The ATRS Board has just adopted new actuarial assumptions and has also made future benefit adjustments.

The ATRS Board met on Monday November 13 to consider proposed actuarial changes presented by the ATRS actuaries and executive staff. ATRS has updated actuarial information due to a five year experience study by the ATRS actuaries that will be presented to the ATRS Board in December. The information generated in the experience study is the basis for adoption of new actuarial assumptions. ATRS has been expecting and providing members with the anticipated actuarial changes that were presented and accepted today. ATRS has also worked to provide the ability to absorb the costs of the assumption changes in a comprehensive manner through legislation and rules that have been put in place over the last several years.

The first change was adoption of new mortality tables that have significantly longer life expectancies for ATRS members than the existing mortality table. The second change was the adoption of a reduced assumed rate of return for ATRS from 8% where it has been since 1991 to 7.5% which was the ATRS assumed rate of return from 1986 to 1991. In addition, the five year experience study brought about many other minor actuarial assumption changes regarding disability rates, retirement rates, refund rates, and basic assumptions on inflation and member behavior.

More details on the assumption changes and benefit changes are provided in this important executive director update. Importantly, most changes regarding member benefits are over a year and a half away and begin in the 2020 fiscal year.

Information about new actuarial assumptions used by ATRS

As stated above, ATRS adopted significant new actuarial assumptions that required ATRS to make adjustments to member benefits and contribution rates with most of the changes taking effect in fiscal year 2020 (over a year and a half from now). However, continued exceptional investment returns in our trust fund may allow ATRS to dial back the changes based on the strength of the investment returns.

These actuarial and benefit adjustments were required despite having had a 16.1% investment return in the last fiscal year which was the highest investment return in the U.S. for pension plans with over a billion dollars in assets under management. ATRS has a history of strong investment returns with its investment returns ranking among the top 1% of all pension plans with over $1 billion dollars in assets over the periods of one year, three years, five years, and since inception. The recent benefit and contribution rate adjustments were made to absorb changes in actuarial assumptions and are not based on poor investment returns or weak operations. In fact, but for the strong ATRS investment returns, the benefit changes required by the new actuarial assumptions would have been much greater. ATRS currently also has $150 million dollars in unrealized gains that will be realized over the next three fiscal years that will help.

What actuarial changes did ATRS make?

1. **ATRS adopted a new, more expensive mortality table.** One of many factors used to calculate a pension plan's cost of benefits and set its liabilities is the life expectancy of the pension plan's members. ATRS pays all retirees a lifetime retirement benefit. The longer the life expectancy of members, the larger the payout will be to the membership group as a whole. The life expectancy of a pension plan's members is estimated using mortality assumptions produced by actuarial groups. These assumptions are called "mortality tables". Increasing life expectancies create increasing cost of benefits (additional unfunded liabilities) to a pension plan due to projections that members are living longer and will receive monthly benefits longer than currently anticipated. The adoption of the new mortality table will add material additional assumed payment of benefits and increase the unfunded liabilities of ATRS.

2. **ATRS adopted a lower actuarial assumed rate of return.** The actuarial assumed rate of return is the projected rate of investment returns used by actuaries to estimate a pension plan's future growth and asset size to fund benefits payable in the future. A lower assumed rate of return will result in increasing the long term liabilities of ATRS. In 1986, ATRS changed the assumed rate of return to 7.5%. In 1991, ATRS adopted an 8% assumed rate of return that has been in use until today. Since 1986, the average ATRS rate of return has been over 8% (actually 8.5%). Accounting leaders and those determining the risks related to pension benefits have advocated a careful review of assumed rates of return with a focus on more conservative assumptions. Continued periods of lower inflation and changing actuarial standards have resulted in pension plans generally reducing actuarial assumed rates of return. ATRS has now lowered the actuarial assumed rate of return from 8% back to 7.5% beginning this fiscal year to remain in the mainstream of pension plans.

What approach did ATRS take to absorb the added costs and liabilities resulting from the actuarial changes?

1. The ATRS Board moved to immediately address the additional liabilities created by changing the actuarial assumptions to bring ATRS back to an amortization period of around 30 years. ATRS has traditionally had a 30 year amortization period as a target.

2. The Board attempted to ensure that all member groups share in the duty of shouldering the adjustments required to bring ATRS back to a 30 year amortization target.

3. Reasonable benefit changes were pushed to begin in fiscal year 2020 to allow ATRS members and ATRS employers time to adjust to changes and potentially allow strong investment returns to eliminate the need for some or all of the changes.

