Does not include written testimony submitted prior to the public hearing per our COVID-19 Response protocol

LINDSTROM: [RECORDER MALFUNCTION] Retirement Systems Committee hearing. My name is Brett Lindstrom. I'm from Omaha, Nebraska, representing District 18 and serve as Vice Chair of the Retirement Committee. For the safety of our committee members, staff, pages, and public, we ask those attending our hearings to abide by the following. Due to social distancing requirements, seating in the hearing room is limited. We ask that you only enter the hearing room when it's necessary for you to attend the bill hearing in process. The bills will be taken up in the order posted outside the hearing room. The list will be updated after each hearing to identify which bill is currently being heard. The committee will pause between each bill to allow time for the public to move in and out of the hearing room. We request that everyone utilize the identified entrance and exit doors to the hearing room. We request that you wear a face covering while in the hearing room. Testifiers may remove their face covering during the testimony to assist committee members and transcribers to clearly hear-- clearly hearing and understanding the testimony. Pages will sanitize the front table and chair between testifiers. Public hearings for which attendance reaches seating capacity or near capacity, the entrance door will be monitored by a sergeant of arms who will allow people to enter the hearing room based on-- based upon seating availability. Persons waiting to enter a hearing room are asked to observe social distancing and wear a face covering while waiting in the hallway or outside the building. To better facilitate today's proceedings, I ask that you abide by the following procedures. Please silence or turn off your cell phones. Move to the front of the row when you are ready to testify. Order of testimony will go introducer, proponents, opponents, neutral, and closing. Testifiers, please sign in, hand your blue sheet to the committee clerk when you come up to testify. Spell your name before the-- spell your name for the record before testifying. Please be concise. It is-- today we'll probably not go with a clock. If you will be testifying at the microphone, we want to go on record or have a position on a bill being heard today, there are white sheets in the entrance where you may leave your name and other pertinent information. These sign-in sheets will be exhibits in the permanent record at the end of today's hearing. We ask that you please limit or-- we ask that you please limit or eliminate handouts. Written material may be distributed to committee members as exhibits only while testimony is being offered. Hand them to the page for distribution to the committee and staff when you come up to testify. We will need one copy, I guess.

KATE ALLEN: Two.

LINDSTROM: Two copies. If you have written testimony, please. To my immediate right is Kate Allen. And down at the end the table is Katie Quintero, the committee clerk. The committee members joining us today are-- unfortunately we had a COVID situation so out of precaution, precautionary, what the Speaker had told us that they're going to quarantine until, I believe, Monday. And so they'll be joining us, I think. Four of the committee members are on Appropriations and one of the committee members is doing another bill. So lucky for you, just have me today. So and again, we'll take up the orders posted. Today we'll start with the 2020 Actuarial Valuations Experience Study and Report on that. So we will open on the report. Good afternoon.

PATRICE BECKHAM: Good afternoon. Thank you, Senator Lindstrom. All right. I have a lot of information to share with you. It's been a busy actuarial year for the retirement systems. So a lot of, I hope, good and interesting information. You have the presentation in front of you. We'll go through it together. As always, please feel free to stop me at any time and ask questions right then when the relevant question is there.

LINDSTROM: And I just forgot to for the record, if you'd spell--

PATRICE BECKHAM: I forgot to-- yeah, I just saw the note. Patrice Beckham, P-a-t-r-i-c-e, Beckham, B-e-c-k-h-a-m, with Cavanaugh Macdonald Consulting. Sorry. I'm so excited to share with you I just forgot. All right. Slide number2. As I mentioned, there's been a lot of activity on the actuarial side of the house at the retirement system. I'm here today to share with you the results of the July 1, 2020, actuarial valuation for the school, Patrol, and judges retirement systems. You'll remember those three have a July1 valuation date. The state and county cash balance plans have a January 1 valuation date. Valuations are performed annually. So this is the update for 2020. In addition, by statute an Experience Study is performed every four years and we were due for one in 2020 so I have that information to share with you. That affected all five of the plans. The changes and assumptions from the Experience Study are not reflected in the 2020 valuation results. Those will be implemented in the 2021. And then at the very end we always share some projections with you about what future trends look like and we'll do that using the new assumptions. Doesn't make sense to use the old ones. All right, slide 3. Just kind of a reminder. We come every year and visit with you about the valuation. But what the valuation is all about is monitoring the funding progress of the plans. These are very, very long-term obligations. The streams of benefit payments go out 75, 80, 85 years. So we can't just set a contribution rate and check in, in 10 or 20 years. We're monitoring it to make sure if we need to make changes, additional money goes in or if changes need to occur in benefits that those happen in a timely fashion. So we measure assets and liabilities. Assets, we do use a smoothing method. It's market related, but it smooths the difference between the expected return and the actual return over five years, which is just a mechanism to give the highs and lows of the market time to average out. Probably don't need to talk about market volatility this year as everybody understands it. The difference, the liabilities then, of course, are the present value of those future benefit payments. So we compare those two and that difference has to be funded by contributions and investment income in the future for the system to be actuarially sound. So one of the key pieces of information that comes out of the valuation is that actuarial contribution rate. And then if there is any additional state contribution that is due, it's for the plan year ending June 30, 2021, but it's actually made usually early July, which would be fiscal year '22 for the state's budget. The valuation also gives us an opportunity to look back over the last 12 months and measure the actual experience, what actually occurred versus what was anticipated by assumptions. And as you know, we use a lot of different assumptions. They're our best estimate, but we know they're going to vary from year to year, even if they're correct or accurate over the longer term. So that keeps those assumptions and the experience in front of us. If, if we see a consistent loss, for example, on mortality, loss, loss, loss, it's, you know, foreshadowing when the Experience Study comes, we're likely going to have to change that assumption. And then in addition, we prepare that modeling tool. Again, we use that to look at trends. We use it to stress test the results. What if these, you know, if all assumptions aren't nice and pretty, what are the implications? And what are the-- what are the risks to funding the plan? That's really where the actuarial profession is headed with trying to communicate with, with stakeholders. So slide 4 we'll talk about what, what impacted the July 1, 2020, valuation results? Well, as I said, we measure the actual experience compared to what the assumptions would have anticipated. And that happens every year. And I've done this for 40-plus years and I've never had a year where every assumption was met, probably had a few years where one assumption was met pretty closely so we know it's going to vary. Investment return is, you know, the one that is the wildest ride. And we have a slide to show that to you. But when you look at that slide, you'll see most of the time it's not anywhere close to the assumption. It's either way higher or way lower. Sort of, unfortunately, investment return is the biggest driver of valuation results. So with that wild volatility, it becomes very hard to manage and create stability in the contribution rates. So we had an actual return on market value for fiscal year '20 of 2.4 percent, which after what happened in March and April, was pretty good. So we had what we call an actuarial loss on assets. And that simply means that the return on the actuarial or smooth value of assets of 6.4 was less than the assumed rate of 7.5. OK, it doesn't mean there was a negative return, just means you didn't-- you didn't hit the benchmark. So actuarial losses tend to increase the contribution rate and decrease funded ratio. However, this year, the COLAs that were granted, which are related to actual CPI with the, the older tier not to exceed 2.5 percent and the newer tiers have a 1 percent cap, you can see the COLAs granted were-- the COLA granted was .52 percent. So our assumption is 2.25 for the older tiers and 1 for the newer tiers. So lower COLAs mean lower future benefits means lower liabilities. So we actually spun off a very nice liability gain for all three plans that really helped to offset that investment actuarial loss. So overall favorable experience actually improved the funded ratio slightly for Patrol and, and schools. Judges had kind of a liability loss for mortality. It's a very small group, so it's easily impacted by the actual experience. It held pretty steady. And we have those numbers to share with you in a few slides. There were no changes in plan provisions or assumptions, except I wanted to visit with you a little bit. We did change our assumption for court fees for the judges plan for fiscal year '21. And as I mentioned, next year, the changes recommended in the Experience Study will be reflected in the 2021 valuations. And we'll have a lot more information on that later. But on the judges' court fees on page 5, our typical assumption is it's very difficult to anticipate court fees I think for anybody. It's not just us. So the, the general assumption has always been whatever we received in the year that just ended, we'll use that amount for the current year. And that's what we did for fiscal year '20. We used the actual fiscal year '19 court fees, which were $3.9 million. You can see the actual court fees for fiscal year '19 were $3.5 million. So we were short about $400,000. And this little graph, the fiscal year '19 court fees by month are the dark blue and then fiscal year '20 are red. And you can kind of see, especially when you get to May and June, that the fiscal year '20 court fees are much lower and that's likely at least partially impacted by the pandemic.

