Estimated Monthly Cost Comparison Charts (based on January Enrollment) at Gateway Health Mart Pharmacy North - Standard Cost Sharing

| $410 | $126 | $452 | $602 | $602 | $602 | $121 | $106 | $106 | $106 | $106 | $106 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** | **Oct** | **Nov** | **Dec** |

## Estimated Monthly Cost Comparison Charts (based on enrollment today) at Gateway Health Mart Pharmacy North - Standard Cost Sharing

| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | $410 | $126 | $452 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** | **Oct** | **Nov** | **Dec** |

**Pharmacy Network Information: 11 retail pharmacies in your zip code**

**Some plans offer a MAIL ORDER option and sometimes there is a significant savings offered to use that mail order system. In this case it would save just over $90 for the year by going with the mail order system. One key difference is that mail order system send out medications as a 3 months' supply at a time.**

| **Estimate of What YOU Will Pay for Drug Plan Premium and Drug Costs at Mail Order Pharmacy** | |
|---|---|
| January Enrollment | $3,356.29 |
| Enrollment Today | $827.72 |

**If you look compare the INITIAL COVERAGE LEVEL of the MAIL ORDER option compared to the two local pharmacy options you will note that this one appears much higher; that is because the MAIL ORDER represents a 3 month supply cost vs. the per month costs with the local pharmacy.**

**Estimated Drug Cost Details at Mail Order Pharmacy**

| | **Full Cost of Drug** | **Deductible** | **Initial Coverage Level** | **Coverage Gap** | **Catastrophic Coverage** |
|---|---|---|---|---|---|
| Androderm DIS 4MG/24HR | $2,362.57 | $2,362.57 | $75.00 | $1,063.16 | $118.13 |
| Hydrochlorothiazide TAB 25MG | $6.26 | $6.26 | $3.00 | $4.07 | $2.65 |
| Hydrocortisone TAB 10MG | $105.43 | $105.43 | $12.00 | $68.53 | $5.27 |
| Levothyroxine Sodium TAB 112MCG | $47.92 | $47.92 | $3.00 | $31.15 | $2.65 |

| Estimated Drug Cost Details at Mail Order Pharmacy | | | | | |
|---|---|---|---|---|---|
| | **Full Cost of Drug** | **Deductible** | **Initial Coverage Level** | **Coverage Gap** | **Catastrophic Coverage** |
| Lyrica CAP 200MG | $922.03 | $922.03 | $75.00 | $414.91 | $46.10 |
| Omeprazole CAP 20MG | $19.67 | $19.67 | $12.00 | $12.79 | $2.65 |
| Tamsulosin Hcl CAP 0.4MG | $46.76 | $46.76 | $12.00 | $30.39 | $2.65 |
| Tramadol Hcl TAB 50MG | $42.95 | $42.95 | $42.95 | $27.92 | $6.60 |
| MONTHLY TOTALS: | $3,553.59 | $3,553.59 | $234.95 | $1,652.92 | $186.70 |

### Estimated Monthly Cost Comparison Charts (based on January Enrollment) at Mail Order Pharmacy

| $767 | $30 | $30 | $1,683 | $30 | $30 | $447 | $30 | $30 | $217 | $30 | $30 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** | **Oct** | **Nov** | **Dec** |

### Estimated Monthly Cost Comparison Charts (based on enrollment today) at Mail Order Pharmacy

| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | $767 | $30 | $30 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** | **Oct** | **Nov** | **Dec** |

# Definitions

**Catastrophic Coverage**: Once you reach your plan's out-of-pocket limit during the coverage gap, you automatically get "catastrophic coverage." Catastrophic coverage assures that once you have spent up to your plan's out-of-pocket limit for covered drugs, you only pay a small coinsurance amount or a copayment for the rest of the year.

**Coverage Gap**: Starting January 1, 2011, if you reach the coverage gap (also called the "donut hole") in your Medicare prescription drug coverage, you will get approximately a 50% discount on covered brand drugs. Medicare has also increased its coverage of generic drugs for beneficiaries in the coverage gap so that beginning in 2011 you will pay less for generic drugs as well. The drugs eligible for the brand discount or the additional generic savings may change based on the information we have available.

