



PENSION SUSTAINABILITY

June 26, 2020

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The comments in **green** are preliminary observations provided by Cavanaugh MacDonald.



Career Employee

- What is a career employee? 25 years? 30 years?

- Are we already serving career employees?

- Since 2001, 25% of retirees had 30+ years of service, about 60% had 20+ years of service.

- Should the length of the work day or work year impact service accrual?

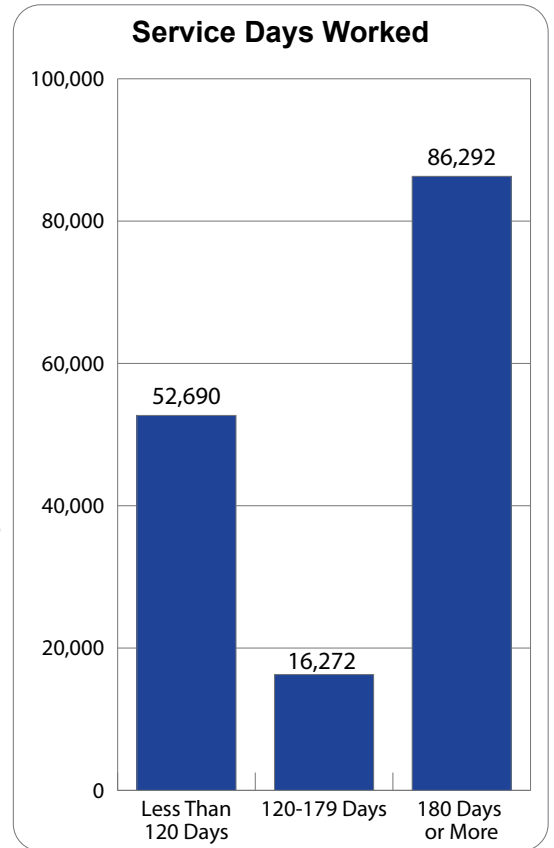
- What would adjusting part-time service accrual rate do? How many would be impacted and by how much?

- As of November 2019, SERS had 86,292 active members with 180+ days of service and 16,272 (10.4%) with between 120 days and 180 days of service. For this latter group average service accrual under 180 days equals one year would be to lower their service accrual to 0.867 of a year.

- What would lower service accrual rate for PT do to liability?

- How frequently does a person working a PT schedule switch to a full time/longer schedule in the final average salary period? Can that be mitigated through measures to prevent pension spiking?

There are several ways to mitigate the transition of part-time employees, a common way is to track part-time service and prorate their part-time service credits when determining their benefit based on full-time final average salary. Pension spiking provision may partially mitigate late career transitions by limiting the rate of increase in salary during the averaging period.

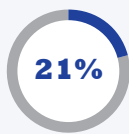


- Is there a target replacement ratio for a career employee? Is there a target replacement ratio for non-career employees?

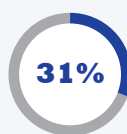
For a non-Social Security covered workforce, the target replacement ratio for a career employee is usually between 70% and 85% depending on the source of the information. That would typically be for a 30 to 35 year career with a portion of the replacement ratio attributable to personal savings.

CURRENT SERVICE RETIREE REPLACEMENT RATIOS BY YEARS OF SERVICE

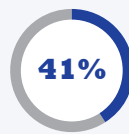
10-14 Years



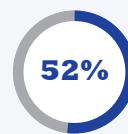
15-19 Years



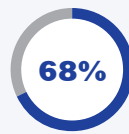
20-24 Years



25-29 Years




30+ Years




Retirement Age/Retirement Eligibility

- What age should a person be to receive an unreduced benefit? (age of entry for benefit payments)

