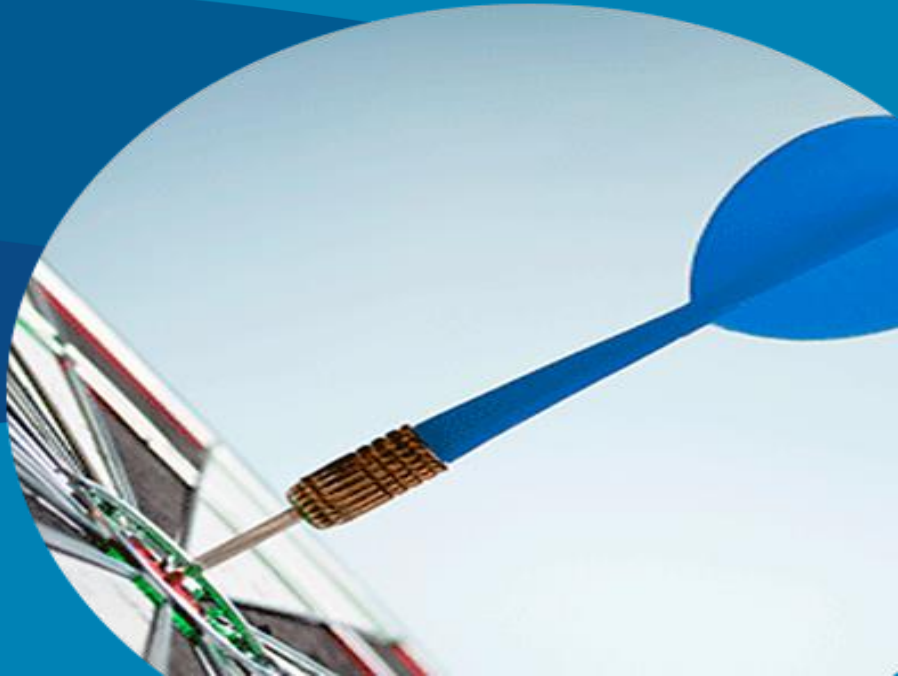
The Rhode Island Pension Advisory Working Group

Study of Options Presented to the Working Group

Joe Newton

January 31, 2024



Agenda

- Introduction and Process
- COLA Proposals
- MERS Police and Fire Proposals
- Misc. State/Teacher/MERS General Proposals
- Benefit Accruals and Structure State/Teacher/MERS General Proposals

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Actuarial Impact of Options

- To the extent possible we have followed the direction given by the Advisory Group and the Office of the Treasurer in a memorandum dated January 17, 2024
  - Also a request from R.I. State Association of Firefighters and the International Brotherhood and Sisterhood of Police Officers dated January 16, 2024
- We have provided quantitative impact of each proposal to the extent it was reasonable to do so
  - To the extent details were not given specifically in the memorandum, we have used recent similar legislative proposals that would be consistent with the request
- To the extent quantitative impact wasn't reasonable, we have tried to provide qualitative comments or notes for decision makers to consider if they wish to make a legislative proposal

Impact of a Proposal

- Analysis of any proposal should at least consider;
  - Cost, now and in the future
  - Risk, to all parties
  - Equity amongst the members
  - Impact to benefit security
  - Potential benefits to attraction, retention, and succession planning
  - Ease of communication and administration

Terminology

- Normal Cost (sometimes referred to as service cost) is the value of new benefits being earned. For example, the cost from a member with 10 years of service earning the 11th year.
- The value provided is a blended average across the population.
- It is also an estimate based on current assumptions being met.
- This portion of the impact represents a change to benefits to be earned in the future
- Any increase to the Normal Cost would increase the contribution as a % of salary and would be permanent, meaning it would continue each year in perpetuity

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Terminology

- The Unfunded Actuarial Accrued Liability (UAAL) is the difference between the liabilities earned as of the valuation date and the assets in the Fund as of the valuation date

- Any increase in this value represents an increase in the value of benefits earned in the past, even though they will actually be paid out in the future

- Any increase in this value will be amortized over a fixed payment schedule, as described on the next page

Financing any new UAAL

- All baseline results assume any new UAAL will be financed over the 20-year period set in Statute.
- However, some proposals would likely extend the time until 80% funded is reached and therefore reduce some future COLAs. In those cases, we have also provided a funding approach that would be expected to keep the date until 80% funding unchanged.
- Also, some of the one-time COLA studies could be financed on a pay-as-you-go approach and we have provided additional information on that as well.

FY2025 Cost vs. Projected Total Cost

- We have provided the changes in contributions for FY2025 based on the proposals. These additional contributions will continue into the future as a percentage of payroll:
  - In perpetuity for the change in normal cost
  - For the next 20 years for any impact to the UAAL

- To estimate the total dollar cost over the next 20 years, including growth in payroll, the FY2025 dollar impact can be multiplied by ~25

- For example, Study 1A has a FY2025 cost of $12 million, and a projected 20-year cost of approximately $300 million, or 25X the FY2025 cost

- However, the 10-year option has larger budget impact up front, but generally costs about 25% less over time

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Funding Principles

- All calculations assume benefits change as of July 1, 2024.
  - Likewise, all calculations assume contributions are impacted beginning July 1, 2024.
  - Using a different date could change the results

- We have placed a cost on each proposal individually. In most cases, the impact from a combination of individual proposals will be larger than the sum of the individual components.

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COLA Requests – Summary
State and Teachers Combined

		Change from Baseline			
Request	Baseline	Request 4.A.a.	Request 4.A.b.	Request 4.A.c.	Request 4.A.c. (alternative)
Description	No Changes	Prospective Restoration of a 3% Compounding COLA (All limits, delays, etc remain unchanged)	Prospective 3% Non-Compounding COLA (All limits, delays, etc remain unchanged)	3% Compounding COLA (Current Benefit Adjusted for all Previous Suspended COLAs)	3% Compounding COLA for those retired before July 1, 2012 (Current Benefit Adjusted for all Previous Suspended COLAs)
State Employees and Teachers Combined					
Normal cost	7.27%	0.41%	0.33%	0.41%	N/A
Unfunded actuarial accrued liability	$4,495 million	$807 million	$563 million	$1,946 million	$1,333 million
Funded ratio	62.8%	-3.9%	-2.8%	-8.7%	-6.2%
Projected FY 2025 Contribution					
a. Percent of payroll	26.53%	3.66%	2.60%	8.25%	5.38%
b. Estimated annual dollar amount - State	$370.2 million	$47.8 million	$34.1 million	$106.4 million	$67.9 million
c. Estimated annual dollar amount - Local	$174.1 million	$27.2 million	$19.3 million	$62.8 million	$42.5 million
d. Estimated annual dollar amount - Total	$544.3 million	$75.0 million	$53.3 million	$169.2 million	$110.3 million
Amount needed per year to not be expected to extend time to 80% funded	N/A	N/A	N/A	N/A	N/A