LINDSTROM: Yeah.

PATRICE BECKHAM: But we got a little nervous because when we were doing this in the fall, the, you know, the pandemic is still going on. So the question was, well, has that trend continued? You know, what should we be using as an estimate for fiscal year '21, knowing that we're still dealing with the pandemic? And we at that point, we only had information for fiscal year '21 for July, August and September. Those are the green bars on the far left side. But you can see they're considerably lower than the red bars, which were fiscal year '20. So we felt like we needed to, to change that methodology, that assumption. So for fiscal year '21, our assumption is that the court fees will be 85 percent of what they were in fiscal year '20, which is about $3 million. And then you'll see when we get to the projections, we're assuming they ramp back up hoping and praying things get back to some normalcy in the next three years. All right, slide 6, I mentioned earlier that we use an asset valuation method or an asset smoothing method to try to take out some of the volatility related to returns on market value. So in this graph, the blue line is the return on market value. And you can see it's extremely volatile. As I said, it's rarely close to the black line. The red line here is the return on the smooth value, the actuarial value. And you can see that it does indeed kind of smooth out some of the peaks and valleys. It still moves because the, the market values are so different. You know, you have a minus 20 and almost, you know, plus 24 in this 20-year period. So, so that's why we use an asset smoothing method. It's very common for public plans to use that because everybody's in the same boat with trying to, to budget for these contributions. If you had used pure market value, you'd see extreme volatility in the contributions and particularly for the Nebraska plans, the additional state piece with it's very leveraged. So that's a common practice. On slide 7, just a summary of the change in the funded ratio. So the funded ratio is actuarial or smooth assets divided by the actuarial accrued liability. And again, the actuarial accrued liability is in a perfect world, if all your assumptions had always been met and you-- and you funded the amount that the actuary recommended, that's where your assets would be if we never had any variance of actual versus expected. But we do. That's the world we live in. So the actuarial assets are not equal to the actuarial accrued liability, and that difference is called the unfunded actuarial accrued liability. And that difference simply needs to be paid in the future over a reasonable period of time to again ensure that there will be money to pay the benefits when they're due. So you can see we started off the funded ratio July 1, 2019, these plans are very well funded. So judges was just over 98 percent funded; state Patrol at 87; schools at 90 percent. Those are great funded ratios. The median public plan funded ratios in 2019, probably about mid 70s, 70 percent. So these are noticeably higher. And then you can see again what, what happened that impacted the funded ratio. And I'm not going to go through everything because we've got so much information to cover. But a couple of things to point out. You'll see right in the middle investment experience, and that's a big one. OK, and we talked about we did not hit the 7.5 percent return, so that's why it decreased the funded ratio. That's, that's headwind for making progress in funding. But then the next line you can see liability experience, in particular for Patrol and schools, pushed the funded ratio up actually more than we lost on the investment return side. And then the other thing to just point out, under the schools, you notice the actual contributions versus the actuarial required contribution, that 0.38 percent. Right now, the contributions that are coming in to fund the school system are actually larger than the actuarial rate. So that extra money that comes in goes straight to pay off that unfunded liability and improves the funded ratio. It's a very good situation to be in. So July 1, 2020, we ended up judges, you know, 97.3 percent; Patrol up just slightly, a little bit over 88; and schools at 91.65 percent.

LINDSTROM: Has that-- has that judges that-- that's probably never fallen out of the 95 percent range. I mean it tends to stay right up there.

PATRICE BECKHAM: It's been very well funded for a long time.

