STATE OF ALASKA
ALASKA RETIREMENT MANAGEMENT BOARD

ACTUARIAL COMMITTEE MEETING

December 1, 2021 – 1:00 p.m.

Call In (Audio Only): 1-907-202-7104	**Code:** 418 218 618#

I. **Call to Order**

II. **Roll Call**

III. **Public Meeting Notice**

IV. **A. Approval of Agenda**
B. Approval of Minutes – September 22, 2021

V. **Public / Member Participation, Communications and Appearances**
(Three Minute Limit)

VI. **Actuarial Calendar Review**
Pamela Leary, Director, Treasury Division

VII. **Valuations and Actuary Review** *(30-45 mins)*
A. Preliminary 2021 Valuation Results
David Kershner & Scott Young, Buck

B. Actuary Review *(5 mins)*
Paul Wood & Bill Detweiler, Gabriel Roeder Smith & Company

VIII. **Economic Assumptions for Experience Study** *(60-90 mins)*
David Kershner & Scott Young, Buck

IX. **Review Committee Charter** *(per Charter)*

X. **Future Meetings**
A. Calendar Review
B. Agenda Items
C. Requests / Follow-Ups

XI. **Public / Member Comments**
XII. **Adjournment**

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
ACTUARIAL COMMITTEE MEETING

Videoconference

MINUTES OF
September 22, 2021

Wednesday, September 22, 2021

ATTENDANCE

Committee Present: Allen Hippler, *Chair*
Lorne Bretz
Gayle Harbo
Robert Johnson
Acting Commissioner Amanda Holland
Commissioner Lucinda Mahoney
Bob Williams
Dennis Moen

Committee Absent: None

ARM Board Trustees Present:
Donald Krohn

Investment Advisory Council Members Present:
Ruth Ryerson
Dr. William Jennings

Department of Revenue Staff Present:
Zachary Hanna, Chief Investment Officer
Pamela Leary, Director, Treasury Division
Kayla Wisner, State Comptroller
Stephen Sikes, State Investment Officer
Kevin Elliott, State Investment Officer
Mark Moon, State Investment Officer
Scott Jones, State Investment Officer
Michelle Prebula, State Investment Officer
Scott Jones, Head of Investment Operations, Performance & Analytics
Hunter Romberg, Investment Data Analyst
Ryan Kauzlarich, Accountant V
Grant Ficek, Business Analyst
Alysia Jones, Board Liaison

Department of Administration Staff Present:
Ajay Desai, Director, Division of Retirement and Benefits
Kevin Worley, Chief Financial Officer, Division of Retirement and Benefits
Robert Aceveda, Benefits and Counseling Manager

ARMB Legal Counsel Present:
Benjamin Hofmeister, Assistant Attorney General, Department of Law

Others Present:
Steve Center, Callan
Paul Wood, Gabriel Roeder Smith
Bill Detweiler, Gabriel Roeder Smith
David Kershner, Buck
Scott Young, Buck
Tonya Manning, Buck
Paul Miranda, Public
Alexei Painter, Legislative Finance Division
Caroline Schultz, Office of Management and Budget

I. CALL TO ORDER

CHAIR ALLEN HIPPLER called the meeting of the ARM Board Actuarial Committee to order at 1:00 p.m.

II. ROLL CALL

MR. BRETZ, MS. HARBO, ACTING COMMISSIONER HOLLAND, MR. JOHNSON, COMMISSIONER MAHONEY, MR. MOEN, MR. WILLIAMS, and CHAIR HIPPLER were present at roll call.

III. PUBLIC MEETING NOTICE

ALYSIA JONES confirmed that public meeting notice requirements had been met.

IV. A. APPROVAL OF AGENDA

MS. HARBO moved to approve the agenda. MR. JOHNSON seconded the motion. The agenda was approved without objection.

B. Approval of Minutes: June 16, 2021

MS. HARBO moved to approve the minutes of the June 16, 2021 meeting. MR. WILLIAMS seconded the motion. The minutes were approved without objection.

V. PUBLIC/MEMBER PARTICIPATION, COMMUNICATIONS & APPEARANCES – None.

VI. FY2023 CONTRIBUTION RATES

A. Discussion of Resetting to Market Value of Assets at 6/30/2021

COMMISSIONER MAHONEY started by thanking the Actuarial committee for giving her the opportunity to speak to them about the $7 billion increase in the TRS/PERS funds for FY2021. She noted that the Treasury team did an outstanding job delivering a 28 percent return on the investments for the year. She also noted that the State of Alaska and other employers had been paying down the PERS and TRS unfunded liability for over 10 years and that the healthcare systems were significantly overfunded due to positive asset returns and positive liability experience. COMMISSIONER MAHONEY then turned their attention to page 71 of the meeting packet which contained a chart mapping out the projected funded status.

COMMISSIONER MAHONEY said that the excess funds and payments were locked in the system and could not be used for anything other than healthcare and that they could not be moved into the pension plans because they were set up in separate trusts. She noted that the administration was concerned that the TRS and PERS pensions were to the point where close attention would need to be paid as to what the state's contributions were. She also noted that it was a good situation to be in, but they needed to consider how much contributions they would continue to make, taking into consideration that the fair market value was $7 billion higher than the actuarial value. She said the administration was uncomfortable making high past service payments using five-year smoothing and the State was working towards a sustainable balanced fiscal plan and to stop operating in a deficit environment.

COMMISSIONER MAHONEY said that each department was required to identify savings through reductions in department budgets. She noted that businesses throughout the state were requiring more fiscal certainty to invest in the state, and the state economists were saying that more fiscal certainty was needed, but based on the 10-year forecast, the next two to three fiscal years would be the most challenging. She stated that the administration wanted the ARM Board to consider resetting the actuarial asset value to the market value to reduce the potential of pension funds becoming overfunded and to prevent contributions from being locked in the system.

COMMISSIONER MAHONEY stated that resetting to market value would have the effect of front-loading expected savings and reducing the potential for overfunding in the future. She noted that in 2014 the Legislature appropriated a $3 billion infusion of funds into the retirement systems and required the actuarial value be reset to fair market value and moved back into a five-year smoothing environment. She stated that they would be amortizing the state's contribution payments into the system until 2039. She also noted that the fund had earned an average return since inception of 9.38 percent.

COMMISSIONER MAHONEY stated that the adjustment would not diminish the benefits to the plans' participants; they would continue to receive their benefits. She said that she believed a reduced contribution to PERS and TRS would still fulfill the fiduciary duties and requirements.

CHAIR HIPPLER asked if anyone had any comments or questions.

MS. HARBO noted that the Metcalfe decision was a concern for her. She said that there were 77,000 potential DB beneficiaries who may come back into the system, and they would all be entitled to full healthcare benefits in the amount of approximately $15,000 per year. She said that until they know the outcome of the decision in the Metcalfe case, she was hesitant to make the change.

CHAIR HIPPLER asked MR. KERSHNER if he would address MS. HARBO'S concerns.

MR. KERSHNER stated that resetting to market value was not done regularly and that they would prefer that the actuarial value and market value stay close to each other, that the actuarial value and market value tended to be around a 3 or 4 percent differential until this year. The actuarial value and market value are off by approximately 11 percent which justified the discussion.

MR. KERSHNER said that that it would be no problem if the Board elected to reset the actuarial value to market value, however in addition to the Metcalfe decision, a market correction, or a downturn in the next year or so to correct from the return in 2021 - by resetting the actuarial value to market value, they would lose all of the existing investment gains and losses that were smoothed into the assets that were currently under the five-year smoothing method.

MR. KERSHNER also pointed out that they were starting on the 2021 experience study with the new assumptions expected to be adopted by the Board beginning with the 2022 valuation. The valuations that they were starting to work on were the 2021 valuations which were the last of the four-year cycle for the current assumptions. He said they expected with the changing capital market expectations and different asset allocations, the current 7.38 percent investment return assumption would likely decrease to 7 percent or below.

MR. KERSHNER stated that investment returns coming into plans have to equal the benefits and expenses paid out over time and when investment returns were insufficient, contribution rates go up, when investment returns are excessive, contributions go down.

MR. WOOD said that there would be a lot of pressure on the discount rate to come down from 7.38, inflation could go up and they were currently at a 2.5 percent assumption with no room for it to come down if inflation does go up. He noted that some of the benefits for the retirees were tied to inflation. He said that for clients who have higher than reasonable assumptions, they suggest an experience study which would be something to consider. He said that reducing a contribution does not really create savings because the long-term cost to the plan remains unchanged. He also suggested that although projections put together by Buck assumed a 7.38 percent return for the next five years, he questioned the likelihood of it especially if there was one year of poor investment performance, it would be artificially suppressed for four or five years due to asset smoothing. He then stated that the way the current funding policy was built, it was going to start to slow down the contributions as they get closer to being fully funded; it would automatically adjust for that.

MR. WOOD addressed the danger of being overfunded. He said that in their opinion it did not seem as though the pension plans were in any danger of being overfunded as the OPEB plans were. He said it was not due to over-contributing by the state, but a good actuarial experience and good asset returns that had been the two main drivers. He said the plan design and positive experience was unlikely to happen on the pension side, that the funding policy was built to slow down the contributions as it gets closer to being fully funded.

MR. WOOD explained that they look at the Actuarial Standards of Practice to help guide their decisions and Actuarial Standard of Practice No. 44 discussed the actuarial valuation method and bias. He said that section states that they do not want to have any systematic bias towards understatement or overstatement relative to the market value. He noted that it stated, "For example, resetting the actuarial value of assets to market value only when the market value exceeds the actuarial value of assets under the normal operation of the asset valuation may constitute significant systematic bias."

CHAIR HIPPLER asked at what deviation from actuarial value to market should they have a discussion about resets; MR. WOOD stated that it would not be a reset but more of a corridor of 120 percent to 80 percent to keep the relationship in line. He said he thought that brining it down somewhat would help.

MR. JOHNSON commended Commissioner Mahoney for her excellent piece of advocacy. He said that he was concerned that they may have a situation where they could potentially violate Actuarial Practice No. 44, that they would be acting inappropriately because they had a great experience for FY2021, which did not mean that they would achieve it again because what goes up does come down which is why they have five-year smoothing. He said that he was worried that they were taking the pension beneficiaries' money and potentially betting that things were going to come up in order to save money. He reminded the board that their fiduciary duty was to make investments that were sufficient to meet liabilities and pension obligations. He also stated that they should continue to take into account the issues and concerns of the state's primary source of funding on a contribution basis.

MR. JOHNSON said that he was looking to hear more from Buck and GRS as to the justification for utilizing the victory they had as a basis for a change to the market value basis and that he was very concerned with a major change occurring as a consequence of one successful year.

MR. WILLIAMS noted that he was surprised by the rush on it and that it felt like a quick reaction to something that he thought should not be rushed. He said he was concerned to have a strong return and then to suddenly pretend that it was the new normal, that there was a high hurdle to move off of the five-year smoothing processes and move away from what had been accomplished.

CHAIR HIPPLER acknowledged the rush in the time frame and that there would be a discussion of that later in the meeting. He then asked COMMISSIONER MAHONEY if there was a risk, and could they quantify that risk to the fund; He also repeated what MR. JOHNSON had pointed out that the fiduciary obligation was for the best interest of the fund and then asked if there was a risk to the fund if they became overfunded, or the fund being obligated to change its payment to the beneficiaries; COMMISSIONER MAHONEY said that was a legal question; MS. HARBO said that there was a provision that if they become 105 percent funded that there would be an ad hoc PRPA paid to the beneficiaries.

MR. HOFMEISTER said that what MS. HARBO had mentioned was an artifact from the Hoffbeck decision which applied to Tier I employees. He then asked CHAIR HIPPLER to repeat his question; CHAIR HIPPLER asked what was the impact to the fund if they become overfunded; Was the fund then obligated to increase payments to the beneficiaries beyond what was currently promised; MR. HOFMEISTER said no, but he did not think that the question had been completely vetted by the Supreme Court. That it had been touch on in a case from 1997 called Gallion which discussed any surplus in the pension fund that was being evaluated in that case and that the indication was that the participants did not have a right to have their benefits increased as a result of a surplus.

MS. HARBO said that there was a provision in SB 141 that addressed the funds reaching 105 percent funding; there would be an ad hoc PRPA given to the beneficiaries.

CHAIR HIPPLER stated that they have experts on the issue but that it seemed that the experts were not in alignment, which proved the need for further research. He said that the subject was important enough that if they have a follow-up meeting to further consider the action, that they would need to have more thorough vetting by a follow-up meeting.

MS. RYERSON commented that the market corridor could be made more narrow; that outsized returns over or under a certain amount would be recognized immediately. CHAIR HIPPLER asked her if she had seen other funds at roughly 10 percent deviation from actuarial and fair market value; MS. RYERSON said she had not, that it was usually 20 percent and it could be narrowed, and 11 percent was not huge, but they would also have to be willing to reset on the downside.

MR. WILLIAMS noted that if they were seriously considering it, that it would be important to have all IAC members at the meeting; COMMISSIONER MAHONEY commented that the sense of urgency related to the budget deadlines for 2023 and that if they do decide as a group to discuss it, they could schedule a special meeting possibly alongside the Audit Committee meeting on October 11th so they could identify the questions of some Trustees.

MR. KERSHNER said that they had discussed what may happen in FY2022 and FY2023, either recovery or continued excess returns. He said that it may be prudent to have an asset/liability modeling study, which forecasts potential outcomes. He said those forecasts and projection are more thorough and would provide the information needed as to where future returns may be.

MR. HANNA said he didn't know the pure answer on the interplay between the State's general fiduciary standard of sole financial best interest and the ARMB's creation statute which discusses acting in a manner sufficient to meet liabilities. He said he understands the asymmetric risk the State faces in potentially overfunding the systems. He said that the ARM Board taking an action to fund the systems so that they were likely to be overfunded may not be the right decision even though it may be in the best interest of the plans because it might be more than sufficient to meet the liabilities. He said that last year's strong performance may have just accelerated the discussion of this issue, which instead of would continue to grow as the systems move closer to being fully funded. However, he noted that overfunding is not the median expected outcome in the short-term.

DR. JENNINGS noted that it was a fair market value discussion and that market values were what finance theory would support. He said he was involved with a UK pension that was performing single-day snapshots and the head triennial valuations and the snapshot day was April of 2009 and by the time they had received the report, the market had significantly recovered. He said the policy could be adapted as they learn from the snapshot dates.

CHAIR HIPPLER said they had two possibilities; one to continue the discussion on October 11th after having completed research on the 105 percent issue, and the other option would be not to go down that road.

MR. JOHNSON stated that it was an important issue and that it would not hurt to have more information. He recommended that they have a special meeting on October 11th along with the Audit Committee. He said that if he there were a vote at that time, he would vote against it. He said he felt they need more information.

MR. JOHNSON moved to continue the discussion till October 11th or on a date to be set. MS. HARBO seconded the motion.

MS. JONES clarified that the motion would table the discussion of resolutions 2021-04 and 2021-07.

MR. BRETZ asked if they could get the answers to some of the question in time for the discussion at the main board meeting; COMMISSIONER MAHONEY said that she would try to work on the issue but would need to work with MR. WORLEY and the Department of Law. She noted that they would need to have a full discussion and not be rushed so they could be thorough with the discussion and research.

MR. JOHNSON said that he too felt that there needed to be a thorough discussion and that the decision the Board faced was controversial.

MS. HARBO stated that she believed that SB 141 required an actuary and another actuary to run checks on the first actuary.

ACTING COMMISSIONER HOLLAND said that one of the things they discussed was if there would be a follow-up meeting, there would need to be questions presented in this meeting to be answered at the follow-up meeting. She said before they move forward with the motion, she wanted to have the issues noted so there would be a more meaningful discussion in October.

CHAIR HIPPLER asked if the Board felt that they should have specific questions laid out in the motion; COMMISSIONER MAHONEY suggested that they could assign a point of contact that they could send their questions to, which would be MS. JONES. She would then circulate them to ensure everyone would be heard. She also suggested that some of the slides from Buck could be consolidated to make a clearer picture of the full impact to the state.

CHAIR HIPPLER agreed that it was important to give the staff more time to get the information put together.

MS. JONES asked that they set a deadline so she could ensure she had everything needed and was able to get it to the appropriate people in a timely manner.

CHAIR HIPPLER clarified that they were tabling Resolution 2021-04 and 2021-07 until October and asked for a roll call vote.

A roll call vote was taken, and the motion passed unanimously.

B. Discussion of 2023 PERS/TRS/JRS Additional State Contributions

MR. WORLEY noted that they would not be discussing the PERS and TRS Defined Benefit Plans as that discussion was placed on hold until the October 11th meeting.

MR. KERSHNER offered to give a walk-through that showed the basic steps to help explain the documents in the packet.

CHAIR HIPPLER stated that as time was limited an abbreviated review would be best.

MR. KERSHNER explained that the presentation started on page 9 of the packet and contained the development of the FY2023 additional state contribution for TRS; that there was a similar one for PERS starting on page 30. He said employers under TRS contribute 12.56 percent of total salaries, including DB and DCR participants. He said they used the information from the valuations to calculate the percentages of total salaries projected for FY2023. He explained that the outputs from the valuations are the two components of the actuarially determined contribution as shown on slide 4. He further explained that the second component was the layered amortizations of the unfunded liability which changes when the funded status of the plans change because the unfunded liabilities change. He said they then take those outputs from the valuation and project them to FY2023 then divide those amounts by the projected FY2023 payroll figures to get the rates which were then combined in step 6.

COMMISSIONER MAHONEY asked if MR. KERSHNER would explain why the Defined Benefit payrolls for 2023 were going down significantly for PERS and TRS; MR. KERSHNER said because the Defined Benefit plans were closed to new entrants after July of 2006, the payroll for current active members - their pay was expected to increase according to the assumptions and there were people exiting from the active population each year due to retirement and death. He also noted that the DCR payrolls increased due to new entrants coming in to replace the members who exited the DB Plan active population; COMMISSIONER MAHONEY then asked if they saw retirements that would be above and beyond the norm such as a result from the pandemic, that would cause that; MR. KERSHNER stated that they had just received the June 30, 2021 data but had not had a chance to thoroughly review it, but they did anticipate more retirements and more deaths than they had seen in the past.

MR. KERSHNER continued the slide presentation noting slide 6 which showed the six steps and slide 8 which referenced the 25-year layered amortizations. He then moved to slide 10 which showed outputs from the valuation on the DCR for occupational death and disability and the healthcare benefits and noted that the percentage of projected FY2023 pay was shown on slide 14. He then moved to slide 16 which showed the dollar amounts for the DB plans. He stated that the Defined Benefit Plan contribution as a percentage of FY2023 pay without the reset was 20.62 percent and the reset would take it to 15.65 percent. He noted that it all came to fruition on slide 18 which displayed step 6.

MR. HIPPLER then identified the difference with PERS by switching to slide 3 of the PERS presentation and noted that each employer contributed 22 percent of total pay under PERS, but SB 55 was passed and stated that the state, as an employer -- the state's employees would contribute the full actuarially determined contribution based on the total pay of their employees. He explained that the total dollar amount did not change, just the bucket it came out of. He said the DCR Plan had to separate the peace/fire participants from the other participants due to different occupational death and disability rates for them.

C. FY2023 Contribution Discussion and Review

1. History of PERS/TRS Employer Contribution Rates

Action: The Actuarial Committee recommends that the Alaska Retirement Management Board set Fiscal Year 2023 PERS Defined Contribution Retirement Plan Retiree Major Medical Insurance and Occupational Death & Disability Benefit rates as set out in the following resolutions:

Resolution 2021-05: Public Employees' Defined Contribution Retirement Plan Retiree Major Medical Insurance Rate
MS. HARBO so moved. COMMISSIONER MAHONEY seconded the motion.

A roll call vote was taken, and the action item passed unanimously.

Resolution 2021-06: Public Employees' Defined Contribution Retirement Plan Occupational Death & Disability Benefit Rates
MS. HARBO so moved. MR. WILLIAMS seconded the motion.

A roll call vote was taken, and the action item passed unanimously.

Action: The Actuarial Committee recommends that the Alaska Retirement Management Board set Fiscal Year 2023 TRS Defined Contribution Retirement Plan Retiree Major Medical Insurance and Occupational Death & Disability Benefit rates as set out in the following resolutions:

Resolution 2021-08: Teachers' Defined Contribution Retirement Plan Retiree Major Medical Insurance Rate
MS. HARBO so moved. MR. WILLIAMS seconded the motion.

A roll call vote was taken, and the action item passed unanimously.

Action: Resolution 2021-09: Teachers' Defined Contribution Retirement Plan Occupational Death & Disability Benefit Rate
MS. HARBO so moved. MR. WILLIAMS seconded the motion.

A roll call vote was taken, and the action item passed unanimously.

Action: The Actuarial Committee recommends that the Alaska Retirement Management Board set the Fiscal Year 2023 NGNMRS annual contribution amount consistent with its fiduciary duty, as set out in the attached form of Resolution 2021-10:
MS. HARBO so moved. MR. BRETZ seconded the motion.

MR. WORLEY noted that the resolution did not propose a dollar amount and that they were in a similar discussion last year and after discussing the issue with Mr. Goering, he indicated that the Board did have a fiduciary responsibility to adopt an amount that was actuarially determined for the National Guard Plan without consideration of past service cost. He reminded the Board that they had passed a resolution for a dollar amount to be contributed to the National Guard Plan, but as it was overfunded, the Legislature did not appropriate funds to it; COMMISSIONER MAHONEY asked what the percentage of the plan was overfunded; MR. WORLEY said it was on page 117 and it was at 191 percent on an actuarial value.

COMMISSIONER MAHONEY asked CHAIR HIPPLER if it should be an item for discussion at the meeting on the 11th and why were they continuing to suggest funding when it was out of a bracket for funding.

CHAIR HIPPLER noted that there had been a motion that was seconded and suggested to either withdraw the motion, vote on the motion, or discuss it further.

COMMISSIONER MAHONEY suggested they discuss it further so they could determine if they wanted to continue to seek contributions to a fund that was already 191 percent funded.

MR. BRETZ suggested that instead of voting it down, it would fit into the discussion that was scheduled for the meeting on the 11th.

