The Committee on Nebraska Retirement Systems met at 1:30 p.m. on Friday, September 16, 2016, in Room 1524 of the State Capitol, Lincoln, Nebraska, for the purpose of conducting a public hearing on an experience study of the Nebraska Public Employees Retirement System. Senators present: Mark Kolterman, Chairperson; Mike Groene; Rick Kolowski. Senators absent: Al Davis, Vice Chairperson; Heath Mello; and Brett Lindstrom.

SENATOR KOLTERMAN: In the essence of time, I think we are going to start. Can everybody hear me out there? Joe (phonetic), can you hear me back there? Thank you. I'd like to welcome you all to the hearing today. My name is Mark Kolterman, Chair of the Retirement Systems Committee. We're here today to learn about Nebraska Public Employees Retirement Systems experience study results. I'll let the committee members introduce themselves starting on my left.

SENATOR GROENE: Senator Mike Groene, Lincoln County, District 42.

KATE ALLEN: Kate Allen, committee legal counsel.

SENATOR KOLOWSKI: Rick Kolowski, Legislative District 31, southwest Omaha.

SENATOR KOLTERMAN: And we have a guest senator with us today, Senator Riepe. What district do you represent, Senator?

SENATOR RIEPE: The beautiful District of 12 which is Omaha, Millard, and Ralston.

SENATOR KOLTERMAN: And then we have Katie Quintero is with us today. And we have Bri who's from California majoring in political science as one of our pages. And Amy will be joining us. Or is she here? I'd like to remind you all to please turn off your cell phones if you have those with you. And at this time I'd like to ask the actuaries to just come forward and make their presentation. (Exhibit 1) While they're getting set up I will tell you that there's a letter that we received a copy of that was addressed to the PERB that deals...it came from the Governor's Office. I'm going to submit that for the record. So, Katie, you can put that in there. Welcome.

Would you go ahead and introduce yourself and then start your presentation. And would you prefer to have us wait until the end or ask questions as we go?

PATRICE BECKHAM: I think we'll take questions as we go through it. I think that might be more effective with this type of material...

SENATOR KOLTERMAN: Sure.

PATRICE BECKHAM: ...if you're okay with that. My name is Patrice Beckham. I'm an actuary with Cavanaugh Macdonald at 3906 Raynor Parkway in Bellevue, Nebraska. And I'll let Brent introduce himself.

BRENT BANISTER: Brent Banister, actuary with Cavanaugh Macdonald, same address.

SENATOR KOLTERMAN: Welcome.

PATRICE BECKHAM: (Exhibit 2) Thank you. So I believe you all have a copy of our presentation and that's what we're going to walk through with you today. The experience study is a significant amount of work, an important piece of actuarial work for the system. And we're going to try to boil it down and hit the high points for you in the interest of time. So again, please ask questions as we go through. I'm going to kick us off and kind of walk through the economic assumptions and then Brent will walk through the demographic assumptions and the cost information resulting from the recommended changes. So just a reminder, the board had a preliminary report from us at their August meeting. No action has been taken. We're scheduled to visit again on Monday with the PERB. So I'm on page 2. Just a little bit of background, some of you are familiar with the actuarial aspects of the retirement system and I think you understand that the liabilities are based on the future benefit payments and there's a lot of unknown contingent events there. So in order to try to estimate those future benefit payments we as actuaries use assumptions to help us anticipate when those payments will start, what the amounts might be, and how long they'll be paid. And that's what this experience study is really all about: It's evaluating those assumptions and deciding whether to recommend that a change be made to get a better estimate recognizing the whole time all of these actuarial calculations are really
estimates at best. We shoot really normally to be kind of in the middle range, not overly conservative nor overly aggressive. That's because the choice of assumptions has, along with it, implications as far as cost implications. So we're trying to allocate costs to current members and taxpayers. So if we are overly aggressive or overly conservative, we're allocating to different generations and that's generally not what we're trying to do. And then we just always like to point out, again, these are assumptions and that's all they are. The actual experience of the system is what's going to ultimately drive the costs and if it's different than the assumptions that will play out over time and you'll see adjustments in contribution rates reflecting that. On the next page, again, it's this piece of actuarial work that is used to recommend changes to the existing assumptions. We do a lot, in particular on the demographic side, a lot of looking back to see what actually happened and comparing it to the assumptions. The economic side of the house is...we look back but we don't assign that nearly as much credibility. It's really more forwardlooking analysis. We are guided in our work by actuarial standards of practice. They provide guidance to us on what we should consider, the process. It's not prescriptive. It won't tell us the investment rate of return should be X percent but rather what we as actuaries should be considering and looking at in developing that assumption. Again, each is intended to stand on its own. Each is a best estimate. We don't say we're going to be a little conservative here and a little aggressive here and overall we're in the right ballpark. Each one is a best estimate. And then we need to recognize that the process is really both science and art. The science part is there's a lot of number crunching that is behind a lot of the graphs and tables that are in the experience study report; that's pretty straightforward. Two different actuaries should get same answer if they're crunching those numbers. But how you interpret that information, how you make a decision on moving forward and what the recommended assumption is, that's definitely more professional judgment/art. So the following page assumptions, we categorize assumptions into two groups: economic and demographic. And economic are obviously those that are impacted by the general economy and the demographic assumptions are those that really impact your members, the members of the retirement systems here in the Nebraska. So those assumptions tend to be very specific to the group of folks that are covered. As far as who selects them, the actuaries making recommendations on both economic and demographic assumptions, I would say the board typically relies more heavily on the actuarial analysis and recommendations for demographic assumptions. That's kind of an actuarial thing. On economic, the board may look to other experts in that field for opinions before they ultimately decide. And the actuaries make
recommendations, but it really falls within the board's purview as far as adopting specific assumptions. So the next slide, slide five, for economic assumptions we use what's called the building block approach. And we've kind of illustrated in this graphic where investment return is really price inflation plus a real rate of return. The individual salary increases have a component of inflation, kind of a productivity or across-the-board increase in wages, and then a merit scale that varies with service typically. And then payroll growth, how covered payroll will grow over time, has inflation and productivity in it. It's important to note that inflation and productivity have to be consistent in all these assumptions. We can't cherry-pick and say we want inflation to be high for investment return but low for salary increases. It's the same assumption across the board and that consistency is a requirement of our actuarial standards of practice. On the next slide, when we're looking at economic assumptions we go back and we do review the actual historical information. That is one consideration. But again, the past, especially economically, is not necessarily a good indicator of the future. So we're doing some independent forward-looking analysis based on some input that we get from experts, in particular investment experts. Yes, Senator.

SENATOR KOLTERMAN: Pat, I have a question, and I don't want to digress, but when you talk about the assumption of productivity they must be consistent, are you talking between...from plan to plan or the entirety?

PATRICE BECKHAM: That is an excellent question, Senator. Each assumption. So here when we look at the salary increase assumption and then the payroll growth assumption, those two both have the productivity as a component of that assumption. So within the system, those should be consistent.

## SENATOR KOLTERMAN: Okay.

PATRICE BECKHAM: Another system might have a different viewpoint. Obviously the general economy is the same but their viewpoint on what the expectation for future productivity is could be different. But within the set of economic assumptions, they are consistent.

SENATOR KOLTERMAN: They have to be consistent. And then...

PATRICE BECKHAM: Does that make sense?

SENATOR KOLTERMAN: Yeah, I guess my question and I think you...I think we'll pick it up. But between the plans, so we have the Patrol plan, we have the teachers plan, that remains constant is what you're saying.

PATRICE BECKHAM: Yes, yes.

SENATOR KOLTERMAN: The demographics and things like that are broken down separately.

PATRICE BECKHAM: That's right.

SENATOR KOLTERMAN: Okay.

PATRICE BECKHAM: As you might...you know, if you think about like retirement experience, the provisions of the plan are going to heavily drive what the retirement rates are for Patrol versus school but the economic assumptions really apply to all the plans under the umbrella of NPERS.

SENATOR KOLTERMAN: Okay. Thank you.

PATRICE BECKHAM: That's a good question. Thank you for asking. The third item that we consider when we're setting economic assumptions is really again the input of other experts. So we like to look at the projections that the Social Security Administration's actuary does. Those are long-term, 75-year projections and they use a number of these economic assumptions. So you'll hear us talk about those. We do consider the views of economists; they usually have a little bit different time frame than we do, but we consider that. And then we look to the experts: the Nebraska Investment Council and Aon, their consultant, as far as what the expectations are for the real rates of return on the various asset classes. So slide seven, when we talk about inflation we're talking about price inflation, so the annual increase in the cost of living. And we measure that with the CPI-U that's published by the Bureau of Labor Statistics. Currently that assumption is 3.25 percent. That's the last time there was an experience study done. That's where the
inflation assumption was set. It really touches nearly all the other economic assumptions, so it's a very important assumption. So it's going to impact investment return, again, the individual salary increases. For the cash balance plans, it's going to potentially impact the interest crediting rate. And then for the plans that have cost-of-living adjustments--school, Patrol, and judges--it touches that cost-of-living adjustment postretirement. So it's a pretty important assumption. On the next page you can see the top of that slide has...kind of the blue line is the annual change in the CPI-U. You can see it's been sort of...it's been very low in the last part of this period, pretty high at the beginning and high in the middle. We like to look at very long periods of time. So the table beneath there kind of shows you what inflation has been over ever-lengthening periods. So kind of the bottom right is 10 years, and then 20 years, 30 years, 40 years. And you can see when we get into the years that are picking up the late '70s and early ' 80 s where inflation was extremely high, the averages--and these are a 30 -year kind of compound average--get higher. But if we look, the last 30 years inflation has been about 2.7 percent; the last 20 years, 2.2 percent; and the last 10 years it's been about 2 percent. So we have seen, you know, a period of sort of sustained low inflation. And if we look over all the data that's available from 1926 through 2015 calendar year basis, it's about 3 percent. So that's the look back. We also like to look at other large retirement systems, kind of a peer group comparison. It's not that we're going to set the assumption equal to what everybody else is doing, but they all live in the same environment, they're going through the same process. So it's interesting to at least observe if there are trends there. And that's what slide nine is showing you: There really has been a trend of a decline in the inflation assumption used by the large retirement systems like Nebraska. In 2001, the median was 4 percent and it's down to 3 percent. And you might notice the date ' 13 looks a little stale and part of that is it just takes a lot of time to gather this data and you have some plans that have a June 30 valuation date and others have a $12 / 31$ and it takes actuaries a while to do their work. So this is kind of the most recent full set of data, but we've definitely seen a trend down in the inflation assumption. On the next slide, this is where we kind of look to some other experts for what they might be thinking. We can look at the bond market and the difference between Treasuries and TIPS on December 31 of '15 and we generally would look to like a 30-year Treasury. That difference is the...at least the bond market's expectation for inflation. And it's a pretty low: 1.73 percent. Again, we like to look at Social Security. They actually have three assumptions: a low, an intermediate, and a high cost. Their intermediate is, in their words, their best estimate and that was 2.6 percent. And again, that's over a long time period which is