LINDSTROM: Yeah, just--

PATRICE BECKHAM: I can have that really quick. It's been above 85 percent since 2001.

LINDSTROM: Above 85?

PATRICE BECKHAM: And close to 90 for most of that.

LINDSTROM: Yeah.

PATRICE BECKHAM: Remember with smoothing you recognize over five years. So the ugliness that happened in fiscal year '09, drug it down a little bit.

LINDSTROM: I was going to say, as long as I've been sitting here, it's been in the high 90s.

PATRICE BECKHAM: Very strong.

LINDSTROM: I know that we've-- Senator Kolterman has introduced bills that deals with the funding of the judges and, and the Governor has included the full ARC payment in his budget and additional fees as well so.

PATRICE BECKHAM: Right.

LINDSTROM: Yeah.

PATRICE BECKHAM: And that's why it's well-funded.

LINDSTROM: Yeah.

PATRICE BECKHAM: These plans will work if you put the money in to fund them.

LINDSTROM: Yeah.

PATRICE BECKHAM: All right. So Slide 8 is, you know, again, what impacted the actuarial required contribution. And again, you've got all the information for all three of the plans. I won't go through each of those. But the drivers that you saw on the last slide for the funded ratio are obviously going to be the drivers here as far as impact. Again, investment experience, if we don't hit our 7.5 assumption, it means more money has to come in to make up for the money we didn't earn on investments. So you can see for each of them there's an increase in the contribution for judges, .48 percent; Patrol, .88 percent; school, .35 percent. But then the liability experience, particularly for, again, Patrol and schools, is favorable. That brings the contribution rate down. We see a little bit of movement in the first row under the, the ARC rate, the change in the normal cost rate. We've got some changes in, in active membership because of new tiers that are in place. And so that's very gradual but over time we will see the normal cost rate trend down. So we ended up judges is a little bit higher, went from 25.56 to 25.95. Patrol is down a little bit and schools is down a little bit. So we'll look at the, kind of the details of those and the dollar amounts of additional state contributions on the next few slides. Slide 9 is the judges. And again, just to emphasize, all these numbers use the smooth value of assets, not market. Again, when we look at funding the plan, we have people who are actively working in the current fiscal year. There is a contribution as a percent of pay that goes in to fund the benefit that they're earning. And that's the normal cost. And it tends to be very stable under the methodology that we're using, and this year it's extremely stable. Did not change at all. Not so with the UAAL payment. That one bounces around because that's tied to your unfunded liability and all those variances flow straight through that number. But you can see, you know, there was a change. Again, the total contributions up a little bit. We do have a blended rate for the members. There are different contributions. But, but for everyone who entered the plan after July of '15, the contribution rate is higher. So, again, we expect over time for that to trend up, and that alleviates a little bit of the increase in the actuarial contribution rate. So really, the nonmember required contribution rate held very steady. When we apply that to the expected payroll for the year, you can see for, for the July 1, 2020, val which is fiscal year '21, it's about $4.4 million compared to 4.3 last year. But the big difference is, of course, the court fees that we just talked about two slides ago, that we're using the lower benchmark for expected court fees of $3 million and that's foreseen an increase in that additional state contribution.

KATE ALLEN: Excuse me, Pat. I have several questions from Senator Clements.

PATRICE BECKHAM: OK.

KATE ALLEN: His first question is what factors caused the 1.24 percent liability experience improvement for schools?

PATRICE BECKHAM: No, is that the-- the 1.24, is that what?

KATE ALLEN: Yes.

PATRICE BECKHAM: Let me. With three systems, I don't ever trust my memory. They're all very different.

KATE ALLEN: I'm not sure if he's looking ahead or if he's looking at the--

PATRICE BECKHAM: Actually, I think that is on slide 7.

KATE ALLEN: OK.

PATRICE BECKHAM: And if the senator has the actual report, the valuation report, there's a detailed analysis of gain and loss by source on that page. But we had again, we had the COLA. The COLA was much lower. I mean, most of the people in pay status get the two-- 2.5 percent COLA and it was .52 so, so that was a $125 million gain. That's a big one. We also had a gain on mortality and a gain on salary. They had a small gain on retirement, so I would say the big ones were salary, first COLA salary, mortality and those were significant. Salary gain was $100 million as well.

KATE ALLEN: OK. His second question is I see the actuary is recommending a change from 7.5 to 7 percent assumed investment rate. When will the 7 percent rate be in effect?

PATRICE BECKHAM: If I could defer that till this-- the slides on Experience Study, I think we will answer that very completely.

KATE ALLEN: OK. And then I'll follow up with another question when you get to that.

PATRICE BECKHAM: OK, sounds good. All right. So I think we were, yeah, we were-- we just finished up talking about the additional state contribution for judges and why it's up considerably from last year. It really has to do with the expected court fees. On page 10, again, the same layout for Patrol. And you'll, you'll notice for each of these plans, the normal cost varies because the benefit structure varies, the assumptions vary, and obviously the demographics of the members vary. But again, the total actuarial contribution held very steady; 45.42 this year. It was 45.67 last year. Again, we're looking at a blended rate for members. The new tier has a 17 percent contribution rate and the old tier is at 16. So the 16.15, the employer makes a statutory contribution that matches the member contribution. And if you subtract those two from the 45.42 percent, the additional state contribution is 13.12 percent of payroll, about $4.1 million, same as last year. The rate's down, the payroll's up. That's how those numbers stay the same. And then the bottom section of that, that table just shows you both the statutory and the additional, kind of look at it a little more holistic. Again, $9.1 million this year versus $9 million last year. That's pretty good news. And then page 11 is the school valuation results. Again, favorable experience, the liability experience we just talked through, move that unfunded liability payment down. We're just over 18 percent. When you look at the member contribution rate, the employers pay 101 percent of the member rate and the state contributes 2 percent of payroll. Those three together are 21.66 percent of pay. So that's where the, the margin, what we call the contribution margin is 3.61; 3.61 percent of payroll is coming in above and beyond the actuarial rate. And that means that we will reach full funding sooner. That's a great situation and also means there's no additional state contribution required, which has been the case for a lot of years as well. So this is like an ideal place to be. You're well funded, putting in a little bit more than you have to so that if it bounces around, you know, if we have-- we've had two, you know, calendar years, two good years. But if, if the rate moves up, you've got 3.6 percent that you can absorb without having to worry about an additional state contribution. All right, so if there are no other questions on the valuation results, again, that's the annual snapshot, how are we doing on funding? Now we're, we're moving to kind of the heavy lifting of the actuarial world and the liability side of the house for the system. It's probably the most important work that's done because the entire actuarial valuation process is trying to fund and put money away to pay the ultimate benefits. And it's the assumptions that help us estimate and put a value on those future benefit payments. So it's very, very important. There are a number of slides to go over. But I will tell you, the board has spent five board meetings discussing this and they've spent a lot of time. And I would just like to publicly acknowledge that and commend them. They're very thoughtful. They're very thorough. They dig into this and they give it the time it deserves and it's not always the case. So we're going to hit the high points today because, again, you probably don't want to spend five hours talking about this. So I will try to condense it and we will keep moving.