COLA Requests – Summary

State and Teachers Combined (cont'd)

		Change from Baseline				
Request	Baseline	Request 4.A.d.	Request 4.A.e.	Request 4.A.f.	Request 4.A.g.	Request 4.A.h.
Description	No Changes	A One-Time 3.00% Non-Compounding COLA (All limits, delays, etc remain unchanged)	Grant Full COLA in 2024 Instead of 25% (2.71% vs 0.71%) for those impacted by the 80% Suspension	A One-Time 3.00% COLA which would Impact Future COLAs (All limits, delays, etc remain unchanged)	A One-Time 2.00% COLA which would Impact Future COLAs (All limits, delays, etc remain unchanged)	No longer have the 80% threshold applied for those retired before 7/1/2012
State Employees and Teachers Combined						
Normal cost	7.27%	N/A	N/A	N/A	N/A	N/A
Unfunded actuarial accrued liability	$4,495 million	$127 million	$95 million	$137 million	$88 million	$268 million
Funded ratio	62.8%	-0.7%	-0.5%	-0.7%	-0.5%	-1.4%
Projected FY 2025 Contribution						
a. Percent of payroll	26.53%	0.51%	0.38%	0.55%	0.36%	1.08%
b. Estimated annual dollar amount - State	$370.2 million	$6.7 million	$5.0 million	$7.2 million	$4.7 million	$13.8 million
c. Estimated annual dollar amount - Local	$174.1 million	$3.8 million	$2.8 million	$4.1 million	$2.6 million	$8.4 million
d. Estimated annual dollar amount - Total	$544.3 million	$10.5 million	$7.8 million	$11.3 million	$7.3 million	$22.2 million
Amount needed per year to not be expected to extend time to 80% funded	N/A	$17.1 million	$12.8 million	$18.5 million	$11.9 million	$36.2 million
In lieu of impact above, annual amount to finance on a pay-as-you-go basis	N/A	$15.5 million	$11.0 million	$15.5 million	$10.3 million	$10.3 million

COLA Threshold Requests – Summary

State and Teachers Combined (cont'd)

Request	Baseline	Change from Baseline: Request 4.B. - Option A	Change from Baseline: Request 4.B. - Option B
Description	No Changes	COLA Threshold reduced to 75% Rounded Ratio, Assumed to Return 1 Year Sooner	COLA Threshold reduced to 70% Rounded Ratio, Assumed to Return 2 Years Sooner
State Employees and Teachers Combined			
Normal cost	7.27%	N/A	N/A
Unfunded actuarial accrued liability	$4,495 million	$65 million	$128 million
Funded ratio	62.8%	-0.3%	-0.7%
Projected FY 2025 Contribution			
a. Percent of payroll	26.53%	0.26%	0.51%
b. Estimated annual dollar amount - State	$370.2 million	$3.8 million	$7.3 million
c. Estimated annual dollar amount - Local	$174.1 million	$1.6 million	$3.2 million
d. Estimated annual dollar amount - Total	$544.3 million	$5.4 million	$10.5 million

MERS Police and Fire Requests – Summary

		Change from Baseline						
Request	Baseline	Request 1.B.	Request 1.D	Request 2.C.a.	Request 2.C.b.	Request 2.D	Request 4.D.	Request 4.F.
Description	No Changes	1-Year Final Average Compensation	Prospective 2.5% Accrual Multiplier	Retire at Age 57 with 20 YOS	Retire at Age 62 with 5 YOS	Retire Any Age and 20 YOS	Repeal post-retirement employment restrictions for police and fire personnel relating to the number of days a retiree can work without incurring penalties.	Deferred Retirement Option Program (DROP)
MERS Police and Fire								
Normal cost	18.89%	1.17%	2.38%	0.17%	0.29%	0.91%	2.90%	2.90%
UAAL	$129 million	$38 million	$15 million	$5 million	$2 million	$17 million	$50 million	$50 million
Funded ratio	86.5%	-3.2%	-1.3%	-0.4%	-0.2%	-1.5%	-4.2%	-4.2%
Projected FY 2025 Contribution								
a. Percent of payroll	17.33%	3.22%	2.22%	0.42%	0.41%	1.83%	5.99%	5.99%
b. Estimated annual dollar amount	$25.6 million	$4.8 million	$3.3 million	$0.6 million	$0.6 million	$2.7 million	$4.6 million	$4.6 million