COMMISSIONER MAHONEY suggested they could vote not to fund it.

MR. BRETZ suggested that they could vote it down and still discuss it as part of the discussion later.

MR. HANNA noted that his recollection of Mr. Goering's recommendation was to continue to set rates at the normal cost since that it was required in the statute.

COMMISSIONER MAHONEY stated that if it was a normal cost and the statute stated the normal costs needed to be funded, but the Legislature did not fund it.

MR. BRETZ stated that it was funded.

COMMISSIONER MAHONEY stated that the Legislature did not appropriate the funds for it; MR. WORLEY stated that was correct, he further stated that it was the fiduciary responsibility of the Board to fund the normal cost. He said what had been sent to OMB was a request for normal cost plus administrative expenses. The OMB said "Because the plan is so overfunded, we're not going to include it in the budget process this year."

MR. HANNA pointed out the distinction in the statute was the difference of what was required by the Board and what was required to be OMB funded.

CHAIR HIPPLER asked MR. WORLEY if he was suggesting that the Board was required by statute to fund, what they considered to be normal costs and they were required to have the resolution; MR.

WORLEY confirmed that was so, based on the Department of Law.

MR. WILLIAMS asked what the risks were if the Board voted no; MR. HOFMEISTER stated that he could not answer that without doing additional research. He stated that he could not think of any risk to not contributing to an overfunded plan.

MR. BRETZ then asked what the statute was; MR. JOHNSON stated it was AS 37.103220(a)8(A).

MR. HOFFMEISTER added that the statute stated "an appropriate contribution rate." He noted that if something was funded 191 percent, the appropriate contribution rate would not be the maximum. He said that if there was a minimal amount that kept the program going, that was fine and if they could continue to maintain without further contributions, that would work as well as it would meet the obligation of the statute.

A roll call vote was taken, and the action failed unanimously.

2. JRS Contribution

CHAIR HIPPLER stated that the JRS Contribution was slated for a 70 percent contribution rate and there was not resolution for it, that it was a topic for discussion.

MR. WORLEY stated that it was information for the Board and the committee to see. He explained that it was the rate for the Judicial Retirement System for FY2023, the normal cost if paid through payroll. He noted the past service amount was funded as a separate line-item much like the additional PERS and TRS contribution.

VII. Discussion on FY2021 Valuation Timeline

MR. KERSHNER noted that the timeline was on page 123 of the packet. He said since the timeline was prepared on August 31st, Steps 6 through 9 had been completed and they were on target to meet the deadlines shown in Item 21. They would be meeting in December to present the preliminary valuation results from the 2021 valuation and to discuss the economic assumptions for the 2021 experience study. He said Item 29 would be discussed in the meeting in March 2022 where they would review the valuation results in more detail and would show the latest projections of contributions. They would also discuss the demographic assumptions for the experience study. He said that Item 31 was a follow-up meeting, if needed, scheduled for April as a follow-up to the March meeting. Item 33 would be the June meeting where the Board would adopt the valuation reports and have a follow-up discussion on the assumptions if needed. The Board would then decide to adopt the new assumptions from the experience study at the June 2022 meeting.

VIII. Online Actuarial Dashboards

MR. KERSHNER shared his screen to take the committee through Buck's dashboards. He said they offered updated dashboards for the 2020 valuation results. He then proceeded to explain the steps of logging in and changing the password if needed. He then displayed the two State of Alaska dashboards and explained the various pages he landed upon.

COMMISSIONER MAHONEY asked if the projection for 2040 in the historical metrics page was showing that by year 2040 the plan would be 121 percent funded; MR. KERSHNER stated that was for TRS and 112 percent funded for PERS. He said the reason was the funding policy which was amortizing the unfunded liability over 25 years -- those would ultimately reach 100 percent per statutes, once they reach 100 percent they have to continue to contribute the normal cost, so the surplus continues to grow. He noted that it was on a combined pension and healthcare basis, the pension trust was not expected to exceed on a combined basis, pension, and healthcare in the future; COMMISSIONER MAHONEY stated that her point was that they were on a trajectory for overfunding; MR. KERSHNER noted that they were on a trajectory to fully fund the plans, and at that point, the statues could be amended to not require the normal cost be contributed as a minimum. He said the DCR plans were still being contributed to because the statutes require the normal cost be contributed regardless of the funded status of the plan; COMMISSIONER MAHONEY stated that she understood that but was uncomfortable with it because it could trigger excess benefits, then a PRPA.

MR. JOHNSON asked if the actual amounts were being expended were lower as the beneficiaries become actuarially insignificant; MR. KERSHNER explained that the amounts of the contributions do not necessarily decrease; under the method to fund the unfunded liability, that was on a level percentage of pay basis. He noted that as payroll is expected to increase in the future, the dollar amounts were expected to increase because those amounts were projected to be the same percentage of payroll; COMMISSIONER MAHONEY asked if the payroll was going down for the DB components; MR. KERSHNER affirmed they were but the funding per the statutes was on a total payroll basis, including DCR.

MR. WILLIAMS asked if it was easy to break it out between health trust and the pension; MR. KERSHNER affirmed that it was; MR. WILLIAMS requested directions on what to do when he logged in so he could review that. MR. KERSHNER said he would have to create a separate graph to show the pension and healthcare separately.

IX. Actuarial Education Modules

MR. KERSHNER said that they had provided access to the modules after the June meeting and that he did not have anything to discuss unless there were questions from the committee members or others in the meeting.

X. Update Independent Audit of State's Actuary per AS 37.10.220(a)(10)

MR. DETWEILER reminded the Board that the audit was different than the normal work they complete as review actuary. He said they selected a number of members and received from Buck detailed test lives. They reviewed the different benefit details for those lives to make sure they agreed as to how Buck valued the liabilities for the different components. He said as part of their normal review, they picked members with different demographic and special types of data elements to ensure they covered as much of the population they could. He said the full replication audit allowed them to review the liabilities for all members and compare that with what Buck had provided. He said they would provide the initial results and findings at the December Actuarial Committee meeting; COMMISSIONER MAHONEY asked if there were any areas of assumption where it was a known difference between Buck; MR. DETWEILER said they had not found any at that time. He said that in the past there had been a few that they had not agreed 100 percent with Buck, and that Buck had updated all assumptions, and the committee and the Board had adopted all those assumptions.

XI. Periodic Self-Assessment

CHAIR HIPPLER gave a background stating that according to the charter the committee was directed to conduct an annual self-assessment twice a year and that he and CHAIR JOHNSON had looked into it and had tried to come up with something to meet the criteria that would be helpful and not overly burdensome, and the proposed solution could be found on page 146.

MR. JOHNSON commented that it effectively created on opportunity for further conversations within the committee about their performance and an objective way of getting it done, hopefully expeditiously.

CHAIR HIPPLER suggested they conduct the self-assessment for the committee and determine if they would want it done differently than as suggested. He also noted that many of the members were also on other committees and were required to conduct self-assessments for those as well and that it would be a good opportunity to determine how to apply the self-assessment to the other committees.

CHAIR HIPPLER read the first question: "Are discussions at the committee level meaningful and, if not, what can be done about it?" No response was given. Question No 2: "What key issues are being missed?" CHAIR HIPPLER said that the answer was yes as evidenced by the fact that they had tabled the discussion of resetting to market value to October 11th to give time for more careful consideration. Question No. 3 was not read. Question No. 4: "Is the committee rationally reducing time spent by the Board on Actuarial discussion?" CHAIR HIPPLER noted that they did not want to have an Actuarial Committee meeting and then duplicate all the work at the Board. He then asked if they were saving the Board time, were they doing it effectively, and how could they do it better; MR. JOHNSON said that with CHAIR HIPPLER's leadership, he thought they were doing a great job.

CHAIR HIPPLER noted the lack of comments and to let him know if there was any way the committee could improve.

XII. Review Committee Charter – None.

XIII. Future Meetings

A. Calendar Review

CHAIR HIPPLER stated that there would be a follow-up meeting in October.

B. Agenda Items

MS. HARBO said that she thought it would be a good idea to have the new counsel go through the provisions of Senate Bill 141, which created the DC system and set up the ARM Board as a refresher for all members; CHAIR HIPPLER asked if she was suggesting they ask their counsel to review SB 141 and report to the Board on the material facts; MS. HARBO said only if the other members would like that, but as there were several issues that had come up that were covered under SB 141, such as requiring two actuaries and the 105 percent funding as well as other requirements, she thought that it might be good to do so.

MR. BRETZ suggested that it be part of the suggested reading list instead of using meeting time; CHAIR HIPPLER asked if he was suggesting that counsel could advise the Board what portions of SB 141 would be appropriate to read; MR. BRETZ said that the Trustees could listen to the audio recordings as there was good discussions and a refresher is always a good idea.

CHAIR HIPPLER noted that the Board had voted down the normal cost contributions for the National Guard because they were at 191 percent, but that it was a statutory requirement. He also noted that the TRS healthcare plan was at 140 percent. He said they need to review the "Normal cost" and determine if the statute needed to be amended; MR. BRETZ asked if they were reading the statute correctly; CHAIR HIPPLER that it might be appropriate to recommend a statutory change.

MR. JOHNSON suggested that MR. HOFMEISTER could give a legal report on that point. MR. BRETZ said that the interpretation of a paragraph might be taken two different ways. He said the notion that they required funds that they did not need every year because the law said as much that it could not be what the statute says; CHAIR HIPPLER stated that is what they were currently doing. He said the healthcare plan was 143 percent funded and they were collecting 2.8 percent which he believed was the normal cost for the healthcare fund; MR. BRETZ again suggested a statute review; CHAIR HIPPLER agreed.

C. Requests/Follow-ups

CHAIR HIPPLER asked if there were other agenda items or follow-ups for the future meetings.

COMMISSIONER MAHONEY suggested in regard to the statute associate with normal cost, the Trustees could write a paper, assuming they all support it, they would sign it and provide it to the Legislature indicating the need and desire to change the normal cost for healthcare.

CHAIR HIPPLER said that would be something they could look into for the meeting on the 11th, assuming the staff had the time. He noted that he would coordinate with MS. JONES and review the list of questions the Trustees submitted within the timeframe dictated by CHAIR JOHNSON.

COMMISSIONER MAHONEY said that would work and they would not have to have a document completed that day, just a conceptual discussion and have it completed in time for the start of the Legislative session in January.

MR WILLIAMS suggested they consider if there was anything needed for the new members to bring them up to speed. He also stated that they had received the login information from Buck and that they should make sure that everyone had been able to log in to it. He also thought there could be notes on certain items that explained what was being viewed and how the numbers lined up.

MR. BRETZ asked if the October meeting was going to be a similar setup for attendance; CHAIR HIPPLER said that he would have to get back with him about that.

MR. JOHNSON said that would be a meeting of the ARM Board itself and MS. JONES would look into the logistics of how that would be done.

XIV. PUBLIC/MEMBER COMMENTS – None.

XV. ADJOURNMENT

MS. HARBO moved to adjourn the meeting. MR. BRETZ seconded the motion. The motion passed without objection.

The meeting was adjourned at 3:26 p.m.

ATTEST:

____

Corporate Secretary

Note: An outside contractor recorded the meeting and prepared the summary minutes. For in-depth discussion and more presentation details, please refer to the recording of the meeting and presentation materials on file at the ARMB office.

ACTUARIAL COMMITTEE TIMELINE of AGENDA ITEMS DEADLINES

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
QUARTERLY AGENDA ITEMS			• Review Contribution Rate Resolutions • Recommendation to Board - Contribution Rates **(A)**			• Status Report - Draft Valuation & 2nd Actuary Review Process			• Draft Review Actuary Report • Draft Valuation Reports* • Audit Findings List			• Final Review & Valuation Reports • Recommendation for Acceptance of Review & Valuation Reports **(A)** • Recommendation for action on Audit Findings List **(A)**
	The following agenda items occur periodically, see Contract & Review for more details:											
			• Experience Analysis Results			• Experience Analysis - Economic Assumptions • Actuary Audit Report			• Experience Analysis - Demographic Assumptions			• Adopt Experience Analysis Assumptions

CONTRACT & REVIEW DEADLINES (JUL – JUN)

Items listed in this section occur perioidically, not annually.

The timeframes noted reflect when those items occur during applicable years.

ACTUARY CONTRACT (DRB) (MAR – JUN)
Timeframe: 3 yrs w/ 1 optional 3-yr renewal and 2 2-yr renewals for a total of 10 yrs
Upcoming: Optional 3yr Renewal March 2023 for FY24
Future: Optional 2 yr Renewal March 2026 for FY27
Optional 2 yr Renewal March 2028 for FY29
RFP March 2030 for FY31

REVIEW ACTUARY CONTRACT (TRSY) (MAR – JUN)
Timeframe: 3 yrs w/ 2 optional 1 yr renewals
Upcoming: RFP in March 2022 for FY23
Future: Optional 1 yr Renewal March 2023 for FY24
Optional 1 yr Renewal March 2024 for FY25
RFP March 2025 for FY26

ACTUARIAL EXPERIENCE ANALYSIS (JUL – JUN)
AS 37.10.220(a)(9)
Timeframe: 4 years
Upcoming: FY22
Future: FY26

ACTUARIAL AUDIT CONTRACT (TRSY) (MAR – JUN)
AS 37.10.220(a)(10)
Timeframe: 4 yrs
Upcoming: FY22
Future: FY26

KEY
(A) = Action Item

*Additional meetings to review DRAFT Valuation Reports may be scheduled before and/or after the March meeting, as needed.

State of Alaska Retirement Systems

Presentation to ARMB Actuarial Committee

Preliminary June 30, 2021 Valuation Results – PERS and TRS

December 1, 2021

Contents

Purpose of the Valuations

Purpose of the 2021 Valuations

- Measure each plan’s funded status as of June 30, 2021
- Compare *actual* FY21 experience (assets and liabilities) to *expected* experience based on the assumptions used in the 2020 valuations
- Provide the basis for setting FY24 contribution rates

2021 Valuation Highlights

Highlights of 2021 Valuation Results

- Asset performance
  - FY21 asset returns **exceeded** the 7.38% expected return
    - Market returns were approximately 30%
    - Due to 5-year asset smoothing, actuarial returns were approximately 12%
- Liability experience
  - Liabilities are **less** than expected. Overall liability gains/(losses) and the more significant gain/(loss) amounts are:

Source	PERS		TRS	
	Pension	Healthcare	Pension	Healthcare
PRPA/COLA increases	$155M		$82M	
Salary increases	$(17)M		$(29)M	
Per capita claims cost		$272M		$97M
Plan changes		$62M		$22M
Overall gains/(losses)	$162M	$384M	$47M	$135M
- as % of 6/30/21 liability	1.0%	5.6%	0.6%	5.5%

The result:

- Funded ratios are up
- Contribution rates are down

Note: The PERS liabilities reflect an adjustment for retroactive payments that were included in the data for a group of new retirees. The final valuation liabilities will reflect an adjustment for retroactive payments that were included in the data for all new retirees.

Highlights of 2021 Valuation Results (cont'd)

- Key reasons for the $272M (PERS) and $97M (TRS) per capita claims cost gains:
  - Medical costs are lower than projected (4% lower for Pre-Medicare / 5% lower for Medicare)
  - EGWP subsidy provided by Optum increased by 16% from $1,003 for 2021 to $1,168 for 2022

	Medical			Prescription Drugs (Rx)		
	Pre-Medicare	**Medicare Parts A & B**	**Medicare Part B Only**	**Pre-Medicare**	**Medicare**	**EGWP**
Fiscal 2022 valuation age 65 per capita cost						
- Expected	16,358	1,705	5,628	3,647	3,591	(1,078)
- Actual	15,708	1,619	5,341	3,695	3,560	(1,168)
- Dollar (Gain) / Loss	(650)	(86)	(287)	48	(31)	(90)
- Percentage (Gain) / Loss	-4.0%	-5.0%	-5.1%	1.3%	-0.9%	8.3%

Note: The actual per capita costs in this table are before reflecting the impact of plan changes shown on the next slide.

Highlights of 2021 Valuation Results (cont'd)

- Two healthcare plan changes will be effective January 1, 2022:
  - Preventive benefits are being added for pre-Medicare members
  - Prior authorization of certain specialty medications is being implemented

- The estimated impact of these changes was provided by Segal

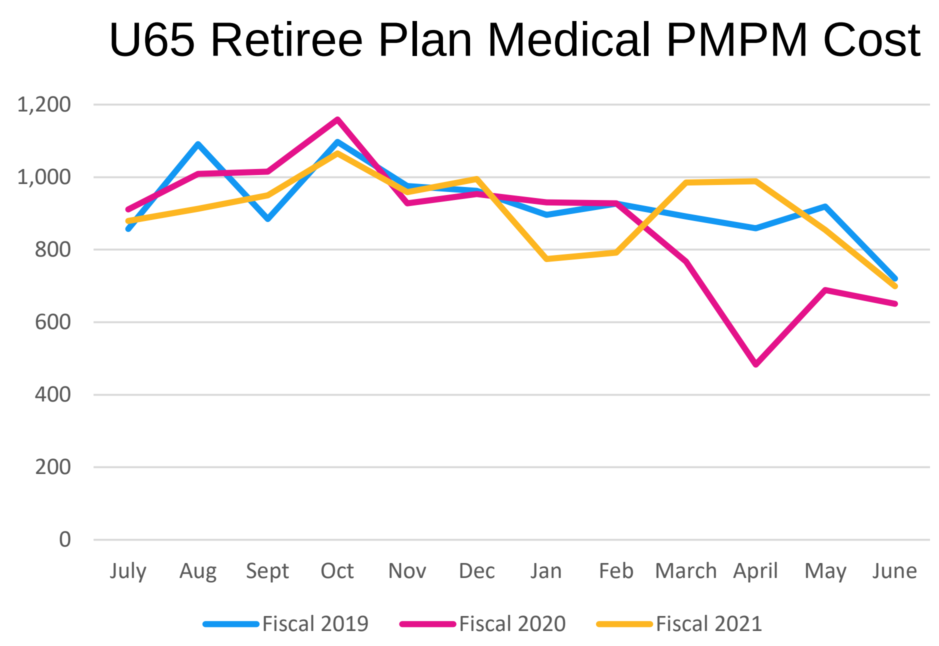
- Adjustments to the 6/30/21 valuation per capita costs to reflect these plan changes are as follows:

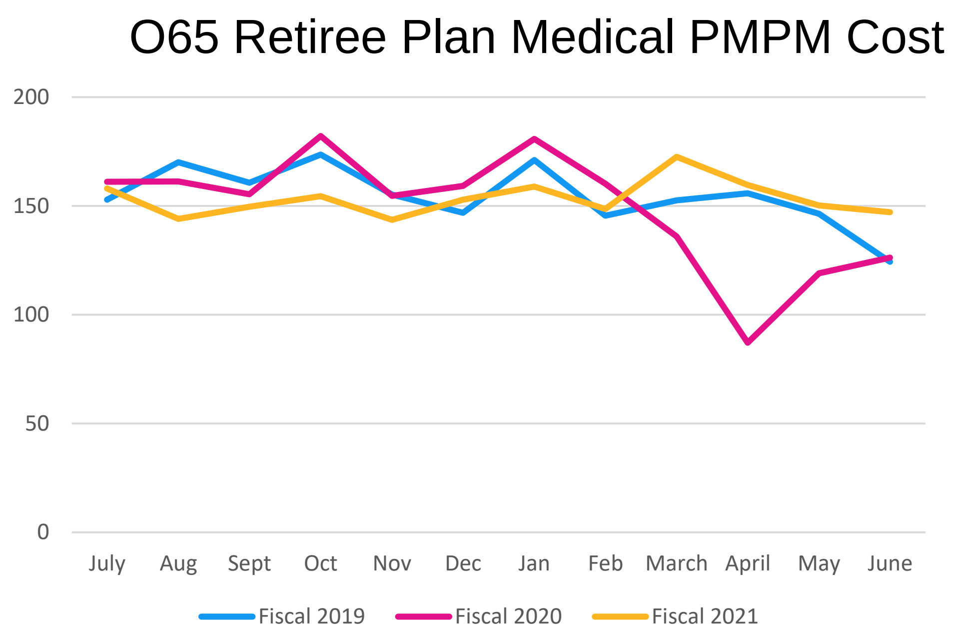
	Medical			Prescription Drugs (Rx)		
	Pre-Medicare	Medicare Parts A & B	Medicare Part B Only	Pre-Medicare	Medicare	EGWP
Fiscal 2022 valuation age 65 per capita cost						
- Prior to plan changes	15,708	1,619	5,341	3,695	3,560	(1,168)
- Impact of plan changes	1.4%	0.0%	0.0%	-8.7%	-2.4%	-3.2%
- After plan changes	15,926	1,619	5,341	3,375	3,474	(1,131)

Note: Figures in this table may differ due to rounding.