LINDSTROM: Where?

PATRICE BECKHAM: Slide 13 again, why this is done? I mean, it's statutorily required, but even when it was not, public systems do periodic experience studies. It's good governance, it's good policy. It gives us the basis for analyzing what's actually happened, evaluating that assumption, deciding if we need to make a change and if so, what that change should be. The actuary's role is really to perform the analysis. A lot of number crunching involved here, a lot of subjective analysis. And so we go through all that. We make a recommendation. But the board or the, the, the trustees have the fiduciary responsibility to actually select the assumptions. And it's a huge responsibility. Usually they adopt, I mean, broadly boards adopt the recommendations of the actuary, but it does not always happen. I've had a few times in my career where recommendations were not adopted, but it is the board's ultimate decision and it's their responsibility. And we recognize that and respect it. On page 14, again, we're comparing what actually happened during the study period. We have a four-year study period. Often we'll look back to the prior Experience Study. So we kind of, we're looking over eight years if we feel like we'd like to have a little bit more data. So compare what actually happened to what was expected to happen. And that measure indicates if the current assumption's doing a pretty good job at anticipating experience. If it's-- if it's way off, then we need to make an adjustment. Past experience is a-- is a pretty good indicator for certain assumptions. Mortality, you know, it's not a voluntary thing. It's not particularly helpful for investment return because that one is, is wild and much more forward looking. And I think it's important to just recognize that this, this process, because it's so important, there's part of it that is fairly objective and that is that calculation, the calculation. How many, how many were looking at retirements? How many retirements would we have expected in each of these ages based on the assumption? How many happened? You would give that data to ten actuaries, you should get the same answer. But the next part, it's very subjective and that is evaluating and interpreting that information and deciding on is a change necessary or appropriate? And if so, how do we want to change it? And if you had ten actuaries, you would get ten different answers. I'll just tell you that. There is a lot of professional judgment involved in setting assumptions. Page 15, we categorize the actuarial assumptions into two groups, economic and demographic. So obviously economic are things related to the economy. The demographics are things that happen to people. People retire, they terminate employment, they die. Those are the demographic assumptions. And who selects them? Again, the board ultimately is the entity that, that selects the assumptions. They tend to lean pretty heavily on the actuary because so many of the demographic assumptions are driven by data and nobody wants to argue with-- about mortality with actuaries. So we're usually good on those. But the economic assumptions are, you know, there's a lot of discussion. The investment consultants have a place at the table for that discussion as well, and other advisers will get involved. On page--

LINDSTROM: I'm just going to jump in real quickly. Just acknowledge for the record, Senator Slama has joined us so welcome.

SLAMA: Thank you.

PATRICE BECKHAM: Good to have you. So on 16, just a little visual to illustrate. We use something under Actuarial Standards of Practice called the building block method for economic assumptions. And it's, again, it's visual. You can see the first block is inflation and it has to be the same. No cherrypicking. You get to have high inflation for investment return and low inflation for salaries. It has to be consistent across all economic assumptions. Then we have productivity, which is how wages in the general economy grow faster than price inflation. It's, you know, basically how the-- your standard of living increases. And merit scale is how each individual person progresses through promotion, longevity, pay scales, things like that. And then the real rate of return is based on the asset allocation and the expected return for each of those asset allocations and then how they sort of are correlated with each other. What will that return, real rate of return be? And we add that to inflation for the nominal return. Since inflation is so important, I included this slide on Slide 17, which just shows all the sources of expected rates of inflation that we use in the Experience Study. This is very much a forward-looking measurement. What's happened in the past 10, 20, 30 years is not necessarily a good indication of what will happen in the next 30. It is a long, a long-term assumption. The current assumption is 2.75, which was actually lowered, I believe, from 3.25 in the last Experience Study. But as we look at all the data, we felt like it needed to be lowered, but we were uncomfortable going all the way to 2 percent. I'm hoping that's right, because that'll be my retirement years, but I'm not [INAUDIBLE]. So, so we wanted to make a meaningful change. But bear in mind that inflation could come back and be higher in the future. And particularly, these plans do have cost of living adjustments that we would want to not be overly aggressive. So we're--

LINDSTROM: I have a quick question. How, how far back do you go when you're looking at dropping that? You know when I'm looking at all the indicators that we're obviously at, as interest rates are as low as maybe they're ever going to be or certainly--

PATRICE BECKHAM: [INAUDIBLE]

LINDSTROM: --in the last couple of years.

PATRICE BECKHAM: Yeah.

LINDSTROM: I guess never say never, right? I mean, they can always go lower. And then with what the federal government and I don't know whether, is it $26 trillion or whatever it is now, and it looks like there's going to be another stimulus/infrastructure deal that's going to put another trillion-plus I'm guessing. And you know, all signs point to inflation increasing. So I guess my question is to decrease it, I'm assuming you're just looking at the rolling average over the last seven years or five years. Or how do they come to a conclusion when everything to me says inflation is going to go up I guess is my [INAUDIBLE]

PATRICE BECKHAM: Yeah.

LINDSTROM: --question.