CURRENT UNREDUCED BENEFIT





AGE: **57**
SERVICE: **30 YEARS**

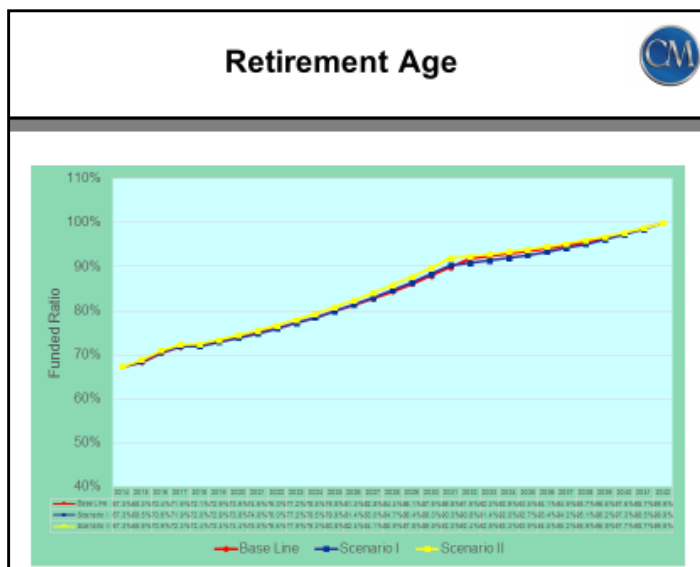


AGE: **67**
SERVICE: **10 YEARS**

- What would be the impact on the fund of raising the age?

Since we assume a percent of eligible retirees elect to retire in any year, the impact is typically pretty limited. See the following PowerPoint slides from January 2015 roundtable:

Pension Reform - Modeler 	Pension Reform - Modeler 
<p>➤ Option #1</p> <ul style="list-style-type: none"> ▪ Increase Retirement Age <ul style="list-style-type: none"> – Scenario I <ul style="list-style-type: none"> • 70 with at least 10 years of service • 57 with at least 32 years of service – Scenario II <ul style="list-style-type: none"> • 70 with at least 10 years of service • 57 with at least 35 years of service 	<ul style="list-style-type: none"> ➤ The long-term projected employer current service cost is 0.57% and 0.39% of compensation respectively under Scenario I and Scenario II for increasing the retirement age eligibility. ➤ Need to consider older workforce's ability to perform required duties. ➤ Could increase disability retirements.



- What age should a person be to be eligible to retire with a reduced benefit? Does the reduction fully address the longer period for drawing a benefit?

- The current and future early retirements with less than 25 years of service are actuarially reduced. Those early retirements with 25+ years of service have a small subsidy.

CURRENT REDUCED BENEFIT



AGE: **60**
SERVICE: **25 YEARS**



AGE: **62**
SERVICE: **10 YEARS**

- What would be the impact of raising the age?
A minor reduction to the liability.

Duration of Benefit Payments

- Are we fully factoring in longer life expectancy? What is the current life expectancy for SERS members (male and female)?

We are utilizing a modern mortality table with future improvements projected generationally. The plan has experienced post-retirement mortality gains averaging approximately \$50 million per year over the past 5 years. The life expectancy of a male age 62 in 2019 is 22.0 years and increases to 23.1 years for a 62 year male in 2039. The life expectancy of a female age 62 in 2019 is 25.1 years and increases to 26.1 years for a 62 year female in 2039.