COVID-19 Impact – Medical Incurred Claims

Per Member Per Month (PMPM)

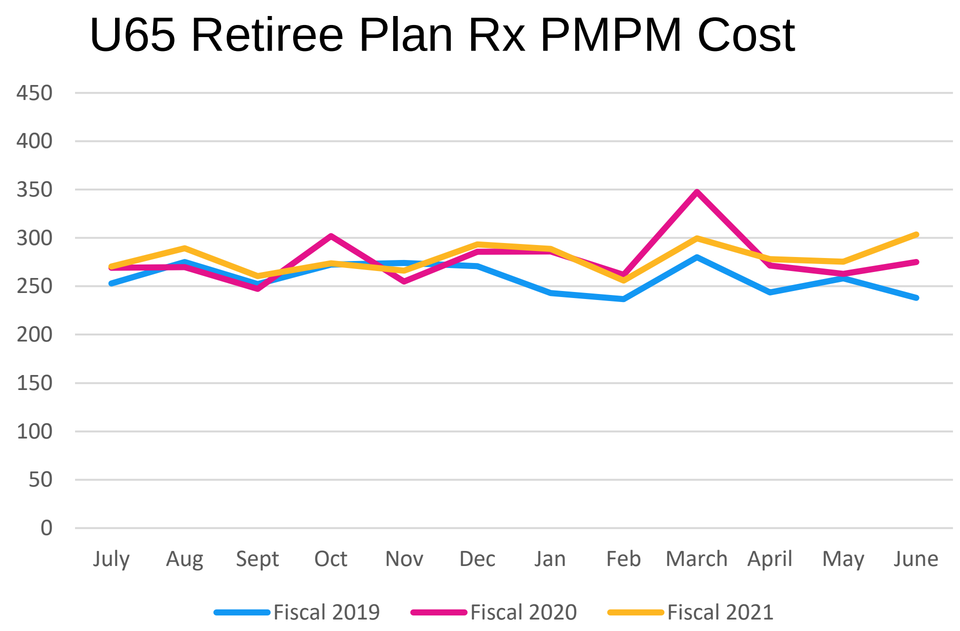


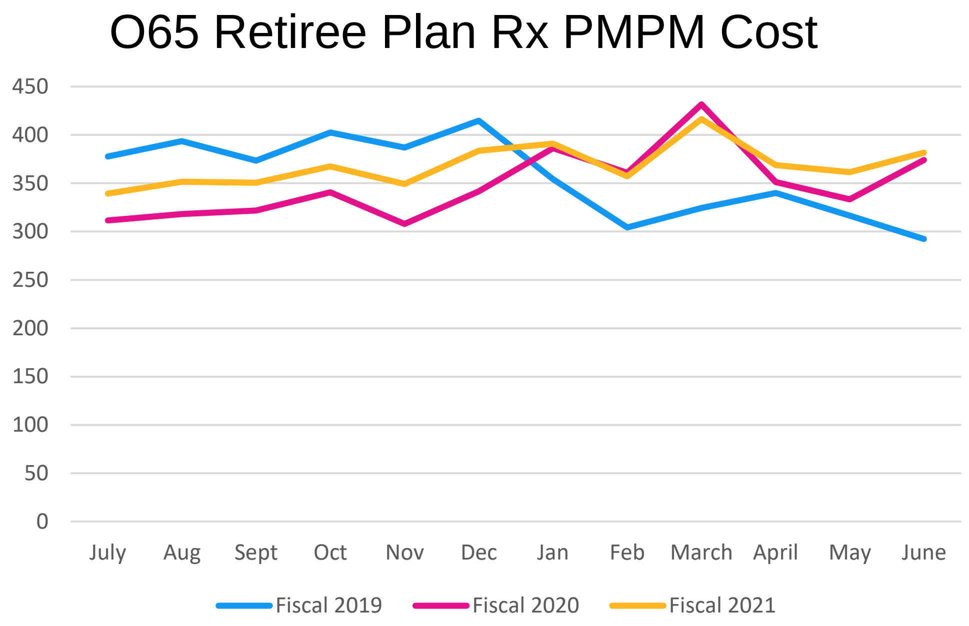


- Material decrease in PMPM cost during March – June of 2020 due to COVID-19
- Fiscal 2021 PMPM medical cost was lower than pre-COVID levels, so a 4% load was added to the Fiscal 2021 medical claims used in the per capita claims cost development to better reflect expected long-term costs

COVID-19 Impact – Rx Incurred Claims

Per Member Per Month (PMPM)





- Observed a spike in prescription drug claims in March 2020
- Fiscal 2021 PMPM Rx cost not impacted by COVID like medical

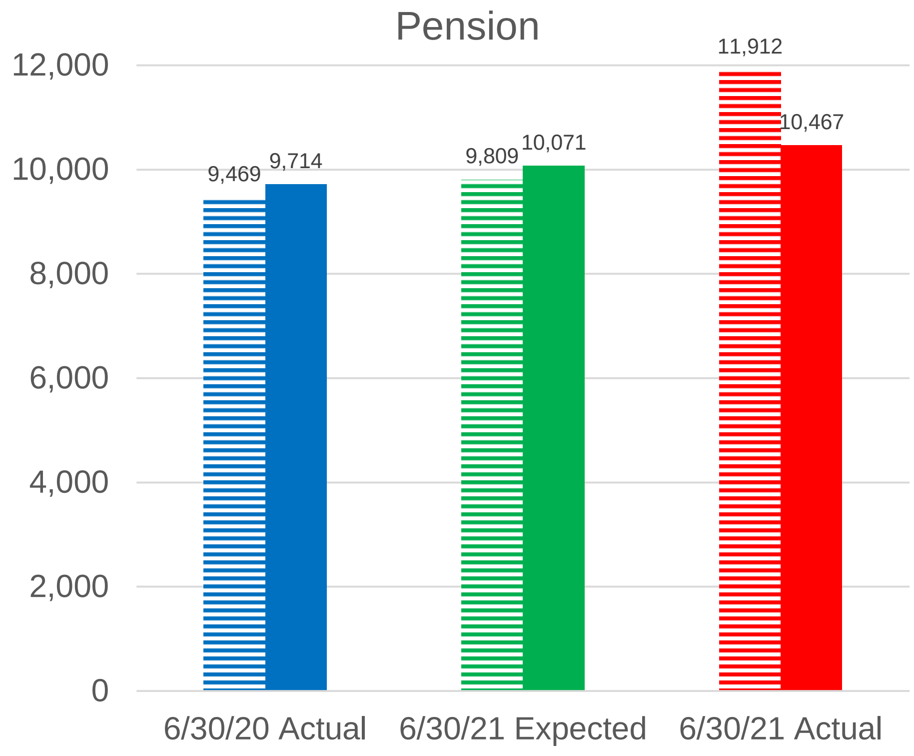
Preliminary 2021 Valuation Results - PERS

Explanation of Terms

- “6/30/20 Actual”
  - The results from the 6/30/20 valuation
- “6/30/21 Expected”
  - The 6/30/21 valuation results if FY21 experience matched all of the assumptions that were used in the 6/30/20 valuation (e.g., assets earned 7.38%, salaries increased as expected, members retired according to what the retirement assumption predicted, etc.)
- “6/30/21 Actual”
  - The 6/30/21 valuation results reflecting actual FY21 asset performance, and actual changes in the participant data from 6/30/20 to 6/30/21
- Gains and losses are the differences between “6/30/21 Expected” and “6/30/21 Actual”
  - If the difference is *favorable* to the plan, we have a *gain*
  - If the difference is *unfavorable* to the plan, we have a *loss*

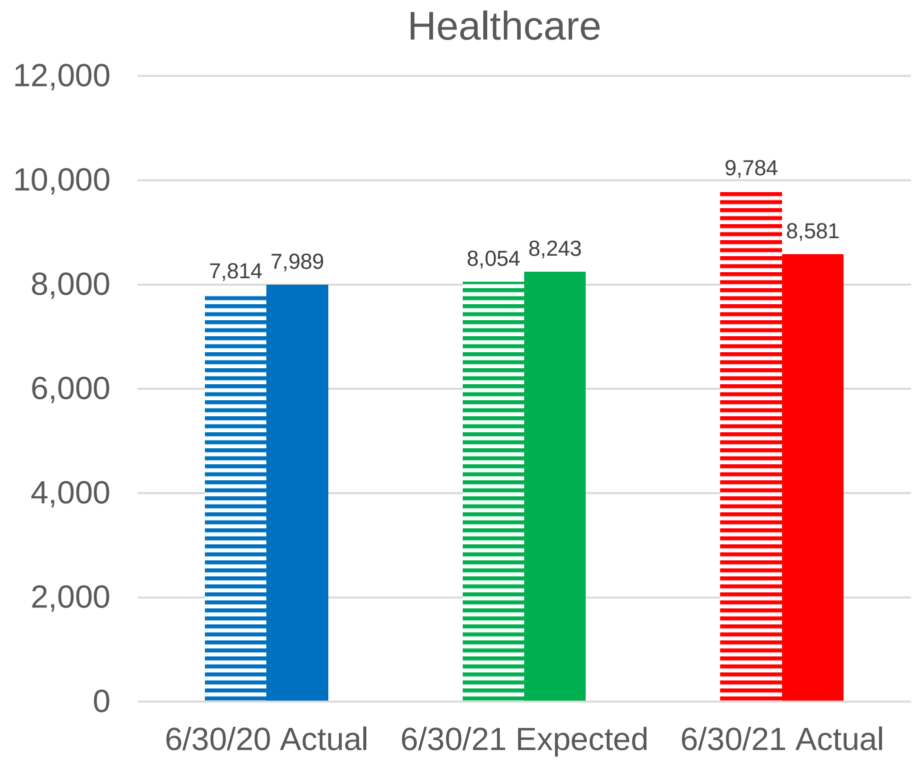
PERS: Assets
($millions)

Market Value (MVA): Striped Bars
Actuarial Value (AVA): Solid Bars



Approximate FY21 return: 30% (MVA); 12% (AVA)

FY21 asset **gain**: $2,103M (MVA); $396M (AVA)

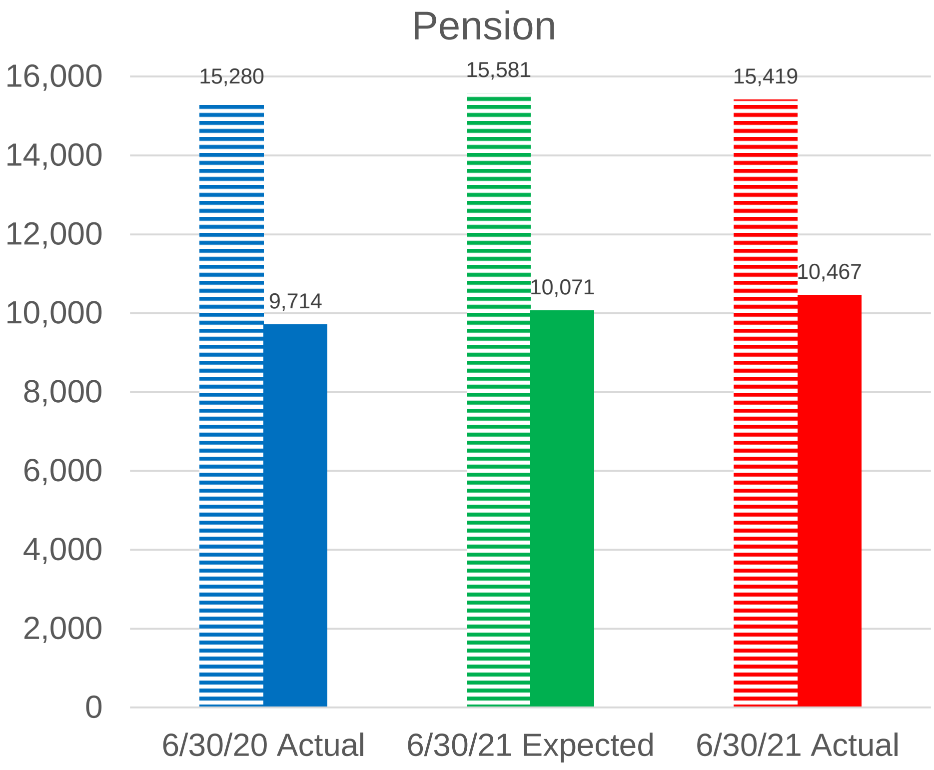


Approximate FY21 return: 30% (MVA); 12% (AVA)

FY21 asset **gain**: $1,730M (MVA); $338M (AVA)

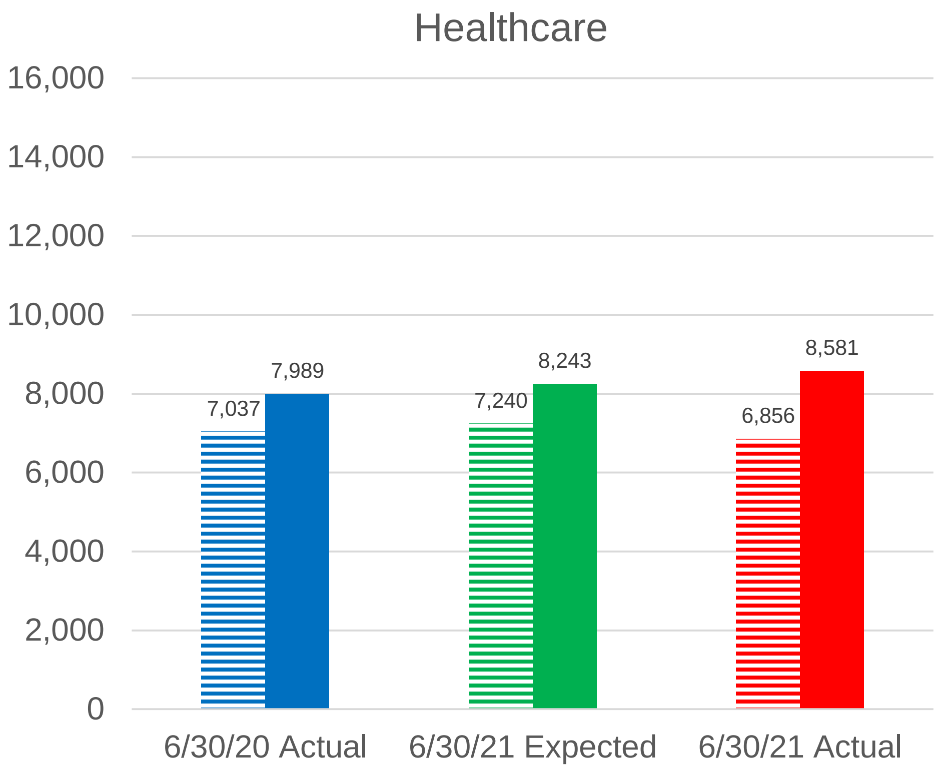
PERS: Assets vs. Liabilities
($millions)

Actuarial Accrued Liability (AAL): Striped Bars
Actuarial Value of Assets (AVA): Solid Bars



FY21 AAL **gain**: $162M

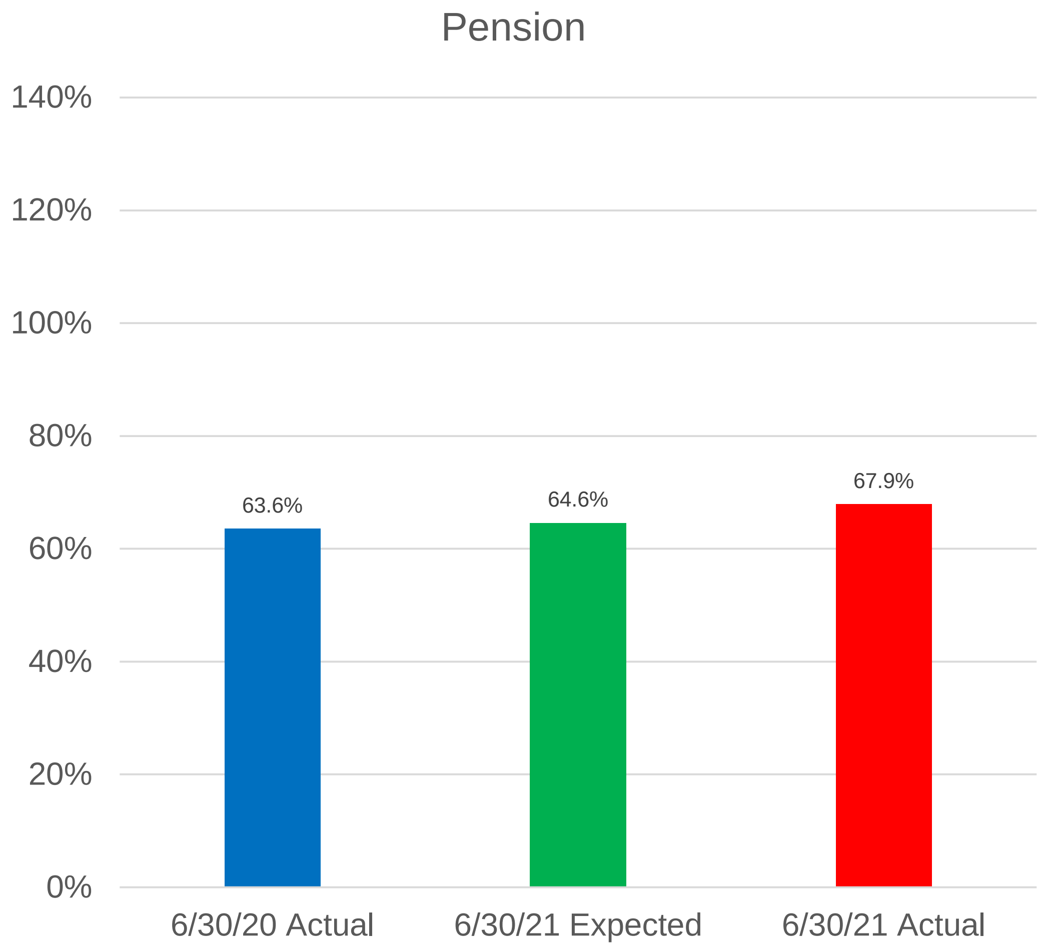
FY21 AVA **gain**: $396M

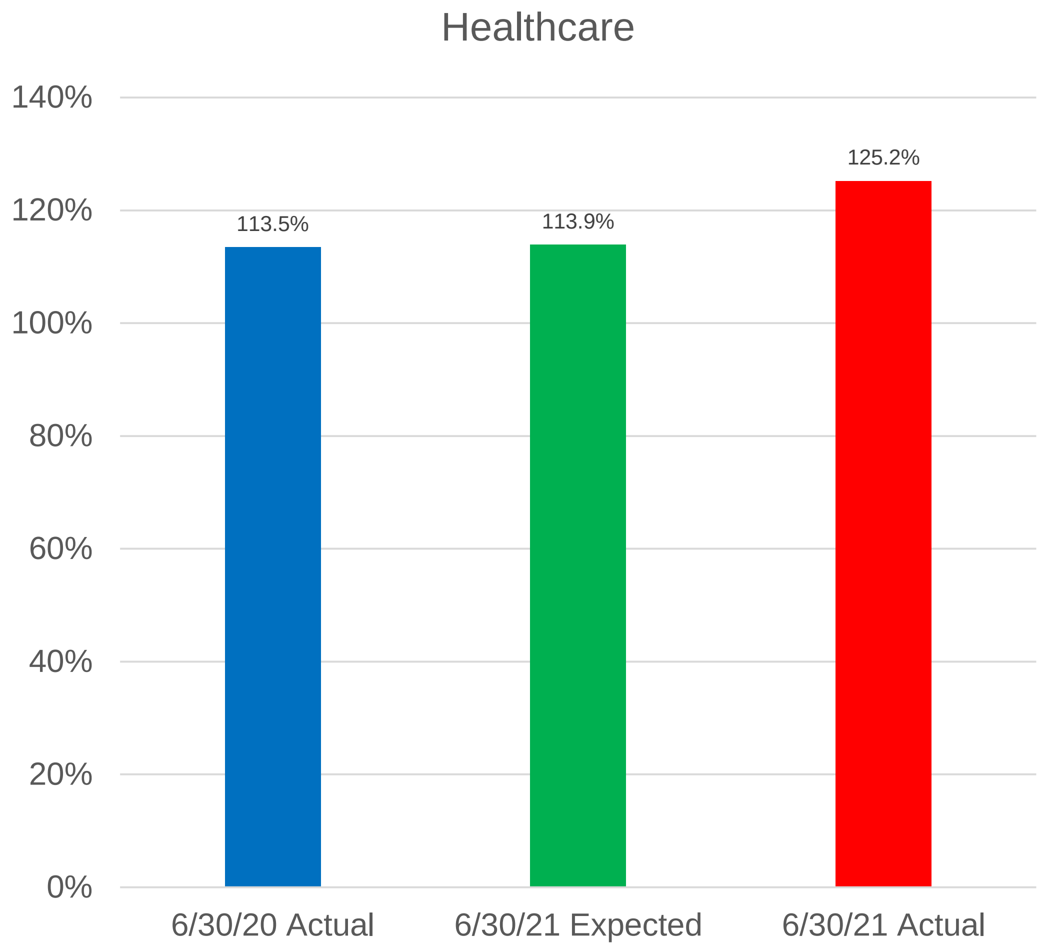


FY21 AAL **gain**: $384M

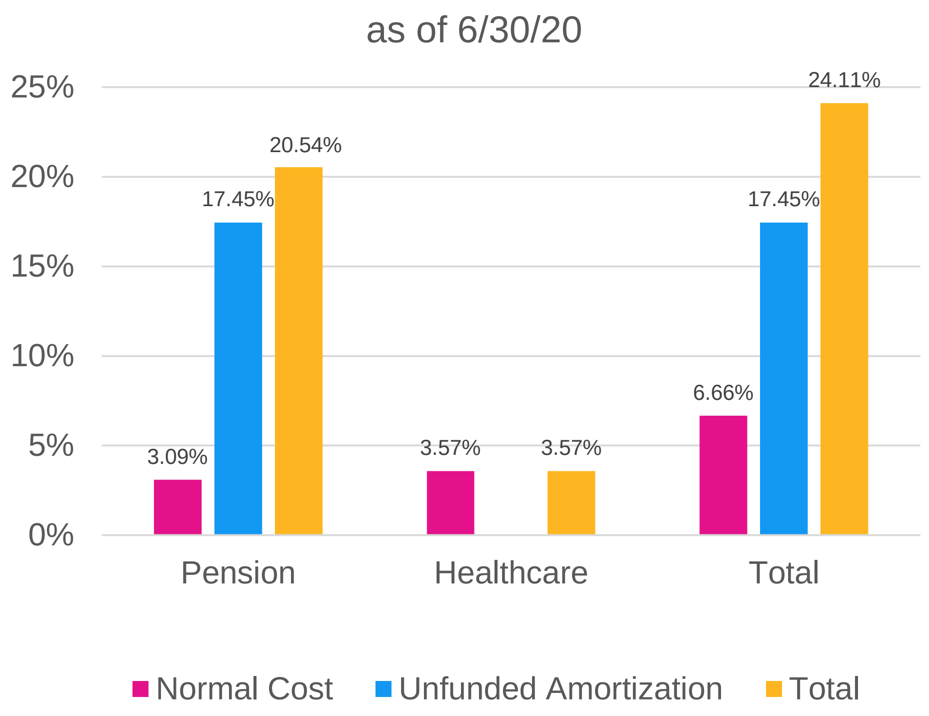
FY21 AVA **gain**: $338M

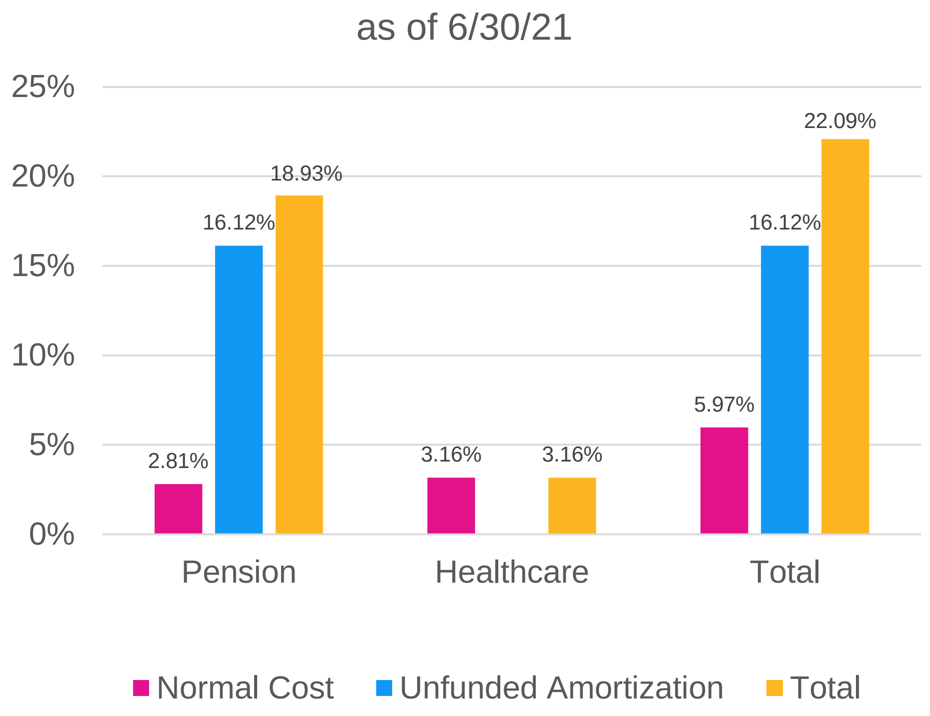
PERS: Funded Status (AVA vs. AAL)