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comparable to the kind of perspective we have on funding the retirement systems. So when we kind of look at all the data, it all seems to be pointing to saying 3.25 percent seems a little too high, that we need to lower that. And we're recommending that we move to 2.75 percent at this point in time for the price inflation.

SENATOR GROENE: I have a question, Chairman.

SENATOR KOLTERMAN: Go ahead, Senator Groene.

SENATOR GROENE: Social Security, cost of living, two out of the last three years or three out of the last four they haven't taken any. How is ours set up? Have we had cost-of-living increases for our retirement or have we followed what the same cost of living as Social Security did?

PATRICE BECKHAM: I believe--I'm going to try to answer that and if I'm wrong I'm going to hope Phyllis or Orron correct me--I believe that the cost-of-living adjustments for Nebraska are based on the actual change in CPI, not to exceed either 2.5 percent on the tier 1 or 1 percent on the tier 2 folks. And this year I believe that increase was 0.64 percent.
$\qquad$ : Correct.

PATRICE BECKHAM: And last year?
$\qquad$ : I can't remember. (Inaudible) zero last year.

PATRICE BECKHAM: And last year there was no adjustment. So it's similar to the criteria that Social Security is using.

SENATOR GROENE: So then when you do your projections then do you go back then that the projections you had in the past, readjust them because you probably didn't plan on no increase one year, right?

PATRICE BECKHAM: That's a great point. No, the assumption is set and it's assumed to happen every year in the future. So this year when we do the July 1 valuations we would have expected there to be a 2.5 percent COLA for school, judges, and Patrol, but it was only 0.64 percent. So you're correct, we recalibrate. We use the actual increase. That's lower than what's expected, that spins off what's called an actuarial gain. The liabilities are lower than what we anticipated and then we project forward from that lower, the actual COLA.

SENATOR GROENE: And that's where your 3.25 percent to 2.75 is kind of played into effect, right?

PATRICE BECKHAM: Yeah, the COLA, the 3.25 percent drove the 2.5 percent COLA assumption. Right. And so we're recommending inflation be lowered. And we'll get to the COLA assumption and how that impacts that particular assumption, knowing that in all these assumptions we're setting what we intend to be a long-term assumption recognizing it's going to bounce around and change from year to year. That's just the world we live in. Other questions on inflation before we move to investment return? Okay. So slide 11, investment return, this is probably the single most powerful assumption that's used in the valuation because all those future benefit payments that we expect to be made get discounted or brought back to today's date, the valuation date, using the assumed rate of return. So it's very powerful, particularly when you've got very long streams of benefit payments and some of these go on a hundred years. Again, we use that building block approach. So when we look at investment return, price inflation that we just talked about at 2.75 percent is the first block. And then the next block on top of that is what we call the real rate of return. And then the sum of those two is the nominal return or the expected investment return. When we look at investment return, there's no doubt the single most important factor is asset allocation. That is...there's a lot of time spent on that for a very good reason. If the portfolio is more aggressive--it has more equities, alternatives, things like that that have higher return--then the portfolio is expected to have a higher rate of return with sometimes more volatility. But that asset allocation is very important and when we're doing our analysis we're looking at that asset allocation and helping us do our modeling on that forward-looking basis. Again, a relatively what might appears a small change in that assumption, 25 or 50 basis points, can have a significant impact on the liabilities as well as the contributions. So it should not be underestimated what impact that has. Currently we have an 8 percent
assumed rate of return for the July 1 valuations which are school, Patrol, and judges. The cash balance plans which have a January 1 valuation date, actually have a 7.75 assumed rate of return. The next slide is just a visual to help kind of clarify why actuaries have such a long-term perspective when they're setting assumptions. These are just the expected benefit payments for the current members on the school group. So you can see how those expected benefit payments are going to grow for a long time before they start to come down. And that's why the perspective for an investment consultant is usually shorter term, 5 to 10 years, but actuaries have that 30 - to 50 -year time frame in mind and this is exactly why. On slide 13, again, this is part of our look back, this is the actual historical returns for the trust fund from the Nebraska Investment Council based on June 30 measurements. And you can see each year is shown there as well as the red lines, the assumed using 8 percent. So the five-year return is at 11.5 percent; kind of looking longer periods again, the 20-year return, just under 8 percent; and the 30 -year return was 9 percent over this period. So that's looking back. Again if we look at a peer comparison, there's about 125 large systems in the public fund survey that the National Association of State Retirement Administrators provides every year. This is busy but it's very intriguing for us as actuaries. It's showing you the distribution, what percent of the funds were using each assumed rate of return. And if you look back to 2001 you can easily see that 8 percent was certainly the most commonly used and it was the median as well. And it was that way for a very long period of time and it really kind of started changing about 2011. And you can just see in about the last four to five years how that distribution has changed and how at the top where we had a number of plans in that early period that were above, 8.5 percent or above, they have just about disappeared. And at the bottom, we now have some plans that are actually...you know, there are some below 7 percent. So there's been this shift down. If you'll remember that graph of inflation that showed the slant going from 4 percent to 3 percent. Well, inflation is an underlying piece of the investment return. So it's not that surprising that we're seeing a similar shift on investment return. And we just point out right now, based on the most recent information, the median--so half of the returns are above 7.5 percent and half are 7.5 percent or below. I mention that we do forward-looking analysis based on the asset allocation for NPERS. And in order to do that, we're not investment experts, so we need kind of what are called capital market assumptions, the expected return for each asset class, the standard deviation, and then the correlation between those different asset classes. And we actually looked at kind of two different sources to again just give us more data and different perspectives. So we looked at that based on the assumptions that
came from Aon; that's the investment advisor for the Nebraska Investment Council. And then Horizon Actuarial Survey is...they gather capital market information from 29 different investment consultants and a lot of the major consultants including Aon and they published this survey. And in that survey they kind of give you the minimum and the maximum and the median. So out of that information we took the median, the middle of the range, and again modeled using the Investment Council's asset allocation to see what the real rate of return would be. So based on Aon's capital market assumptions, the real rate of return was 4.56 percent. Using the Horizon median expected returns, it was over 5 percent, 5.13 percent. And if you add the 2.75 inflation, that building block approach, you can see that based on Aon's assumptions, the expected return is 7.31 percent; based on Horizon, the Horizon survey assumptions it was 7.88 percent. When we kind of take a giant step back and look at all this information and kick it around and argue a bit, we landed on a recommendation of the investment return assumption of 7.5 percent. We feel like that's pretty solid. What we want to do if we're going to make a change is make a change that we believe can kind of stand and be used for a long period, wouldn't have to make, you know, another change five years down the road. Any questions? I know this is an important assumption. I know you've been interested in it. Any questions on this before we move on? I want to give it plenty of time. All right. Okay. So now we'll talk about the cost-of-living adjustment and the assumption that we use. Again we now really have two tiers in these traditional defined benefit plans. Tier 1 has a COLA of actual CPI up to 2.5 percent. And the new tier caps that COLA at 1 percent. Currently the COLA assumption for tier 1 is 2.5 percent, the maximum is 1 percent for tier 2. And that was generated or based on that inflation assumption 3.25 percent. So we've lowered the expected average inflation assumption to 2.75 percent. But we know there are going to be variations from year to year. And if we...we did some modeling, you know, introducing a standard deviation, a variation on the CPI. And based on that we think the COLA assumption should come down from 2.5 percent to 2.25 percent because of reducing the inflation from 3.25 percent to 2.75 percent. So obviously the 1 percent for tier 2 remains at 1 percent, but for tier 1 we're recommending an inflation assumption of 2.25 percent. If there are no questions then we'll talk about...

SENATOR KOLTERMAN: I have a question.

PATRICE BECKHAM: Okay.

SENATOR KOLTERMAN: You see a lot of different plans, obviously, from state to state. Do all plans have COLA built into them?

PATRICE BECKHAM: No, Senator. I'm not sure if I know the number. I would....and you know, I'll be honest with you, there have been a number of reforms passed in the last five to ten years and the COLAs have been part of that reform. But I mean we work with Iowa and Kansas and Oklahoma do not have COLAs. Colorado...