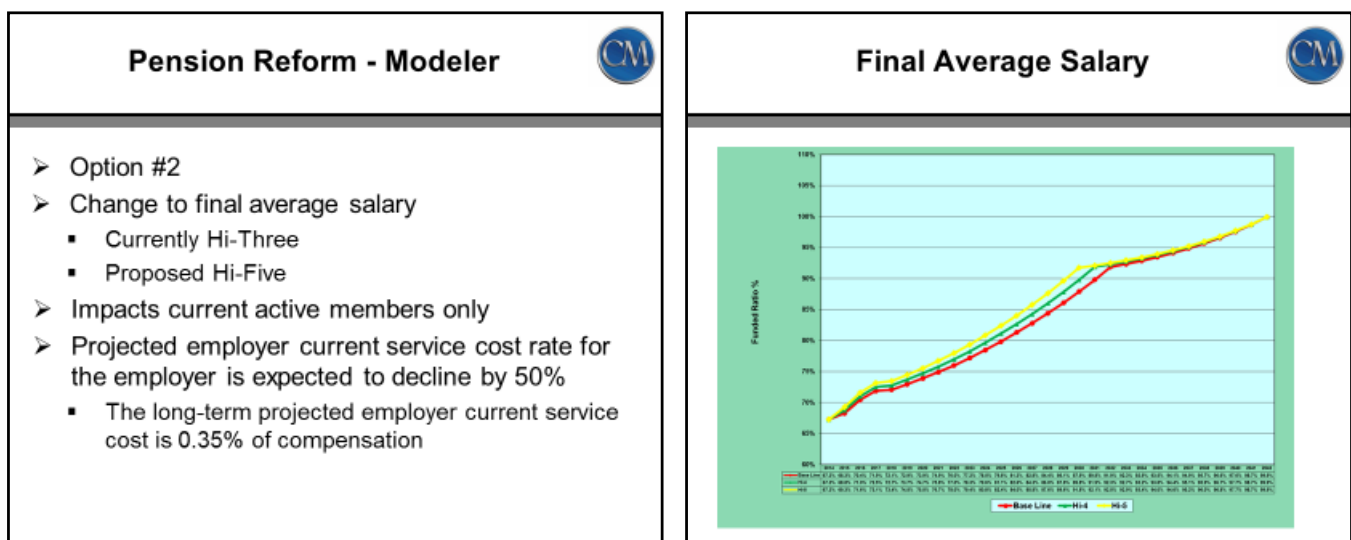
- Does receiving a benefit payment for longer than you worked mean that unfunded liability is created? What are the factors that impact this?

No, the UAAL (the excess of liability over assets) is not directly impacted by the occurrence of a retiree being paid longer than they worked. Typically, approximately 70% of lifetime payments a retiree receives is attributable to the investment earnings on the contributions deposited over their career. The largest source of current and future UAAL is due to investment volatility not longevity.

Final Average Salary

- What would be the impact of switching to a 5 year FAS? 7 year? 10 year?

See the following PowerPoint slides from January 2015 roundtable:



- What would be the impact of linking the benefit to the contribution history? (i.e., limiting impact of late career/FAS salary spike)

Vesting

- What impact has changing the vesting period from 5 years to 10 years had on the fund?

Minor.

- What impact would changing from 10 years to 15 years have on the fund?

To the best of our knowledge, this would be the longest vesting period in the country.

- What are the vesting periods at different systems around the country? Is there any data about the impact/experience in moving to a longer vesting period?

5 year cliff vesting is most common for public DB plans with 10 year cliff being the longest period we are aware of.

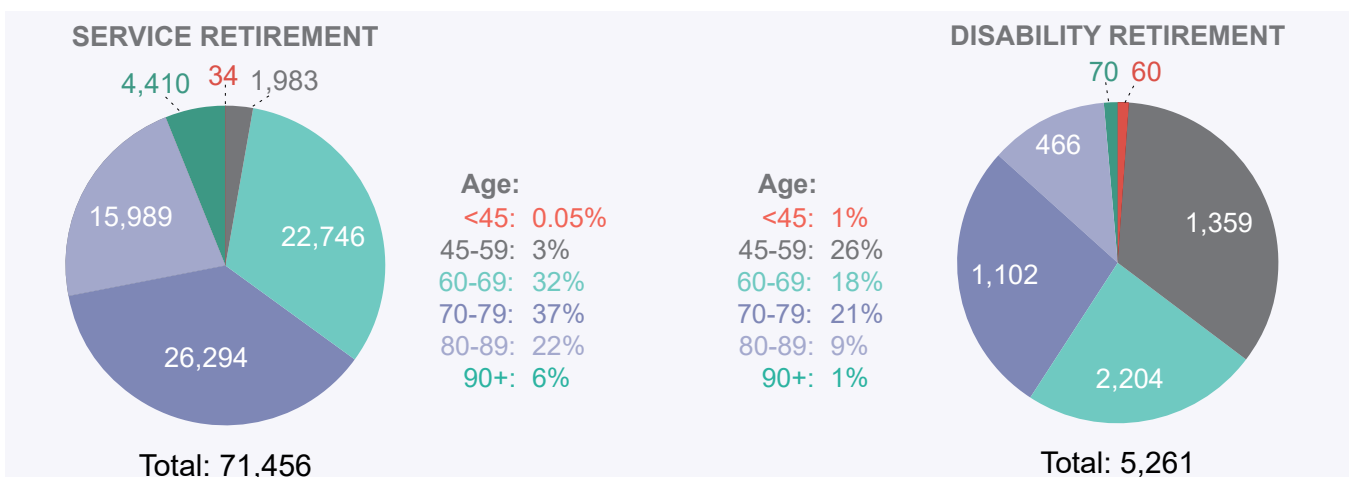
- Should the vesting period for service benefits be the same as the vesting period for disability benefits?