PERS: Employer/State Contribution Rates
(% of DB/DCR payroll)

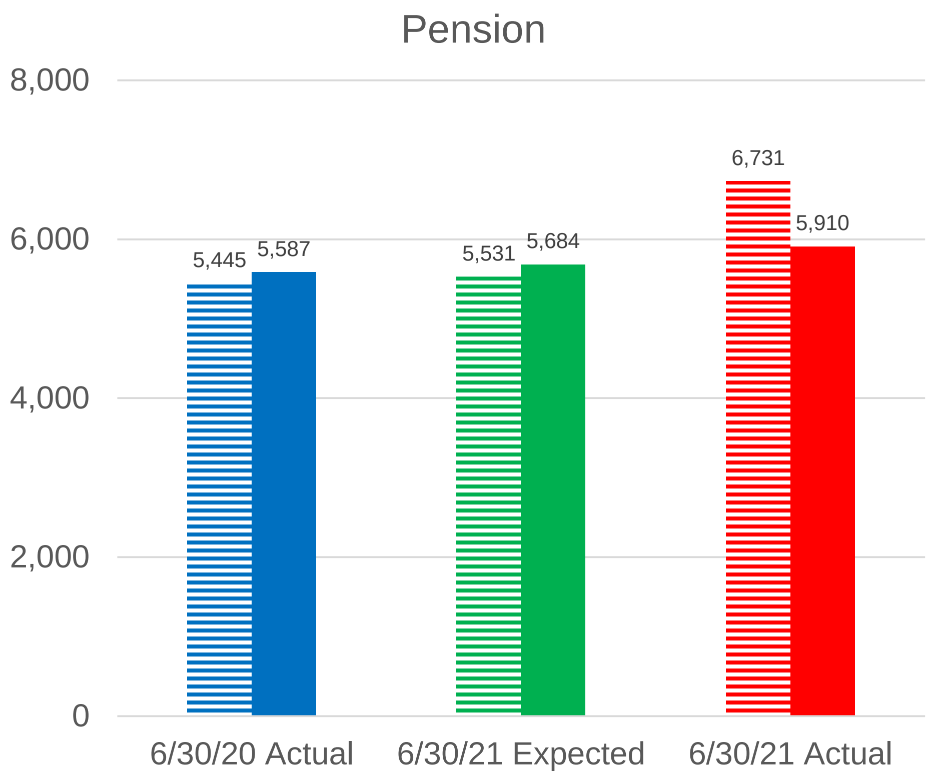




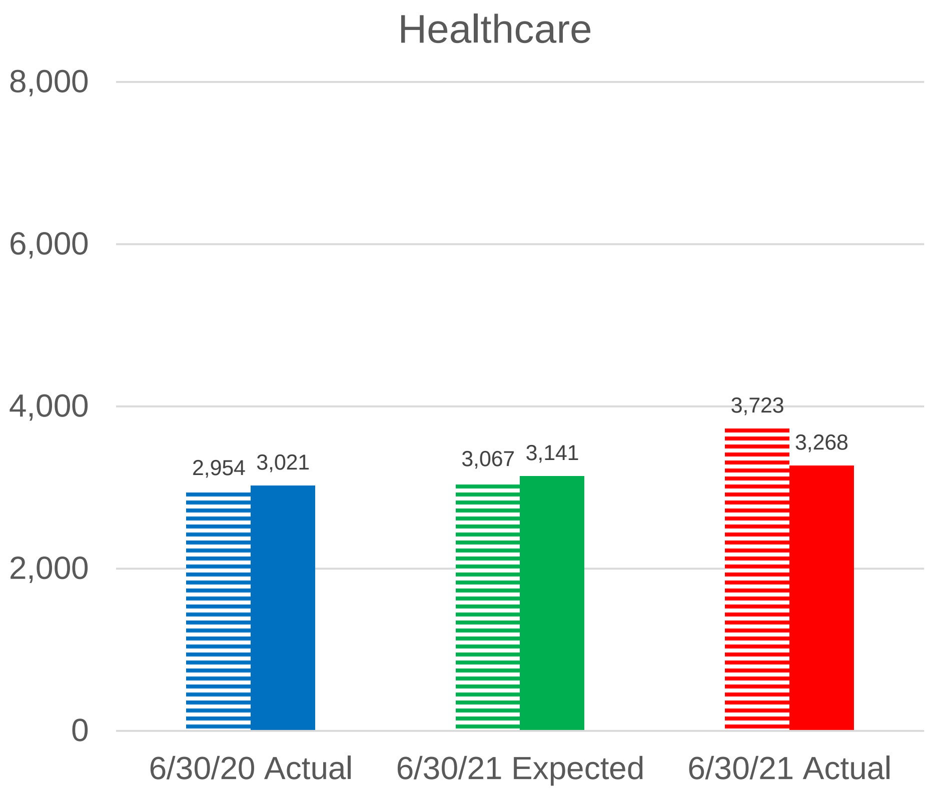
Preliminary 2021 Valuation Results - TRS

TRS: Assets
($millions)

Market Value (MVA): Striped Bars
Actuarial Value (AVA): Solid Bars



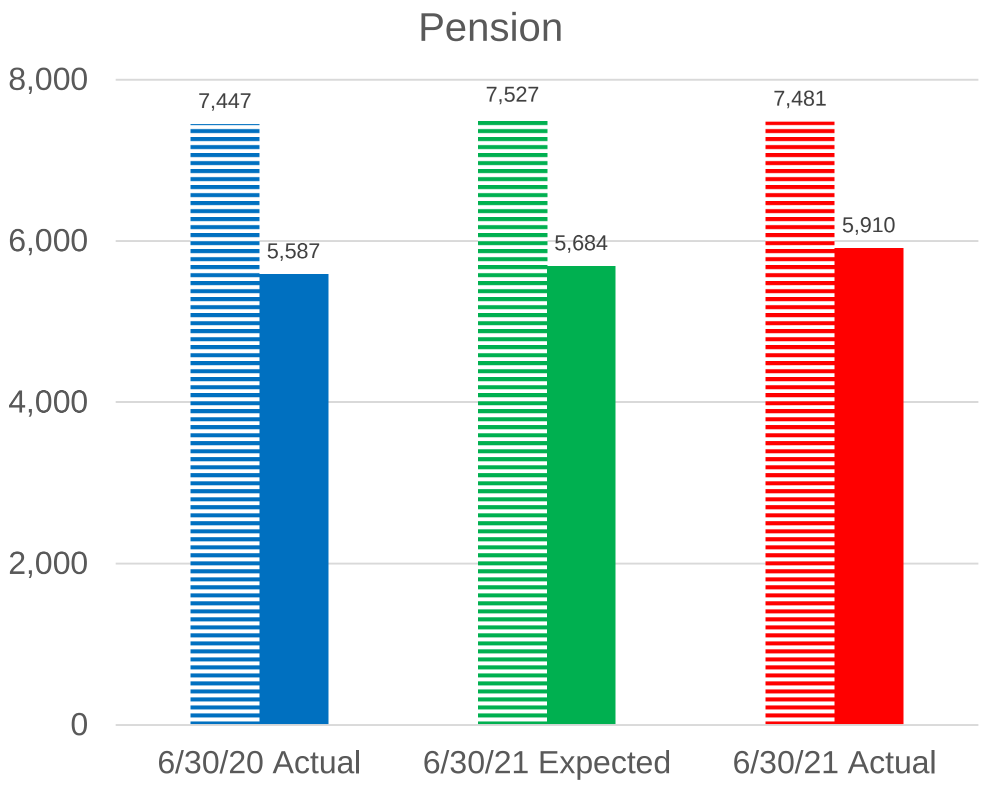
Approximate FY21 return: 30% (MVA); 12% (AVA)
FY21 asset **gain**: $1,200M (MVA); $226M (AVA)



Approximate FY21 return: 30% (MVA); 12% (AVA)
FY21 asset **gain**: $656M (MVA); $127M (AVA)

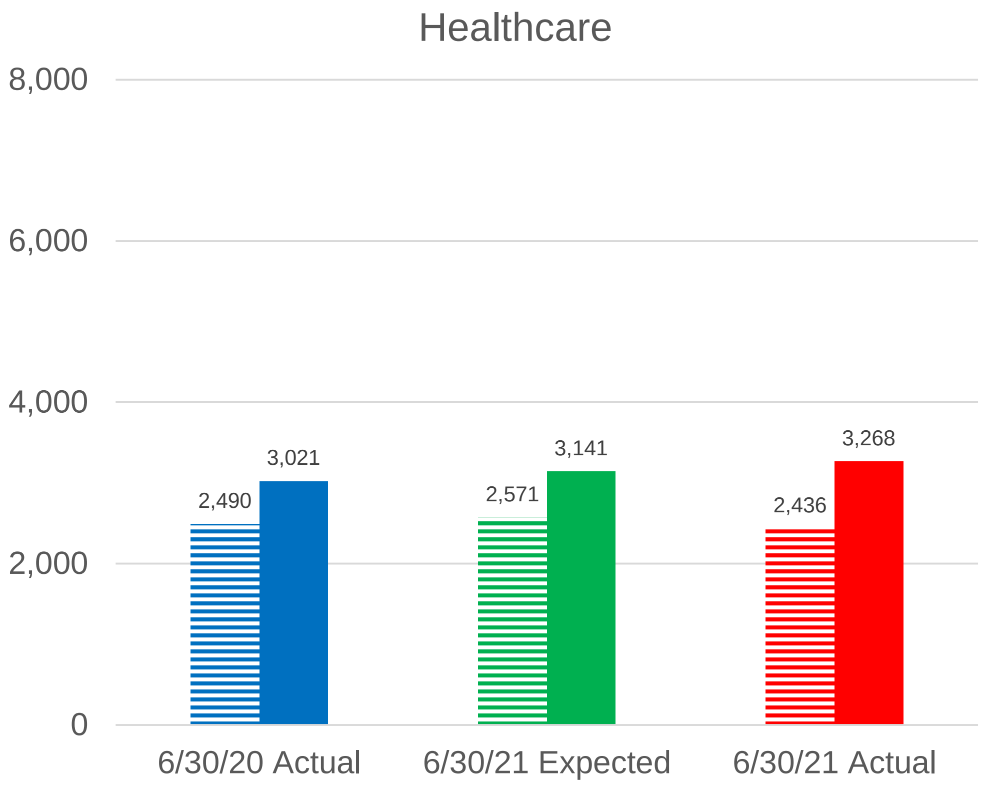
TRS: Assets vs. Liabilities
($millions)

Actuarial Accrued Liability (AAL): Striped Bars
Actuarial Value of Assets (AVA): Solid Bars



FY21 AAL **gain**: $47M

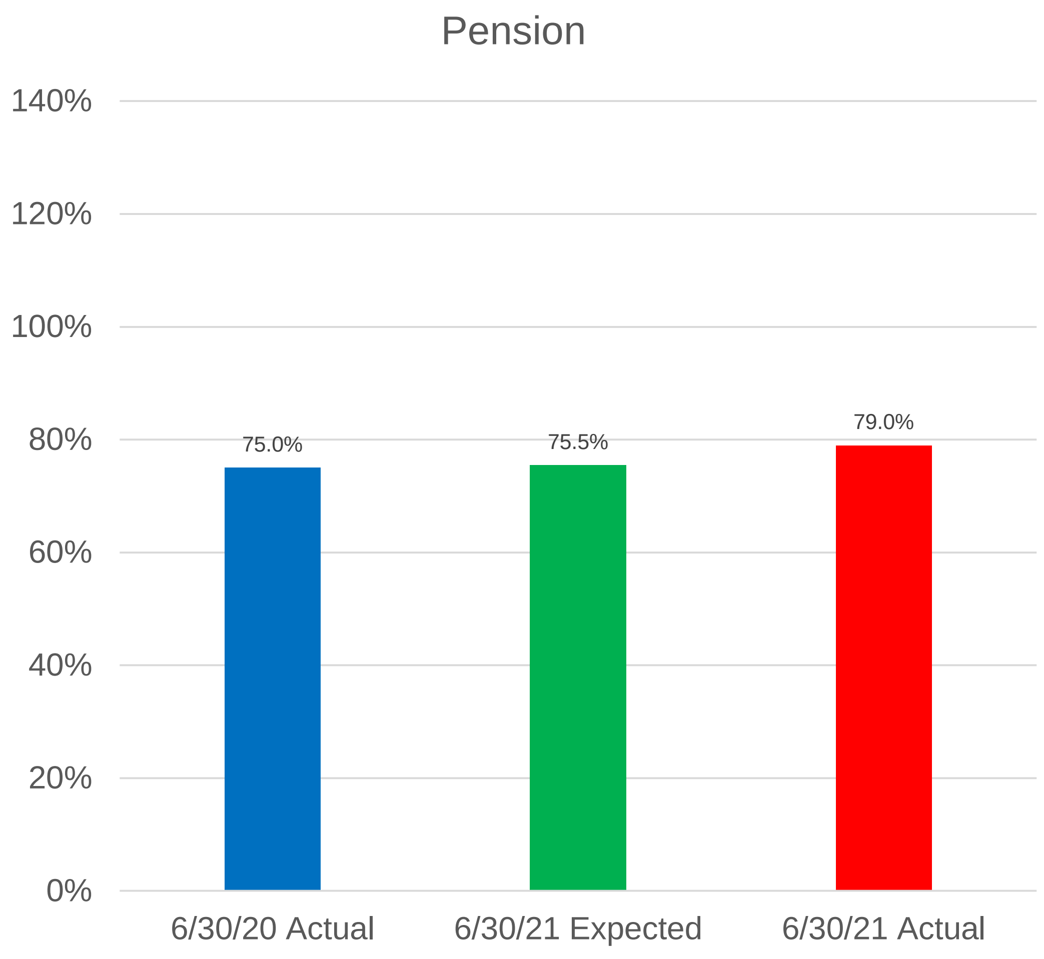
FY21 AVA **gain**: $226M

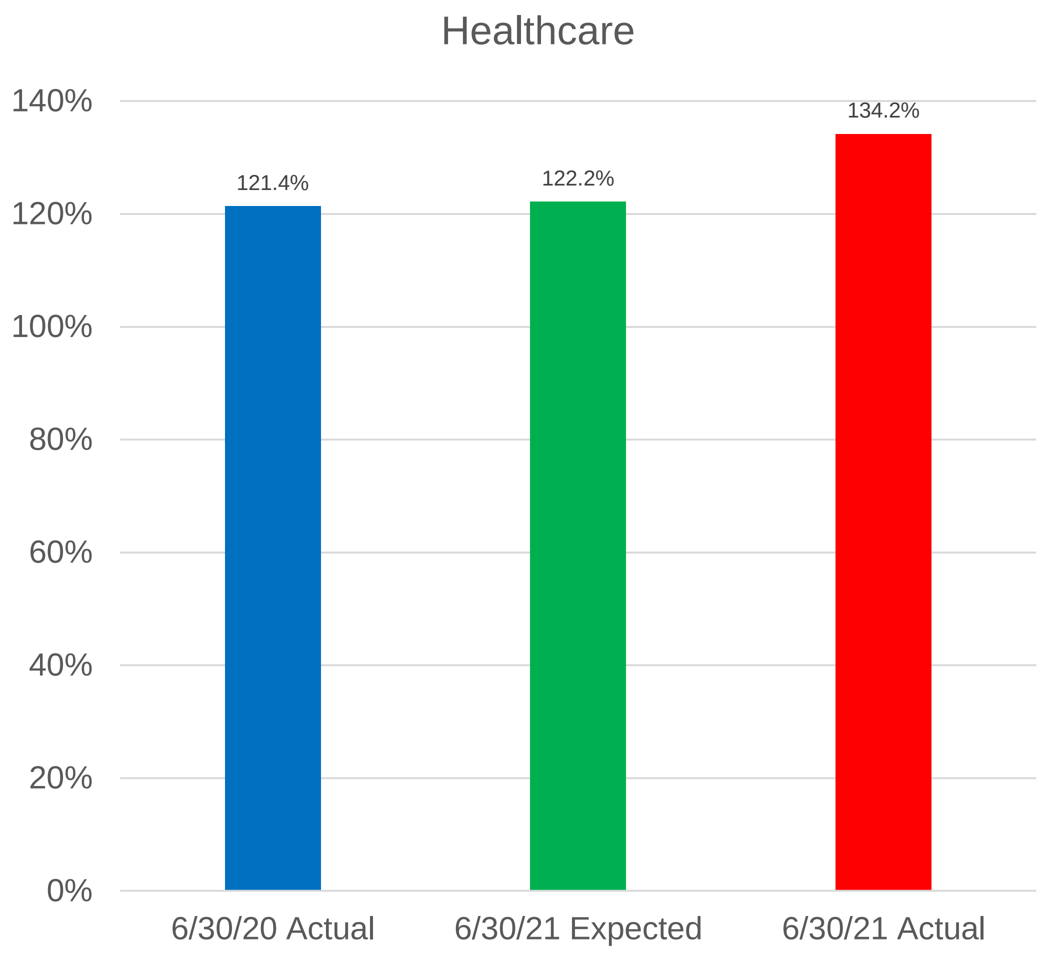


FY21 AAL **gain**: $135M

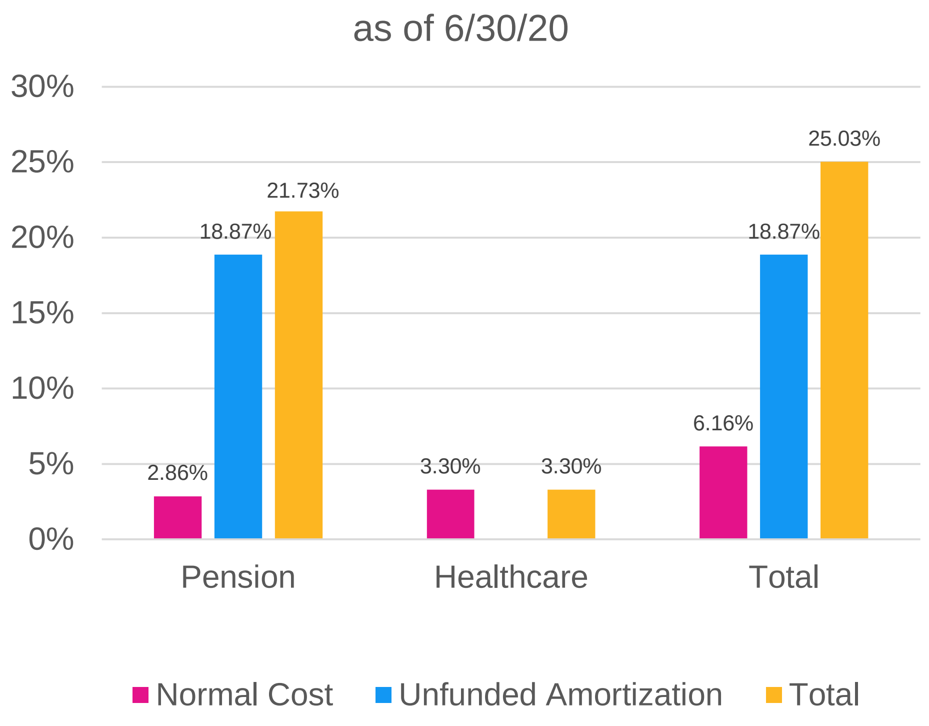
FY21 AVA **gain**: $127M

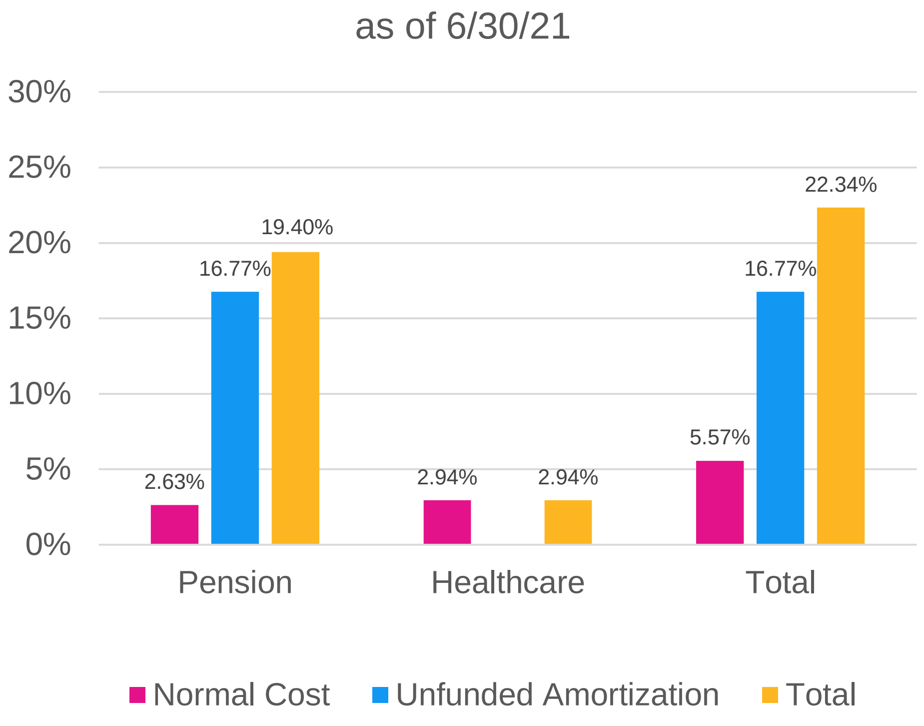
TRS: Funded Status (AVA vs. AAL)





TRS: Employer/State Contribution Rates
(% of DB/DCR payroll)





Next Steps

Next Steps

- Complete the DCR valuations and the JRS/NGNMRS roll-forward valuations
- Run projections of assets, liabilities and contributions
- Prepare draft valuation reports
- Discuss these items at the March meeting

Actuarial Certification

Actuarial Certification

The purpose of this presentation is to provide the ARMB Actuarial Committee with preliminary June 30, 2021 valuation results for discussion at the December 1, 2021 meeting. More complete valuation results will be presented at the March 16, 2022 meeting. This presentation should be considered part of the June 30, 2021 actuarial valuation report services.