Some of the actuarial changes are being strongly advocated and encouraged by national groups that create guidelines and standards for pension plans to follow. Although all member groups participate in absorbing the responsibility, all changes made by ATRS are minimal compared to benefit changes that many other retirement systems are implementing. Even after all changes are implemented the benefit program offered by ATRS remains one of the strongest and best offered in the country and will continue to focus on the ATRS goal of recruiting, retaining, and rewarding career educators and others that spend a career helping deliver the educational curriculum. As an insight, the adoption of the new actuarial assumptions will cost ATRS approximately $100 million dollars per fiscal year. The ATRS Board did not overreact to the additional costs produced by the change in actuarial assumptions but carefully considered the changes and only implemented the ones that were required to bring ATRS back to a 30 year target amortization period. The delay in implementation of many changes indicates the ATRS Board's willingness to see if returns will eliminate the need for some of the changes.

What are some of the changes made to ATRS?

1. **Increasing the member contribution rate from 6% to 7% in 0.25% increments over a 4 year period beginning over a year and a half from now in FY 2020.**

   Any change to the member contribution rate is over a year and a half away. The 6% member contribution rate has not been changed in 43 years. Most retirement plans across the country have materially raised member contribution rates in those 43 years with many member contribution rates having material increases since the financial crisis in 2008/2009. The ATRS Board found alternate and conservative methods to maintain financial strength after the financial crisis. However, the adoption of a lower assumed rate of return and a new mortality table necessitates the member contribution rate increase to maintain financial strength and sustainability. The contributory rate increase will be phased in over a four year period. This provides contributory members greater flexibility and more time to absorb the change.

2. **Lowering the noncontributory member multiplier from 1.39% to 1.25% beginning in FY 2020.**

   Historically, when ATRS has modified the contributory multiplier, the noncontributory multiplier is adjusted in alignment with the change in the contributory multiplier. The change in the member contribution rate means that contributory members will pay more to maintain the current contributory multiplier of 2.15%. In order to maintain alignment and parity between contributory members and noncontributory members, the noncontributory multiplier should be reduced in line with the additional cost borne by contributory members. A 1.25% multiplier for noncontributory service brings the noncontributory rate in close parity with the higher contribution rate for contributory service. As a reminder, any noncontributory member may become contributory by filing an election with ATRS before the beginning of a fiscal year and receive the higher contributory multiplier.

3. **Lowering the initial contributory multiplier from 2.15% to 1.75% for service before reaching 10 years. If someone reaches 10 years, then the service will be backfilled and credited at the full 2.15%. For noncontributory service the change goes from 1.39/1.25% to 1% with the same backfill provision. Plus noncontributory members will have the option to become contributory.**

   ATRS will now have a lower initial multiplier for initial service before 10 years of credited service is reached. This will NOT IMPACT ANY MULTIPLIER ALREADY EARNED through the current fiscal year. This change is to prevent those who "cross the border" from taking advantage of our generous retirement and is designed to better reward career service. ATRS has tried to provide material incentives for members to work past 10 years of service. The incentives that currently kick in after 10 years of service include becoming eligible for the lump sum death benefit and receiving the benefit stipend. The enhanced benefit after 10 years through the backfilled initial multiplier is a new incentive. Importantly, to not impact recruiting from other retirement systems in Arkansas, reciprocal service in other state retirement systems, such as APERS or a public college, will count toward the 10 year service requirement to obtain the backfill to the standard multiplier. This means a person with 10 years or more service in APERS would immediately receive the standard multiplier. Also note that previously earned multipliers before fiscal year 2019 would not be affected. Any and all earned multipliers through fiscal year 2018 (through June 30, 2018) will not be subject to a reduction or modification.

4. **Moving from a 3 year final average salary to a 5 year final average salary calculation. This will be done with a 2018 benchmark to set a 3 year final average salary calculation at the end of the current fiscal year. This will be a permanent benchmark that will be used if the 5 year calculation produces a lower final average salary than the permanent 2018 benchmark. This**

ensures the change will not negatively affect those soon to retire, and all members' benefits will grow by working longer.