SENATOR KOLTERMAN: All three of those states don't have COLAs?

PATRICE BECKHAM: They do not.

SENATOR KOLTERMAN: Okay.

PATRICE BECKHAM: Colorado, Minnesota--I think South Dakota does too--do have. So I would guess maybe it's 70-30: 70 do have a COLA; 30 do not.

SENATOR KOLTERMAN: Okay.

PATRICE BECKHAM: And it's a very, from a philosophical standpoint, it's a very important part of the plan design for a defined benefit plan. But it's also a very expensive component which is why a number of systems do not have automatic COLAs.

SENATOR KOLTERMAN: Right, okay. Thank you.

PATRICE BECKHAM: You're welcome. All right, so I think we're on slide 17. So we have the state and county cash balance plans. And as you know, contributions go into those kind of hypothetical accounts and then there is an interest credit and that's how those account balances grow. The interest credit is the greater of 5 percent or the federal midterm rate plus 1.5 percent; that's in statute. The expected return or expected rate, I should say, on the intermediate duration securities is 4.2 percent, so that's like the federal midterm rate. So that would drive an interest credit of 5.7 percent. Again, there is variation, there's volatility. We think it makes sense to build
a little bit of conservatism in there for adverse deviations. So we're recommending that it be lowered from 6.75 percent to 6.25 percent, but not all the way down to 5.7 percent. And that protects those plans, too, because if the actual interest credit for the year is lower, then again, that spins off an actuarial gain similar to what we were talking about with the COLAs. Okay? All right. So next slide talks about the general wage increase. So this, again, the building block approach, the base piece is price inflation and then the second piece is what we call I'll refer to as productivity. It's really kind of the increase in the standard of living. So over time, over long periods of time wages have increased more than price inflation and that's again how our standard of living improves. There's not a lot of data here. What we use typically is the information from the Social Security Administration on the national wage index. That's actually used to compute our Social Security benefits when we retire and it tracks really wages in the entire economy. That's one of the limitations. We have more homogenous groups in the retirement systems than the whole economy, but again, this is kind of available information. And then again, the Social Security, when they're doing their long-term projections they are collecting their tax receipts based on wages, so this is one of their assumptions that they use. Again, with their three they've got 0.5 percent, 1.2 percent, and 1.8 percent with 1.2 percent being their best estimate. The next slide, 19 , each point on this graph is either a 30-year average for CPI, that's the red line, or a 30year average of the wage index. Okay, so if the first plot for 1981 is the 30 years from 1951 to 1981 and every one forward is still a 30 year. So they're putting on the actuarial long-term lens perspective and you can see that over the entire period, the wage increase, wage inflation is higher than price inflation when we're kind of smoothing it over a longer period. That speaks to why we need to have an assumption for wages being higher than just pure price inflation. It's varied over different periods. As you can see, it's kind of skinnier in the middle and the wider on the left-hand side of that graph. It ranges pretty much from about 0.5 percent to 1 percent over different periods of time. Again, the Social Security Administration is at 1.2 percent. Currently the productivity component of the salary increase is 0.75 percent. So the inflation assumption was 3.25 percent. The productivity or real wage growth, however you want to term that, is 0.75 percent. So the expectation is that the general wage increase is 4 percent. Then your merit, as people work and get promoted and all that, is on top of this. But the general wage increase is 4 percent. With the 0.5 percent drop in price inflation, we're recommending that move to 3.5 percent but that we keep the 0.75 percent. That seems reasonable. I think...you know, it's lower than Social Security, but we've certainly been coming through a period where it's been relatively
modest, particularly for governmental employers. And then again, because the general wage increase is part of the individual salary scale and this is dropping 0.5 percent, the individual salary increase will drop 0.5 percent as well. Any questions on that?

SENATOR GROENE: This wage increase assumption is based on overall private enterprise government?

PATRICE BECKHAM: Yes, the Social Security information...

SENATOR GROENE: How do you...can you do this on all plans? I know the state employees, take the prisons, for example, if you're a new employee you're making $\$ 30,000$. If you've been there 30 years you're making $\$ 30,000$. In education we have a whole different semantics where somebody starts at $\$ 30,000$ and somebody retires at $\$ 75,000$, so how much we're collecting from them employees as we go along. So how can you assume the same for two different wage structures?

PATRICE BECKHAM: That's a great question. So I think what you're really homing in on is the difference in what we would call the merit scale, kind of as people progress through their career if they stay, you know, if you're a teacher as you get additional years of service and additional education you kind of move across the grid, right?

SENATOR GROENE: Yeah, and you're moving up faster than 3 percent because you're taking a step plus a...

PATRICE BECKHAM: Right. So we have for each--for Patrol, for judges, for state, for county, for schools--we have a separate merit scale that's part of our projection of salaries for each person. The general wage increase think of it more of as an across-the-board increase. So when you started working, it was probably maybe around when I started working, starting wages for actuaries are different today than they were then even though the education requirements coming in would be about the same. And that's just over time because of the impact of price increases and just general wage increases, you have to pay people more to compete. So that's the general increase, across-the-board kind of increase that affects. Kind of when you think about the pay
scale, the whole pay scale goes up 2.5 percent or 3 percent. Yeah, that's what this assumption is. There is a separate merit scale that will address movement.

SENATOR GROENE: But when you deal in percentages don't you...when you do percentages don't you widen the base between the poor and the rich when you say I'm going to give somebody with $\$ 30,000$ a 3 percent raise or somebody with $\$ 70,000$ a 3 percent raise, doesn't that widen because percentages, you start adding $\$ 2,100$ on the top end and $\$ 900$ on the bottom end. And then what we collect from that early employee until the time they retire it doesn't keep pace of what the payment is, does it, their retirement benefits, when you have that type of a wide variance from beginner to retiree? You know have that in a lot of government but you do in education is my point.

PATRICE BECKHAM: Right, it's all built into the numbers. I mean when we run our projections we're projecting salary from wherever they are currently to when they retire assuming these increases follow the assumptions. And that's the expected stream of contributions, unless I'm missing the question.

BRENT BANISTER: Right. And I think it's important, if we were looking at, say, a new school employee today and let's say they come in at $\$ 30,000$ and a seasoned teacher is retiring at $\$ 70,000$, our assumption actually is going to say this new teacher will ultimately make far more than $\$ 70,000$ when they retire because that's what that job will pay then. So we're factoring in kind of this overall growth and trying to anticipate...across-the-board wages are more than they used to be, but also people move through jobs in their career. And so there's kind of a compounding effect of both kinds of increases going on.

SENATOR KOLTERMAN: Senator Groene, I think as we get further into it you'll see some of the...what you're asking about.

SENATOR GROENE: I'll wait then.

SENATOR KOLTERMAN: But it's a good question.

PATRICE BECKHAM: Right. And it's...this little...the general wage increase gets kind of confusing for a lot of people because it's not so obvious. It's a piece of the individual salary increase but the merit is what... when we all think of it, as people get hired in and usually when you first hire in you get higher salary increases when you're getting your experience. And a lot of that's driven by the merit increase.

SENATOR KOLTERMAN: Well, and a state employee is in a cash balance plan versus a teacher is in a defined benefit plan. And that all plays in, too, as we go down the road here.

PATRICE BECKHAM: Right, the salary increase has a different impact on those two types of plan.

SENATOR KOLTERMAN: Right, correct.

PATRICE BECKHAM: But we project it for both of those plans.

SENATOR KOLTERMAN: Similarly, yeah.

PATRICE BECKHAM: But again, this is kind of if you were to go back 30 years and look at a schedule for teachers based on years of service and education, the dollars would look higher and that's the general wage increase impact.

SENATOR GROENE: Senator Kolterman made a good point. The cash balance plan is how much you paid in over time. The defined benefit is what you're making at the end of the day.

PATRICE BECKHAM: Right.

SENATOR GROENE: So the payments are based on completely different assumptions.

SENATOR KOLTERMAN: But I think you'll see it, Senator, as we get back here.

SENATOR GROENE: All right. I'll shut up then. Is that what you're saying, Mark? (Laughter)

SENATOR KOLTERMAN: I didn't say that, but you can read whatever you want to read into it, Senator.

SENATOR GROENE: I'll be quiet and listen.

PATRICE BECKHAM: All right. I'll just wrap up on page 21, kind of summarize. The current and the proposed economic assumptions, they're all on this page. Again, we're recommending a 50 basis point drop in inflation; the investment return for all five of the plans to move to 7.5 percent; again, this general wage increase to drop from 4 percent to 3.5 percent; the COLA for tier 1 folks, the assumption to drop from 2.5 percent to 2.25 percent; and then, again, the interest crediting rate, which is just for the cash balance plans, to decrease from 6.75 percent to 6.25 percent. So that's the package of economic assumptions. Again, those are developed based on actuarial standards of practice and with the consistency of inflation touching all of these in the same manner. And we'll pause here just for another minute...well, not a minute but a second to see if anybody has anything related to economic assumptions before we move into the really fun stuff which is demographic and talking about mortality because actuaries love to talk about mortality. And Brent won the flip so he got to talk about it today. Ready to move on? Thank you.