PATRICE BECKHAM: And there is a lot of sort of, again, it's a lot of professional judgment, subjective viewpoint. All of these numbers that you see here are forward-looking estimates.

LINDSTROM: That's, that's, yeah, right. That's the question.

PATRICE BECKHAM: So it's part of what we have to weigh. But we're like, well, you know, we're not sure. The other thing is when they printed all the money back after the Great Recession, there was a lot of talk of inflation.

LINDSTROM: Right.

PATRICE BECKHAM: And it did not happen. And so that's what we're trying to kind of balance. Like 2.75 feels kind of high. And we kind of look at Social Security as a good metric because they're doing 75-year projections on an ongoing plan hopefully that's going to be around. It will be around. It's just whether it pays full benefits. But so, so that one's at 2.4. And again, it's sort of like that's where we're not-- that's why we're uncomfortable moving to even though if you looked at all these, it would argue that you'd be somewhere 2 to 2.10.

LINDSTROM: All right.

PATRICE BECKHAM: Aon is the investment consultant and their 20-year expectation is 2.10, but we're just not comfortable. And so it's very unscientific. Brent and I arm wrestled and I won. No, but we, we, we decided to move it down. We felt like we needed to go a little bit more than just a quarter percent because last time we moved, but maybe, you know, probably should have moved a little more last time to be honest. So we wanted to go down but not too far. And that's really where we landed at 2.35. It's above 2.25 and below 2.5.

LINDSTROM: Yeah, just interesting.

PATRICE BECKHAM: Yeah, it's, it's really hard. This one is super hard to do because historical has-- it doesn't matter.

LINDSTROM: Well, yeah, historically I was always-- is it 3.1 I think over the long, long term, somewhere in that range I believe.

PATRICE BECKHAM: Yeah.

LINDSTROM: But in the last 15, 20 years it's more in the 2, 2.5.

PATRICE BECKHAM: Yeah, it's been really low even for the last 20. Now you've got my curiosity piqued.

LINDSTROM: Not to sidetrack you there.

PATRICE BECKHAM: I know.

LINDSTROM: It's just that stuff kind of fascinates me.

PATRICE BECKHAM: You know, it's like it doesn't take much for me. [INAUDIBLE] Anyway, I'm going to find out for you before we're done. But I want to keep moving in case we run out of time. So slide 19 again, it's 18. I'm sorry, 18 is investment return. We need to spend a little time on this one. So when we lower the price of inflation, we automatically impact investment returns because of the building block. OK, so again, price inflation is down 40 basis points. Based on the information that we got from Aon, we also used something called the Horizon Actuarial Survey that has the capital market assumptions for about 30 other investment consultants. And about 12 of those have long-term 20- or 30-year expectations. Based on that information, we felt like the real rate of return needed to come down. Again, there's no right answer. So a lot of times, well, let's move in that direction. We do this every four years. We've got, you know, we have time to keep adjusting it down if that trend continues so that we decrease that 15 basis points. And then you'll notice the second to the bottom row that says adjustment for administrative fees. Right now, the 7.5 is net of both investment and administrative expenses. So it takes money to operate NPERS and pay benefits and all that. So those administrative expenses right now are netted out of the investment return. We recommended a change where the administrative expenses will be part of the actuarial contribution so they're not netted out of investment return. So that's five basis points. And that's why you see in the proposed that's zero. So we're really moved from 7.55 to 7 if you think about the kind of take, taking out the administrative expenses. So a pretty significant change in our world; 50 basis points is, is a meaningful change. And you remember the last time we did Experience Study we moved from 8 to 7.5. So in two experience studies we've moved from 8 to 7.

LINDSTROM: Do you think it will go lower then? I mean, I know you're projecting, but just based on I guess the conversation we just had if interest rates are the way they are and the underlying asset allocation in here hitting 7 percent to me is extremely difficult in this environment. Could you foresee it even being maybe lower?

PATRICE BECKHAM: After 40 years, I've learned that I could foresee just about anything happening, good or bad.

LINDSTROM: Yeah.

PATRICE BECKHAM: One thing to remember is this time frame. If you said over the next 10 years, I would say yes. More than likely with interest rates so low, returns are going to be below 7 likely-- I mean, look at the year we just had-- for the short term. But there's also because these plans sort of are perpetuity, they go on and on, they can invest for the long term. And, you know, things-- how they are now they're not going to be that way for 30 years. That's what I do know, at least I would bet on it. And so things could change. You know, interest rates could come up, inflation could come up. I mean, there's all these things, which is exactly why we do an Experience Study every four years--

LINDSTROM: Right.

PATRICE BECKHAM: --to stay on top of it and make the change when we need it and, again, just to move in that direction and not to overcompensate. But it is misunderstood because it's a very, very long-term assumption. And the plan, the plan can ride out the highs and lows that the market gets.

LINDSTROM: Right.

KATE ALLEN: So I have a couple of comments and questions that I need to ask. Senator Clements said it doesn't appear that actuarial returns have ever been even 7 percent. What would be the effect of a 6.5

percent assumed rate? And I don't know if you've done any of those calculations.

PATRICE BECKHAM: Well, the 6.5 would vary, you know, by each of the systems--

KATE ALLEN: Yeah.

PATRICE BECKHAM: --because it has a different impact on them. Again, in the valuation reports, we do a sensitivity analysis where we change the investment return assumption. Unfortunately, I see the one here is just 7 is as low as we go. We would have to to calculate that impact. And then it always comes with the is it-- is inflation changing because that then changes the cost of living assumption, the salary increase assumption. But if he wanted to know just change only the 7 to 6.5, we'd have to run the numbers and get back to you on that.

KATE ALLEN: And the other question, Senator Kolterman asked, if you just kind of review where our assumed rates have been and I know you mentioned it had been that we've gone from a 7.5 now with the proposal down to 7. And prior to that, can you talk about what those rates have been?