- What would be the impact of changing disability vesting to 10 years? 15 years? How many fewer people would be eligible for disability?

- In FY19 the average new disability retiree had 16.8 years of service.

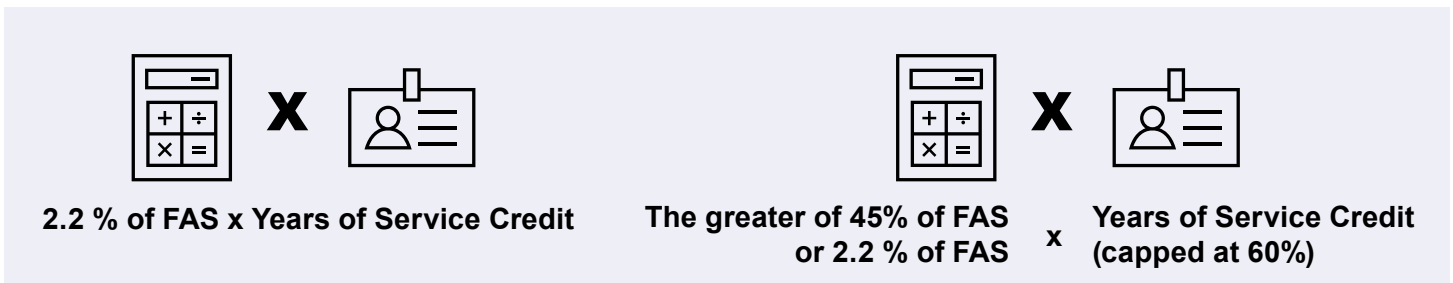
Differentiating between service-connected disability (day one coverage) and a non-service connected disability (eligible at full vesting) with lower benefit minimums is common. Offsets from other income received (or earned) while on a disability is also common (e.g. plan provides up to 60% of final salary offset by workers comp, Social Security, or other sources of income). Usually Long Term Disability (LTD) policies offset post-disability (but pre-retirement) income including benefits from DB plans. If the plan defers payments until LTD ends, significant savings will result. Such a change may increase the administrative efforts.

Age: ■ Under 45 ■ 45-59 ■ 60-69 ■ 70-79 ■ 80-89 ■ 90+

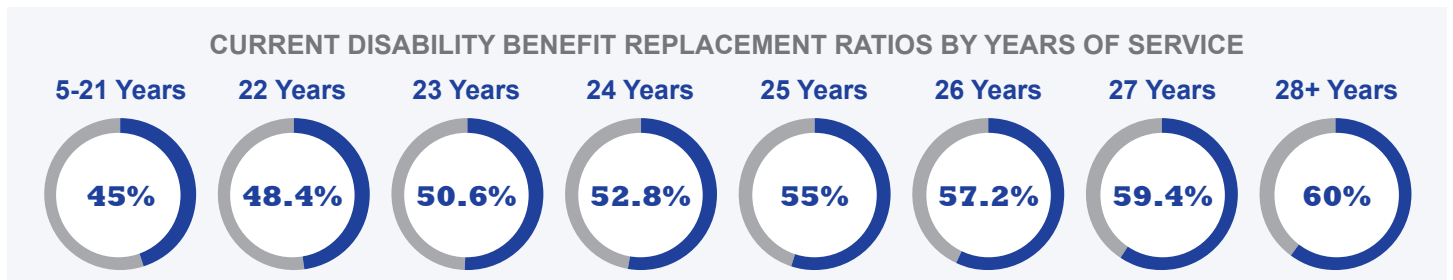


Disability

- Are disability benefits better than service retirement benefits?