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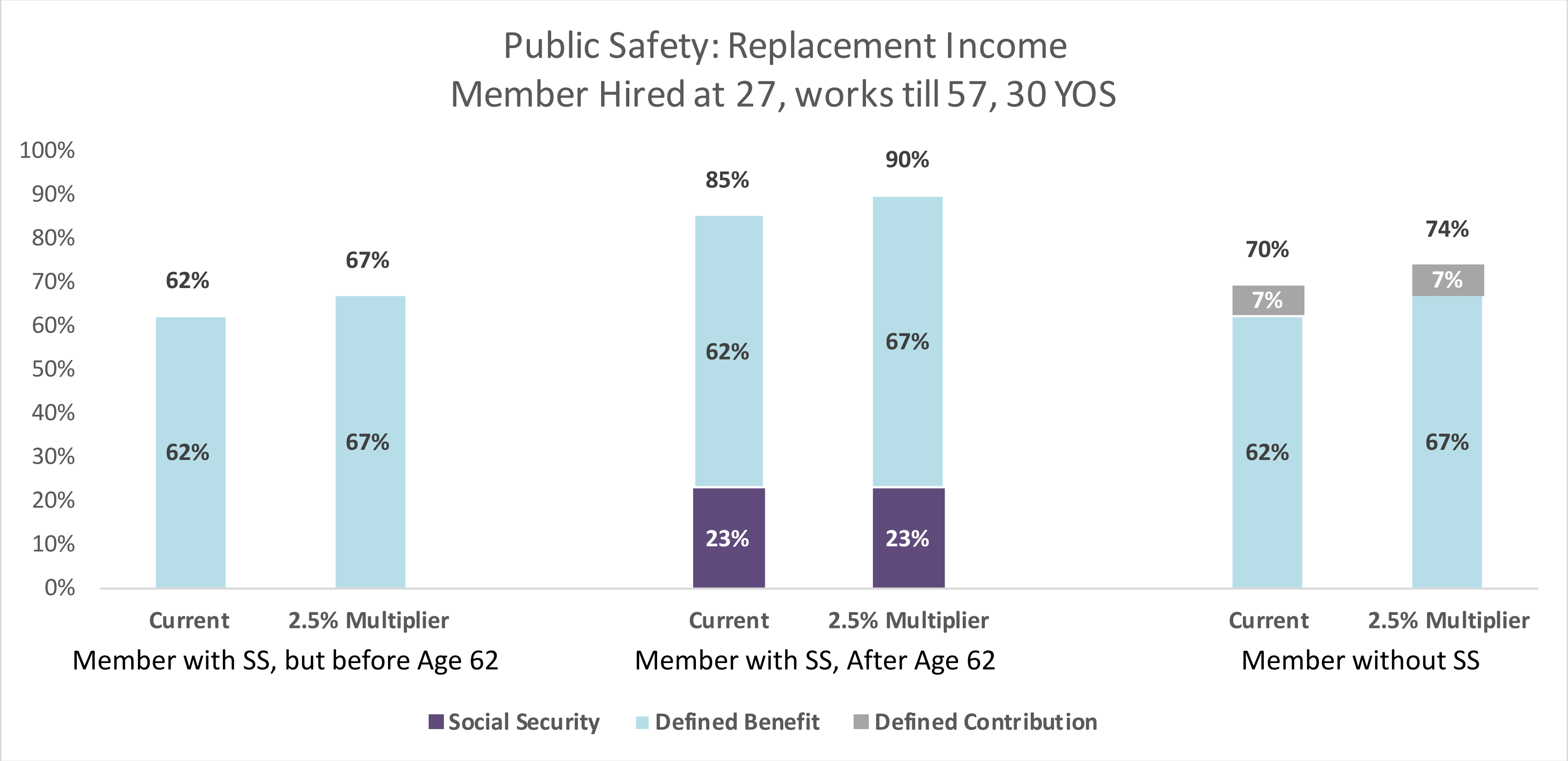
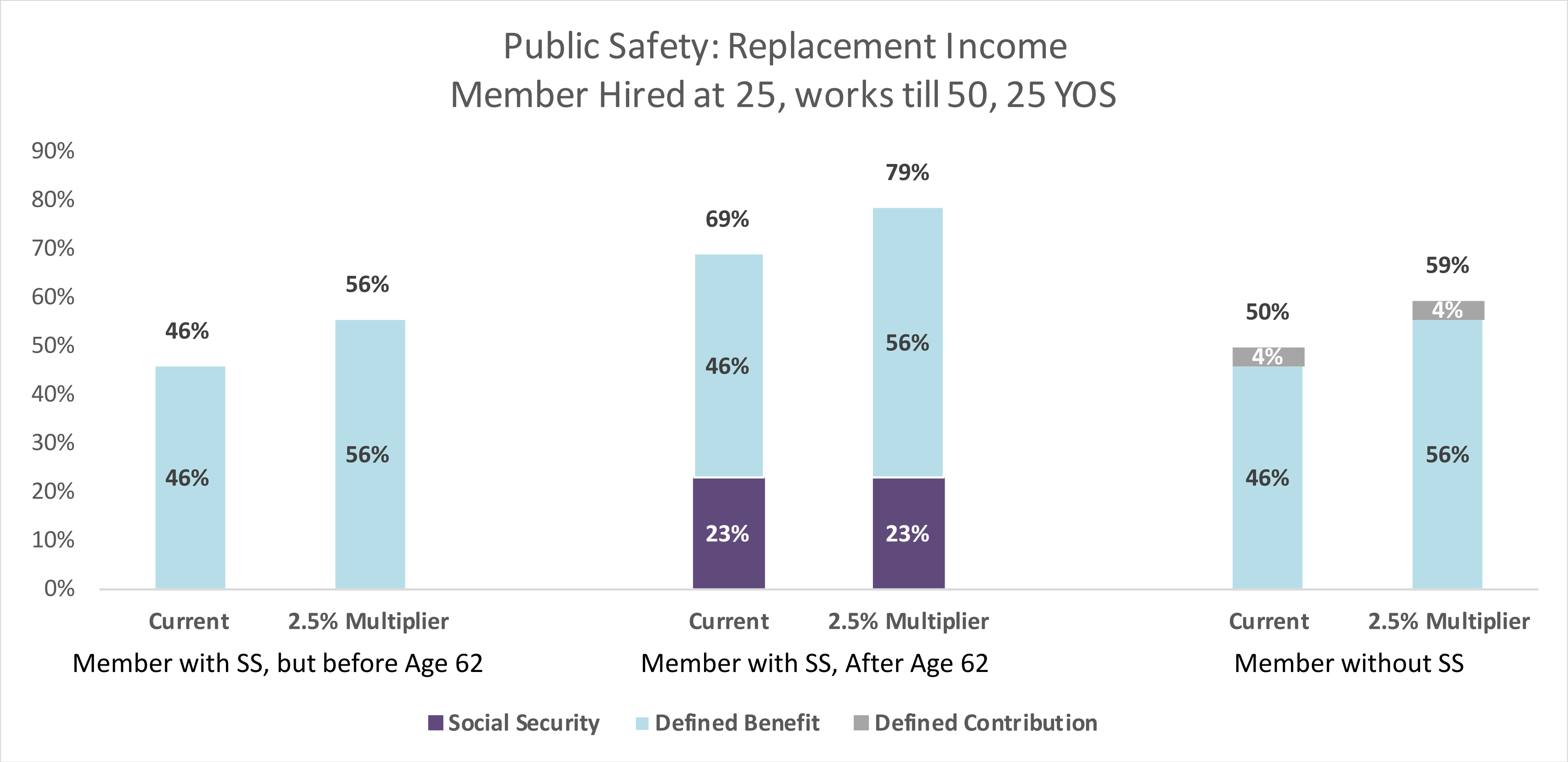
Benefit Examples and Comparisons



Replacement Income is calculated over the member's expected retirement lifetime with full inflation purchasing power protection
Most research recommends 70-80% replacement to keep same standards of living

Benefit Examples and Comparisons



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Post-Retirement Employment Provisions

- Relaxing of these provisions increase cost if they change retirement behavior for members that retire in the future

- If the member knows they can retire and come back and receive both their salary and their pension, they will almost all do so
  - Most members do not retire when they are first eligible, thus this change in behavior will begin the pension sooner and not allow as many years to accumulate assets before retirement. This also can reduce the amount of payroll that is eligible for contributions, which will increase the contribution as a percentage of the remaining payroll

- This cost can be reduced by requiring the returning member and the employer to make contributions into the pension plan while they have returned to employment

- Also, one time windows that allow current retirees to return to employment without a change to their pension typically does not have a cost, especially if there are contributions made on the payroll as it would a regular active.