**Deductible**: The amount you must pay for health care or prescriptions, before Original Medicare, your Medicare drug plan, your Medicare Health Plan, or your other insurance begins to pay. For example, in Original Medicare, you pay a new deductible for each benefit period for Part A, and each year for Part B. These amounts can change every year.

**Initial Coverage Level**: Once you have met your yearly deductible, and until you reach the plan's out-of-pocket maximum, you pay a copayment (a set amount you pay) or coinsurance (a percentage of the total cost) for each covered drug.

**Prior Authorization (PA)**: Prior authorization means that you will need prior approval from an insurance plan before you fill your prescription. If a drug has prior authorization, you will need to work with the plan and your doctor to get an exception. Call your plan or visit their Web site to learn more about specific prior authorization requirements. Many prior authorization requirements can be resolved at the point of sale and don't require any additional information from your doctor. Knowing what the prior authorizations are before going to your doctor's office may save you time at the pharmacy counter. **If you see a "YES" noted by one of your medications you will need to ask your doctor's office to provide a letter submitted to the plan that demonstrates the reason you need this medication before they will pay their share.**

**Quantity Limit (QL)**: For safety and cost reasons, plans may limit the quantity of drugs that they cover over a certain period of time. If the drug has a quantity limit restriction, you should contact the plan for more details. If you take one pill per day and the drug has a 30 day/month quantity limit, the impact will be minimal (i.e., you may not be able to refill the prescription until a few days before running out of pills). If you currently take 2 pills per day and the quantity limit is 30 pills per month, you would need to work with the plan to get authorization for the higher quantity. **Generally this is not much of an issue if you notice a yes under QUANTITY LIMIT by one of your medications; unless you are taking an unusual amount of a medication. If you are prescribed to take more than the normal amount your doctor may need to talk to or write to the plan to explain why.**

**Step Therapy (ST)**: In some cases, plans require you to first try one drug to treat your medical condition before they will cover another drug for that condition. For example, if Drug A and Drug B both treat your medical condition, a plan may require your doctor to prescribe Drug A first. If Drug A doesn't work for you, then the plan will cover Drug B. If a drug has step therapy restrictions, you will need to work with the plan and your doctor to get an exception. . **If you see a "YES" noted by one of your medications you will need to ask your doctor's office to provide a letter submitted to the plan that demonstrates that you attempted other medications that did not work for you before settling on this one.**

Appendix #4

| Benefits | MedicareBlue Rx Value Plus | | MedicareBlue Rx Standard | MedicareBlue Rx Premier |
|---|---|---|---|---|
| **Monthly plan premium** – amount you pay | $31.80 | | $51.20 | $124.20 |
| **Annual deductible** – amount you pay before initial coverage begins | $160 | | $320 | $0 |
| **Initial coverage** – amount you pay for a 30-day supply | **Preferred Cost Sharing** After you pay the deductible | **Standard Cost Sharing** After you pay the deductible | After you pay the deductible | |
| • **Tier 1:** Preferred Generic drugs | • $0 copay | • $5 copay | • $0 | • $1 copay |
| • **Tier 2:** Non-Preferred Generic drugs | • $6 copay | • $12 copay | • $6 copay | • $3 copay |
| • **Tier 3:** Preferred Brand drugs | • $35 copay | • $45 copay | • $22 copay | • $24 copay |
| • **Tier 4:** Non-Preferred Brand drugs | • 50% coinsurance | • 50% coinsurance | • $95 copay | • 50% coinsurance |
| • **Tier 5:** Specialty drugs | • 29% coinsurance | • 29% coinsurance | • 25% coinsurance | • 33% coinsurance |
| **Coverage gap** – amount you pay for a 30-day supply after your total yearly covered prescription drug costs reach $2,960[1] | | | | • $1 copay for Tier 1: Preferred Generic drugs, $3 copay for Tier 2: Non-Preferred Generic drugs and $24 copay for some Tier 3: Preferred Brand drugs |
| • Generic drugs | • 65% of the plan's costs | | • 65% of the plan's costs | • 65% of the plan's costs for all other generic drugs |
| • Brand-name drugs | • 45% of the plan's costs | | • 45% of the plan's costs | • 45% of the plan's costs for all other brand-name drugs |
| **Catastrophic coverage** – amount you pay for a 30-day supply after you have paid $4,700 in out-of-pocket prescription drug costs[2] | The greater of $2.65 copay for generic drugs and $6.60 copay for all other covered drugs OR 5% coinsurance | | | |

[1]Your "total drug costs" means the total amount you have paid for covered drugs plus what the plan has paid for the calendar year. This does not include the plan premium you pay.
[2]Your "out-of-pocket costs" means the amount you have paid for covered drugs for the calendar year. This does not include the amount the plan has paid or the plan premium you pay.