PATRICE BECKHAM: Right. And on slide 6 where we showed the historical asset returns, we actually had the assumption, that goes back to 2001, which is before my time. But it was 8 percent from 2001 through the 2017 valuation. And then it dropped 7.5. And now we'll be, I'll give it away, we're going to phase it, phase down to 7 over the next four years. OK. So it was 8 percent for a long time. You had a lot of company. That was the most common investment return assumption, the median. And there's hardly anybody left at 8. Out of 125 plans, I think there might be 2 that are still there. Did we cover them, Kate?

KATE ALLEN: And he also wanted me to make the comment, the current investment returns this year should help as well. In other words, the Investment Council continues to do a great job and also the PERB board and their management team are doing, I mean, they really did quite a job this year with five--

PATRICE BECKHAM: Yes.

KATE ALLEN: --sessions of actuarial presentations and decisions that they made. And he wanted to give a shout out to them as well so.

PATRICE BECKHAM: Absolutely, Senator. A lot of good governance going on in Nebraska. I'm proud of our state. All right, so slide 19, looking at sort of all the economic assumptions we talked about, you know, two of the big ones and again, the price inflation touches all the rest of them on this page. But when price inflation goes down, we talked about investment return assumption goes down. Again, the general wage inflation kind of across the board increases. If inflation is lower, that's going to be lower as well. Cost of living goes down. And in the cash balance plans, the, the interest crediting rate is somewhat sensitive to what's happening in the economy. And that's why that assumption is coming down a little bit. So these were the the bigger, bigger changes. On the demographic side, again, we did change assumptions. For the most part, they did not have a significant impact compared to the economic assumption changes. But one change I wanted to talk about was mortality, which is a big one, because benefits are payable as long as people live. If people live longer, paying benefits longer, liabilities are higher. You know, typically we will go to a standard table that's been published by the Society of Actuaries and then try to massage that a little bit to get it to fit better. And mortality varies by many, many factors. Geography is one of them. I'm happy to say in Nebraska, in the Midwest, we really have better mortality. We live longer than the average. That's good if you're a person, but if you're a retirement system, it does mean you're paying benefits longer. Obviously, females live longer than males. So if you have a system like school that's heavily female, that has implications. So we take all that into, into consideration. For Nebraska, most of the plans don't have enough data to really analyze mortality experience on their own. So we combine them all, but it's heavily driven by school because that's a big group. Our current assumption has been the RP-2014 white collar mortality table with a two-year age setback. That is a plan that was constructed based on corporate pension plan data because there was never anything for public plans until 2019. And we use what's called generational mortality, where the probability of death decreases just a little bit at most ages every single year. So for younger people, we're reflecting, anticipating a longer life expectancy than we are older people. That's definitely become the, the most common trend in the actuarial world. So slide 22, again, for the first time ever, super exciting, we've been recognized by the Society of Actuaries that public plans are important and they published a set of mortality tables that were constructed based on strictly public plan data. It's called the Pub-2010 Mortality Tables, different tables by occupation, first time that's ever happened. So teachers, public safety, general employees. And then again, there's a correlation between the size of the benefit of mortality, not a causation, but a correlation. Higher benefits tend to have, those people have better mortality. So there's three different levels. So this is a great resource for us as a starting place for all of our systems. And even though it didn't have a big impact, we wanted to move to the Pub-2010 tables, kind of for best, best practice. And you can see our recommendations there that the general employees was the one that fit the best above median, indicating our mortality in Nebraska's, you know, a little bit better. And then set back one year means a 65-year-old here exhibits mortality of a 64-year-old so, again, better mortality than what the standard table has, good news. Again, there's a projection improvement scale. I want to go into that. Basically, we're updating that going with this MP-2019 scale, which was the most recent one when we did the study. And again, it's reflecting slightly more improvement than what the old scale had. And I think, you know, that's a good thing, not dramatically more, but a little bit more. So page 24, you've got a summary of the, the changes in the demographic assumptions by plan. Again for school, a number of changes in particular, retirement. Mortality changed for all of them. On the next page you can see for state and county. Again, state and county are very resilient because they're not-- the benefits aren't based on the final, final salary at the end of a career. They kind of ebb and flow and they kind of-- things balance out there really nicely. So 26, this is just a description of that.

KATE ALLEN: Pat, before you move on, Senator Clements had a question.

PATRICE BECKHAM: Sure.

KATE ALLEN: It's on slide 17. Are Nebraska property tax increases included in the inflation statistics? If not, I agree with being above many of the other inflation metrics is his comment.

PATRICE BECKHAM: Is the Nebraska. what did you--

KATE ALLEN: Are Nebraska property tax increases included in the inflation statistics?

PATRICE BECKHAM: No. That is not--

KATE ALLEN: No.

PATRICE BECKHAM: --any of the metrics that we looked at.

KATE ALLEN: OK. And he says, if not, I agree with being above many of the other inflation metrics.

PATRICE BECKHAM: OK. OK, great. All right, so I want to keep us moving, because I know you also have the hearing on LB17. Page 27 I think is interesting. This just shows you sort of the, the impact of all the demographic changes and all the economic assumption changes on the liabilities. OK, so for schools, the net impact on liabilities was under 2 percent. You can see the demographic changes were actually lowered liabilities was below, below the zero percent. Patrol had a big impact, the economic changes there, a little bit on the demographics. But you can-- I don't know, for me, it's sort of interesting to see how the different changes impacted liabilities. Now, this isn't a direct correlation to contributions, but liabilities can drive contributions. And, and obviously, when you look at this chart, you understand the economic assumptions were the big driver. So those assumption changes were basically between 2 and 4 percent of liabilities have a material impact on the-- on the contribution rates. And they'll be implemented, we talked to the board about kind of different ways to, to implement those changes. They landed on a four-year implementation from the July 2021 to '24 valuations. And since we're dropping inflation 40 basis points, we're going to drop it 10 basis points each year and then kind of let that flow through the economic assumptions. The demographic changes will be implemented entirely in the '21 valuation. Doesn't make sense to phase in demographic assumptions. I want to make it clear we looked at this. We've done, you know, long-term projections. The phase-in does not have a negative impact on the long-term funding of the plans. We're ramping up quick enough that there's no-- there's no really long-term impact. What it does is it provides a smoother pattern of contribution increases and, quite frankly, gives the state some time to plan for what's coming down the road. All right, so page 29, again, a lot of numbers but, but relevant. These-- each one of these for each of the '21 through '24 valuations is the set of economic assumptions that we will be using in the valuation, which illustrate really how we're moving from 7.5 down to 7. I think that question came earlier, Kate. And all the other ones that are, are touched by that change in inflation that will go down, including the cost of living for tier one, the, the interest crediting rate on the cash balance plans, the wage increase, it's all driven by that change in price inflation. All right. Any questions on the assumptions? We're going to change gears a little bit and--

KATE ALLEN: I don't see any.