Deferred Retirement Option Programs (DROP)

- These programs have many different designs, we chose the one that is the most typical one proposed.
- Under these provisions, once eligible to retire a member can elect to enter DROP, at which point their annuity will be determined based on their service and final average earnings at that time.
- The member will continue working, and their annuity will accumulated in a "savings account", that is typically credited interest. Some programs actually have the money leave the pension fund and move to more of an TIAA like account.
- Then at retirement, the annuity continues as it was determined at DROP entry and the member receives (or can roll over to an IRA) the accumulated balance.
- These can be designed to have minimal cost, but the program would have to utilize provisions such as:
  - the member and the employer would have to continue to contribute to the pension plan as normal their entire working career
  - the interest applied to the accounts would generally need to be less than the investment earnings created by the Fund assets
  - there would be no COLAs until after the member leaves DROP.

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Miscellaneous Requests – Summary

State and Teachers Combined

		Change from Baseline				
Request	Baseline	Request 1.A	Request 2.A	Request 2.B	Request 3.A	Request 3.F
Description	No Changes	3-Year Final Average Compensation	Rule of 90 unreduced retirement eligibility instead of 95, Minimum Age 60	3% per year Early Retirement Reduction Factor	1% Additional Employer Contribution into DC Plan	Provide Public Safety Employees in ERSRI the Same Retirement Benefits as Police/Fire in MERS
State Employees and Teachers Combined						
Normal cost (New Entrant)	6.31%	0.18%	0.16%	0.13%	N/A	0.29%
Unfunded actuarial accrued liability	$4,495 million	$102 million	$106 million	$70 million	N/A	$17 million
Funded ratio	62.8%	-0.5%	-0.5%	-0.4%	N/A	-0.2%
Projected FY 2025 Contribution						
a. Percent of payroll	26.53%	0.59%	0.59%	0.41%	0.98%	0.45%
b. Estimated annual dollar amount - State	$370.2 million	$8.0 million	$6.3 million	$4.8 million	$12.0 million	$3.8 million
c. Estimated annual dollar amount - Local	$174.1 million	$4.1 million	$5.8 million	$3.7 million	$7.1 million	N/A
d. Estimated annual dollar amount - Total	$544.3 million	$12.2 million	$12.1 million	$8.5 million	$19.1 million	$3.8 million
Amount needed per year to not be expected to extend time to 80% funded	N/A	$17.5 million	$17.7 million	$12.1 million	N/A	$4.7 million

Request 5.A

Separate legacy debt and legacy unfunded liability from that associated with active members of ERSRI

- This would not impact the expected cost, but instead would change how the costs are communicated and budgeted.
- Currently the two components of the Required Contributions (Normal Cost and Amortization) are both converted to a % of payroll and then added together to give the employer one % of pay to contribute on aggregate payroll.
- The Normal Cost is directly connected with payroll, so keeping that as a % of payroll is optimal.
- However, the Amortization Payment of the UAAL is a set dollar amount, and currently is quite large in comparison to the Normal Cost. By including this amount in the total contribution rate and applying to current payroll, it can give the appearance (and functions) as if hiring a new employee comes with a 25%+ pension price tag.
- In reality, the Amortization of the UAAL is based on past service and the contributions will be about the same whether or not the next employee is hired. If less employees are hired, then the contribution as a rate of payroll would need to increase to make up for it.

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Request 5.A

Separate legacy debt and legacy unfunded liability from that associated with active members of ERSRI

- This proposal would invoice the two components separately, with the Normal Cost as a % of payroll and the Amortization Payment as a specific dollar amount. That way as employers are budgeting, hiring, etc. the Amortization Payment is a fixed amount and hopefully will not unintentionally impact these hiring decisions.
- It would also reduce the dependency on payroll growth in the budgeting and funding process

Request 5.A

Separate legacy debt and legacy unfunded liability from that associated with active members of ERSRI

- # Example:

State Employees Plan
$ in millions

Item	Current Process		Alternative Process
Total Normal Cost %		7.63%	7.63%
Member Contribution		4.24%	4.24%
Employer Normal Cost%		3.39%	3.39%
FY2026 Scheduled Amortization Payment	$ 219.40		
FY 2026 Projected Payroll	867.0		
Amortization Divided by Payroll	25.31%	25.31%	
Total Employer Contribution Rate		28.70%	3.39%
Employer Amortization Payment			$219.4
FY ending June 30,		2026	2026
Payroll Projected 2 Years		$867.0	$867.0
Projected Contribution		$248.8	$248.8

Multiplier Requests – Summary

State and Teachers Combined

		Change from Baseline			
Request	Baseline	Request 1.C Option A	Request 1.C Option A (alternative)	Request 1.C Option B	Request 1.C Option C
Description	No Changes	Prospective Increase the Accrual Rate from 1.0% to 1.5%	Prospective increase the Accrual Rate from 1.0% to 1.5%, 2.5% Member Contributions Diverted From DC to DB Plan	Prospective 3-Tier Accrual Rates (1.25% for 10 or less YoS; 1.50% for 11 to 20 YoS; 2.00% for 21 or over YoS)	Prospective 4-Tier Accrual Rates (1.25% for 10 or less YoS; 1.50% for 11 to 20 YoS; 2.00% for 21 to 30 YoS; 2.50% for 31 or over YoS)
State Employees and Teachers Combined					
Normal cost (New Entrant)	6.31%	2.57%	2.89%	2.65%	2.75%
Unfunded actuarial accrued liability	$4,495 million	$289 million	$274 million	$531 million	$637 million
Funded ratio	62.8%	-1.5%	-1.4%	-2.6%	-3.1%
Projected FY 2025 Contribution					
a. Percent of payroll	26.53%	2.23%	0.08%	3.75%	4.35%
b. Estimated annual dollar amount - State	$370.2 million	$27.6 million	$.2 million	$45.3 million	$52.0 million
c. Estimated annual dollar amount - Local	$174.1 million	$18.1 million	$1.5 million	$31.6 million	$37.3 million
d. Estimated annual dollar amount - Total	$544.3 million	$45.7 million	$1.7 million	$76.9 million	$89.3 million
Amount needed per year to not be expected to extend time to 80% funded	N/A	$60.8 million	$16.0 million	$104.6 million	$122.5 million