BRENT BANISTER: All right, so we're on slide 22. The demographic assumptions, and this is I think what people sort of think of as the traditional actuarial work where we look at how many we started with and how many were left and what happened to them, that kind of thing. There's sort of three big circles here on this page, just to talk about kind of the major things that we consider as we...when we are trying to help set and determine what funding is needed. We're taking each individual and try to track that person, what we think they'll do through time. And there's a certain probability that that person will quit in any given year between now and retirement. So we have to figure out, do they even get to retirement? And along with that, we're at the same time tracking how their salary grows each year and all those kinds of things. Then we say, okay, when are they going to retire? There's a span, many of them over about a 10-, 15-year period when they could retire. And so each year we'll say what's their benefit going to be based on their salary and their service when they retire. And then the third part is, okay, we know what the benefit is. How long are we going to pay this out? How long are they going to live? So the mortality component comes in. So these are kind of key demographic things we do. By and

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large, the termination and retirement and disability assumptions, those sorts of things had very minimal changes in this study--so some little things here and there, kind of fine-tuning I think would be really how we describe it. Patterns are remaining fairly stable on most of those items. Mortality is the one that had a little bit more of adjustment. And so that's really where we're going to kind of spend a few minutes here. It probably is also the more interesting one. Disability rates is just a little bit esoteric and doesn't happen that much anyway. So slide 24 , mortality is big because obviously the longer people live, the more we...the more benefits are paid to them. There's also a lot of variation in how long people live. And that's where we have the advantage of a good-size system like NPERS being able to kind of pool that risk. You know, if you've got one person who's got to make their money last their whole life, they need a lot of money because they might live to be 100. But we know not everybody will. You know, some of them are going to die at 65 or 67 or 70 or 75 or 80 and so we can kind of take and pool that experience. But we have to know what it's going to be, or estimate. But we can kind of gain that efficiency of sort of a pooled experience. Lots of things affect mortality. There's isn't one mortality table covers everybody. It varies by a whole list of things there. We do a lot of our work in the Midwest and the further north you go, it seems like the mortality gets better. And we're never sure why, whether it just seems longer or whatever it may be, but the Midwest is a pretty healthy place to live. We've got some colleagues who work in different parts of the country and they don't use the same mortality tables. So Nebraskans I think can be glad. The flip side is that it costs more. But lots of factors affect mortality. The other part, so we mention on slide 25 , is mortality tends to improve through time. Now there's different opinions out there. I mean there's no disagreement that it has improved, that people are living longer than they used to. The disagreement comes, how much will it continue to improve? And there's lots of debate here. There's medical processes going on, things working on aging, all of that. Then people say, yeah, but look at obesity rates and this and that. And, okay, there's some upper limits. The actuarial standards say you have to think about whether mortality is going to improve or not. They don't say what you have to conclude. They just say you have to think about it. And as we think about it, we believe it's reasonable to anticipate some continued improvement. We struggle with will it continue at the same rate it's been recently or not. And you know, there's a lot of back and forth there. I'd say we spent a few hours discussing that one. And we both, you know, have different views and two or three views myself depending on what time of year it is, so lots of...it's not a simple thing. It's something that definitely has to be given some consideration. Nebraska has been using what we
call a static mortality table and we use that term there on slide 26 where essentially we say, jump out a ways and what's mortality going to be like in a few years? So the current table was projected, kind of a fancy word for saying you assume some mortality improvement through 2015. And this was adopted several years ago and said, okay, let's assume what we think...here's what we think mortality will look like in 2015. Let's use that table every year. If you look at the chart on there, you'll see what we call an actual to expected, or AE, ratio. And when we look at the...what's been occurring, the actual number of deaths is roughly 75 percent of what we would expect. Okay, so (inaudible) these are sort of the amounts of monthly benefit that are dying (inaudible) each year. With the static table you need to really have something a little over 100 percent to feel good. So it was pretty clear to us that mortality table does need to be updated. We're experiencing longer life. Benefits are being paid longer than what was anticipated under the current assumptions. So we have that. Again, we started looking not only at the number of people who are dying in a given year but the amount of benefit. If you recall back in that table of...or a list of things that are connected with mortality, mortality rates are observed to vary with income levels. We don't know why. People will advance reasons and maybe so. As actuaries we've kind of resigned ourselves to, we don't know why but it's what happens. And sure enough, we're seeing that here, that to some extent the higher benefits which tend to go with higher education levels and various other things that are all correlated, those people are living even longer on average than the total pool NPERS retirees. And so that says we need to improve mortality a little bit more, so kind of a second factor pushing the mortality table. Now we want to be a little bit cautious because we're only looking at four years of data. Nebraska is a decent-size pool of data, but we're not the biggest state. We don't have the most data we might want so we had to kind of caution that in. And so we ended up with a sense of, here's what we think mortality will do. And instead of trying to pick a table, we said here's...let's jump ahead and use this static table in a few years, we said here's a table that ought to be pretty good right now. And every year we're going to improve it just a little tiny bit, what we call generational mortality, and to use a real fancy term there. The computers can do this stuff now and they couldn't 20 years ago, so we let them do it now. We improve the table a little bit each year and in that way reflect the future mortality improvements. And so you can see the...we're saying based on that, we're pretty close to observing the number of deaths or the amount of dollars...going wage here is expected. We purposely kept it a little low because again this credibility issue. We don't want to overreact to four years, just four years of data. So again, some of the nitty-gritty details there of
the mortality table. We had to take it and bend it a little bit and all this to make it really fit Nebraska's experience better.

PATRICE BECKHAM: It's worth mentioning though that the RP-2014 mortality table is the most recent table that's been published by the Society of Actuaries, specifically for valuing pension benefits. So we've we moved to a very current table with some minor adjustments to get a better, little bit better fit to what we observed in the data.

BRENT BANISTER: Because while it's produced for technically valuing corporate pension plans, they figure out all the public data when they built the table because it's a little different. So we're kind of, to some degree, maybe correcting back for that. We anticipate there may be adjustments in the future. The adjustment this year is noticeable. We would hope that that would not be a pattern. We really would not anticipate that to be a pattern again. There were two or three major kind of factors affecting it this time, I think, pushed to be a larger adjustment, but hopefully with this generational approach that each year we're improving the table. Four years from now when it's time to do another experience study, hopefully it will be kind of on the margins we're making some change. And so mortality improvement will not be a big deal; we'll bury it in two bullet points instead of five pages. So we'll talk about what this all does, kind of bottom line here on page 28. What happens to the cost impact? Several of these...this is...these are assumptions that affect all or most of the plans, kind of what we did and what the cost impact was. The inflation doesn't directly do anything as it's not a direct assumption. But the investment return, by decreasing that that will increase cost. The wage growth by decreasing will have a slight increase on...there's kind of some offsetting things so it's not too dramatic but it does have a little bit of an increase. Decreasing the COLA will decrease the cost. We don't expect COLAs to be quite as expensive as they've been because of this reduction of inflation. The interest credit rate, by decreasing what we think will be credited to the accounts--not what will be but what we think will be--will the lower the cost. Decreasing the mortality, same people live longer, increased costs. And all the other things which help make up a big, thick report don't make much difference but give us plenty to do. So that's kind of the big picture. Now we wanted to spend a little bit of time talking about each of the plans and a few projections on some of the plans as to where we see things headed. We'll spend a little bit of time on slide 29. You're going to see four more slides that look just like this and we'll be able to go through them a little quicker because
you'll kind of be familiar. The column on the far left is where we were with the last valuation: July 1 of '15, or with the cash balance plan it's January 1 of 2016. And we split this into kind of two pieces--one changing all of the demographic assumptions, primarily mortality is the biggest, far and away the biggest impact as we move from the first column to the second column. And then the third column picks up the economic changes with the salary and the discount rate, COLAs, interest crediting, all of those assumptions. So you can see if you look at the first row there, the actuarial liability is just under $\$ 11$ billion when we did the last experience study. And that's kind of where we think we ought...that's the money we'd like to have to fund this plan systematically over time. The demographic changes add about $\$ 500$ million. The economic add another just under $\$ 300$ million, $\$ 275$ million to the liability. The assets don't change. When we change assumptions, the assets are still...it's the money that's there. We can't make that magically change. We could solve a lot of problems if we could. And so that we have the unfunded actuarial liability, which when you change one number but not the other and you subtract, the unfunded liability is not a big number but it changes more dramatically because it's the difference of two large numbers, one of which is moving some and the other of which is not moving. So you can see, again, there's a roughly $\$ 500$ million change in the unfunded liability with the demographic changes but that's a big portion of $\$ 1.2$ billion; $\$ 500$ million is a lot. Or going to the old assumption change, again there's a little over $\$ 700$ million. Change the unfunded for all of those changes in there which is...proportionally it looks large. And so the funded ratios you can see there decline as the...move the liability up, the assets stay the same and the funded ratios come down. The normal cost rate is really a good estimate of the long-term cost of the plan and you can see that those numbers go up. Again, the changes we made on balance, the new plan is going to cost more. And then the amortization rate is what we need to contribute to systematically pay down the unfunded liability. And of course those amounts go up because the unfunded liability went up. And so you can see the total actuarial rate goes from 17 percent in the last valuation to nearly 21 percent had we put all these assumptions in last year. Now that's a little less than the contributions that are scheduled to come in. So there's still some margin. We aren't where we'd say, oh, no, we've got problems. There's still some margin. I want to talk...show you some projections here, a couple comments on projections on slide 31. Projections are really a comparison more than a prediction tool. I'd like to stress this because there are many, many, many assumptions that go into here, most of which will not exactly be met, maybe none of which will be exactly met. It turns out that a person retires or they don't; 0.7 of a person doesn't
retire, 0.3 of a person doesn't die. They die or they don't. All these things...so we know we're going to be wrong on almost every assumption we make. On average we should be pretty close. That's what we're trying to do. But what the projections really let us do is compare kind of a couple scenarios and see patterns and trends. So (inaudible) say, well, where are we going to be in 2041? The 2041 numbers are not numbers you'd want to go hang your hat on. But the direction and the patterns and the trends are what you should be looking at. So we're going to show two sets of results here if you will: One is where we thought we were when we did the last valuation, earning 8 percent a year in the future with the old assumptions; the other is with the new proposed assumptions earning 7.5 percent a year. So we've said two different realities are going to emerge. That's the biggest factor are these lines kind of moving in different behaviors. Again, before we move on, these aren't the numbers that are...even one year out we know these aren't going to be the numbers that we come back here in a couple months and present because 2016 was about 1.6 percent return; that's not 7.5 percent or 8 percent. But the COLA was 0.64 ; hat's not 2.25 percent or 2.5 percent. And those are the only two...I mean those are just two things we know so far. Again, probably salary increases were not exactly as expected. Probably lots of other things were not exactly as expected. So there will be some other changes we don't know about yet.