PATRICE BECKHAM: You don't see any. OK, great. So the-- you know, we talked earlier that we have a difference between actuarial accrued liability and actuarial assets, and that difference has to be funded in addition to what you're going to pay to-- to-- for the benefits of people that are actively working. And that is called the amortization policy, the unfunded liability amortization policy. And it's in statute in Nebraska. So for school, Patrol, and judges, we use layered amortization, which just means every year when we calculate the difference between actual and expected return or we change assumptions, we set up a separate little piece of UAAL and we fund it over 30 years for school, Patrol, and judges, a closed 30-year period. Interestingly, state and county are layered, but a different payment level dollar payments instead of level percent of payroll and close 25 years versus 30. And I was not around when that happened, but it's slightly different for whatever reason. What we're seeing in the industry and actuarial standards in particular is that 30-year amortization is considered to be really too long, especially when you're using level percent of payroll financing because you've got lower dollar amounts in the earlier years and then they ramp up over time. So in the early part of the period, you're not even paying the interest on the unfunded liability. And I think that-- we call that negative amortization. I think that's what's driving this criticism of 30 years. So we think that that should change. I would say if we look across the industry, 20 is probably becoming the new standard. But, you know, you have to look at each system and each state situation differently. And a lot of the recommendations that come out are for plans that are-- have sort of a variable contribution rate. So in Nebraska, we're kind of trying to fund with quasi fixed contribution rates. And so we believe that moving to 25 sort of balances the shorter period with, with the desire to have really more stable contributions funded with fixed contribution rates. And then to implement this one, we'll just kind of leave all the existing bases where they're at. OK, so when we did the valuations, the experience for fiscal year '20, we amortize that over 30 years, everything stays, but the new pieces going forward will be over 25. Since we were recommending, obviously, that, you know, that change has to be done by the Legislature. So we did recommend that the board seek legislation to do that. And because of that, we also wanted to include in the legislation the ability for the board to manage what we call tail volatility. So when you have these little pieces of UAAL or tranches, whatever you want to call them, and they-- when that payment's over with, you can get some weirdness at the tail. We're quite a ways out. The shortest period we have right now is 16 years. But I think it's smart to get it in statute now. So if, if when it happens, it can be managed by the board. And that does require that it be recommended by the actuary and that there be information provided to this committee to illustrate why it's being recommended and what the outcome is. And that's, I think, the hearing that you're having after this, LB17. The next three slides are just, you know, what impact does this change from 30 years to 25 have on judges, Patrol and school plans? Again, a lot of numbers. I would really say you want to look-- the current 30-year layers is on the left-hand side and 25-year layers on the right-hand side. And I would really tell you, look at the actuarial rate. I mean, the far right-hand side is the difference and that's relevant, but you want to put it in context. So when you go out to 2024 for judges, with 30-year layers, you'd be looking at 29.19 percent; with 25-year layers, 29.51 percent, so .33 percent of payroll. Again, what's happening, we've got both deferred investment experience flowing through in this projection and the phase-in on the economic assumptions. So it, just full disclosure, it does increase the cost to the extent liabilities are going up. But if you have gains, it will do-- it will recognize them more rapidly as well. OK. And on 33--

KATE ALLEN: Pat, excuse me. We're going to have to leave here in about 15 minutes.

PATRICE BECKHAM: OK.

KATE ALLEN: So I just want to kind of give you a time check.

PATRICE BECKHAM: Perfect. The next-- the next two is the same thing, just the other system. So you can-- you can look at those at your, your leisure. Important thing on schools is there's still a margin. It's bottom line. I'm going to hit projections real quick so that you have a little bit of time for LB17. Slide 35 is the projection for judges just over the next, you know, four years as we implement, phase in the new set of economic assumptions. Again, you'll see under court fees we are projecting that those will increase to $3.5 million. Kind of getting back to our, excuse me, our standard assumption that court fees this year will be about what they were the year before. But you can see that the additional state contributions will increase from $1.4 million to 2.1 over this time period. And a lot of that's driven by the economic assumptions. Thirty-six, you've seen this slide before. We've got court fees in blue; member contributions in green; and then the additional state contributions is the red piece. We've talked about this before, too, that contributions are developed as a percent of payroll, that court fees have nothing to do with payroll. And so we-- as the total amount goes up and court fees don't, it forces more and more into the additional state contribution. And I know that's been a topic of discussion before. Side 37, projected funded ratio if all assumptions are met. If all assumptions are met and you put in the actuarial contribution rate, it will move the system to full funding. And that's what's happening here. We don't quite get there by 2049, but in another year or two we would be there and that's the way it's supposed to work for actuarial funding. Slide 38, again, the short-term projected contributions for Patrol. These numbers, again, probably more interesting part here, additional state contributions in the 2020 valuation was $4.1 million. By the time all this shakes out in 2024, it'll be up to $7.1 million. This-- Patrol was hit the hardest by the change in the assumptions. And then slide 39, again, this is the longer term projection. You'll see the red piece is the additional state contributions, which we pretty much expect there to, to be a requirement for at least the next 20 years. And we talked about tail volatility. You see that at the end of this, the slide where the red pops in and out over about the last six or eight years. So when the board can deal with managing that, some of that can be smoothed down. That's exactly why we want to get that in statute. Funded ratio on page 40, again, it's going to move to 100 percent because that's how actuarial funding works. On page 41, the school system, again, this graphic is a little bit different because of the funding that's coming in. But basically there is a contribution margin. We've got the 2 percent of pay and then the employer contributions, which is larger than the red line, which is the actuarial contribution. And again, there's no additional state contributions expected, certainly if the-- if the actuarial assumptions are met. Page 42 is actually contributions. It says funded ratio, that's actually total contributions. Again, no additional state contribution is expected. Dollars increase simply because payroll is increasing over time. And then page 43 school projected funded ratio, remember additional money is coming in. That margin moves the system to 100 percent funded sooner. And that's why we reach it in 2032 instead of in 2049. Likely something will happen if the system actually gets to 100 percent funding. So the projections from '32 to '49 may not be all that valuable. And then the state cash balance plan.