A newer consistent approach used nationwide to contain costs and ensure that contributions received on salary are more in line with actual "final average salary" has been for plans to move back to a five year final average calculation to establish final average salary. A three year final average salary was adopted by ATRS in 1998. Pension plans around the country generally moved to a three year average salary calculation during that era. A three year final average salary invites greater anti-selection opportunities for some but not all member groups and is more subject to spiking techniques that provide a higher benefit than the contributions received were designed to fund. The use of a five year final average salary makes spiking more difficult to achieve since it adds to the number of years that the spiking technique would be required to cover. The change as adopted by ATRS guarantees that no active member with three full years of ATRS service will receive a reduction in benefits by continuing to work through the effective date of the conversion to a five year final average salary. In fact, all member benefits will continue to increase if the member works through and after the conversion. This was carefully developed to protect members. This guaranteed positive outcome is achieved through ATRS providing all eligible members to have a benchmarked three year final average salary using the same formula ATRS would use today if the member were retiring or entering T-DROP on July 1, 2018. ATRS staff will compute this three year final average salary benchmark at the end of the current fiscal year. This benchmarked final average salary will be used as a permanent comparison to the five year final average salary calculation with the higher of the two calculations becoming the member's final average salary for the calculation of benefits at retirement or entry into T-DROP.

5. **Lowering the retiree benefit stipend from $75 to $50 per month and removing the stipend from the base for COLA purposes.**

The benefit stipend was created in 1999 as an ad-hoc supplement to eligible retirees' benefits. It was initially a $50 per month supplement that was ultimately increased to a $75 per month supplement. The benefit stipend is not a part of a member's earned benefit. For unknown historic reasons the benefit stipend was added to the base of all members for the purpose of the simple COLA calculation each year. New retirees in the current fiscal year do not have the benefit stipend as part of the base. Retirees will assist in absorbing the costs added by the change in actuarial assumptions through the removal of the benefit stipend from the base for all current retirees beginning in fiscal year 2019, coupled with the reduction in the benefit stipend from $75 back to the original $50 per month beginning in fiscal year 2020 (1½ years away). The ATRS Board provided that the reduction would have a hold harmless "phase-in" to ensure that no retiree would see an actual dollar amount reduction in the monthly benefit payment after the stipend is returned to $50 per month. Essentially the annual COLA would backfill the implementation of the stipend reduction over more than one fiscal year for any member with a base monthly benefit of less than $833. Most retirees will not need this protection, but a few will benefit by it.

6. Lowering the T-DROP interest rate to a fixed 3%.

Until this fiscal year, ATRS used a variable interest rate formula that varied between 2% and 6% based upon returns. This fiscal year ATRS set the one year rate at a fixed 5% since it was clear ATRS was moving toward outstanding returns, tempered by the Board's understanding that soon ATRS would implement changes due to the changes in the actuarial assumptions. Here, ATRS balances the need to incentivize members to remain in T-DROP which is actuarially beneficial to ATRS while at the same time having T-DROP participants contribute to the process of absorbing the new liabilities brought about by the actuarial assumption changes. The 3% interest rate is very competitive. In addition, the ATRS Board made provisions to allow the opportunity in years with outstanding investment returns (9.5% or higher) for the ATRS Board to provide additional incentive interest on top of the fixed rate, up to 6% total interest payable in good years.

7. Adjusting the Post 10 year T-DROP interest rate formula with NO CHANGE in current interest rates.

The Post 10-year interest program has major beneficial impact on ATRS. A material number of members complete 10 years in T-DROP and for personal reasons often decide not to retire but continue working. These members could receive a monthly benefit and could potentially withdraw their entire T-DROP balance accrued over the ten year period. When the monthly benefit payments that could be paid plus the spread ATRS has between the Post 10-year T-DROP interest and its assumed rate of return, ATRS makes millions of dollars by these members obtaining the Post 10-year T-DROP interest in lieu of retirement. Post 10-year T-DROP will continue to pay the current variable interest rate between 4% and 6% (ATRS is paying 6% in fiscal year 2018) using the existing formula after one minor tweak to the process being the use of a calendar year return as estimated by the general financial consultant instead of an annualized return from March 31. This tweak is intended to allow more time to establish a better estimate. Otherwise the interest rate process is unchanged for Post 10 year T-DROP.

8. Updating the annuitization factors for T-DROP Annuity Options to lower costs.

ATRS has used the actuarial assumed rate of return as the interest rate that ATRS assumes it will make on a T-DROP balance that is converted into a monthly benefit. Once ATRS reduces its assumed rate of return below 8%, all the annuitized T-DROP balances establish new liabilities since the T-DROP benefit was set at 8% while the actuarial assumption is now lower. Said another way, on all T-DROP annuitizations using the 8% rate of return places an 8% return risk on ATRS as long as the member lives. Changing the T-DROP annuitization factors will better align with private insurance companies offering annuities. This means applying mortality tables in use at the time T-DROP is annuitized to ensure the appropriate life expectancy is included and over time bringing the assumed return on the T-DROP balance to be annuitized more in line with the private annuity industry. This means initially dropping the assumed rate of return for annuitization of T-DROP balances to 7.5% and over several years reducing the assumed rate of return on T-DROP annuitization to 3% or the return on a 10 year treasury instrument, whichever is higher. This slow reduction over time lessens the difference between recent annuitization estimates and the updated calculation while reaching the recommended annuitization interest assumption in a reasonable time.