SENATOR KOLTERMAN: I have a question about that.

BRENT BANISTER: Yes.

SENATOR KOLTERMAN: Since these are not...these are projections...

## BRENT BANISTER: Right.

SENATOR KOLTERMAN: ...and since we're really dealing with the unknown, what kind of an effect would it have... and I think this came up at the last PERB board meeting by a retired senator that was there. Bob Wickersham asked that we delay making any decisions on this until a year from now which gives us an opportunity to really see what's happened. What kind of an effect would that have on a plan like this?

BRENT BANISTER: Well, and part of the answer is it depends. For instance, the school plan...

SENATOR KOLTERMAN: That's scientific. (Laugh)

BRENT BANISTER: Yeah. Well, if you consider the school fund, the contributions that go into that--the members pay a piece, the districts pay 101 percent of that, the state puts in 2 percent of payroll--those amounts are all set in statute.

## SENATOR KOLTERMAN: Right.

BRENT BANISTER: And regardless of what we assume, those amounts go in. And then if there's a shortfall, the state is supposed to make an appropriation, you know, potentially.

SENATOR KOLTERMAN: An ARC, right.

BRENT BANISTER: But if, and as what we'll see in a minute is, under either of these sets of assumptions we don't anticipate, for instance, for the schools that will have an additional amount regardless of those, either the current or the proposed assumptions. So for the school plan, it would make no difference in terms of the dollars that go in. It would make no difference to the dollars going out. It would change the numbers that sat on some books for one reporting period. Now the State Patrol on the other hand, just to take the next one in the list, the members put in some money, the State Patrol puts in some money, and the state puts in some more. That amount is calculated using these assumptions. If we change to the current assumptions and say we need a little bit more money to go in than the old assumption said, basically by delaying the implementation of the assumptions we put that money in not...we don't put that money in a year from now. It's got to go in eventually, somehow or another. All you do is simply take that piece and defer it with interest to the future. So ultimately again thinking back to what Pat was talking about earlier, none of this changes the actual cost of the benefit. That's all prescribed in statute. All it's doing is changing the timing of when the money goes in.

SENATOR KOLTERMAN: Okay. And I think we'll see some of that when we get into the next few pages.

BRENT BANISTER: Yes, yes. Okay, so slide 32 are the schools showing the funded ratio. And I guess the bottom line here is if no changes are made and all assumptions are met and all these other things that are...again, because we're comparing, you can see that in either case we reach 100 percent funding and we keep improving because the money going in is in excess of the normal cost rates. This is how it's designed to work. If we were earning 8 percent with the old assumptions we'd get there sooner, but we still get there either way and we're not anticipating any additional contributions would be required potentially for a number of years under either scenario.

SENATOR KOLTERMAN: I have another question but I'm going to wait until you get through this.

BRENT BANISTER: Sure. Okay.

SENATOR KOLTERMAN: Cut the pages here and there.

BRENT BANISTER: Okay, the Patrol numbers you can see again that the liabilities on the first row go up. The assets stay the same. So of course the unfunded liability increases in kind of generally the same sorts of proportions, not exactly but somewhat similarly. The fund ratio declines, the normal cost rate goes up. So the total actuarial rate you can see goes from 41.6 percent of pay roughly in the last valuation to about 49 percent with the new assumptions, which is fairly dramatic. Now because the statutory rate was 32 percent when we did last valuation, since then new members will be contributing more. The shortfall, which is what is left for the state, goes up fairly dramatically. Again, this is all very leveraged. The portion that was sort of the state appropriation out of the total amount was...they were paying a certain portion but all the increase due to the new liability basically flows through to the state because of the funding mechanism in place here. As you look at the graph on page 34 you can see that the funded ratio drops, it's a little bit lower under this scenario. It stays a little bit lower but eventually reaches 100 percent either way. Again, it's a pretty...it's that stable increase. Now both of these graphs are with the new tier reflected that's coming into play. There wasn't anybody...no member was in this in the last valuation but we've projected the new members to be in the new tier. So that's what drives both of these lines upward over time.

PATRICE BECKHAM: And they both assume any additional contributions are made.

BRENT BANISTER: Right, yeah.

PATRICE BECKHAM: That's how you get to 100 percent.

BRENT BANISTER: Yes, it's how you get to 100 percent is if there's a state appropriation of $\$ 2.7$ million, the state makes $\$ 2.7$ million.

SENATOR KOLTERMAN: So that's in the assumption...

BRENT BANISTER: That's in the assumption.

SENATOR KOLTERMAN: ...that we're going to make the ARCs that we're required to make.

BRENT BANISTER: Right.

SENATOR KOLTERMAN: Okay.

BRENT BANISTER: So here...this next graph on page 35 has a lot of lines, a lot of bars. There's two compare...two sets of...for each year, there's two bars: bars on the left and bars on the right. The blue bars are what the employer would put in. The green bars are what the member would put in. In each case, those bars are 16 percent of pay. Now you may say, well, how come they're different under the two different sets of assumptions? It's because we have a different assumption regarding how salary grows. And you can see the bar on the right is higher because we're changing the assumption to have pay grow at a slower rate. The red is the amount that the state has to add in. Again, if you do kind of a year-by-year comparison, you can see there is more required from the state under the new assumptions because we expect to earn less money and we expect people to live longer. So it takes more money. But eventually the plan is self-sustaining without the additional state appropriations. The graph on page 36 is changing all this to rates of pay. So now you can see it's much more stable because it's 16 percent of pay for employer...actually there's a slight increase going on there with the employee raise because the
new ones are coming in at '17 and your eyes have got to be pretty sharp if you're going to spot that because lots of lines there. But it does happen. So there you can see the changes.

SENATOR KOLTERMAN: I have a couple of questions. Back on page 32, you're looking at the school versus current assumptions...current assumptions versus new assumptions. Which of those assumptions has the greatest impact on delaying it, 100 percent funding, to 2035 ?

BRENT BANISTER: Well, again if you were to flip back to the...this is slide 29, the demographic changes have a slightly or have somewhat larger impact than the economic changes. Now I'm not going to say if we'd run these in reverse order, that we'd have gotten the identical numbers. That's not how actuarial calculations work. But comparatively the demographic changes in this study have more impact. And I know Pat told you a few minutes ago that the rate of return is the biggest influence. We have several kind of mitigating factors that I think help here. Because we also reduced the salary scale by saying inflation is lower, pay raises will be lower, that means future benefits will be lower. We expect people will, you know, receive smaller benefits in the future because they won't be paid as much. We also said the COLA will be lower we think because inflation will have more years of being below 2.5 percent than it is now. So factors like that actually helped offset some of the increase. If we had just closed our eyes and pushed and set the interest rate differently and run the valuation this would be different, but because some of these factors helped offset I think your experience with a 50 basis point change in discount rate is probably...has less impact than some other states. If you didn't have a COLA, this actually would cost you more to make the change because the COLA could reduce...it actually help to reduce...helped offset some of that increase. So in your case this year, this experience study, the...probably the thing that is the biggest cost I think I can say would be mortality. Trying to really reflect how long we think people are going to live and getting that current is the biggest single item. If we isolated the interest rate by itself and ignored the impact of the COLA and the salary scale, maybe it would be bigger. But we can't ignore those. We have to take them together to be consistent.

SENATOR KOLTERMAN: Okay, but along those same lines as we look..as you start to compare the school and the judges plan and the Patrol plan and how they achieve 100 percent funding, there's a tremendous difference among the plans between the school, the Patrol, and the judges.

BRENT BANISTER: Yes.

SENATOR KOLTERMAN: Why is that?

BRENT BANISTER: Well,...

SENATOR KOLTERMAN: I mean if before we said we're using the same demographics, why is there such a major difference?

BRENT BANISTER: Okay, well, but we're not...okay, first of all...

SENATOR KOLTERMAN: Because judges aren't funded until 2043.

BRENT BANISTER: Right. It turns out we aren't using all the same demographic assumptions. Each plan has its own rates of retirement and salary growth and things like that, that reflect what goes on with that plan. We use the same mortality table. But there's really two factor...one of the biggest factors that affects how well...how soon you reach 100 percent funding is, how much money are you putting in? And so if you look at the schools, for instance, look at that normal cost rate because that's sort of the ongoing. That's what the new members coming in...if we had started from scratch or always had the right amount of money, that's what our contribution rate would be and you can see we've got, say under the...well, we'll take the current assumptions at 12.11 percent normal cost rate and we're putting in 21.66 percent, 9 percent of pay is going in to help pay off anything that's unfunded and that's kind of in perpetuity. Well, that's more than we need to get it paid off in perpetuity. That will get us paid off in 25 or 30 years or less. And then after that we keep putting in the extra 9 percent of pay, so it keeps going up and up, whereas if you look at the Patrol numbers you can see that the normal cost rate is 28.85 percent and our scheduled contributions, ignoring the additional money going in, is only 32 percent of pay. We're not...we don't have very much extra to put it in and so we're putting in just barely enough to kind of move us toward 100 percent. And judges is essentially in the...judges has an additional complication of we're funding this with court fees that are assumed to stay constant forever. And so we have to make that up some other way.