- What level of replacement income should disability benefits provide?



- How does this compare to the replacement ratios in other systems?

Similar but several other systems provide less benefits for non-service connected disablement.

- Is the number of disability benefits granted, and the duration of the disability payments consistent with, better than or worse than the actuarial assumptions used to fund disability benefits?

Approximately \$167 million in losses due to disability over the past 5 years (the UAAL at 6/30/2019 is over \$6 billion), the apparent trend lowered losses (\$9.5 million in 2019).

- Are there other ways to provide and fund a disability benefit than through the pension fund?

In Virginia, the Retirement System administers the Virginia Sickness and Disability Plan and have reduced/removed pre-retirement disability benefits from the plan (Plan provides post-retirement benefits to disabled members). Some single-employer plans may provide STD/LTD coverage outside the plan and remove pre-retirement disability benefits. They often still provide a post-retirement annuity to certain disabilities (fully vested and/or service-connected causes).

Different Benefit Levels Tied to Years of Service (Better Benefit for Career Employee)

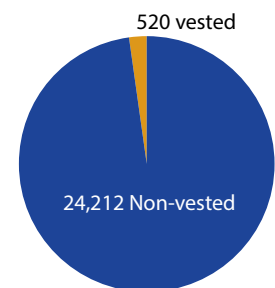
- Some systems start with a lower benefit formula and increase it as the employee reaches certain years of service thresholds (e.g., 1.5% for years 1-9; 1.75% for years 10-19; 2% for years 20 to 29; 2.2% for years 30 and beyond).
 - How does the cost for such a plan compare to the cost of a single formula plan?

If the net effect is to reduce the average benefit expected to be provided, savings would be in

relation to the decrease in the expected benefit. This could represent a 10% reduction to the average active member (hired at nearly age 40). We would recommend consideration of the member contribution requirement if active member benefits reductions are also considered otherwise effected members would be contributing toward the amortization of the unfunded liability derived from liabilities or losses established prior to their service.

Inactive Members and Refunding of Contributions

- Currently there are about 255,000 inactive, non-vested members. If they all refunded it would cost \$312 million in returned employee contributions. Retained contributions for non-vested can result in an investment benefit to the fund.
- Currently there are about 5,500 inactive, vested members. If they remain in the system and draw a retirement benefit, those benefits would cost about \$317 million.
- In FY19 there were 24,732 refunds.
 - 24,212 were non-vested members. The average service was 1.3 years.
 - 520 were vested members. The average length of service was 14.2 years.



- Currently, no interest is paid on a refund.

In a perfect world, this would generally be a good incentive for members to request rollover distributions. Since these amounts are pretty small on average, most terminated members aren't bothering to rollout.

- Would paying interest on refunds to vested members incentivize more refunds?

We would suspect less incentive as the short-term savings rate is near 0% outside the plan.

- What would be the additional cost to pay interest?

Minor cost if implemented prospectively.

- How would the additional interest cost compare to the reduction in the liability?

Providing any increase in the amount to be provided would either reduce the assets more (if paid) or increase the liability (if not paid). There is no improvement to the plan's actuarial condition due to increasing the payments owed terminated members with interest.

- The additional interest cost would be immediate while the savings on benefit payments would be in the future. How does that impact the cost/benefit analysis?

The plan carries a liability equal to the refundable amount (which is equal to the amount of the assets payable) so it would actually reduce the funded ratio slightly to pay all these amounts today.

- Some systems have offered a discounted present value lump sum payment in exchange for cashing out the service credit. Would that be a bigger incentive? How does the cost compare to interest?

- How successful have such programs been in spurring cash-outs?