To help you decide which plan is right for you, use our drug pricing tool (/current-members/drug-calculator-tool-medicareblue). Remember to compare all the benefits and value offered by each plan option, in addition to out-of-pocket costs.

If you are new to Medicare, you may want to learn more about Medicare (/learn) before choosing a plan.

**Appendix 5**

**Communication Plan of Upcoming Change to ESI & Unbundled Product**

- NDPERS Member Mailings
  - 1st general mailing to be sent by October 1
    - Provide overview of upcoming change to ESI with sample rate detail
    - Provide notice of ability to unbundle medical & PDP
    - Provide details on assistance provided by SHIC, Dept of Insurance
    - Provide required creditable coverage notice
    - Provide RHIC portability details – if space is available
    - Provide webinar detail
    - Provide meeting location detail
  - 2nd general mailing to be sent early November
    - Provide overview of upcoming change to ESI with sample
    - Provide notice of ability to unbundle medical & PDP
    - Provide details on assistance provided by SHIC, Dept of Insurance
    - Include FAQs
  - Rate specific notice – sent mid-late November
    - Provide specific rate increase detail for member
    - Insert page if needed outlining upcoming change
  - 3rd general mailing to be sent end of November (if needed)
    - Reminder that if intent to move to another PDP as part of federal open enrollment, federal enrollment ends December 7
  - LIS/LEP Member specific mailings – by end of November

- Vendor Mailings:
  - MedicareBlue Rx mailing – required by CMS, approximate mailing date by October 15 if not sooner
  - ESI
    - initial mailing – approximate date of November 10
    - Welcome kit including ID cards – approximate date of December 20

- Newsletter
  - Scheduled to be mailed the week of October 12
  - Article to outline same information as provided in 1st general mailing

- Recorded Webinar – to be available on NDPERS website by October 1
  - To be available prior to October 1 and referenced in 1st general mailing

- Onsite meetings – to be completed by end of October
  - Presenters from NDPERS/SHP/Dept of Insurance SHIC (if available)
  - Major Cities:
    - Bismarck
    - Mandan
    - Bottineau
    - Fargo
    - Grand Forks
    - Grafton
    - Minot
    - Dickinson
    - Devils Lake
    - Jamestown
    - Williston
    - Wahpeton
    - Valley City

- Webinars
  - Conduct live webinars for individuals to attend and ask questions

- Website Updates
  - Provide copies of notices, meeting details, recorded webinar link, FAQs, etc

- Staffing & Training
  - Presenters for onsite meetings & webinars
    - Temporary staff to assist with presentations across state & webinars

- Incoming calls & return calls
    - Temporary staff to begin 9/28 to learn incoming phone process and receive training on upcoming change
    - Training for member services, counselors and other benefit division staff regarding upcoming changes to be completed by end of September

- Walk-ins/Appointments
    - Temporary staff to begin 9/28 to learn protocol for visitors to office and to direct walk-ins and appointments
    - Training for member services, counselors and other benefit division staff regarding upcoming changes to be completed by end of September

- PERSLink System Enhancements
    - Training for all staff – prior to production migration

MEMORANDUM

**APPENDIX #6**

TO: Sparb Collins, Executive Director, Public Employees Retirement System

FROM: Janilyn Murtha, Assistant Attorney General

RE: Part D Options

DATE: September 10, 2015

You have indicated that historically PERS has offered a Medicare Supplement Plan that includes drug coverage, and when electing this plan PERS has required its members to elect both the medical and prescription coverage[1]. You have asked me whether the Board has the authority to "unbundle" this coverage and allow an otherwise eligible retired member to elect either or both types of coverage. It is my opinion that the PERS Board has the authority to offer "unbundled" medical and prescription drug coverage under the Medicare Supplement Plan offered by PERS. [2]