The data, assumptions, methods, and plan provisions used to determine the results shown in this presentation are as shown in the June 30, 2021 actuarial valuation reports (draft reports will be provided within the next couple of months). The June 30, 2021 actuarial valuation reports will include details related to potential risks associated with the plans, and information regarding our use of models.

Where presented, references to “funded ratio” and “unfunded actuarial accrued liability” typically are measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded ratios and unfunded actuarial accrued liabilities. Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the plan if the plan were to settle (i.e., purchase annuities) all or a portion of its liabilities.

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

The results were prepared under the direction of David Kershner and Scott Young, both of whom meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. These results have been prepared in accordance with all applicable Actuarial Standards of Practice.

David Kershner
FSA, EA, MAAA, FCA
Principal, Retirement

Scott Young
FSA, EA, MAAA
Director, Health

BUCK

State of Alaska Retirement Systems

Presentation to ARMB Actuarial Committee

2021 Experience Study – Economic Assumptions

December 1, 2021

Contents

Background

Background

- Under AS 37.10.220(a)(9), the ARMB requests the plan actuary to conduct an experience analysis of the retirement systems at least once every four years (except healthcare costs and trend rates are analyzed annually)

- The last experience study covered the experience for the 4-year period July 1, 2013 to June 30, 2017
  - New assumptions adopted by the ARMB were effective beginning with the June 30, 2018 valuations

- The current experience study covers the experience for the 4-year period July 1, 2017 to June 30, 2021
  - New assumptions adopted by the ARMB will be effective beginning with the June 30, 2022 valuations

- The experience study covers economic and demographic assumptions
  - Today's presentation includes an analysis of the *economic* assumptions
  - The analysis of the *demographic* assumptions will be presented at the March 2022 meeting

- Setting assumptions is a blend of art and science

Background (cont'd)

- Each assumption used in the valuation should represent the actuary's **best estimate of reasonable long-term expectations**
  - An assumption is considered reasonable if it is not anticipated to accumulate in significant cumulative gains or losses over time
  - The economic assumptions should be internally consistent with each other
  - Each assumption should be evaluated considering its materiality on the valuation results
  - Typically, a range of reasonableness applies for each assumption
  - Past experience should be considered, but not given undue influence if future expectations differ

- To assess whether an investment return assumption is "reasonable", we tend to consider a range between the 65th and 35th percentiles. For example:
  - If 65th percentile is 7%: 65% of the randomly-generated scenarios produced an expected return of 7% or lower
  - If 35th percentile is 6%: 35% of the randomly-generated scenarios produced an expected return of 6% or lower

- The cost effects are shown in this presentation as if the proposed new economic assumptions were used in the June 30, 2020 valuations (with no changes to the current demographic assumptions)

Background (cont'd)

- Actuarial Standard of Practice No. 51 (ASOP 51) requires the actuary to identify risks that, in his/her professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition

- The more significant risk factors affecting future funded ratios and contribution rates of the plans are:
  - Investment Risk – future investment returns will be different than the assumed rate
  - Contribution Risk – the actuarially determined contribution is not deposited to the trust each year
  - Long-Term Return on Investment Risk – changes in capital market assumptions or the asset allocation will create the need to update the long-term investment return assumption
  - Longevity Risk – mortality rates of participants and beneficiaries will be different than assumed
  - Salary Increase Risk – future salary increases will be different than assumed
  - Inflation Risk – changes in the CPI will be different than assumed
  - Other Demographic Risk – retirement and withdrawal patterns will be different than assumed

- An experience study is performed every 4 years to assess whether the assumptions being used in the annual actuarial valuations should be changed to better match future experience, thereby managing these risk factors

Historical Data

Historical Data - Inflation

	Mean Inflation Rate (CPI-W)	
	National	Urban Alaska/Anchorage
10-Year Period Ending 2000	2.81%	2.47%
10-Year Period Ending 2010	2.37%	2.51%
10-Year Period Ending 2020	1.62%	1.53%
20-Year Period Ending 2020	1.99%	2.02%

Historical Data – Market Returns

BUCK

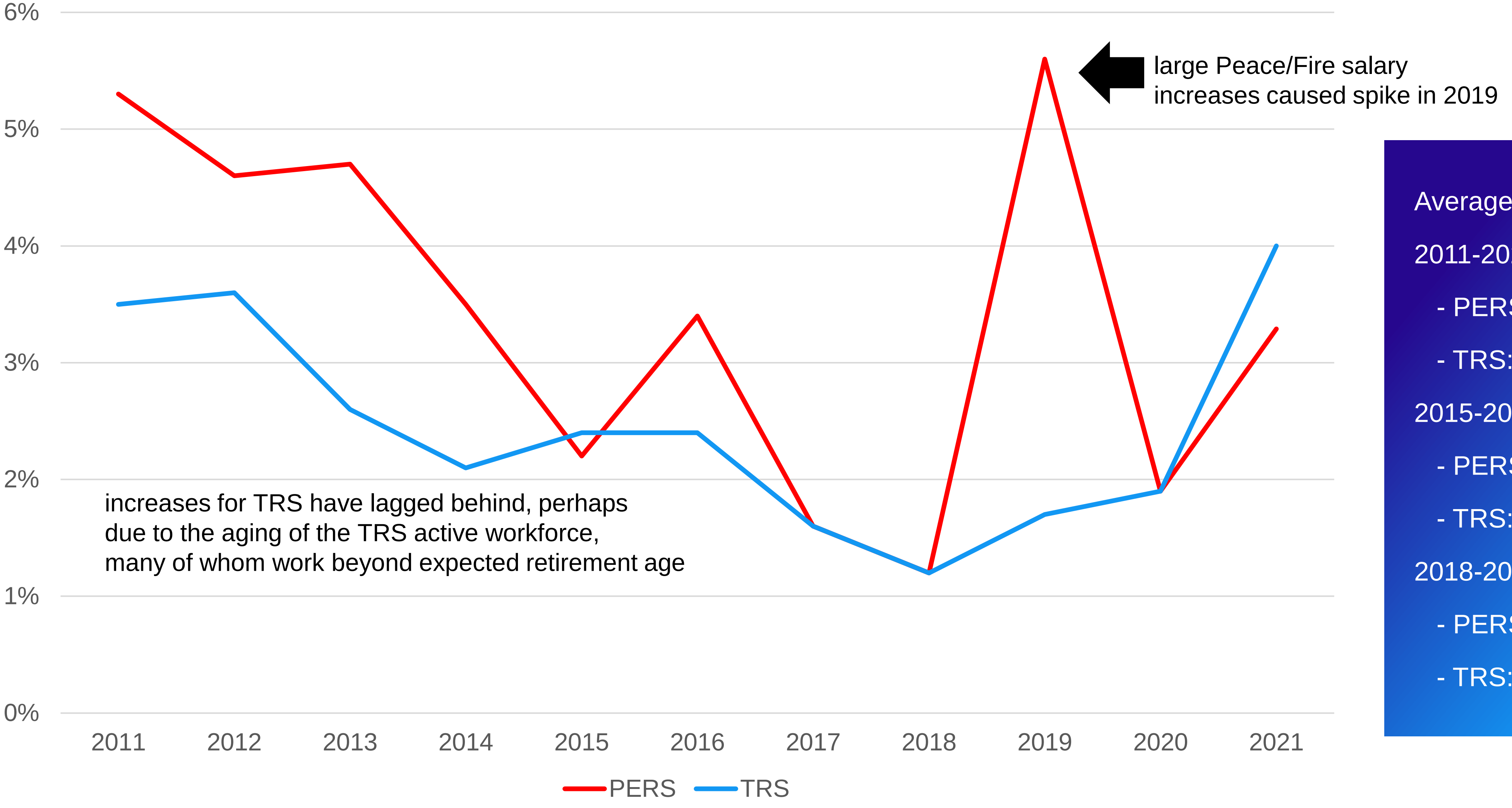
Historical Data – Average Market Returns*

	PERS	TRS	JRS	NGNMRS
Last 5 years	12.2%	12.2%	12.2%	9.4%
Last 10 years	9.4%	9.4%	9.4%	6.9%
Last 15 years	8.0%	8.0%	7.9%	6.4%
Last 20 years	7.6%	7.6%	7.6%	5.9%
Last 25 years	7.9%	7.9%	7.8%	6.4%

Average returns during the last 5 years are higher primarily because of exceptionally high returns in FY21.

* net of investment expenses

Historical Data – Increases in Average Pay



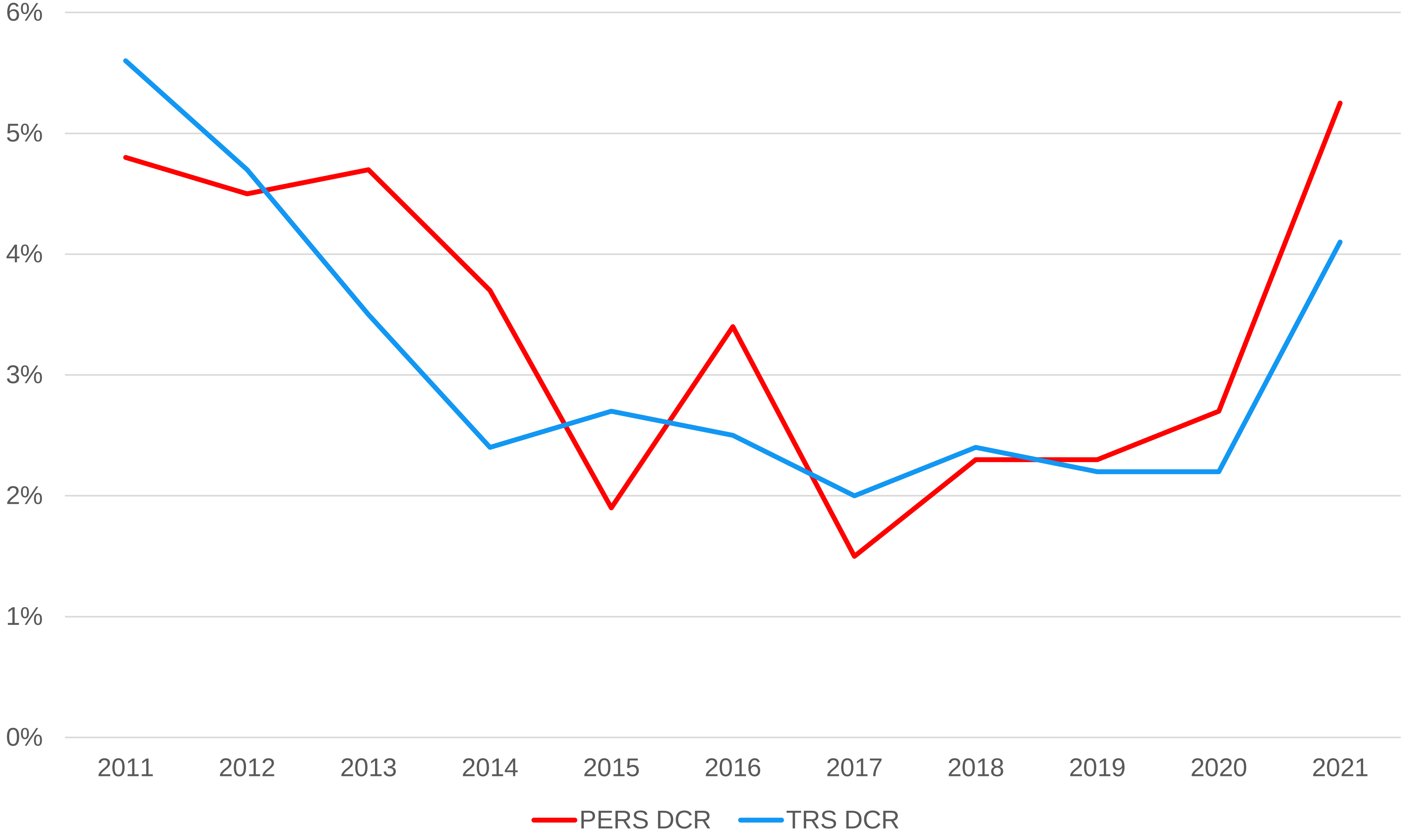
Average increases:

2011-2021
- PERS: 3.4%
- TRS: 2.5%

2015-2021
- PERS: 2.7%
- TRS: 2.2%

2018-2021
- PERS: 3.0%
- TRS: 2.2%

Historical Data – Increases in Average Pay (cont'd)



Average increases:

2011-2021

- PERS DCR: 3.4%
- TRS DCR: 3.1%

2015-2021

- PERS DCR: 2.8%
- TRS DCR: 2.6%

2018-2021

- PERS DCR: 3.2%
- TRS DCR: 2.7%

Historical Data – Payroll Growth

PERS DB/DCR

Year	# Actives	Annual Earnings ($000's)	% Increase in Annual Earnings vs Prior Year
2021	33,821	$2,384,394	1.4%
2020	33,956	$2,352,227	1.1%
2019	34,054	$2,327,729	3.2%
2018	33,812	$2,254,499	0.5%
2017	33,890	$2,244,324	-0.7%
2016	34,320	$2,260,857	1.0%
2015	34,758	$2,239,064	0.0%
2014	35,097	$2,239,805	1.9%
2013	35,271	$2,198,978	3.1%
2012	35,327	$2,132,009	3.2%
2011	35,358	$2,065,748	2.9%
2010	35,674	$2,007,884	5.7%

Average increases:

2010-2021: 1.9%

2015-2021: 0.9%

2018-2021: 1.6%

Historical Data – Payroll Growth
TRS DB/DCR

Year	# Actives	Annual Earnings ($000's)	% Increase in Annual Earnings vs Prior Year
2021	8,917	$728,516	0.9%
2020	9,121	$722,347	2.1%
2019	9,042	$707,383	-1.9%
2018	9,333	$720,819	-0.5%
2017	9,466	$724,298	0.4%
2016	9,506	$721,075	0.5%
2015	9,597	$717,220	3.3%
2014	9,408	$694,574	-1.1%
2013	9,624	$702,204	-0.9%
2012	9,902	$708,229	1.7%
2011	10,011	$696,424	1.9%
2010	10,078	$683,699	5.7%

Average increases:

2010-2021: 1.1%

2015-2021: 0.7%

2018-2021: 0.2%

Inflation Rate

Inflation Rate

- The inflation rate is an underlying component of the following economic assumptions:
  - Investment return
  - Salary increases
  - Healthcare trend rates
  - Payroll growth rate

- The inflation rate directly impacts the calculation of PERS/TRS liabilities for Postretirement Pension Adjustments (PRPA’s)

- The PERS/TRS Alaska residency COLA’s are independent of inflation since they are fixed increases (10%) applied to the retiree’s base benefit

- The last several years have seen relatively low CPI increases, although the large CPI increase for the year ending June 30, 2021 was an exception

Inflation Rate (cont'd)

- CPI-W (hourly wage earners and clerical workers) increases for the last four years are:

Year ending June 30	National	Urban Alaska/Anchorage
2021	6.12%	6.20%
2020	0.52%	-0.08%
2019	1.44%	1.26%
2018	3.09%	2.83%

- External inflation forecasts (10-year)
  - 2.0% - Callan's January 2021 market outlook
  - 2.3% - Survey of Professional Forecasters published by the Philadelphia Federal Reserve Bank in May 2021

- From NASRA February 2021 Issue Brief (survey of US public state retirement systems)
  - 3.50%* - Average inflation assumption in FY10 (Alaska's FY10 inflation assumption = 3.12%)
  - 2.65% - Average inflation assumption in FY19 (Alaska's FY19 inflation assumption = 2.50%)

* approximate value

Inflation Rate (cont'd)

- GEMS modeling produced the following expected inflation rates based on 1st quarter 2021 capital market assumptions:
  - 10-year: 1.85%
  - 20-year: 2.03%
  - 30-year: 2.08%

- The current inflation assumption adopted by the ARMB is 2.5% for the June 30, 2018-2021 valuations

- **We propose lowering the inflation assumption to 2.0% for the June 30, 2022-2025 valuations**

Investment Return

Investment Return

- The investment return assumption represents the expected return on invested assets, net of investment expenses
- The investment return assumption is used to discount projected benefits for all active and inactive members to determine the plan’s liabilities
- A change in this assumption generally has the biggest impact on the plan’s liabilities
- Factors to be considered in setting the investment return assumption
  - The plan’s investment policy and asset allocation strategy
  - Capital market assumptions in effect at the time of measurement
  - Timing of expected contributions and benefit payments
    - For example, the 2020 valuation projections produced the following expected benefit payments for PERS and TRS:
      - PERS: $1.35B in 2021; $2.11B in 2039 (peak); $1.64B in 2050
      - TRS: $0.65B in 2021; $0.89B in 2036 (peak); $0.65B in 2050
  - Investment expenses

Investment Return (cont'd)

- Our analysis reflects the asset allocation strategy adopted by the ARMB in June 2021:

Asset Class	Target Allocation PERS/TRS/JRS	Target Allocation NGNMRS
Broad Domestic Equity	27%	20%
Global Equity (non-US)	18%	13%
Fixed Income	21%	46%
Opportunistic	6%	6%
Real Assets	14%	7%
Private Equity	14%	8%
Total	100%	100%

Investment Return (cont'd)

- Buck's capital market assumptions are based on an economic scenario generating model developed by Conning and Company called GEMS©
  - GEMS is an econometric model that incorporates historical data and forecasts future geometric values for inflation and relevant asset classes
- GEMS was modeled using the following asset class allocations:

Asset Class	Allocation PERS/TRS/JRS	Allocation NGNMRS
US All Cap	27.00%	20.00%
Global Equity (non-US)	18.00%	13.00%
Global Equity	3.60%	3.60%
Aggregate Bonds	22.35%	46.10%
Private Equity	14.00%	8.00%
NCREIF	9.80%	4.90%
REIT	2.10%	1.05%
Infrastructure	2.10%	1.05%
Cash	1.05%	2.30%
Total	100.00%	100.00%

Investment Return (cont'd)

- GEMS geometric returns are shown under two approaches
  - Approach #1

    The propensity for asset returns and inflation to revert to a level close to historical norms, recognizing the inherent difficulty in forecasting current conditions to persist for 30+ years. Under this approach, the expectation is that asset returns and inflation rates will reach a level close to historical averages.
  - Approach #2

    Emerging demographic trends (such as aging workforce, increasing longevity, globalization of economy, and technological innovation transforming the workforce) that contribute to the "new normal" of low GDP, low inflation, low interest rates and a low asset return environment will persist well beyond the current business cycle. Under this approach, expectations around returns for "return generating" assets such as equities and real estate are approximately 50 to 100 basis points below that expected under Approach #1.
  - Approaches #1 and #2 produce results closer to each other than in the 2017 experience study

- Results are also shown using the "building block" method (arithmetic returns)

Investment Return – GEMS Analysis

GEMS results – geometric returns, net of investment expenses of 12 basis points*

PERS/TRS/JRS

	10-year	20-year	30-year
Approach #1			
- expected value	**6.02%**	**6.60%**	**6.86%**
- 65th percentile	7.54%	7.81%	7.88%
- 35th percentile	4.81%	5.50%	5.96%
Approach #2			
- expected value	**5.26%**	**5.86%**	**6.11%**
- 65th percentile	6.78%	7.06%	7.13%
- 35th percentile	4.05%	4.76%	5.21%

NGNMRS

	10-year	20-year	30-year
Approach #1			
- expected value	**4.65%**	**5.36%**	**5.65%**
- 65th percentile	5.71%	6.24%	6.33%
- 35th percentile	3.79%	4.55%	5.01%
Approach #2			
- expected value	**4.13%**	**4.86%**	**5.15%**
- 65th percentile	5.19%	5.74%	5.83%
- 35th percentile	3.28%	4.06%	4.51%

* investment expense assumption was provided by the State's DOR

Investment Return – Building Block Method

Building block method (arithmetic returns)

PERS/TRS/JRS

	10-year	20-year	30-year
Approach #1			
- inflation	1.86%	2.04%	2.09%
- real rate of return	4.75%	5.22%	5.44%
- nominal return	6.61%	7.26%	7.53%
- less investment expenses	-0.12%	-0.12%	-0.12%
- nominal return, net of investment expenses	**6.49%**	**7.14%**	**7.41%**
Approach #2			
- inflation	1.86%	2.04%	2.09%
- real rate of return	3.99%	4.48%	4.70%
- nominal return	5.85%	6.52%	6.79%
- less investment expenses	-0.12%	-0.12%	-0.12%
- nominal return, net of investment expenses	**5.73%**	**6.40%**	**6.67%**