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Multiplier Requests – Summary

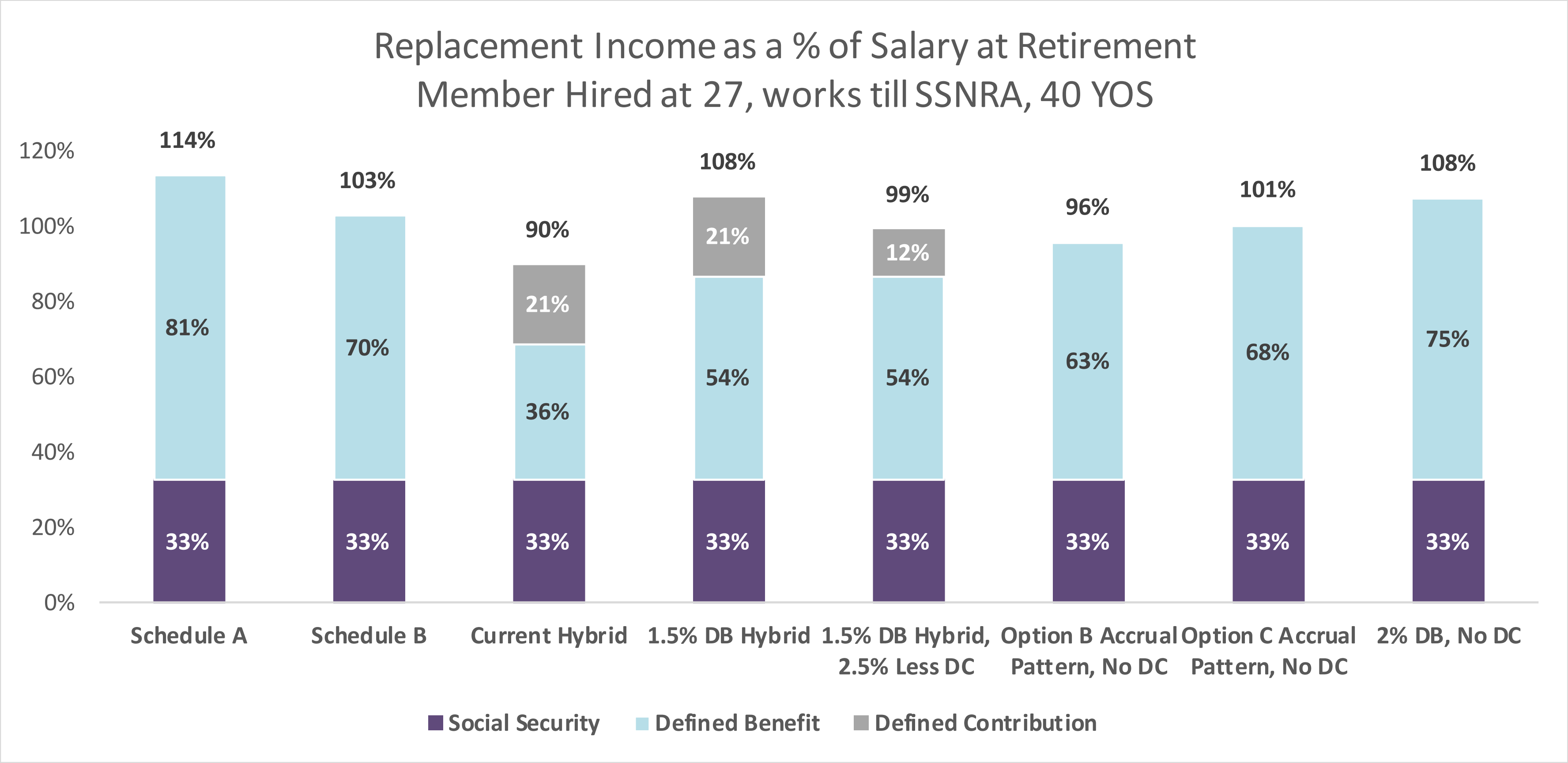
State and Teachers Combined (cont'd)

		Change from Baseline			
Request	Baseline	Request 1.C Option C	Request 1.C Option C (Alternative)*	Request 1.C Option D*	Request 1.C Option D (Alternative)*
Description	No Changes	Prospective 4-Tier Accrual Rates (1.25% for 10 or less YoS; 1.50% for 11 to 20 YoS; 2.00% for 21 to 30 YoS; 2.50% for 31 or over YoS) for State Employees, Teachers, and MERS General	Prospective 4-Tier Accrual Rates (1.25% for 10 or less YoS; 1.50% for 11 to 20 YoS; 2.00% for 21 to 30 YoS; 2.50% for 31 or over YoS) All DC Contributions Diverted to DB.	Prospective 2% Accrual Rates. All DC Contributions Diverted to DB.	Prospective 2% Accrual Rates. All DC Contributions Diverted to DB. Members can reestablish past service at 2% by purchasing using DC balances.
State Employees and Teachers Combined					
Normal cost (New Entrant)	6.31%	2.75%	3.41%	5.67%	5.67%
Unfunded actuarial accrued liability	$4,495 million	$637 million	$611 million	$571 million	$255 million
Funded ratio	62.8%	-3.1%	-3.0%	-2.8%	-1.3%
Projected FY 2025 Contribution					
a. Percent of payroll	26.53%	4.35%	0.06%	0.27%	0.53%
b. Estimated annual dollar amount - State	$370.2 million	$52.0 million	-$2.9 million	$1.4 million	$7.9 million
c. Estimated annual dollar amount - Local	$174.1 million	$37.3 million	$4.0 million	$4.1 million	$3.0 million
d. Estimated annual dollar amount - Total	$544.3 million	$89.3 million	$1.1 million	$5.5 million	$10.9 million
Amount needed per year to not be expected to extend time to 80% funded	N/A	$122.5 million	$33.0 million	$35.3 million	$24.2 million