The Board is responsible for the administration of the uniform group insurance program under ch. 54-52.1.[3] Chapter 54-52.1 does not require retired medicare-eligible members to elect both medical and prescription drug coverage in order to participate in the Medicare Supplement Plan offered by PERS. Section 54-52.1-02, N.D.C.C., sets out the various subgroups of coverage under the uniform group insurance program and makes a distinction between medical and prescription drug coverage. Section 71-03-01-02, N.D.A.C., continues this distinction between the types of coverage offered by stating that the Board may solicit bids for prescription drug coverage for active or retired members or both and for medical coverage for active or retired members or both. Further, both N.D.C.C. §§ 54-52.1-04 and 54-52.1-04.2 permit the Board to receive bids separately for and establish a fully insured or self-insured plan for prescription drug coverage that is separate from the plan for medical coverage. In addition to the absence of a statute or administrative rule requiring retired medicare-eligible members to elect both types of coverage, these provisions support a conclusion that the Board has the discretion to administer medical and prescription drug coverage differently.

You have indicated to me that the original decision of the Board to offer members a "bundled-only" option for participation in the Medicare Supplement Plan stemmed from a Board action in 2005.[4] It is my understanding that this decision was not subsequently adopted into a policy or rule. Therefore, the Board may choose to provide an "unbundled" option to medicare-eligible retirees in the same manner it provided a bundled option; through Board action at an open meeting.[5]

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[1] August 27, 2015, PERS Board Meeting, Agenda item III. A.

[2] You have also indicated that you have confirmed with both Deloitte (consultant of PERS) and the North Dakota Insurance Department that offering unbundled coverage would not be contrary to any applicable federal or state insurance laws. Therefore my analysis is limited to a review of the state statutes and administrative rules specifically applicable to PERS.

[3] N.D.C.C. § 54-52-04(7).

[4] August 18, 2005, PERS Board meeting minutes.

[5] Additional considerations regarding whether and to what extent a decision to provide an unbundled coverage option is impacted by the recent RFP process and subsequent bid award for medical and prescription drug coverage will be discussed at the Board meeting.

# Appendix 7

Attached please find an unsolicited renewal offer from BCBS for the Part D product that was received on September 9th. In the email that came along with it BCBS stated:

> Sparb, I know the NDPERS Board will be discussing the 2016 Part D renewal options this month. We prepared a 2016 Part D proposal for NDPERS with a monthly premium of $80.10, for NDPERS to consider. This would assume that the product would remain coupled with a MedSupp product.

Jan will be at the meeting to discuss your options relating to this offer from a legal perspective. Staff will also be prepared to discuss this and the ESI proposal as well.

Appendix 7

**North Dakota Public Employees Retirement System**
2016 Renewal for Group Prescription Drug Plan

| | 2015 | | 2016 | | |
|---|---|---|---|---|---|
| Enrollment on 6/30/2015 | Monthly Premium | Annual Income | Monthly Premium | Annual Income | Rate Change |
| 8,728 | $77.90 | $8,158,934 | $80.10 | $8,389,354 | 2.8% |

**Notes for 2016 Renewal:**

- The Centers for Medicare and Medicaid Services (CMS) reported on July 29, 2015 the national average monthly bid amount for standard Part D individual coverage of $64.66 and the Part D base beneficiary premium for 2016 (average individual premium) of $34.10.

  Further information on this topic can be found at the CMS website:
  https://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Downloads/PartDandMABenchmarks2016.pdf

- The NDPERS Group Prescription Drug Plan (GPDP) has been rated for 2016 based on prior claim experience from 2014.

- Effective January 1, 2013, the manufacturer discount program will apply to employer group Part D plans. This reduction in premium is included in the 2016 renewal calculation.

- The BCBSND quote for 2016 Group Part D assumes that retirees continue to be required to purchase both NDPERS MedSupp and Part D. This quote is not valid if this requirement changes. If this requirement no longer exists, a significant selection factor would need to be applied to the rates. At this time BCBSND is not willing to provide a quote for an unbundled approach.