NGNMRS

	10-year	20-year	30-year
Approach #1			
- inflation	1.86%	2.04%	2.09%
- real rate of return	3.16%	3.73%	3.98%
- nominal return	5.02%	5.77%	6.07%
- less investment expenses	-0.12%	-0.12%	-0.12%
- nominal return, net of investment expenses	**4.90%**	**5.65%**	**5.95%**
Approach #2			
- inflation	1.86%	2.04%	2.09%
- real rate of return	2.65%	3.23%	3.48%
- nominal return	4.51%	5.27%	5.57%
- less investment expenses	-0.12%	-0.12%	-0.12%
- nominal return, net of investment expenses	**4.39%**	**5.15%**	**5.45%**

Investment Return – NASRA August 2021 Survey

Average return = 7.06%; Median return = 7.00%

Alabama ERS	7.7
Alabama Teachers	7.7
Alaska PERS	7.38
Alaska Teachers	7.38
Arizona Public Safety Personnel	7.3
Arizona SRS	7.0
Arkansas PERS	7.15
Arkansas State Highway ERS	7.5
Arkansas Teachers	7.5
California PERF	6.8
California Teachers	7.0
Chicago Teachers	6.75
City of Austin ERS	7.0
Colorado Affiliated Local	7.0
Colorado Fire & Police Statewide	7.0
Colorado Municipal	7.25
Colorado School	7.25
Colorado State	7.25
Connecticut SERS	6.9
Connecticut Teachers	6.9
Contra Costa County	7.0
DC Police & Fire	6.5
DC Teachers	6.5
Delaware State Employees	7.0
Denver Employees	7.5
Denver Public Schools	7.25
Fairfax County Schools	7.25
Florida RS	7.0
Georgia ERS	7.2
Georgia Teachers	7.25
Hawaii ERS	7.0
Houston Firefighters	7.0
Idaho PERS	6.3
Illinois Municipal	7.25
Illinois SERS	6.75
Illinois Teachers	7.0
Illinois Universities	6.5
Indiana PERF	6.25
Indiana Teachers	6.25
Iowa PERS	7.0
Kansas PERS	7.75
Kentucky County	6.25
Kentucky ERS	5.25
Kentucky Teachers	7.1
LA County ERA	7.0
Louisiana Parochial Employees	6.4
Louisiana SERS	7.55
Louisiana Teachers	7.45
Maine Local	6.5
Maine State and Teacher	6.5
Maryland PERS	6.8
Maryland Teachers	6.8
Massachusetts SERS	7.0
Massachusetts Teachers	7.0
Michigan Municipal	7.35
Michigan Public Schools	6.8
Michigan SERS	6.7
Minnesota PERF	7.5
Minnesota State Employees	7.5
Minnesota Teachers	7.5
Mississippi PERS	7.55
Missouri DOT and Highway Patrol	7.0
Missouri Local	7.0
Missouri PEERS	7.3
Missouri State Employees	6.95
Missouri Teachers	7.3
Montana PERS	7.65
Montana Teachers	7.5
Nebraska Schools	7.3
Nevada Police Officer and Firefighter	7.5
Nevada Regular Employees	7.5
New Hampshire Retirement System	6.75
New Jersey PERS	7.3
New Jersey Police & Fire	7.3
New Jersey Teachers	7.3
New Mexico PERA	7.25
New Mexico Teachers	7.0
New York City ERS	7.0
New York City Teachers	7.0
New York State Teachers	7.1
North Carolina Local Government	6.5
North Carolina Teachers and State Employees	6.5
North Dakota PERS	7.0
North Dakota Teachers	7.25
NY State & Local ERS	5.9
NY State & Local Police & Fire	5.9
Ohio PERS	7.2
Ohio Police & Fire	8.0
Ohio School Employees	7.0
Ohio Teachers	7.0
Oklahoma PERS	6.5
Oklahoma Teachers	7.0
Orange County ERS	7.0
Oregon PERS	6.9
Pennsylvania School Employees	7.25
Pennsylvania State ERS	7.0
Phoenix ERS	7.0
Rhode Island ERS	7.0
Rhode Island Municipal	7.0
Richmond Retirement System	7.0
San Diego City	6.5
San Diego County	7.0
San Francisco City & County	7.4
South Carolina Police	7.0
South Carolina RS	7.0
South Dakota RS	6.5
St. Louis School Employees	7.5
St. Paul Teachers	7.5
Texas County & District	7.5
Texas ERS	7.0
Texas LECOS	7.0
Texas Municipal	6.75
Texas Teachers	7.25
TN Political Subdivisions	7.25
TN State and Teachers	7.25
University of California	6.75
Utah Noncontributory	6.95
Vermont State Employees	7.0
Vermont Teachers	7.0
Virginia Retirement System	6.75
Washington LEOFF Plan 1	7.5
Washington LEOFF Plan 2	7.4
Washington PERS 1	7.5
Washington PERS 2/3	7.5
Washington School Employees Plan 2/3	7.5
Washington Teachers Plan 1	7.5
Washington Teachers Plan 2/3	7.5
West Virginia PERS	7.5
West Virginia Teachers	7.5
Wisconsin Retirement System	7.0
Wyoming Retirement System	7.0

Investment Return – Current and Proposed

PERS/TRS/JRS

	Current	Proposed
Nominal Return, net of investment expenses	7.38%	**7.00%**
Inflation Rate	2.50%	**2.00%**
Real Rate of Return	4.88%	**5.00%**

NGNMRS

	Current	Proposed
Nominal Return, net of investment expenses	7.00%	**5.75%**
Inflation Rate	2.50%	**2.00%**
Real Rate of Return	4.50%	**3.75%**

Salary Increases

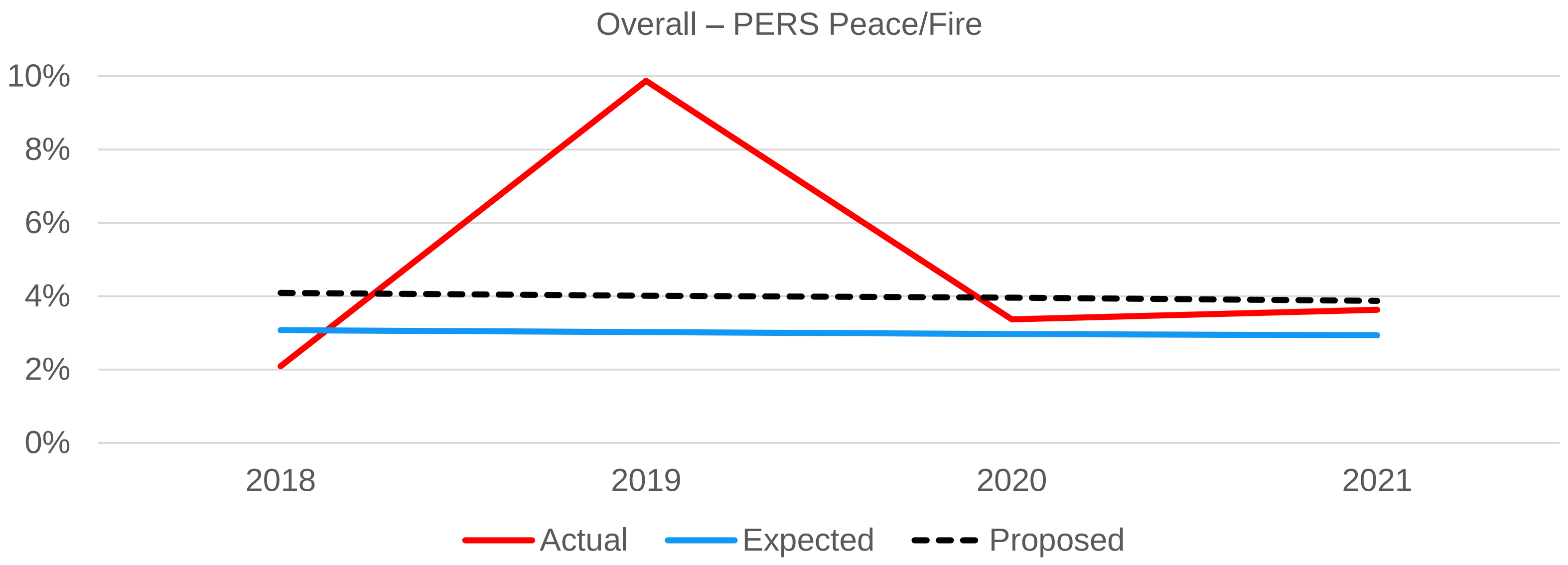
Salary Increases

- Retirement benefits provided by the State's retirement systems are based on 3-year or 5-year average pay at retirement, except for JRS (based on pay at retirement) and NGNMRS (not pay related)
- The salary increase assumption is used to project each active member's pay from current amount (which is based on the valuation data) until expected retirement date
- The salary increase rates include two components --- inflationary and merit/productivity
- The salary increase rates are higher for shorter service, and gradually decline until reaching a level slightly higher than the inflation rate
- Historically, the same salary increase rates have been used for DB and DCR members
- Within PERS DB and DCR, the salary increase rates are higher for Peace Officer/Firefighter members than for Other members
- For JRS, the salary increase assumption is a fixed percentage per year (it is currently 0% until FY24)

Salary Increases – Experience

PERS – Peace/Fire

Service	2018		2019		2020		2021	
	actual	expected	actual	expected	actual	expected	actual	expected
Under 5 years	9.0%	6.6%	11.3%	6.8%	16.6%	6.4%	3.9%	6.4%
5-9 years	0.3%	3.9%	10.0%	4.0%	7.6%	4.0%	6.4%	4.0%
10-14 years	2.4%	3.3%	9.6%	3.3%	2.5%	3.3%	3.7%	3.2%
15+ years	1.9%	2.8%	10.0%	2.8%	3.6%	2.8%	3.6%	2.8%
Overall	2.1%	3.1%	9.9%	3.0%	3.4%	3.0%	3.6%	2.9%



The proposed rates shown on slide 36 are based on *combined* DB/DCR experience for the Peace/Fire group. Those proposed rates applied just to the DB Peace/Fire group are illustrated on this slide.

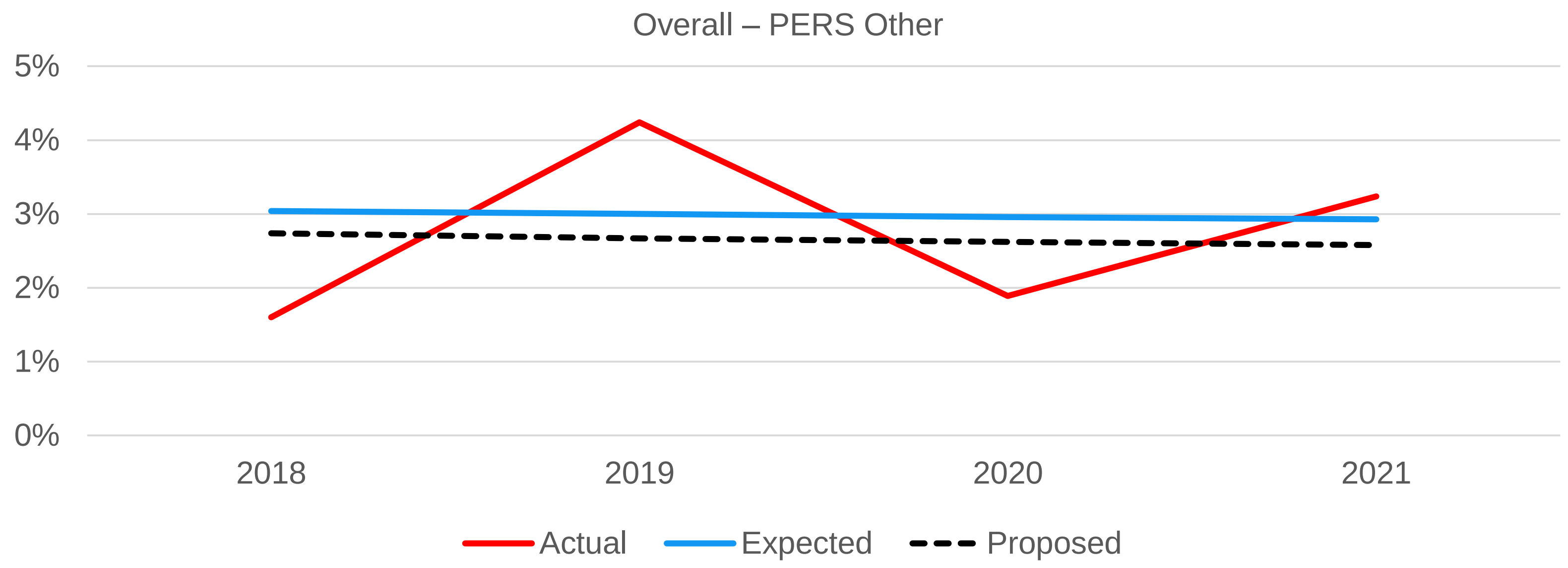
Overall increases for all 4 years:

- Expected = 3.0%
- Actual = 4.7%
- Proposed = 4.0%

Salary Increases – Experience (cont'd)

PERS – Other

Service	2018		2019		2020		2021	
	actual	expected	actual	expected	actual	expected	actual	expected
Under 5 years	3.1%	5.4%	5.9%	5.4%	-2.4%	5.4%	4.4%	5.6%
5-9 years	1.0%	3.6%	4.5%	3.6%	1.0%	3.6%	5.2%	3.7%
10-14 years	1.4%	3.2%	4.2%	3.1%	2.2%	3.1%	3.7%	3.1%
15+ years	1.8%	2.8%	4.2%	2.8%	2.0%	2.8%	2.9%	2.8%
Overall	1.6%	3.0%	4.2%	3.0%	1.9%	3.0%	3.2%	2.9%



The proposed rates shown on slide 36 are based on *combined* DB/DCR experience for the Others group. Those proposed rates applied just to the DB Others group are illustrated on this slide.

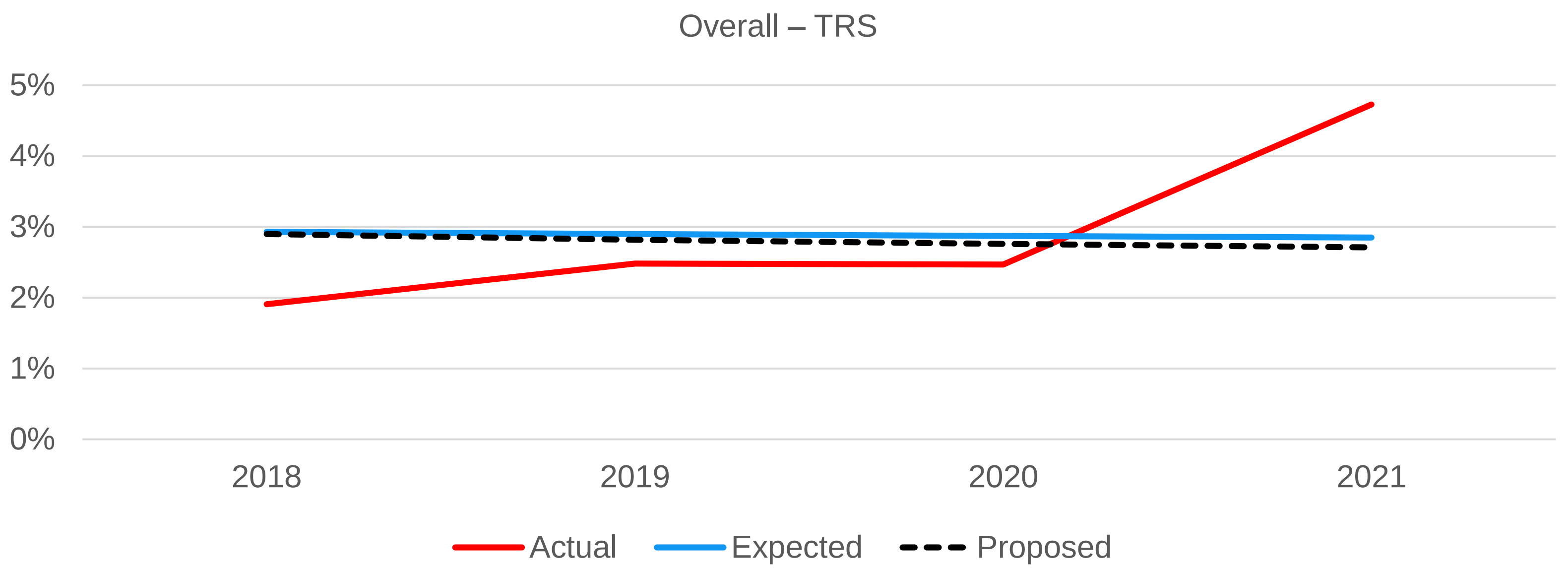
Overall increases for all 4 years:

- Expected = 3.0%
- Actual = 2.7%
- Proposed = 2.7%

Salary Increases – Experience (cont'd)

TRS

Service	2018		2019		2020		2021	
	actual	expected	actual	expected	actual	expected	actual	expected
Under 5 years	5.1%	5.3%	8.8%	5.2%	3.3%	5.1%	6.5%	5.3%
5-9 years	2.8%	3.6%	4.8%	3.6%	4.1%	3.6%	7.4%	3.7%
10-14 years	2.4%	3.1%	2.6%	3.1%	2.8%	3.1%	5.1%	3.0%
15+ years	1.6%	2.8%	2.3%	2.8%	2.3%	2.8%	4.6%	2.8%
Overall	1.9%	2.9%	2.5%	2.9%	2.5%	2.9%	4.7%	2.9%



2021 increases were much higher than in previous years. The question is whether this was an anomaly, or whether the larger increases can be expected to continue in the future.

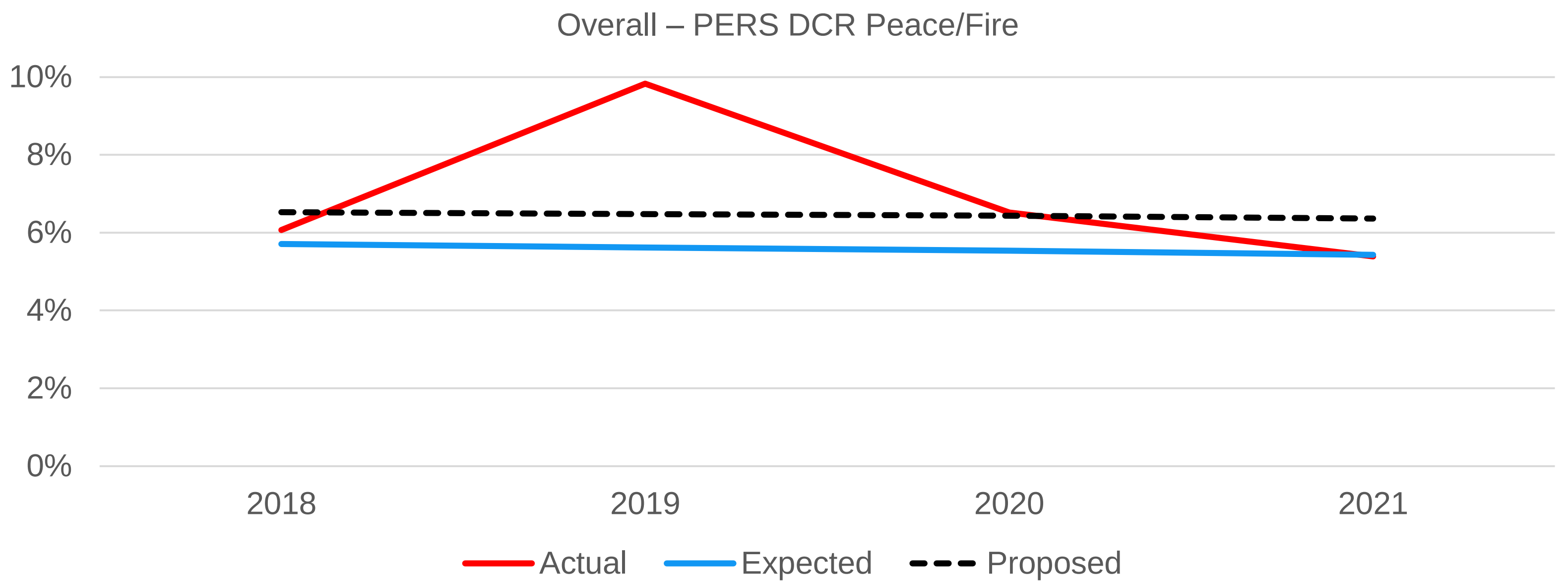
Overall increases for all 4 years:

- Expected = 2.9%
- Actual = 2.8%
- Proposed = 2.8%

Salary Increases – Experience (cont'd)

PERS DCR – Peace/Fire

Service	2018		2019		2020		2021	
	actual	expected	actual	expected	actual	expected	actual	expected
Under 5 years	7.9%	6.8%	11.2%	6.8%	8.4%	6.9%	7.4%	6.9%
5-9 years	3.6%	4.3%	7.8%	4.4%	4.5%	4.5%	3.6%	4.5%
10-14 years	6.9%	3.6%	9.5%	3.5%	4.8%	3.5%	3.5%	3.4%
15+ years	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Overall	6.1%	5.7%	9.8%	5.6%	6.5%	5.5%	5.4%	5.4%



The proposed rates shown on slide 36 are based on *combined* DB/DCR experience for the Peace/Fire group. Those proposed rates applied just to the DCR Peace/Fire group are illustrated on this slide.