**There would be an additional $12 million and $7 million annual savings for the State and Local Employers, respectively from the elimination of the employer 1% DC contribution*

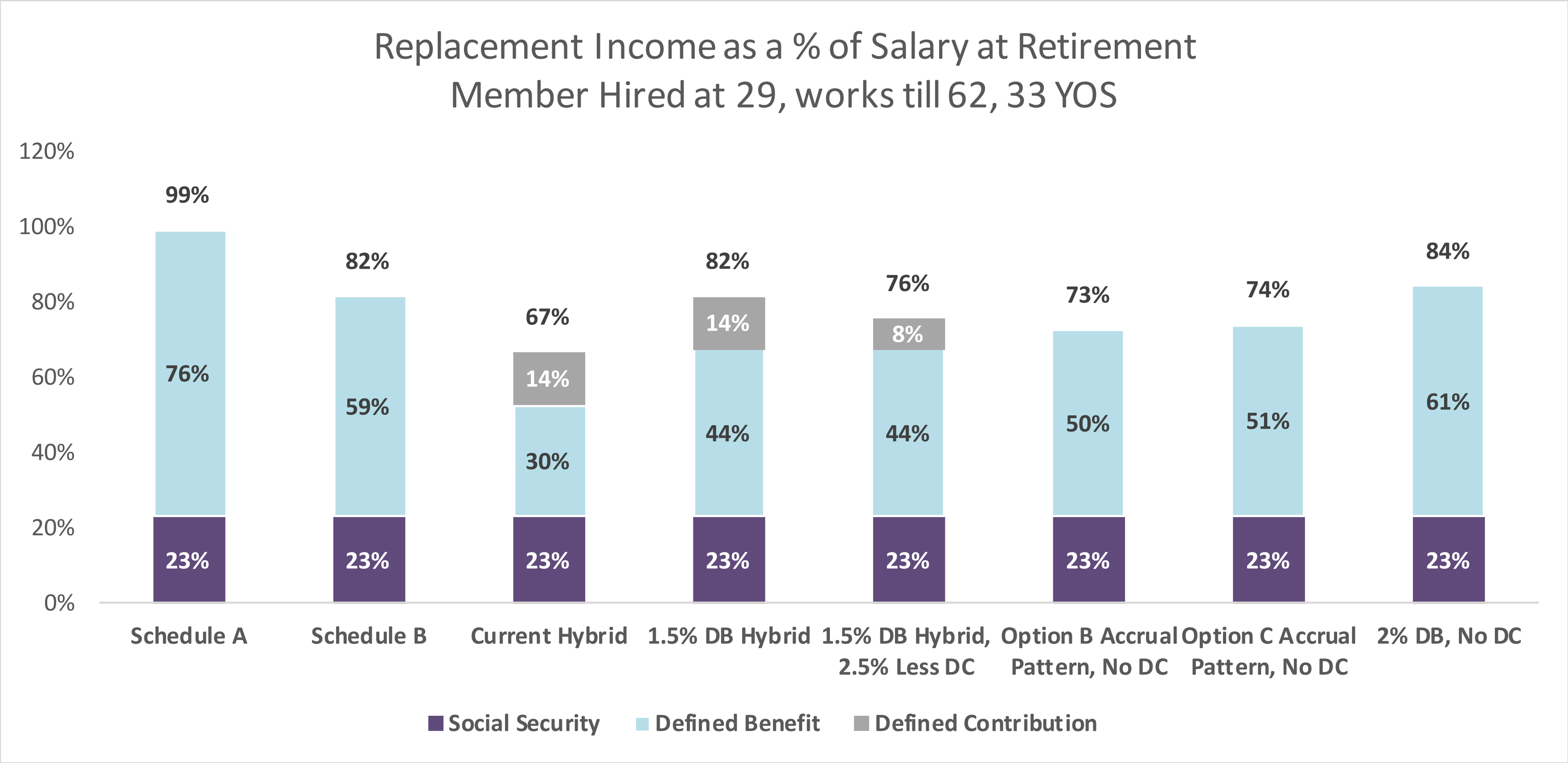
Request 1.C (cont.)

Benefit Examples and Comparisons



Replacement Income is calculated over the member's expected retirement lifetime with full inflation purchasing power protection
Most research recommends 70-80% replacement to keep same standards of living

Benefit Examples and Comparisons



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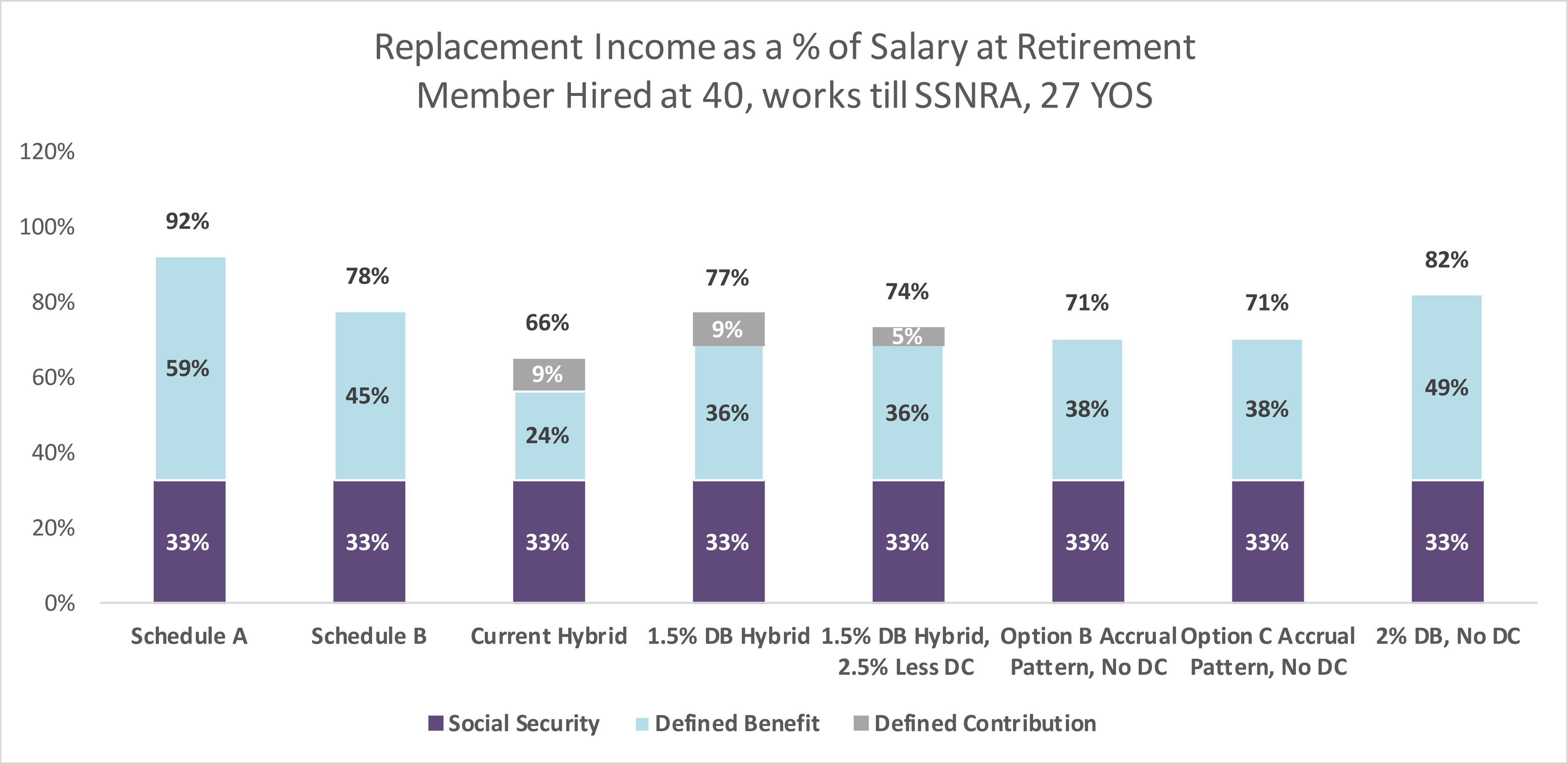