Illinois offered a 60% buyout with less than 5% utilization, Missouri offered 60% buyout with approximately 22% utilization. Both these examples produced less savings than projected not including the cost of the administration of the program.

- **Illinois' Accelerated Pension Benefit Payment Plans (data gathered from several online resources)**
 - **Pension Buyout Eligibility requirements:**
 - Former members of the Teachers' Retirement System (TRS), State Employees' Retirement System (SERS), and State Universities Retirement System (SURS)
 - Must be part of Tier 1 and Tier 2 and no longer employed by the state but vested (more than 5 years of service) and not yet retired
 - **Pension Buyout offer details:**
 - Eligible members would collect a lump-sum payment calculated at 60% of the present value of the member's deferred normal retirement annuity calculated on October 1, 2017 (both periods); present value was based on assumed life expectancy calculated by their actuary
 - Participants cannot restore eligibility in the future; if a person returns to a state pension-covered job they would be considered a new employee
 - **COLA Buyout Eligibility requirements:**
 - Current retiring members of the Teachers' Retirement System (TRS), State Employees' Retirement System (SERS), and State Universities Retirement System (SURS)
 - Must be in Tier 1
 - **COLA Buyout offer details:**
 - Eligible members would collect a lump-sum payment upon retirement in exchange for accepting a 1.5% non-compounded annual COLA increase instead of a 3% compounded annual COLA increase. To determine the lump-sum amount, the system would calculate the value of what the retiree has given up by accepting the lower COLA and pay the retiree 70% of that amount.
 - **Actual realized results (to date):**
 - As of June 30, 2019, 500 of 2,119 applicants for SERS retirement (23.6%) chose the COLA accelerated payment saving \$11 million
 - As of June 30, 2019, SERS reported about \$2 million in savings from the inactive pension buyout
 - TRS and SURS began their programs late in FY2019 and projected no relevant savings for the year
 - As of November 24, 2019, SERS reported that 22 of 3,600 qualified inactive members (0.6%) elected to take the pension buyout; 719 out of 2,889 retiring members (24.8%) elected the COLA buyout
 - As of November 24, 2019, TRS reported that 297 of 14,598 qualified inactive members (2%) elected to take the pension buyout; 596 out of 3,715 retiring members (16%) elected the COLA buyout
 - As of April 24, 2020, SERS reported paying out \$87 million in both programs with a 23.4% participation rate in the COLA buyout program and 1% participation rate in the pension buyout; TRS reported paying out \$192 million in both programs with a 17.4% rate in the COLA buyout program and 10.4% participation rate in the pension buyout; SURS reported paying out \$3 million in both programs but reported no participation rates.
 - **Drawbacks to the Illinois Buyout Plans:**
 - The state of Illinois knew they would not have sufficient funds to make the buyout payments so they borrowed \$300 million in April 2019 and \$700 million more in August 2019 to make accelerated pension payments, adding to the state's debt burden.
- **MOSERS' Buyout Plan (data gathered from several online resources)**
 - **Buyout Eligibility:**
 - Former state employees who were fully vested (more than 5 years of service) but not yet retired
 - Must have left their MOSERS-covered position before June 30, 2017
 - 17,005 eligible members
 - **Buyout offer details:**
 - Eligible members would collect a lump-sum payment calculated at 60% of the present value of the member's deferred normal retirement annuity calculated on October 1, 2017 (both periods); present value was based on assumed life expectancy calculated by their actuary
 - Letters with lump-sum calculations were sent to all eligible members on two occasions
 - Average lump-sum amount for the 17,005 eligible members was \$18,450

- Participants cannot restore eligibility in the future; if a person returns to a MOSERS-covered job they would be considered a new employee
- Participants forfeit rights to any long-term disability benefit
- **Actual realized results (both adoption periods):**
 - 25.7% of eligible members participated
 - At the time of the offers, MOSERS had total unfunded liabilities of \$4.78 billion and a net pension liability of \$5.57 billion. The buyout resulted in a total liability reduction of approximately \$101million and a net pension liability reduction of \$35 million.
 - Average monthly benefit forfeited: \$380 per month
 - The average one-time payment was \$13,904
 - Total paid out: \$60.5 million