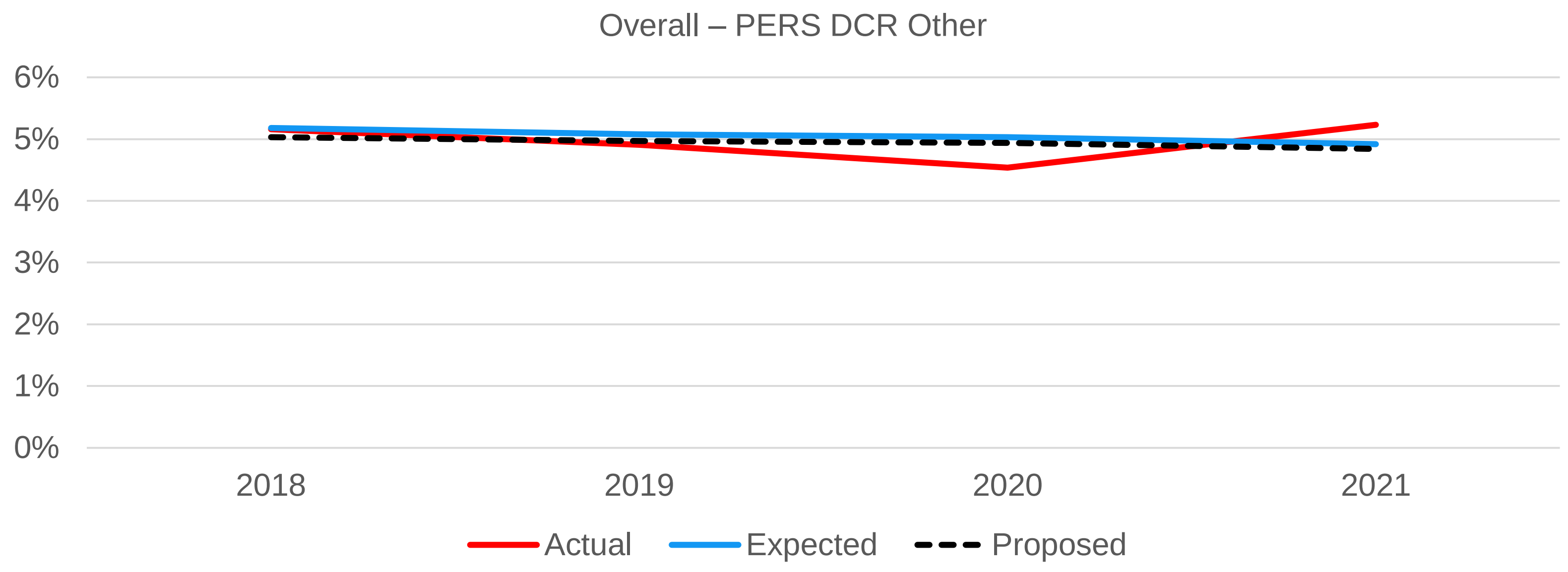
Overall increases for all 4 years:

- Expected = 5.6%
- Actual = 6.9%
- Proposed = 6.5%

Salary Increases – Experience (cont'd)

PERS DCR – Other

Service	2018		2019		2020		2021	
	actual	expected	actual	expected	actual	expected	actual	expected
Under 5 years	5.8%	5.9%	5.4%	5.9%	5.2%	6.0%	6.2%	6.0%
5-9 years	4.0%	3.8%	4.0%	3.8%	3.7%	3.8%	4.3%	3.8%
10-14 years	2.8%	3.3%	4.7%	3.3%	3.2%	3.3%	3.5%	3.2%
15+ years	0.0%	0.0%	-1.1%	2.9%	1.6%	2.8%	2.1%	2.8%
Overall	5.2%	5.2%	4.9%	5.1%	4.5%	5.0%	5.2%	4.9%



The proposed rates shown on slide 36 are based on *combined* DB/DCR experience for the Others group. Those proposed rates applied just to the DCR Others group are illustrated on this slide.

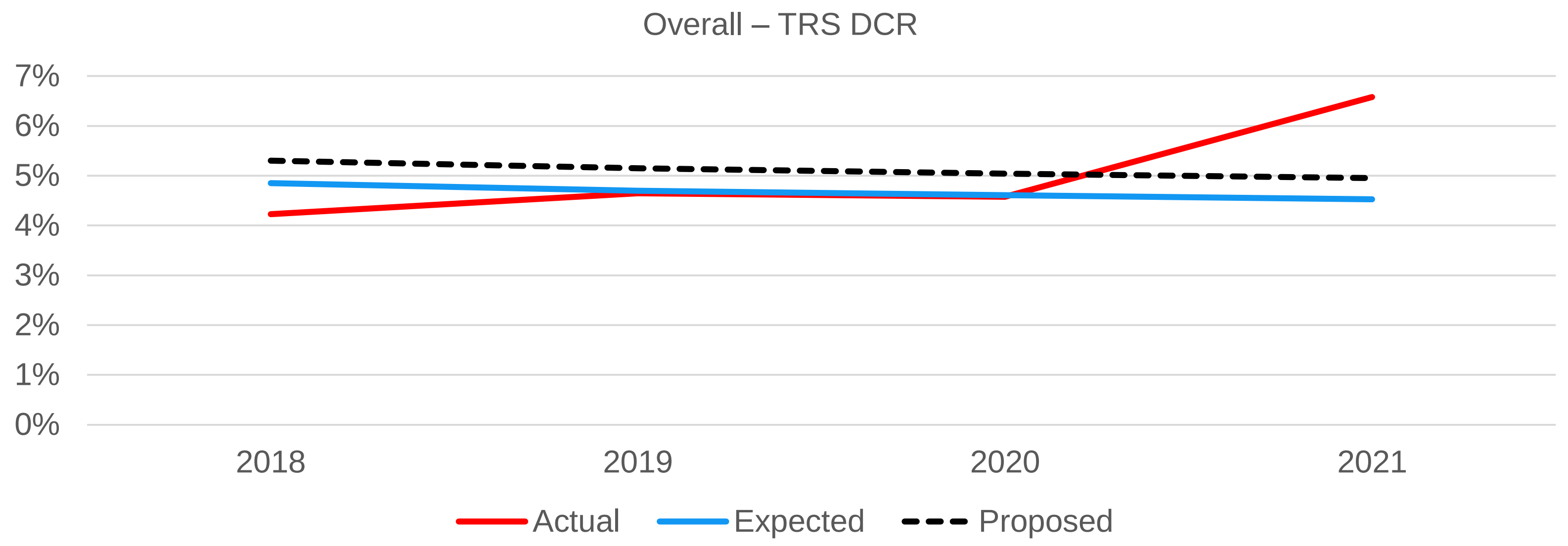
Overall increases for all 4 years:

- Expected = 5.1%
- Actual = 5.0%
- Proposed = 4.9%

Salary Increases – Experience (cont'd)

TRS DCR

Service	2018		2019		2020		2021	
	actual	expected	actual	expected	actual	expected	actual	expected
Under 5 years	5.3%	5.8%	5.2%	5.8%	5.6%	5.8%	7.5%	5.8%
5-9 years	3.0%	3.7%	4.3%	3.7%	4.0%	3.8%	6.1%	3.8%
10-14 years	3.2%	3.4%	3.5%	3.3%	3.1%	3.3%	5.5%	3.2%
15+ years	2.1%	2.8%	6.0%	2.8%	-6.3%	2.8%	7.4%	2.8%
Overall	4.2%	4.9%	4.7%	4.7%	4.6%	4.6%	6.6%	4.5%



Overall increases for all 4 years:

- Expected = 4.7%
- Actual = 5.1%
- Proposed = 5.1%

Salary Increases – Current and Proposed

We propose the following changes to the salary increase assumption for the June 30, 2022-2025 valuations:

PERS/PERS DCR – Peace/Fire

Service	Current	Proposed
0	7.75%	**8.25%**
1	7.25%	**7.50%**
2	6.75%	**7.00%**
3	6.25%	**6.75%**
4	5.75%	**6.50%**
5	5.25%	**6.00%**
6	4.75%	**5.50%**
7	4.25%	**5.25%**
8	3.75%	**5.00%**
9	3.65%	**4.80%**

Service	Current	Proposed
10	3.55%	**4.70%**
11	3.45%	**4.60%**
12	3.35%	**4.50%**
13	3.25%	**4.40%**
14	3.15%	**4.30%**
15	3.05%	**4.20%**
16	2.95%	**4.10%**
17	2.85%	**4.00%**
18	2.75%	**3.75%**
19	2.75%	**3.50%**
20+	2.75%	**3.25%**

PERS/PERS DCR - Others

Service	Current	Proposed
0	6.75%	**6.50%**
1	6.25%	**5.75%**
2	5.75%	**5.25%**
3	5.25%	**4.75%**
4	4.75%	**4.50%**
5	4.25%	**4.00%**
6	3.75%	**3.80%**
7	3.65%	**3.70%**
8	3.55%	**3.50%**
9	3.45%	**3.30%**

Service	Current	Proposed
10	3.35%	**3.20%**
11	3.25%	**3.00%**
12	3.15%	**2.85%**
13	3.05%	**2.75%**
14	2.95%	**2.55%**
15	2.85%	**2.45%**
16	2.75%	**2.35%**
17+	2.75%	**2.25%**

Salary Increases – Current and Proposed (cont'd)

TRS

Service	Current	Proposed
0	6.75%	**6.75%**
1	6.25%	**6.25%**
2	5.75%	**5.75%**
3	5.25%	**5.50%**
4	4.75%	**5.25%**
5	4.25%	**5.00%**
6	3.75%	**4.75%**
7	3.65%	**4.50%**
8	3.55%	**4.25%**
9	3.45%	**4.00%**
10	3.35%	**3.75%**
11	3.25%	**3.50%**
12	3.15%	**3.25%**
13	3.05%	**3.20%**
14	2.95%	**3.10%**
15	2.85%	**3.00%**
16	2.75%	**2.90%**
17	2.75%	**2.70%**
18	2.75%	**2.50%**
19	2.75%	**2.30%**
20+	2.75%	**2.25%**

TRS DCR

Service	Current	Proposed
0	6.75%	**7.00%**
1	6.25%	**6.50%**
2	5.75%	**6.00%**
3	5.25%	**5.50%**
4	4.75%	**5.00%**
5	4.25%	**4.75%**
6	3.75%	**4.50%**
7	3.65%	**4.25%**
8	3.55%	**4.00%**
9	3.45%	**3.75%**
10	3.35%	**3.50%**
11	3.25%	**3.25%**
12	3.15%	**3.00%**
13	3.05%	**2.80%**
14	2.95%	**2.60%**
15	2.85%	**2.50%**
16	2.75%	**2.40%**
17	2.75%	**2.30%**
18+	2.75%	**2.25%**

JRS

Current: 0% per year through FY24, 3.62% per year thereafter

Proposed: 0% per year through FY24, 2.50% per year thereafter

Payroll Growth Rate

Payroll Growth Rate

- The payroll growth rate is used for amortizing the Unfunded Actuarial Accrued Liability
  - Per AK Statutes, the amortization is on a level percent of pay basis
  - Under this method, future amortization amounts for each amortization “layer” will increase as future payroll increases

- The current payroll growth rate assumption adopted by the ARMB for the June 30, 2018-2021 valuations is 2.75% (inflation of 2.50% plus 0.25%)

- **We proposed changing the payroll growth rate assumption for the June 30, 2022-2025 valuations to 2.25% (inflation of 2.00% plus 0.25%)**

Healthcare Trend Rates

Healthcare Trend Rates

- Per Capita Claims Costs are updated annually for:
  - Pre-Medicare (medical / prescription drugs)
  - Medicare Parts A&B (medical / prescription drugs)
  - Medicare Part B only (medical / prescription drugs)
  - Medicare Part D – EGWP
  - Third Party Administrative (TPA) Fees

- Healthcare trend rates are used to project per capita claims costs into future years

- Since 2012, the Getzen model developed by the Society of Actuaries has been used to help set the healthcare trend rate assumption

Healthcare Trend Rates (cont'd)

- Current assumption for June 30, 2020 valuations

Fiscal Year	Medical Pre-65	Medical Post-65	Prescription Drugs / EGWP
FY21	6.5%	5.4%	7.5%
FY22	6.3%	5.4%	7.1%
FY23	6.1%	5.4%	6.8%
FY24	5.9%	5.4%	6.4%
FY25	5.8%	5.4%	6.1%
FY26	5.6%	5.4%	5.7%
FY27-FY40	5.4%	5.4%	5.4%
FY41	5.3%	5.3%	5.3%
FY42	5.2%	5.2%	5.2%
FY43	5.1%	5.1%	5.1%
FY44	5.1%	5.1%	5.1%
FY45	5.0%	5.0%	5.0%
FY46	4.9%	4.9%	4.9%
FY47	4.8%	4.8%	4.8%
FY48	4.7%	4.7%	4.7%
FY49	4.6%	4.6%	4.6%
FY50+	4.5%	4.5%	4.5%

- Initial trend rates are based on survey data and recent actual experience of Alaska's plans

- Ultimate trend rate is based on Getzen model and Alaska's inflation assumption:

	Current Assumption
Inflation Rate	2.5%
Real GDP Growth	2.0%
Ultimate Trend Rate	4.5%

- TPA fees are assumed to increase at the ultimate rate of 4.5%

Healthcare Trend Rates – Initial

- Initial trend rate survey information

Survey	Medical Pre-65	Medical Post-65	Prescription Drugs
Buck 2021 National Health Care Trend Survey[1]	8.1%	4.8%	7.9%
Segal 2021 Medical Plan Cost Survey[2]	7.7%	5.4%	7.3%

[1] https://buck.com/national-health-care-trend-survey-2021/ – 2021 estimates are 8.08% for PPO plans and 7.45% for POS plans; 4.77% for Medicare supplement (without Rx coverage) plans; 7.86% for prescription drug coverage

[2] https://www.segalco.com/media/1913/segal-trend-survey-2021.pdf – 2021 estimates are 7.7% for PPO/POS plans; 5.4% for MA PPO plans; 7.3% for pre-Medicare outpatient Rx coverage (before PBM rebates); 7.0% for Medicare outpatient Rx coverage (before PBM rebates)

Healthcare Trend Rates – Other State Systems

- Trend assumptions from other State retirement systems

State	Initial Trend	Ultimate Trend	Period to Ultimate	Source
California – Pre-65	7.50%	4.50%	6 years	6/30/2019 ACFR
California – Post-65	8.00%	4.50%	7 years	6/30/2019 ACFR
California Trial Courts Single-employer & agent multiple-employer	6.90%	4.40%	57 years	6/30/2019 ACFR
Florida	6.70%	5.40%	51 years	6/30/2020 ACFR
Illinois – Pre-65	8.00%	4.89%	7 years	6/30/2020 ACFR
Illinois – Post-65	9.00%	4.50%	9 years	6/30/2020 ACFR
Michigan	8.30%	3.50%	10 years	9/30/2020 ACFR
New York – Pre-65	5.75%	4.50%	7 years	3/31/2021 ACFR
New York – Post-65	5.00%	4.50%	6 years	3/31/2021 ACFR
New York – Prescription Drug & EGWP	8.00%	4.50%	6 years	3/31/2021 ACFR
Georgia – Pre-65 (multi-employer plans)	7.00%	4.50%	10 years	6/30/2020 ACFR
Georgia – Post-65 (multi-employer plans)	5.25%	4.50%	4 years	6/30/2020 ACFR
Pennsylvania – Pre-65	6.60%	4.10%	55 years	6/30/2020 ACFR
Pennsylvania – Post-65	6.10%	4.10%	55 years	6/30/2020 ACFR

Healthcare Trend Rates – Ultimate

- Support for real GDP growth assumption of 2.0% (current and proposed)
  - Federal Open Market Committee June 2021 forecast projects longer run range of 1.6% - 2.2%[1]
  - Congressional Budget Office July 2021 10-year projection (from 2021 – 2031) of 1.8%[2]
  - Callan presentation at June 2021 Board meeting[3] projected real GDP rate of 2.0% – 2.5% over the next 10 years and 3.0% over the long-term (Equilibrium expectations)

[1] https://www.federalreserve.gov/monetarypolicy/files/fomcprojtabl20210616.pdf

[2] https://www.cbo.gov/system/files/2021-07/51135-2021-07-economicprojections.xlsx

[3] Slide 6 of presentation titled "ARMB 2021 Asset Allocation Strategy", dated June 18, 2021

Healthcare Trend Rates – Retiree-Paid Premiums

- Premiums paid by certain DB plan pre-Medicare members are assumed to increase in the future based on (1) assumed healthcare trend rates and (2) the shift in the pre-Medicare / Medicare population because the premium is only paid by pre-Medicare members, but calculated based on total members

Fiscal Year	Trend Assumption
FY21	0.0%
FY22	0.0%
FY23+	4.0%

- Assumed increases reviewed each year and updated as needed

- DCR Plan premiums are assumed to be a percentage of the plan cost so a separate assumption is not needed
    - Premiums are assumed to increase with the same trend that is assumed for medical and prescription drug benefits

Healthcare Trend Rates – Current and Proposed

Current assumption

Fiscal Year	Medical Pre-65	Medical Post-65	Prescription Drugs / EGWP
FY21	6.5%	5.4%	7.5%
FY22	6.3%	5.4%	7.1%
FY23	6.1%	5.4%	6.8%
FY24	5.9%	5.4%	6.4%
FY25	5.8%	5.4%	6.1%
FY26	5.6%	5.4%	5.7%
FY27-FY40	5.4%	5.4%	5.4%
FY41	5.3%	5.3%	5.3%
FY42	5.2%	5.2%	5.2%
FY43	5.1%	5.1%	5.1%
FY44	5.1%	5.1%	5.1%
FY45	5.0%	5.0%	5.0%
FY46	4.9%	4.9%	4.9%
FY47	4.8%	4.8%	4.8%
FY48	4.7%	4.7%	4.7%
FY49	4.6%	4.6%	4.6%
FY50+	4.5%	4.5%	4.5%

Proposed assumption

Fiscal Year	Medical Pre-65	Medical Post-65	Prescription Drugs / EGWP
FY21	**N/A**	**N/A**	**N/A**
FY22	**6.2%**	**5.3%**	**7.1%**
FY23	**6.0%**	**5.2%**	**6.6%**
FY24	**5.7%**	**5.1%**	**6.2%**
FY25	**5.4%**	**5.0%**	**5.7%**
FY26	**5.1%**	**5.0%**	**5.3%**
FY27-FY40	**4.9%**	**4.9%**	**4.9%**
FY41	**4.8%**	**4.8%**	**4.8%**
FY42	**4.7%**	**4.7%**	**4.7%**
FY43	**4.6%**	**4.6%**	**4.6%**
FY44	**4.5%**	**4.5%**	**4.5%**
FY45	**4.5%**	**4.5%**	**4.5%**
FY46	**4.4%**	**4.4%**	**4.4%**
FY47	**4.3%**	**4.3%**	**4.3%**
FY48	**4.2%**	**4.2%**	**4.2%**
FY49	**4.1%**	**4.1%**	**4.1%**
FY50+	**4.0%**	**4.0%**	**4.0%**

The trend rates for the 6/30/21 valuations are not being changed.

The proposed assumption illustrates lowering the ultimate trend rate from 4.50% to 4.00%. Short-term trend rates were also modified to achieve a gradual decline to the 4.00% ultimate rate.