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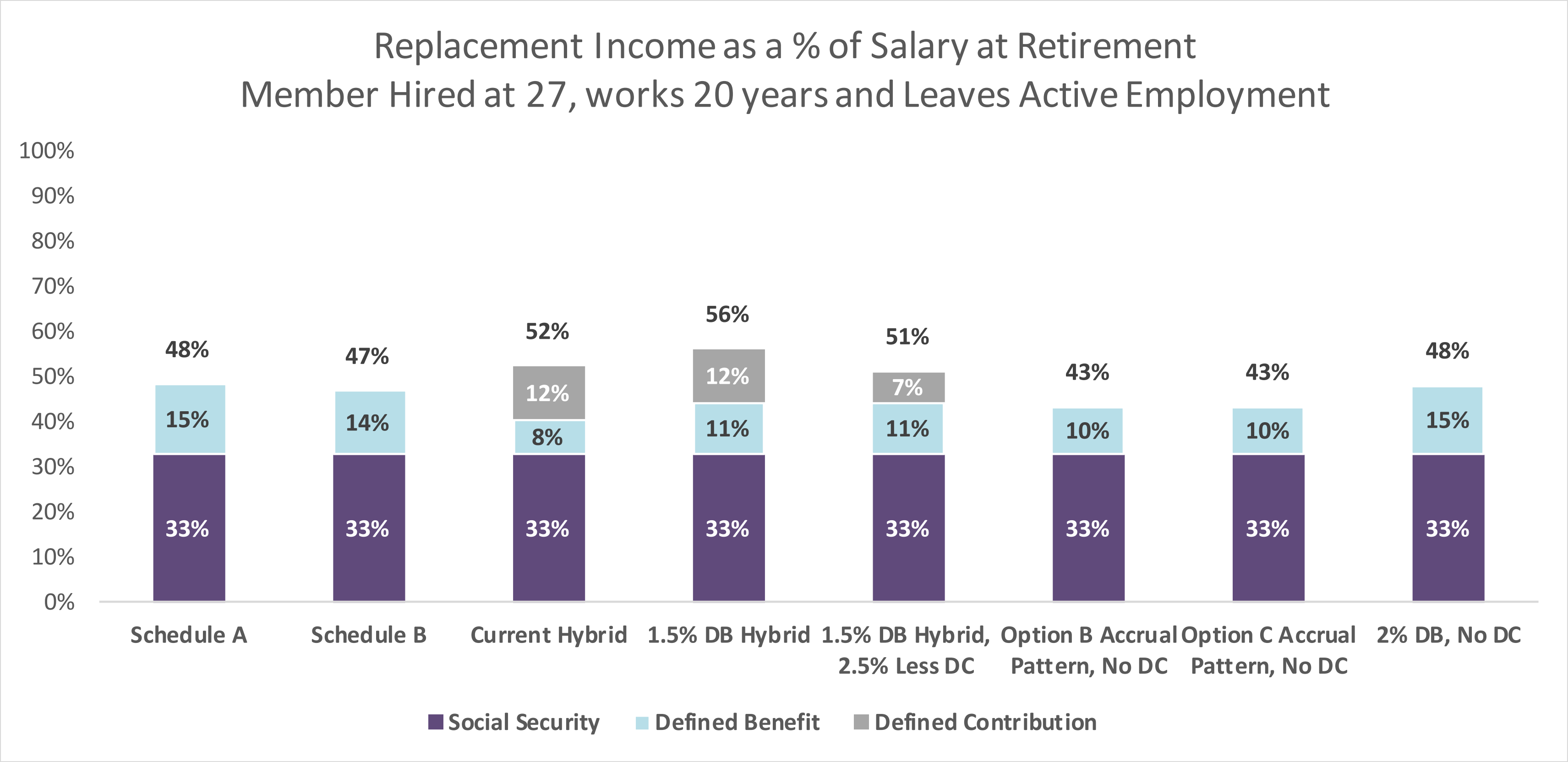