Retiree COLA

- **The actuary previously identified the COLA as being one of the biggest ‘needle movers.’ Are there other changes to the COLA besides reducing and/or suspending it that might be considered?**
- **Some systems have implemented a design where there is no COLA but the member can elect to ‘buy’ a COLA at retirement funded by reducing the benefit.**
 - **How much would this reduce the cost of the system?**
Significant reduction to liabilities due to a possible significant reduction in the benefits provided.
 - **How much of a benefit reduction would the member experience?**
The current COLA typically represents approximately 8% of the present value of the benefit provided.
We haven’t seen this offered as a change from a plan offering an annual COLA. Offsetting the accrued benefit to provide COLAs could significantly reduce liabilities and may necessitate assessing the member contribution rate.
- **Some systems have shifted to a gain sharing/loss sharing model where the retiree has the potential for additional income when the system meets certain funding/ investment return thresholds, but can also experience a benefit reduction (down to a floor) if the performance is poor.**
 - **How would the cost of such an approach compare to the current COLA model?**
Under such an approach, COLAs would be based on the return in excess of a “hurdle” rate. The hurdle rate is solved for as the discount rate that if no COLAs were provided in the future, the liability is equal to the current liability using the higher discount rate (currently 7.5%) and assuming 2.5% simple COLAs. As an example, if we say the current 7.5% discount rate with 2.5% assumed simple COLAs has approximately the same liability as using a 6.0% discount rate with 0% COLAs, the hurdle rate would be 6% and each year the actuarial smoothed return exceeds 6%, the difference is provided as a simple COLA. This COLA rate should also be reduced to reflect that the plan is not 100% funded and therefore all excess returns are not fully sharable.

Post-Retirement Employment

- **How does the current approach to post-retirement employment impact sustainability? Are there different, less costly approaches that should be considered?**

Compared to other states, SERS has pretty liberal return to work policies. In most other States, the return to work retiree and/or employer fund the full contributions to the System and none is diverted to a DC account. Generous return to work provisions impair the System's turnover and depress the payroll growth. Most plans require significant breaks in service before returning to work (1 year pretty common), both employer and employee contributions and some limit the number of years a person can return to work.

Other Benefits

- **How do other benefits under the plan (e.g., service purchases, survivor benefits) impact sustainability?**

Very minor. Some of the service purchases are subsidized (military, non-contributory, etc.) which is common among public plans. We are not aware of any overly generous ancillary benefits.

Risks to Sustainability

- **What are the most significant risk factors in the current plan design?**
 - Investment experience – **Primary source of known risk to SERS**
 - Low or no payroll growth – **Secondary source of known risk**
 - Declining active membership levels – **a significant potential risk**
 - Employers' ability to pay – **a less likely potential risk**
- **Are there ways to mitigate against those risks beyond changing the plan design to lower cost?**

A plan with statutory funding has only the liability side to generate a change to future funded status. Assessing the risks of each source via stochastic analysis (ALMs) and the impact of changes on net external cash flow.

- **Would moving to a philosophy of adopting intentionally conservative assumptions provide any insulation?**

We don't recommend intentionally conservative assumptions that are not reflected by actual conservative changes in expectation. A good example is if we assume a lower return assumption but the plan assets are invested to target higher returns, although the liabilities are priced higher, the asset volatility remains unchanged. The long term problem is the investment volatility more than the measure of liabilities. We continue to recommend best estimate assumptions which are expected to provide the most accurate measure of expected liabilities. Also, we would suggest periodic Asset/Liability Models as these are the best tool to assess future sustainability of the plan and the degree investment volatility could impact outcomes.

Modifying Existing Plan vs. Establishing a New Tier for New Hires

- **Which of the potential plan changes being looked at would be fair to apply to current members?**
- **Which of the potential plan changes being looked at should be applied to new hires only?**
- **How long would it take for a new tier, with a lower cost plan design to start improving the overall funded status?**