KATE ALLEN: Pat, before you move on to that, Senator Clements had a question on mortality on slide 22. Female mortality is assumed less than male. For male and female retiring at the same time with the same years of service and pay, does the male receive a higher monthly benefit due to a shorter lifespan?

PATRICE BECKHAM: The short answer is no.

KATE ALLEN: OK.

PATRICE BECKHAM: So for school, Patrol, and judges, it's a formula benefit. It may cost more to fund the female, but they don't get a higher benefit.

KATE ALLEN: OK.

PATRICE BECKHAM: In the cash balance plans, the factors are unisex factors.

KATE ALLEN: OK.

PATRICE BECKHAM: You cannot pay females more. So 44 and 45 look very similar for the cash balance plans. Again, these plans have a contribution margin, so the bars are higher. The red line is the actuarial required contribution. The money coming in, employer and member, is higher than that, a couple percent. That's what helps those plans be so resilient when bad things, experience happens. It's less favorable. County looks similar. I'm going to wrap up on slide 46. We, we've talked about this. That basically demographic assumption changes were more fine tuning, but more significant changes in the economic assumptions. I think those were necessary. They're important. They actually set the plan up to be more successful because we should have fewer actuarial losses from experience that is less favorable than assumed. But the really last bullet is really key. Even after all the assumption changes, all five plans are very well funded and they're all projected to get to full funding. The, the state has a policy of contributing the additional contributions. So really, I think everything's great. This was a lot of work, I'll be honest, for us and for the board. I feel really good about where we ended up. And I think the phase-in is a very logical approach and it does no harm to the funding and the system. So.

LINDSTROM: Sounds good. Thank you very much, appreciate it.

PATRICE BECKHAM: And Senator Lindstrom, I just have to say, the last 30 years, actual inflation has been 2.44. Since 1913 now it's been 3.11.

LINDSTROM: Very good.

PATRICE BECKHAM: [INAUDIBLE]

LINDSTROM: Got to dig deep in the history memory banks there. All right. Thank you so much.

PATRICE BECKHAM: Thank you.

LINDSTROM: And that will end the hearing on the report on the valuation and Experience Study. We will now move to LB17. We'd like to welcome Tyler Mahood, Senator Kolterman's legislative aide.

TYLER MAHOOD: Good afternoon, Senator Lindstrom, and those watching this public hearing online. My name is Tyler Mahood, M-a-h-o-o-d, and I am Senator Kolterman's legislative aide. Unfortunately, due to COVID protocols, Senator, Senator Kolteman is unable to be here today. So I am here to introduce LB17 on his behalf. LB17 would change the current

30-year amortization periods to 25-year periods beginning July 1, 2021, for the judges, school employees, and the Nebraska State Patrol defined benefit plans. These changes were recommended by the actuary, Cavanaugh Macdonald, which is under contract with the Public Employees Retirement Board. The judges, school employees, and the Nebraska State Patrol Acts are also amended to authorize the actuary to, to combine or offset certain amortization bases to reduce future volatility of the actuarially contribution rate, the actuarial contribution rate. Prior to making these change, these actuarial adjustments, the PERB must notify the Nebraska Retirement Systems Committee of the actuary's recommendation. Written notifications must include the actuary's explanation of why the combination or offset is in the best interest of the plan at the proposed time and include a projection of the contributions to fund the plan if these adjustments are implemented and if no adjustments are made. The actuary, Pat Beckham, who you just heard from, is available for any questions, should you have any. Thank you and I waive my closing.

LINDSTROM: Thank you, Mr. Mahood. Well done. We'll have proponents of LB17. We'll wipe down the chair quick before you.

RANDY GERKE: Good afternoon, Senator Lindstrom and members of the Retirement Systems Committee attending remotely. My name is Randy Gerke. That's spelled R-a-n-d-y G-e-r-k-e, and I'm the director of the Nebraska Public Employees Retirement Systems. I was going to introduce myself just very briefly, since there's a couple of people that are new. I've been with the agency since 2003 and have been the director for a little over three years. I'm from Fremont, Nebraska, worked for the city of Fremont for 20 years, Midland University as a controller for seven, and and now I am here. My background is in accounting and information management. Full disclosure, I am not an actuary. So I have asked Pat Beckham from Cavanaugh Macdonald to stay in the event there were technical questions regarding this bill that I could not answer. I'd like to add that my agency, my board, and myself really enjoy working with this committee and look forward to an interesting and productive session. I have been asked by the Public Employees Retirement Board, the PERB, to testify in support of LB17. The PERB and NPERS asked Senator Kolteman to introduce LB17, based upon the recommendation of the plan's actuary. As you have heard in the last presentation regarding the Experience Study, this bill will bring the amortization periods used in our plan valuations more in line with current actuarial standards. I would like to thank Senator Kolterman and Kate Allen for their help in introducing this bill and would ask that you vote to bring this bill forward. Thank you. That includes my testimony and I could sure try to answer any questions.

LINDSTROM: I don't think we'll do that to you. Thank you, Mr. Gerke. I guess any questions from anybody watching before we? I think it was explained very well--

RANDY GERKE: Thank you.

LINDSTROM: --in your presentation prior as to why and the phase-in. So I don't have any questions, but we'll give it just a second. OK, no questions at this point,

RANDY GERKE: Oh, sorry.

LINDSTROM: No, you're fine. Any other proponents of LB17? Seeing none, any opponents? Seeing none, any neutral testifiers? Also seeing none and Mr. Mahood, I believe you waived the closing and that will end the hearing on LB17. Thank you.