SENATOR GROENE: Isn't part of the problem with the State Patrol is that they're not paying in as many years because they're retiring at 45,50 versus a school employee even at 55 they're paying in for 30 years? And the Patrol, I mean some of these guys retire very early and they're getting paid a long time after retirement, isn't that part of the problem, that they're not paying in as many years? I know they pay a bigger portion of their pay in.

BRENT BANISTER: Right. That's really where it's reflected is in the bigger portion of the pay, is they've got a, if you will, a longer time frame to be paid out and a shorter time to collect, so it requires a higher normal cost rate. But to the extent that all assumptions are met, it would work.

SENATOR GROENE: Isn't when we set it up that at 55 you can retire after 30 years based on mortality rate and that will match if somebody retires at 65 at 80 percent of the benefits? And when you start adding mortality rate, is that early retirement, should that move up too? If mortality, should we start saying you can't retire until you're 56,57 ? Wouldn't that...

BRENT BANISTER: Okay, those would affect what the costs are. It doesn't...what we're trying to do is say how much does this cost as it is? And so we say, well...

SENATOR GROENE: But I would assume when it was set up that you could retire at 55 and get 60 percent of your pay, that it was calculated out by some actuary, that that employee wouldn't cost us any more over time because of the mortality rate as the employee that retired at 65 and got 80 percent of their top pay.

BRENT BANISTER: I don't know...

SENATOR GROENE: That wasn't based on science?

BRENT BANISTER: And that would be...yeah, you have a very, very different looking benefit structure to make that work. What really is designed is, for any number of reasons, a benefit structure gets put into place.

SENATOR GROENE: They didn't ask an actuary to design it.

BRENT BANISTER: Well, they might have asked an actuary what it would cost. And the nature of a defined benefit plan is some people...the person who comes in at one age is going to cost a different amount than somebody who comes in at another age. We're looking at kind of this average and blend.

SENATOR GROENE: But have you ever looked at the mortality rate? Does it cost the plan more for somebody who retires at 65 over the rest of their life than at 80 percent benefit of their last pay versus retiring at 55 at 60 percent over the rest of their life? Which one of those two cost the plan more money on average, do you know?

BRENT BANISTER: More often than not...again, it does depend from plan to plan. But more often than not the sooner somebody retires even with a lower benefit the more it costs because later in their career their benefits aren't...one more year isn't that much more of a benefit. Their pay doesn't go up that much. Now that's not always true in every case. Somebody gets promoted and things change. But generally speaking, the longer a person works, on average, the cheaper it is, typically.

SENATOR GROENE: On payout to the plan.

BRENT BANISTER: Yeah.

SENATOR GROENE: In relationship with how much they paid in over their...

BRENT BANISTER: Well, it may or may not...I'm just talking about what the value of the payout is, not even what they paid in.

SENATOR KOLTERMAN: Senator Kolowski, you have a question?

SENATOR KOLOWSKI: Just a point of clarification, the Patrol, do they pay Social Security?

BRENT BANISTER: They do not.

SENATOR KOLOWSKI: They do not. Anyone else not pay into Social Security of the groups we're looking at?

BRENT BANISTER: I believe the schools, the judges...

SENATOR KOLOWSKI: Schools do. Judges do.

BRENT BANISTER: ...do, the state and county do. So right. And again, those are kind of what I'll call plan design issues that may be appropriate to grant more valuable benefits to certain groups for various reasons. I mean, one, in the case of the Patrol, they don't have Social Security and that actually makes these costs maybe look a little different. You say, oh well, factor Social Security in. Secondly, you know, sometimes you...there may be reasons for thinking we don't...in fact, there's a mandatory retirement age with the Patrol that it's been determined that probably it's best if we don't have...

SENATOR KOLOWSKI: Sixty-five-year-old Patrols.

BRENT BANISTER: ...65- or 70-year-olds out there. It's maybe not viewed as being good for public safety. So the retirement is...what we're trying to do again is not really set those policy issues but just help determine, given what everybody has decided is the best benefit structure, how do we spread these costs out and evenly over time?

SENATOR KOLOWSKI: But if I'm a Patrol member, I'm paying in more potentially myself over time because I'm not getting a Social Security benefit as far as my future, therefore, my whole retirement nest egg is riding on that, on the State Patrol program compared to having to have Social Security.

BRENT BANISTER: Right, right. Yes, yeah. The Patrol members, again, it's likely that people will say it's fair or reasonable or appropriate for the Patrol to have a higher benefit because they're not participating in Social Security. And then our goal is, how do we make sure to pay for it?

SENATOR KOLTERMAN: Okay. In the essence of time, we're going to move on.

BRENT BANISTER: Okay. So I think we've kind of looked at the Patrol, but again, there's...the new assumptions as expected because we're saying people are going to live longer, we're going to earn less money. It's going to take, without other changes, more money from the state. The judges, the exhibit here I'll point out is a little bit different in that the funding that comes in to pay for the benefit includes member contributions and then court fees which are not related to pay have recently had a tendency to decline. We assume they are going to be constant--I say constant--we know that there's a scheduled increase coming up and that we do reflect, that they are scheduled to increase, losing track, a year from now I think. And so there are some little...some differences that kind of come through with that. If you look at the funded ratio, they're a very well-funded plan currently. Now, assuming lower investment return and better mortality, the funded ratio drops and it takes a much longer time to get to 100 percent and that's really kind of a function of the funding method and that what happens right now is those court fees are really good for a couple years at the first...when they first bump up and that's going to help, in theory, push us up to 100 percent and then we can kind of glide. Otherwise we just...we take the approach of we don't...we want to get to 100 percent very slowly and so we do. That's sort of the funding mechanism in place. It just...if the court fees push us up, we're there. And so that's why that graph looks the way it does. You can see that under the new assumptions there would be additional contributions from the state all the way through, whereas the court fees, the way everything is set, if it all goes as planned there would not have been state appropriations for a number of years. If court fees continue to decline, obviously this would all change. But this is our...again, a comparable...it's a fair comparison. Whether it's accurate or not, we don't know but we think it's fair. And so the contribution rates you can see kind of behave again in a similar way. It does require a little more money for a number of years with the new assumptions. Now we come to the easy ones that are kind of nice. The cash balance plans, a couple things on these, as you can see looking at, for instance, the state cash balance plan, you can see at the January 1 valuation we were over 100 percent funded. Where it says UAAL there on the third row it's a negative number. We're slightly ahead of schedule on an actuarial basis. Now these assumption changes would cost a little bit more and you see there's a very small unfunded liability. We go from 103 percent funded to 99 percent. It's 99-plus I think percent funded. The normal cost rate does not...it actually goes down, okay, in the...which is probably counterintuitive but the biggest
factor here is the interest crediting rate assumption declining, that if...we've been spinning off gains regularly over the last number of years. I don't know when there was last a 6.75 percent interest credit. It's just not, with the way the interest rates have been, a likely event. And so the normal cost rate actually comes down. So the total contribution rate remains fairly flat and that's well below the actual contribution rate. So that additional money goes in and allows for periodically the potential for a dividend to be granted. It's kind of a benefit enhancement. So this is a case where these assumptions really have...all the changes, when all is said and done, didn't make a big difference.

PATRICE BECKHAM: But we probably should mention, remember the change in economic assumptions here was for 7.75 percent and 7.5 percent. So it's less than the average. Remember that as well.

BRENT BANISTER: Right. And then the county, again, sort of a similar picture: The costs stayed fairly flat, the funding stays pretty flat. Cash balance plans behave differently. I think this one caused us a couple times to scratch our head and say, hold on, we changed this, we changed that. It was like, yeah, okay, but, yeah, here's why. And so we didn't...the expected contributions for these two plans would be ongoing, just the scheduled statutory rate. We don't envision there being, under reasonable scenarios, any particular departure there.

SENATOR KOLTERMAN: So the normal cost rate in the state and county cash balance plans, they decrease with new assumptions.

BRENT BANISTER: Yes, right. (Inaudible.)

SENATOR KOLTERMAN: A reduction in the crediting..and that's due because of the reduction in the crediting?

BRENT BANISTER: That would be the biggest factor. The other... another part--and there are several factors going on here--a large portion of these benefits are taken as lump sums and not as annuities. And so from that standpoint the mortality change didn't have much impact. So the
mortality table has less impact on these plans. And we're actually decreasing...the way...the benefit is growing more than we're decreasing the time value of money and so.

SENATOR KOLTERMAN: So those cash distributions, lump sums, have a pretty major impact on the plan.

BRENT BANISTER: Yes, because the...what we do when we do this is we say, what money is going to be paid out in benefits? And to the extent that people choose annuities and receive those annuities, you know, we say, oh, they're going to live longer and get more money. But if they take...

SENATOR KOLTERMAN: But you also know what your exposure is.

BRENT BANISTER: Right, but if they're going to take their account balance and just take their money out, that mortality doesn't affect it. It doesn't matter how long they live. They've taken their money and they're off our books, so to speak. So some things to me were a little counterintuitive on the cash balance plans here.