9. Updating the annuitization factors for Beneficiary Annuity Options to lower costs.

An essential change is to adopt the new mortality table as part of the formula to establish the reduction required to provide an option benefit to another person. Option A and Option B benefits are payable only to an eligible spouse and Option C is a 120 payment guarantee payable to anyone. In establishing the reduction, the actuarial factors such as the mortality table impact the amount of the reduction to provide the option benefit. An unanticipated outcome of the longer assumed lifetimes of members caused by the adoption of the new mortality table is that without adjusting the assumed rate of return below 7.5% it may in several instances create a smaller reduction than the existing option beneficiary formula.
It was determined that the new option beneficiary formula should not become more generous than the existing formula since cost-cutting was occurring across all other ATRS groups. In order to have cost sharing by option beneficiaries, the new mortality table will be used with an assumed rate of return of 5%. This creates a slightly higher reduction (typically about 3%) than the reduction in the existing option beneficiary formula. This seems to be a fair reduction when considering the contribution other member groups are making to address the actuarial changes.

10. INCREASED Cash Balance Account (CBA) interest rates to encourage more CBA participation to bring in more revenue to ATRS.

The CBA account is for members retiring from T-DROP and leaving a discretionary balance at ATRS for future withdrawal. It is much like rolling out the T-DROP proceeds to another financial institution. For CBA participants, the funds are left in an interest bearing account with ATRS. The CBA account has been a win for members and a win for ATRS. Members win by having a quality fixed income product in a safe environment that protects principal and is competitive with other alternatives that would place the principal at risk. ATRS benefits by receiving the spread between the average interest rate paid on CBA accounts and actual earnings for ATRS. For instance, last fiscal year ATRS received over a 13% net return on existing CBA balances (the difference between a 16.1% and an estimated average CBA interest rate of 2.75%). The actuaries have indicated that since the CBA program is now well established and the funding is consistent, that ATRS may receive credit on the spread between the highest CBA interest rate (4%) and the assumed rate of return (7.5%). (7.5% minus 4% equals 3.5%) This means that as ATRS continues to gain traction in CBA balances, ATRS will have actuarial gains projected into its assets to help offset liabilities. For instance, if CBA balances reach $200 million dollars, the annual actuarial gain would be $7 million dollars. The Board has determined that the value of the CBA program to ATRS warrants an increase of CBA rates to encourage more participants and adjust to market conditions. The initial CBA rate will be increased from 2% to 2.5% beginning on July 1, 2018, with the second year through fifth year interest rates increasing 0.5% each year from the original CBA schedule and reaching a 4% interest rate in year six (6) rather than the current 4% interest rate in reached in year eight (8).

For the first fiscal year of participation:	2.50%
For the second year:	2.75%
For the third year:	3.00%
For the fourth year:	3.25%
For the fifth year:	3.50%
For the sixth year:	4.00%
For the seventh year:	4.00%
For the eighth year and thereafter:	4.00%

11. **Increasing the employer contribution rates from 14% to 15% in 0.25% increments over a 4 year period beginning FY 2020 with the rate change fully implemented in fiscal year 2023.**

Again, any change to the employer contribution rate is over a year and a half away. ATRS has not had an employer contribution increase in over 12 years. Most other plans had to have employer increases to overcome the financial shock of the 2008/2009 financial crisis. Importantly, the first employer increase would not happen until fiscal year 2020, with 0.25% increases per year through fiscal year 2023. This gives ample time for employers to prepare for the increase and for any process for the payment of the increase to be tweaked to the extent necessary for an orderly transition period from 14% to 15% for the employer contribution rate. Absent this employer contribution rate increase, the impact to the members would be greater.

Transparency, answers to questions and other helpful information.

ATRS executive staff is ready to maintain transparency and provide full information to members. Most members will not see any change for well over a year and most of the changes will not have a material change to current benefits. In addition, the changes implemented have hold harmless provisions and benchmarks to prevent a reduction in benefits being paid or a major change in benefit calculations, especially in the short term. In the coming weeks, you can email questions to the executive director and answers to questions will be posted in upcoming executive director updates. Additionally, the executive director reminds school districts, ATRS employers, and ATRS member groups that the executive director will schedule times to attend "school hall meetings" across the state to answer benefit questions and provide insight to the quality benefits ATRS provides. The executive director will stay and answer questions until all are answered.