Cost Effects of Proposed Economic Assumptions

Cost Effects of Proposed Economic Assumptions

- The cost effects shown in this presentation are based on the most recent valuations that have been reviewed and adopted by the ARMB (i.e., the June 30, 2020 valuations)

- The cost effects are shown in two steps
  - 1st step: Changing just the investment return assumption (this is provided for informational purposes only; consistency between assumptions needs to be maintained when considering assumption changes)
  - 2nd step: Changing all of the economic assumptions

- For purposes of this presentation, the demographic assumptions are the same as those used in the June 30, 2020 valuations

Cost Effects of Proposed Economic Assumptions (cont'd)

PERS

as of June 30, 2020 ($000's)	Current			Proposed – Investment Return Only*			Proposed – All Economic Assumptions		
	Pension	Healthcare	Total	Pension	Healthcare	Total	Pension	Healthcare	Total
1. Actuarial Accrued Liability (AAL)	15,279,525	7,036,550	22,316,075	15,913,099	7,349,934	23,263,033	15,385,113	7,025,104	22,410,217
2. Actuarial Value of Assets (AVA)	9,713,710	7,989,358	17,703,068	9,713,710	7,989,358	17,703,068	9,713,710	7,989,358	17,703,068
3. Unfunded Actuarial Accrued Liability (AAL - AVA)	5,565,815	(952,808)	4,613,007	6,199,389	(639,424)	5,559,965	5,671,403	(964,254)	4,707,149
4. Funded Ratio (AVA / AAL)	**63.6%**	**113.5%**	**79.3%**	**61.0%**	**108.7%**	**76.1%**	**63.1%**	**113.7%**	**79.0%**
5. Normal Cost (Total)	137,815	84,825	222,640	149,949	92,818	242,767	145,473	86,364	231,837
6. Projected DB/DCR Payroll for Upcoming Year			2,373,078			2,373,078			2,369,540
7. Contribution Rate as of 6/30/20**									
7a. Normal Cost Rate (Employer)	3.09%	3.57%	6.66%	3.60%	3.91%	7.51%	3.42%	3.64%	7.06%
7b.Unfunded Liability Amortization Rate	17.45%	(2.66%)	17.45%	18.62%	(1.75%)	18.62%	17.95%	(2.73%)	17.95%
7c.Total Rate (not less than Employer Normal Cost)	**20.54%**	**3.57%**	**24.11%**	**22.22%**	**3.91%**	**26.13%**	**21.37%**	**3.64%**	**25.01%**

* this is provided for informational purposes only; consistency between assumptions needs to be maintained when considering assumption changes
** % of projected DB/DCR payroll for the upcoming year

Cost Effects of Proposed Economic Assumptions (cont'd)

TRS

as of June 30, 2020 ($000's)	Current			Proposed – Investment Return Only*			Proposed – All Economic Assumptions		
	Pension	**Healthcare**	**Total**	**Pension**	**Healthcare**	**Total**	**Pension**	**Healthcare**	**Total**
1. Actuarial Accrued Liability (AAL)	7,447,036	2,489,675	9,936,711	7,741,477	2,604,305	10,345,782	7,478,056	2,480,074	9,958,130
2. Actuarial Value of Assets (AVA)	5,587,064	3,021,283	8,608,347	5,587,064	3,021,283	8,608,347	5,587,064	3,021,283	8,608,347
3. Unfunded Actuarial Accrued Liability (AAL - AVA)	1,859,972	(531,608)	1,328,364	2,154,413	(416,978)	1,737,435	1,890,992	(541,209)	1,349,783
4. Funded Ratio (AVA / AAL)	**75.0%**	**121.4%**	**86.6%**	**72.2%**	**116.0%**	**83.2%**	**74.7%**	**121.8%**	**86.4%**
5. Normal Cost (Total)	51,404	24,419	75,823	55,722	26,994	82,716	55,019	25,818	80,837
6. Projected DB/DCR Payroll for Upcoming Year			741,090			741,090			741,484
7. Contribution Rate as of 6/30/20**									
7a. Normal Cost Rate (Employer)	2.86%	3.30%	6.16%	3.44%	3.64%	7.08%	3.35%	3.48%	6.83%
7b. Unfunded Liability Amortization Rate	18.87%	(4.82%)	18.87%	20.83%	(3.70%)	20.83%	19.33%	(4.96%)	19.33%
7c. Total Rate (not less than Employer Normal Cost)	**21.73%**	**3.30%**	**25.03%**	**24.27%**	**3.64%**	**27.91%**	**22.68%**	**3.48%**	**26.16%**

* this is provided for informational purposes only; consistency between assumptions needs to be maintained when considering assumption changes
** % of projected DB/DCR payroll for the upcoming year

Cost Effects of Proposed Economic Assumptions (cont'd)

PERS DCR

as of June 30, 2020 ($000's)	Current			Proposed – Investment Return Only*			Proposed – All Economic Assumptions		
	ODD	Healthcare	Total	ODD	Healthcare	Total	ODD	Healthcare	Total
1. Actuarial Accrued Liability (AAL)	10,634	150,701	161,335	11,131	164,009	175,140	10,987	147,134	158,121
2. Actuarial Value of Assets (AVA)	43,029	144,747	187,776	43,029	144,747	187,776	43,029	144,747	187,776
3. Unfunded Actuarial Accrued Liability (AAL - AVA)	(32,395)	5,954	(26,441)	(31,898)	19,262	(12,636)	(32,042)	2,387	(29,655)
4. Funded Ratio (AVA / AAL)	**404.6%**	**96.0%**	**116.4%**	**386.6%**	**88.3%**	**107.2%**	**391.6%**	**98.4%**	**118.8%**
5. Normal Cost	5,134	15,182	20,316	5,306	16,837	22,143	5,286	14,838	20,124
6. Projected DCR Payroll for Upcoming Year			1,443,017			1,443,017			1,441,285
7. Contribution Rate as of 6/30/20**									
7a. Normal Cost Rate	0.36%	1.05%	1.41%	0.37%	1.17%	1.54%	0.37%	1.03%	1.40%
7b. Unfunded Liability Amortization Rate	(0.17%)	0.05%	0.05%	(0.16%)	0.11%	0.11%	(0.17%)	0.04%	0.04%
7c. Total Rate (not less than Employer Normal Cost)	**0.36%**	**1.10%**	**1.46%**	**0.37%**	**1.28%**	**1.65%**	**0.37%**	**1.07%**	**1.44%**

* this is provided for informational purposes only; consistency between assumptions needs to be maintained when considering assumption changes
** % of projected DCR payroll for the upcoming year

Cost Effects of Proposed Economic Assumptions (cont'd)

TRS DCR

as of June 30, 2020 ($000's)	Current			Proposed – Investment Return Only*			Proposed – All Economic Assumptions		
	ODD	**Healthcare**	**Total**	**ODD**	**Healthcare**	**Total**	**ODD**	**Healthcare**	**Total**
1. Actuarial Accrued Liability (AAL)	223	40,634	40,857	206	44,497	44,703	213	39,328	39,541
2. Actuarial Value of Assets (AVA)	4,933	49,554	54,487	4,933	49,554	54,487	4,933	49,554	54,487
3. Unfunded Actuarial Accrued Liability (AAL - AVA)	(4,710)	(8,920)	(13,630)	(4,727)	(5,057)	(9,784)	(4,720)	(10,226)	(14,946)
4. Funded Ratio (AVA / AAL)	**2,212.1%**	**122.0%**	**133.4%**	**2,394.7%**	**111.4%**	**121.9%**	**2,316.0%**	**126.0%**	**137.8%**
5. Normal Cost	312	3,396	3,708	320	3,781	4,101	316	3.344	3,660
6. Projected DCR Payroll for Upcoming Year			391,854			391,854			392,915
7. Contribution Rate as of 6/30/20**									
7a. Normal Cost Rate	0.08%	0.87%	0.95%	0.08%	0.96%	1.04%	0.08%	0.85%	0.93%
7b. Unfunded Liability Amortization Rate	(0.10%)	(0.14%)	(0.24%)	(0.09%)	(0.07%)	(0.16%)	(0.10%)	(0.16%)	(0.26%)
7c. Total Rate (not less than Employer Normal Cost)	**0.08%**	**0.87%**	**0.95%**	**0.08%**	**0.96%**	**1.04%**	**0.08%**	**0.85%**	**0.93%**

* this is provided for informational purposes only; consistency between assumptions needs to be maintained when considering assumption changes
** % of projected DCR payroll for the upcoming year

Cost Effects of Proposed Economic Assumptions (cont'd)

JRS

as of June 30, 2020 ($000's)	Current			Proposed – Investment Return Only*			Proposed – All Economic Assumptions		
	Pension	Healthcare	Total	Pension	Healthcare	Total	Pension	Healthcare	Total
1. Actuarial Accrued Liability (AAL)	211,742	16,764	228,506	220,127	17,489	237,616	202,022	16,811	218,833
2. Actuarial Value of Assets (AVA)	194,788	34,806	229,594	194,788	34,806	229,594	194,788	34,806	229,594
3. Unfunded Actuarial Accrued Liability (AAL - AVA)	16,954	(18,042)	(1,088)	25,339	(17,317)	8,022	7,234	(17,995)	(10,761)
4. Funded Ratio (AVA / AAL)	**92.0%**	**207.6%**	**100.5%**	**88.5%**	**199.0%**	**96.6%**	**96.4%**	**207.0%**	**104.9%**
5. Normal Cost (Total)	5,934	854	6,788	6,378	911	7,289	5,298	844	6,142
6. Projected Payroll for Upcoming Year			13,157			13,157			13,157
7. Contribution Rate as of 6/30/20**									
7a. Normal Cost Rate (Employer)	38.85%	6.49%	45.34%	42.22%	6.92%	49.14%	34.02%	6.41%	40.43%
7b. Unfunded Liability Amortization Rate	24.74%	(8.24%)	24.74%	28.57%	(7.60%)	28.57%	19.96%	(8.33%)	19.96%
7c. Total Rate (not less than Employer Normal Cost)	**63.59%**	**6.49%**	**70.08%**	**70.79%**	**6.92%**	**77.71%**	**53.98%**	**6.41%**	**60.39%**

* this is provided for informational purposes only; consistency between assumptions needs to be maintained when considering assumption changes
** % of projected payroll for the upcoming year

Cost Effects of Proposed Economic Assumptions (cont'd)

NGNMRS

as of June 30, 2020 ($000's)	Current	Proposed – All Economic Assumptions*
1. Actuarial Accrued Liability (AAL)	22,417	25,097
2. Actuarial Value of Assets (AVA)	43,020	43,020
3. Unfunded Actuarial Accrued Liability (AAL - AVA)	(20,603)	(17,923)
4. Funded Ratio (AVA / AAL)	**191.9%**	**171.4%**
5. Normal Cost	503	626
6. Contribution as of 6/30/20		
6a. Normal Cost and Administrative Expenses	759	882
6b. Unfunded Liability Amortization	(3,325)	(2,702)
6c. Total (not less than zero)	**0**	**0**

* the only economic assumption that affects NGNMRS is the investment return assumption

Appendix

GEMS Geometric Returns by Asset Class

Approach #1

Asset Class	1 year	5 year	10 year	15 year	20 year	25 year	30 year
Cash	0.14%	0.88%	1.49%	1.91%	2.15%	2.30%	2.40%
US All Cap	6.78%	6.58%	6.87%	7.27%	7.44%	7.55%	7.69%
Global Equity ex US	5.99%	5.72%	5.81%	6.14%	6.24%	6.32%	6.40%
Global Equity	6.45%	6.38%	6.59%	6.96%	7.11%	7.21%	7.32%
Aggregate Bonds	-0.22%	0.89%	1.78%	2.32%	2.69%	2.91%	3.05%
Infrastructure	6.22%	5.67%	5.72%	6.00%	6.08%	6.14%	6.19%
Private Equity	9.73%	8.50%	8.37%	8.74%	8.89%	9.03%	9.23%
NCREIF	6.26%	7.10%	7.30%	7.19%	7.18%	7.17%	7.22%
REIT	6.87%	5.84%	5.66%	5.58%	5.57%	5.56%	5.60%
Inflation	1.68%	1.73%	1.85%	1.98%	2.03%	2.05%	2.08%

Approach #2

Asset Class	1 year	5 year	10 year	15 year	20 year	25 year	30 year
Cash	0.14%	0.88%	1.49%	1.91%	2.15%	2.30%	2.40%
US All Cap	5.78%	5.57%	5.86%	6.25%	6.42%	6.54%	6.67%
Global Equity ex US	5.03%	4.76%	4.84%	5.22%	5.37%	5.44%	5.50%
Global Equity	5.47%	5.39%	5.60%	5.99%	6.16%	6.26%	6.35%
Aggregate Bonds	-0.22%	0.89%	1.78%	2.32%	2.69%	2.91%	3.05%
Infrastructure	5.22%	4.67%	4.72%	5.00%	5.08%	5.14%	5.19%
Private Equity	8.73%	7.49%	7.35%	7.72%	7.87%	8.01%	8.20%
NCREIF	5.26%	6.10%	6.29%	6.18%	6.18%	6.17%	6.22%
REIT	5.87%	4.83%	4.65%	4.57%	4.56%	4.54%	4.59%
Inflation	1.68%	1.73%	1.85%	1.98%	2.03%	2.05%	2.08%

Actuarial Certification

Use of Models

Actuarial Standard of Practice No. 56 (“ASOP 56”) provides guidance to actuaries when performing actuarial services with respect to designing, developing, selecting, modifying, using, reviewing, or evaluating models. For this presentation, Buck used the following:

- internally developed and third-party model to compare actual versus assumed experience and determine proposed assumptions to use for valuing the liabilities in the third-party software
- models to analyze investment returns as previously described in this presentation
- third-party software to calculate the liabilities associated with the plans based on current and proposed assumptions
- an internally developed model that applies applicable funding methods and policies to the liabilities derived from the output of the third-party software and other inputs, such as plan assets and contributions, to determine the contribution rates

Buck has an extensive review process for annual valuations whereby the results of the liability calculations are checked using detailed sample output, changes from year to year are summarized by source, and significant deviations from expectations are investigated. Other outputs and the internal model are similarly reviewed in detail and at a high level for accuracy, reasonability and consistency with prior results. The models used for annual valuations are used for this presentation and any adaptations for this presentation are checked and reviewed by experts within the company who are familiar with applicable funding methods as well as the manner in which the model generates its output. If significant changes are made to the internal model, extra checking and review are completed.

Actuarial Certification

The purpose of this presentation is to provide the ARMB Actuarial Committee with an analysis of proposed changes to the economic assumptions that are used in the actuarial valuations of the State of Alaska's retirement systems.

The cost effects of the proposed assumptions are based on the June 30, 2020 actuarial valuations, assuming the current demographic assumptions are unchanged.

Please see the June 30, 2020 actuarial valuation reports for a more detailed description of risk factors related to future funding of the plans (ASOP 51).

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

The results were prepared under the direction of David Kershner and Scott Young, both of whom meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. These results have been prepared in accordance with all applicable Actuarial Standards of Practice.

David Kershner
FSA, EA, MAAA, FCA
Principal, Retirement

Scott Young
FSA, EA, MAAA, FCA
Director, Health

State of Alaska

Timeline for June 30, 2021 Valuations (PERS/TRS DB and DCR, JRS, NGNMRS, EPORS)

Item #	Task	Original Deadline	Revised Deadline	Date Completed	Team Responsible	Comments / Notes
1	Enrollment Data Request to Aetna	7/16/21		7/6/21	Buck	Send to Daniel Dudley at Aetna. Enrollment counts received 7/21.
2	Valuation Data Request to DRB	7/16/21		7/16/21	Buck	
3	Monthly Audit Discussion with GRS / Buck	7/21/21		not needed	GRS / Buck	
4	Preliminary 6/30/2021 Assets to Buck	8/6/21		8/10/21	DRB	These will be used only for the adoption of FY23 contribution rates.
5	Monthly Audit Discussion with GRS / Buck	8/18/21		not needed	GRS / Buck	
6	Valuation Data to Buck	9/3/21		9/3/21	DRB	
7	Monthly Audit Discussion with GRS / Buck	9/15/21		9/15/21	GRS / Buck	
8	Audit Data and Sample Lives Request to Buck	9/17/21		9/22/21	GRS	
9	**Actuarial Committee Meeting - FY23 Contribution Rates**	9/22/21		9/22/21	All	**Teleconference**. Deadline for meeting materials is 9/3.
10	Claims Data Request to Segal/DRB	9/24/21		9/13/21	Buck	Incurred claims through 6/30/21 that are paid through 8/31/21.
11	Data Questions to DRB	9/24/21		9/29/21	Buck	PERS data questions sent on 9/24. TRS data questions sent on 9/29.
12	Data Answers to Buck	10/8/21		10/7/21	DRB	
13	Final 6/30/2021 Assets to Buck	10/15/21		n/a	DRB	Use same assets as provided for 6/30/21 GASB reporting.
14	Monthly Audit Discussion with GRS / Buck	10/20/21		10/20/21	GRS / Buck	
15	TRS (and selected school districts in PERS) updated active listing at 10/1/21 to capture term/rehires since 6/30/21	10/22/21			DRB	Won't be reflected in 6/30/21 valuations, but DRB still wants Buck to track how many terms/rehires by plan.
16	Claims Data to Buck	10/22/21		10/8/21	Segal / DRB	Incurred claims through 6/30/21 that are paid through 8/31/21.
17	6/30/2021 Valuation Data and DRB Data Questions to GRS	10/29/21	11/15/21		Buck	
18	Sample Life Information to GRS	11/5/21	11/19/21		Buck	
19	Preliminary Valuation Results and PVB's by individual to GRS	11/15/21	11/23/21		Buck	
20	Monthly Audit Discussion with GRS / Buck	11/17/21			GRS / Buck	
21	**Actuarial Committee Meeting - 6/30/21 valuation results (preliminary), economic assumptions for experience study**	12/1/21			All	**Juneau**. Deadline for meeting materials is 11/12.
22	Monthly Audit Discussion with GRS / Buck	12/15/21			GRS / Buck	
23	Draft DCR Valuation Reports to GRS	1/7/22			Buck	
24	Monthly Audit Discussion with GRS / Buck	1/19/22			GRS / Buck	
25	Draft DB Valuation Reports to GRS	1/21/22			Buck	
26	Monthly Audit Discussion with GRS / Buck	2/16/22			GRS / Buck	
27	Draft Actuarial Review Report to Buck	2/28/22			GRS	
28	Monthly Audit Discussion with GRS / Buck	3/9/22			GRS / Buck	
29	**Actuarial Committee Meeting - 6/30/21 valuation results (full), projections, draft valuation reports, demographic assumptions for experience study**	3/16/22			All	**Juneau**. Deadline for meeting materials is 2/25. Also include demographic assumptions for experience study.
30	Monthly Audit Discussion with GRS / Buck	4/20/22			GRS / Buck	
31	**Actuarial Committee Meeting - follow-up to March meeting (if needed)**	4/28/22			All	Teleconference.
32	Monthly Audit Discussion with GRS / Buck	5/18/22			GRS / Buck	
33	**Actuarial Committee Meeting - final valuation reports, follow-up discussion on assumptions for experience study**	6/15/22			All	**Anchorage**. Deadline for meeting materials is 5/27.

Note: All deadline and completion dates are specific to PERS/TRS.

Alaska Retirement Management Board

CHARTER OF THE ACTUARIAL COMMITTEE

I. Actuarial Committee Purpose.

The Actuarial Committee (Committee) assists the Alaska Retirement Management Board (Board) in fulfilling the Board's function of independent oversight of the integrity of the Alaska Retirement Management Board' s (Board) retirement systems ' actuarial valuations, experience analyses, and other requested reports and analysis, including compliance with legal, accounting., and regulatory requirements. It also serves as a conduit of communication between the Actuary, the Review Actuary, the Audit Actuary, Department of Administration (DOA) and Department of Revenue (DOR) staff, and the Board.

The Committee has the authority to conduct any review appropriate to fulfilling its responsibilities and it has direct access to the independent actuaries, as well as DOR and DOA management and staff, and legal counsel. The Committee may recommend that the Board retain, at Board expense and consistent with applicable procurement requirements, special legal, accounting, or other consultants or experts it considers necessary in the performance of its duties.

II. Actuarial Committee Responsibilities and Duties.

A. The Committee shall assist the Board in carrying out the following responsibilities:

1. Coordinate with the retirement system administrator to have an annual actuarial valuation of each retirement system prepared to determine system assets, accrued liabilities, and funding ratios and to certify to the appropriate budgetary authority of each employer in the system (A) an appropriate contribution rate for normal costs; (B) an appropriate contribution rate for liquidating any past service liability; in this subparagraph, the appropriate contribution rate for liquidating the past service liability of the defined benefit retirement plan under AS 14.25.009 - 14.25.220 or the past service liability of the defined benefit retirement plan under AS 39.35.095 - 39.35.680 must be determined by a level percent of pay method based on amortization of the past service liability for a closed term of 25 years;

2. Review actuarial assumptions prepared and certified by a member of the American Academy of Actuaries and conduct experience analyses of the retirement systems not less than once every four years, except for health cost assumptions, which shall be reviewed annually; the results of all actuarial assumptions prepared under this paragraph shall be reviewed and certified by a second member of the American Academy of Actuaries before presentation to the board.

3. Review the annual actuarial valuations and any actuarial experience analysis prepared by the Actuary and the report prepared by the Review Actuary prior to presentation or distribution of any report.

4. Coordinate with staff to conduct an independent audit of the state's actuary not less than once every four years and review any audit report prepared by the Audit Actuary prior to presentation or distribution to the Board.

5. In consultation with management and the independent actuaries, consider the integrity of the actuarial reporting processes and controls, including the process for "closure" on the audit findings.

6. Review any significant changes to applicable actuarial principles and any items required to be communicated by the independent actuaries.

7. Review the independence and performance of the actuaries and periodically recommend to the Board the appointment of the independent actuaries or recommend approval of any discharge of actuaries when circumstances warrant.

8. Review, discuss and recommend for Board consideration any strategic issues related to the actuarial work.

9. Review and assess the adequacy of this Charter at least annually and submit recommended changes to it to the Board for approval.

10. Review and periodically perform self-assessment of the Committee's performance.

B. The Committee shall have the following responsibilities with respect to the ARMB's independent actuaries:

1. Schedule an annual pre-valuation entrance conference with the Actuary that includes DOA and DOR staff and the Review Actuary to discuss scope, staffing, locations, timeline , reliance upon management, and general approach to the annual valuation conducted for the retirement systems; and in the year that an actuarial experience analysis is conducted, schedule a similar entrance conference.

2. Discuss with management and the independent actuaries the actuarial principles and provide input as to the underlying assumptions and methods used in the preparation of the retirement systems' valuation reports and experience analyses to ensure the integrity of actuarial number s used in preparation of accounting reports, compliance with GASB or other regulatory bodies, consistency with the actuarial policies of the plan, and alignment with the purpose of the reporting.

3. Review the Actuary's draft valuation and the Review Actuary's draft report (and the experience analysis and review when conducted); discuss the contents with the actuaries and monitor the follow-up on significant observations, findings, and recommendations.

4. Discuss with the independent actuaries the clarity and format of the presentations in appearances before the committee and the Board.

5. Meet with the actuaries, in the absence of management, to review findings, recommendations or other pertinent subjects.

6. Review Audit Actuary report (conducted every four years); discuss any significant findings with Actuary and management.

C. In addition to the foregoing, the Committee shall:

1. Perform such other activities consistent with this Charter, and governing law as the Committee considers necessary or appropriate or as the Board may otherwise request.

2. Maintain minutes of Committee meetings and periodically report to the Board on significant results of the Committee's activities.

Alaska Retirement Management Board
Actuarial Committee
Schedule of 2022 Meetings

2022

January TBD, 2022 (Videoconference)

1. Highlights of Draft Valuation from Buck (scheduled so that the committee has a preview of the draft valuation contents prior to any dissemination to the administration and/or legislature-legislative committees)

March 16, 2022 (Juneau/Teleconference)

1. Discuss Draft Review Actuary Report;
2. Review Draft Valuation Reports; requests or recommendations for edits or corrections
3. Review Audit Findings List; proposed resolution and recommendations
4. Discuss demographic assumptions from the 2021 experience study
5. Update on RFP for Review Actuary Contract

April TBD, 2022 (Videoconference)

1. *If necessary* – scheduled to follow up on discussion/findings/questions from March meeting

June 15, 2022 (Anchorage/ Videoconference)

1. Review and discussion of final review reports and valuations, including any items brought forward from March meeting
2. Action: Recommendations from committee to board for acceptance of review reports and valuations
3. Recommendation from committee to board for action on Audit Findings List
4. FY2022 valuation discussion
   a. Valuation Timeline
   b. Actuarial principles and underlying assumptions; any proposed new assumptions
   c. Outstanding audit issues (Audit Findings List)
5. Adopt experience analysis assumptions

September 14, 2022 (Anchorage/Videoconference)

1. Review contribution rate resolutions/action memos for recommendation to Board
2. Status/Follow-up from previous meetings
3. Education Topic:

November 30, 2022 (Anchorage/Videoconference)

1. Status Report/Discussion on Draft Actuarial Valuation and Second Actuary Review Process
2. Discussion of new trends and findings in actuarial matters
3. Education topic:

Periodic and As Needed Meeting Topics

1. Updates by DOA on actuary procurement.
2. Actuarial Committee training.

Updated: 11/17/2021