SENATOR KOLTERMAN: Do you know what percentage of the people take a lump sum? I'm just curious.

BRENT BANISTER: We did a study of that. I want to say...I don't know if I can find it quickly or not. And we looked at two different parts. One was how many take it, as well as what portion do they take because they can elect partial amounts. It looks like over the time period we were studying, about 27 percent of the county and 46 percent of state took some portion as an annuity.

## SENATOR KOLTERMAN: Okay.

BRENT BANISTER: Okay. And when we kind of take into account the...what was actually paid out, it's (inaudible) it's 50 percent gets taken as an annuity and 50 percent of the value is a lump sum because if people with small balances take all their money out and don't...say, well, why would I annuitize this? We get a lot of numbers of people to balances out, but if the people with
the biggest balances say I need this to live on, I want a dependable income and annuitize, the dollars are not...

SENATOR KOLTERMAN: Okay.

BRENT BANISTER: About half the money gets annuitized.

SENATOR KOLTERMAN: Okay. Thank you.

PATRICE BECKHAM: So that makes a big difference in the cost impact because for that half that take the lump sums, the mortality change had no impact. The cash balance plan have a number of things that kind of work in their favor for financing purposes.

BRENT BANISTER: So that's kind of a summary of what we've determined and what we're proposing to the board on Monday.

SENATOR KOLTERMAN: So I just have some...anybody have any questions? I have some questions about process and I guess it goes back to what we went through last year which dated before I got here. So I'm here to learn. I'm still trying to understand the process of how the actuarial studies work. So this experience study that you just did, that's based on four years. And I know we changed that in statute so it would be four years. That was ending June 30 of 2015, is that correct?

BRENT BANISTER: For the cash balance plans it actually ends December 31 of 2015.

SENATOR KOLTERMAN: Okay.

BRENT BANISTER: Yeah, because there are six months kind of shifted.

SENATOR KOLTERMAN: So in essence, you did have all the information you needed for four years in 2015?

PATRICE BECKHAM: We don't have the cash balance data reconciled and all that done until the end of April.

SENATOR KOLTERMAN: Okay.

PATRICE BECKHAM: Yeah.

SENATOR KOLTERMAN: Okay. Well, my question is--and I'm going to ask some questions of the PERB here in a minute--but as we are trying to evaluate and keep these plans as solid as possible financially and we're getting the information as close to the deadline as we're getting it and I don't think it's just...it's not as much a problem for us or any more of a problem for us as it is for the PERB Board, how do we correct that so we're not dealing with, in my opinion, lastminute decisions? And if you go back four years when we had a different Governor, they faced the same challenge from what I've been able to read through the transcripts. You get the question where I'm going?

BRENT BANISTER: Yeah. One of the things I would point out, we presented kind of preliminary results to the PERB a month ago...

SENATOR KOLTERMAN: Yeah, but that's...

BRENT BANISTER: ...to give them a month to kind of reflect on (inaudible) get their feedback on some policy (inaudible).

SENATOR KOLTERMAN: But again, that was preliminary and that didn't have a lot of the numbers in it that we're seeing today. How do we change the process so that we can all make better informed decisions because...you know, with the idea that we might be moving the assumed rate to 7.5 percent and we're going to have a change in the inflation rate and mortality rates are going to change and we're going to be looking at some ARCs, actuarially required contributions, and we're sitting here with a $\$ 95$ million shortfall to start with? How do we take all this information? That was that kind of the credence of my first question early on where I was saying how do we...would it make sense for us to wait before and the PERB to wait before we
make these changes and think about them work together and study them? Or do we just keep doing the reactive approach? Go ahead, Pat.

PATRICE BECKHAM: I think that's a policy issue.

SENATOR KOLTERMAN: That's why I'm...

PATRICE BECKHAM: Yeah, I think it's a policy issue for you and for the PERB. The timing, you know, I wanted to just clarify, you know, rather than have it disjointed and doing Patrol, school, and judges sooner and then doing cash balance later, I guess that's a possibility; it wouldn't be my favorite idea. But it just takes a lot of time to get all this work done and that's why I wanted to point out, like we don't have the data for the cash balance plans to start doing our demographic analysis until almost May. And it takes May, June, and July to get all the numbers crunched and the analysis done and to write the report. So that timing is probably going to be kind of, so to speak, stuck with it unless you split and do those $7 / 1$ plans earlier and then the cash balance plans later, which is a little disjointed.

SENATOR KOLTERMAN: And I don't want to...

PATRICE BECKHAM: So I mean I think when you implement the recommended changes, I think maybe that's where you're headed. I think that's, you know, up to the PERB, falls under their purview.

SENATOR KOLTERMAN: Well, I guess where I'm going with this is we're all in this together. But you guys do a lot of plans and you already indicated you do some other states. Is this much different than what you're seeing in other states? Let's go for that.

PATRICE BECKHAM: These changes?

SENATOR KOLTERMAN: Yeah, or how they're implemented and the process.

PATRICE BECKHAM: I would say there are not very many systems that have plans with varying valuation dates.

## SENATOR KOLTERMAN: Okay.

PATRICE BECKHAM: That's pretty unique. So I think you win the prize there. So if all the valuation dates are aligned...and I'll use Kansas as an example because we're working on their experience study right now. So they're a 12/31 valuation but we don't start working on it and get the data until May. So we'll finish up this calendar year with their experience study and it will be used for $12 / 31 / 16$ valuation, but that work isn't done until May and it's presented in July of the following year. So you see it's more comfortable, I guess, maybe to your timing question. There is more time to analyze and we sort of skip a legislative session in there if anything needs to happen. And it varies. We work with Minnesota teachers and some of these things are actually in statute up there. And so even when there's a recommended change it doesn't necessarily happen. So each one has their sort of own life, so to speak. Colorado we're working on one this fall that, again, will apply to the December 31, '16, valuation. But those results are presented in June. I think your challenge is that you've got three plans on July 1 and two plans on 12/31. And that kind of throws off the cycle.

BRENT BANISTER: A lot of states also have what I'll call a lag between evaluation and when the contributions are (inaudible). And so if...

PATRICE BECKHAM: It's not as imminent.

BRENT BANISTER: It's not as...you will try to contribute in the year in which a contribution amount is determined. You try to contribute it right at the end of that year as opposed to waiting until the following year. So that's part of what some states do is they...if we do a valuation, they're not even going to attempt to start funding at that level for another year.

SENATOR KOLTERMAN: And that's kind of what recommendation was made from...

PATRICE BECKHAM: Yeah, they do that every year.

SENATOR KOLTERMAN: Right.

BRENT BANISTER: On just...

SENATOR KOLTERMAN: I understand that. It kind of goes to the question that I'm searching for. When you...let's talk about the annual valuation reports. Can you tell me, when you get...what kind of information do you need from DAS and do you get that in a timely manner in order to complete that defined benefit valuation report?

PATRICE BECKHAM: DAS is?

SENATOR KOLTERMAN: Department of Administrative Services.

PATRICE BECKHAM: We don't...we get the member data from the system.

SENATOR KOLTERMAN: Okay.

PATRICE BECKHAM: We get the asset information...

SENATOR KOLTERMAN: So then that question is going to have to be asked to them.

PATRICE BECKHAM: Yeah.

SENATOR KOLTERMAN: Okay. I think that's the question that I'd have. Anybody have any other questions?

SENATOR GROENE: Over here.

SENATOR KOLTERMAN: Senator Groene.

SENATOR GROENE: So you make the changes. We're going to have to come up in appropriations about $\$ 4.9$ million for the Patrol and $\$ 1.1$ million for the judges because we're on shortfall? And that's annual.

PATRICE BECKHAM: Those numbers are going to be different.

BRENT BANISTER: They'll be different with actual experience but...

SENATOR KOLTERMAN: What do you mean actual? Kate said that you're taking...that's at 8 percent. If the reality is 1.6 percent these numbers...

BRENT BANISTER: Those were July 1, 2015, had we done the change a year ago.

SENATOR GROENE: All right. So we don't know what the effect of this will be on next year's appropriations.

BRENT BANISTER: I think we think it would be a similar magnitude. In other words, the State Patrol would have been, I want to say, $\$ 2.7$ million...I mean, it's what it was.

SENATOR GROENE: Two point seven.

BRENT BANISTER: Two point seven. So it added $\$ 2.2$ million for this change. And so we would I think anticipate in that magnitude.

SENATOR GROENE: This was for ' 15 , these numbers.

BRENT BANISTER: Right, but we would anticipate that...

SENATOR GROENE: But we don't know what's going to happen the next two...in the next budget cycle.

BRENT BANISTER: Right, but we would anticipate that the difference would be somewhat similar to...in other words...

PATRICE BECKHAM: Be careful because he's probably thinking total dollars.

BRENT BANISTER: Total...yeah, right, but...

SENATOR GROENE: I'm worried about dollars, not percentages.

PATRICE BECKHAM: But the baseline is going to go up...

BRENT BANISTER: Right.

PATRICE BECKHAM: ...because we're having a 1.6 percent return instead of 8 or 7 . And then the COLA is lower so then that will back it off a little bit. I mean the bottom line is, for this valuation we don't know.

SENATOR GROENE: Your 7 is for long term, as you said.

PATRICE BECKHAM: Right.

SENATOR GROENE: But we're...we've got to live with reality, what returns we got last year or what we got that year, right, that affects that bottom dollar, how much this is going to cost the budget?

PATRICE BECKHAM: We can give you our best guess based on the limited information we do have in trying to reflect the asset return in particular since that's such a powerful piece of the funding equation. Do you have that, Brent?

BRENT BANISTER: Right, and for the Patrol I don't...let's see, do I have the baseline? I don't know if I have the 8 percent numbers here, but Patrol, our estimation is that when we do the

# Transcript Prepared By the Clerk of the Legislature 

 Transcriber's Office Rough DraftNebraska Retirement Systems Committee
September 16, 2016
valuation come this fall with it, we're looking at probably, say, around $\$ 4.7$ million, $\$ 4.8$ million...

SENATOR GROENE: Shortfall.

BRENT BANISTER: ...contribution. No, that would be contribution, whereas if we stayed at 8 percent...had we earned 8 percent which...or, no, maybe that's...no see, this would be with earning (inaudible)...well, yeah, we would have been about $\$ 2.6$ million.

SENATOR GROENE: If we change that it's going to affect that amount, how much we have to come up with to...shortfall.

BRENT BANISTER: Right, but also the actual return affects it too.

SENATOR GROENE: Yeah.

SENATOR KOLTERMAN: Senator Groene, the reality is we won't know until November.

SENATOR GROENE: But what we will know is that if we make these changes, it's going to be more.

SENATOR KOLTERMAN: Oh, yeah.

SENATOR GROENE: That's the reality.

SENATOR KOLTERMAN: We know it's going to be more. That's why I'm asking...that's why I was asking the questions about that process.

SENATOR GROENE: One more question, on the schools, total actuary rate needed with the changes is 20.82 percent. Statutory contribution rate is 21.66 percent. We're paying more in than what we need, right?

SENATOR KOLTERMAN: Correct.

SENATOR GROENE: To keep it at what, 80 percent? Actually, if we keep paying that extra in we'll reach 100 percent?

BRENT BANISTER: You'll go over 100 percent.

SENATOR GROENE: So we could lower the state's contribution of that 2 percent about 0.8 percent and make some savings there, right, and switch it over? I'm thinking about switching numbers from here or there to keep the net zero.

BRENT BANISTER: Yeah.

PATRICE BECKHAM: You're rounding 20, 30. I mean under the projections based on the '15 valuation, and the 7.5 percent and the current contribution, you're not 100 percent funded until 2035.

SENATOR KOLTERMAN: Correct.

BRENT BANISTER: So if you...

PATRICE BECKHAM: So if you take money away you're going to push that out further.

SENATOR GROENE: But if you match that 20 points, whatever it was, 20.82 percent, it would keep us from having to add contributions because you're matching what you said the necessity is of 20.82 percent.

PATRICE BECKHAM: That's going to change every year though.

BRENT BANISTER: That will change each year.

SENATOR GROENE: Yeah.

PATRICE BECKHAM: So you want flexibility.

BRENT BANISTER: Yes. It will almost certainly be higher than that when we do this valuation if we use the new assumptions because of...

SENATOR GROENE: Rate of return.

BRENT BANISTER: I think we're thinking the rate of return is going to have more negative effect than the COLA, and other experience will have a positive effect.

SENATOR GROENE: All right. So we don't know.

SENATOR KOLTERMAN: So any other questions for the actuaries? Thank you. I would like to ask Ron Ecklund and Phyllis, could you...I'd like to ask a couple of questions. And I'm...I guess we'll have some open dialogue a little bit here. So for the record, we have Ron Ecklund who's chair of the PERB Board.

RON ECKLUND: Correct.

SENATOR KOLTERMAN: And we have Phyllis Chambers who's the executive director of the PERB Board.

PHYLLIS CHAMBERS: Yes.

SENATOR KOLTERMAN: Thank you for both coming today. Appreciate that. I guess the question is really...and I was asking the actuaries but it probably has to do with the interaction between us and the Governor and all involved because I don't believe our committee is going to want to get in the same situation that we were back in 2012 where we're--maybe I'm speaking for myself but--where we're...we have an actuarial study, we come in with increased numbers, and then we have to have an ARC right away and we really haven't had time to think about that or research that. I guess my question...and you got you got a letter yesterday from the Governor, we got a copy of it, and his recommendation was give us time to sit down and talk about this and
review it together before we actually made final decisions. I guess my question to you is, are you open to that, and if so, has anybody in your group--and they probably haven't seen the letter--had any questions about making decisions on Monday, because I think you're scheduled to vote on this Monday?

RON ECKLUND: We have on our agenda Monday, but I don't know that we're necessarily going to vote, okay?

SENATOR KOLTERMAN: Okay.

RON ECKLUND: The whole PERB committee, board got the letter yesterday afternoon, late, and we have not met as a group and nor have I talked to any other members of the PERB Board about the letter. I have no idea of what will transpire on Monday yet.

## SENATOR KOLTERMAN: Okay.

RON ECKLUND: But am I open to sitting around and thinking about it and talking about it? Yes, absolutely.

SENATOR KOLTERMAN: Okay. And I believe our committee would be, too, simply because, as you know, we're going into a short...we're going into a long session short on money. That's one issue. But the other thing is I think we need to somehow develop a very close relationship with all the parties. And, Ron, you and I have talked about that.

RON ECKLUND: We've talked about that personally and individually, yes.

SENATOR KOLTERMAN: And so I just, I'm hoping you're open to that.

RON ECKLUND: And I think it's important to recognize that what we're talking about here is a 50 -year or longer projection and one month out of 50 years isn't that long of a delay.

SENATOR KOLTERMAN: Right. The other question is not knowing what the actual numbers are for budgeting, and we aren't going to get those until November. I would hope maybe we'd take a little time and talk through that a little bit. The other questions I have about...talk really about timing of the valuation reports. Are you getting the proper information in a timely manner from Department of Administration Services as you start to look at budgets and look at these, what we're going to need for the...? I'm just questioning.

PHYLLIS CHAMBERS: As far as I know we are, but I don't know of any issues with DAS.

SENATOR KOLTERMAN: Okay.

PHYLLIS CHAMBERS: I would need to ask probably our head of accounting, Randy Gerke, our deputy about that. But I have not been advised of any problems.

SENATOR KOLTERMAN: Is there any possibility, and here again I'm asking a favor, that you could try and get those valuation reports completed by October instead of putting it off until November?

PHYLLIS CHAMBERS: Well, these are issues we work with the actuaries.

SENATOR KOLTERMAN: Okay.

PHYLLIS CHAMBERS: Okay. So we're providing them the data and they're looking at the information. As far as...I mean I don't think we're any different than any other plan. We're looking at making the best estimate for the coming year and then if that doesn't... and you set a time and you do them. And then if that doesn't work--I mean if you overspend, underspend-those adjustments are made in the next year. So every year when they do these valuations, they're looking what we did and what we plan to do for the next year I think. I'm speaking...that's my understanding of it. So if we're...and again, these are 30 -year projections. So there...we're just trying to smooth all of those estimates out along the way, give everybody an amount of what the ARC would be for the next July when you pay it to us if there is one needed. And then we go through the same process every year. So as far as getting them in October or November, I
don't...is there a reason that October helps you more than November because you're not going to vote on anything until January, February, March?

SENATOR KOLTERMAN: I realize that, but for budgeting purposes, you know, the Governor has already gone out to all the departments. He's probably been to your department and said get a handle on controlling costs. And I think I'm acting from the same position and so I think if the Governor and our committee can do anything to help expedite the process so we get very accurate information, I can't speak for the Governor's Office and Department of Administrative Services, but I can speak for the committee and we're willing to help any way we can.

PHYLLIS CHAMBERS: Well, again, these are funding mechanism to fund the plan. They're not going to be exact numbers always. We could certainly visit with the actuaries and find out if there's something that we could do differently. We do have fiscal year ends for the school. And so it's just not that you...you just can't change it, change these fiscal year ends and valuation years and our...how we do things just...

SENATOR KOLTERMAN: Pat was going to help address that too.

PATRICE BECKHAM: Yeah, there's really kind of two pieces to the valuation. One are, of course, the liabilities which are driven from the data. And that we actually I think get that in a pretty reasonable amount of time. But the other side of that, of course, is the assets. And we don't normally get asset information until October. I mean it takes a while to gather that, to do the audit. That I think is what holds the valuation up from being done sooner. And I'm not sure...I don't know what that process is but we would have to get that asset information sooner if we're going to produce a valuation a month earlier. And you are not unlike other systems that that is the last piece of information that we get.

SENATOR KOLTERMAN: Knowing that, then I'm kind of the same agenda that the Governor has: Let's take our time and get all the information and not over...not have to act in reverse, so to speak. In other words, let's get it as accurate as possible, and maybe that plays into what Senator Wickersham had recommended a couple of times. Maybe we're working in arrears, but at the
same time at least we have the accurate information. And I don't know, those are just thoughts that I had and I wanted to ask you if something like that...

RON ECKLUND: The board will take that into consideration on Monday.

SENATOR KOLTERMAN: Yeah, appreciate that. And you know that we're open to visit and I sense that the Governor's Office is as well. Any other questions? Senator Groene, do you have any?

SENATOR GROENE: At the end of the day, we're going to have to pay the piper, aren't we?

RON ECKLUND: Correct.

SENATOR KOLTERMAN: Yeah.

SENATOR GROENE: That's what I thought.

SENATOR KOLTERMAN: It's a matter of whether we do it this year or next year or whenever it's going to be.

RON ECKLUND: And you'll never have all the data perfectly.

SENATOR KOLTERMAN: No, we know that. All right, thank you both.

RON ECKLUND: Thank you.

SENATOR KOLTERMAN: Thank you for coming. With that, I'll close the hearing.