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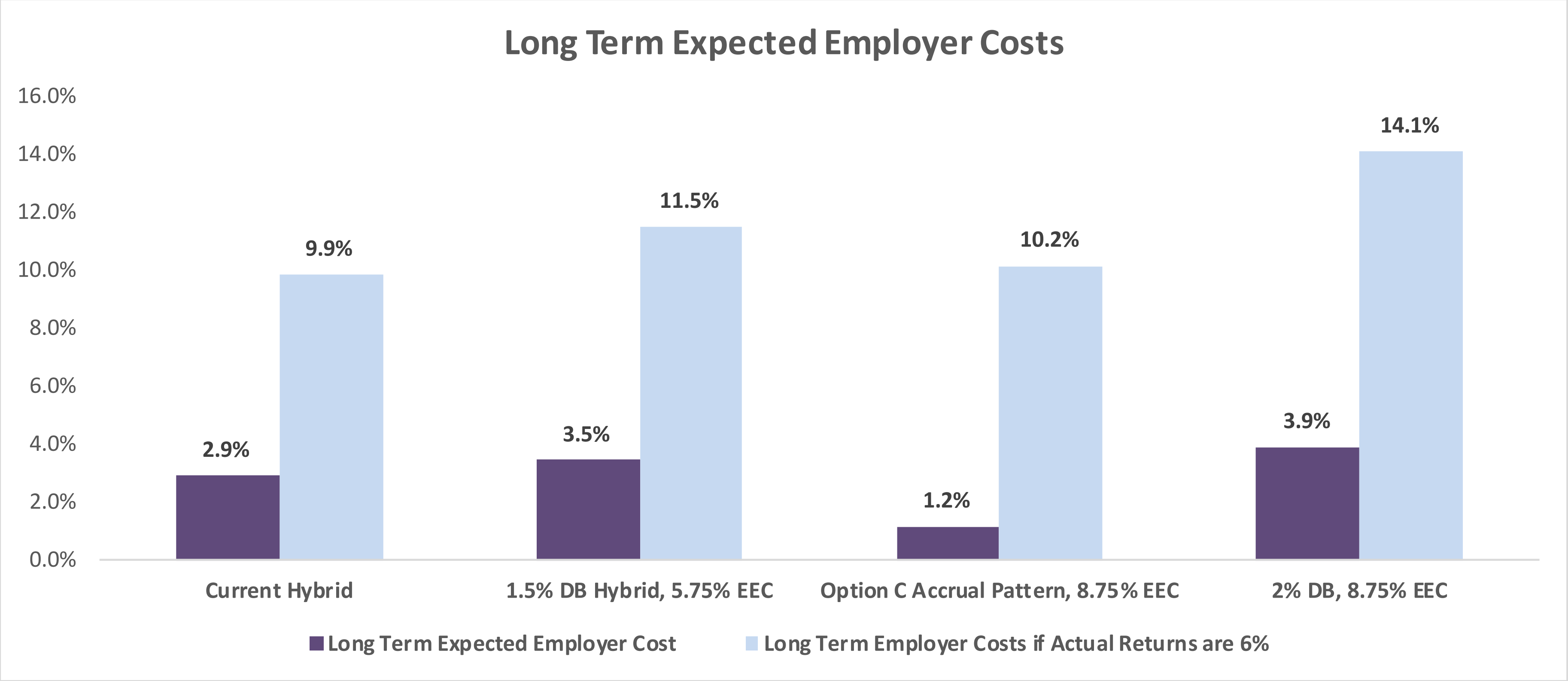
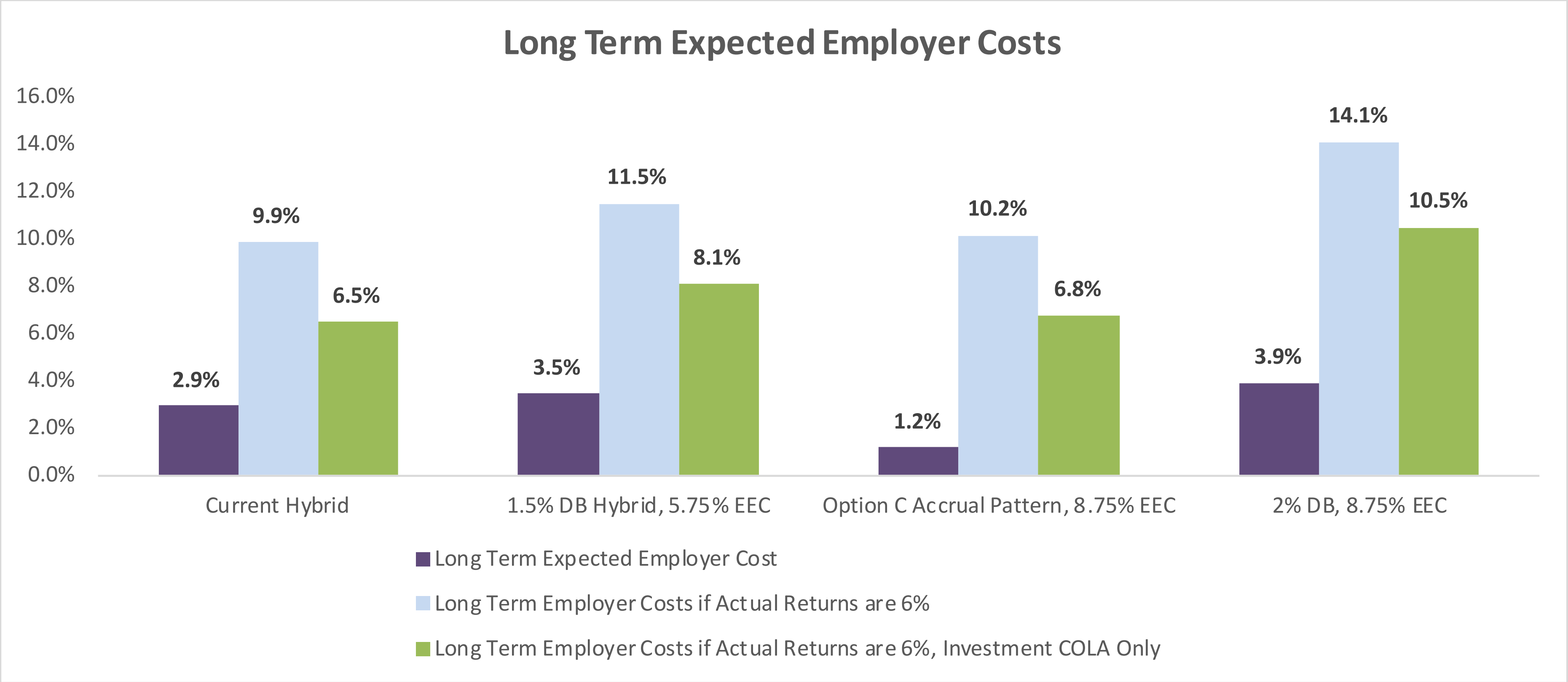
Comparison of Costs in Stress Scenarios



Some of this additional risk could be offset by reducing risk in other provisions

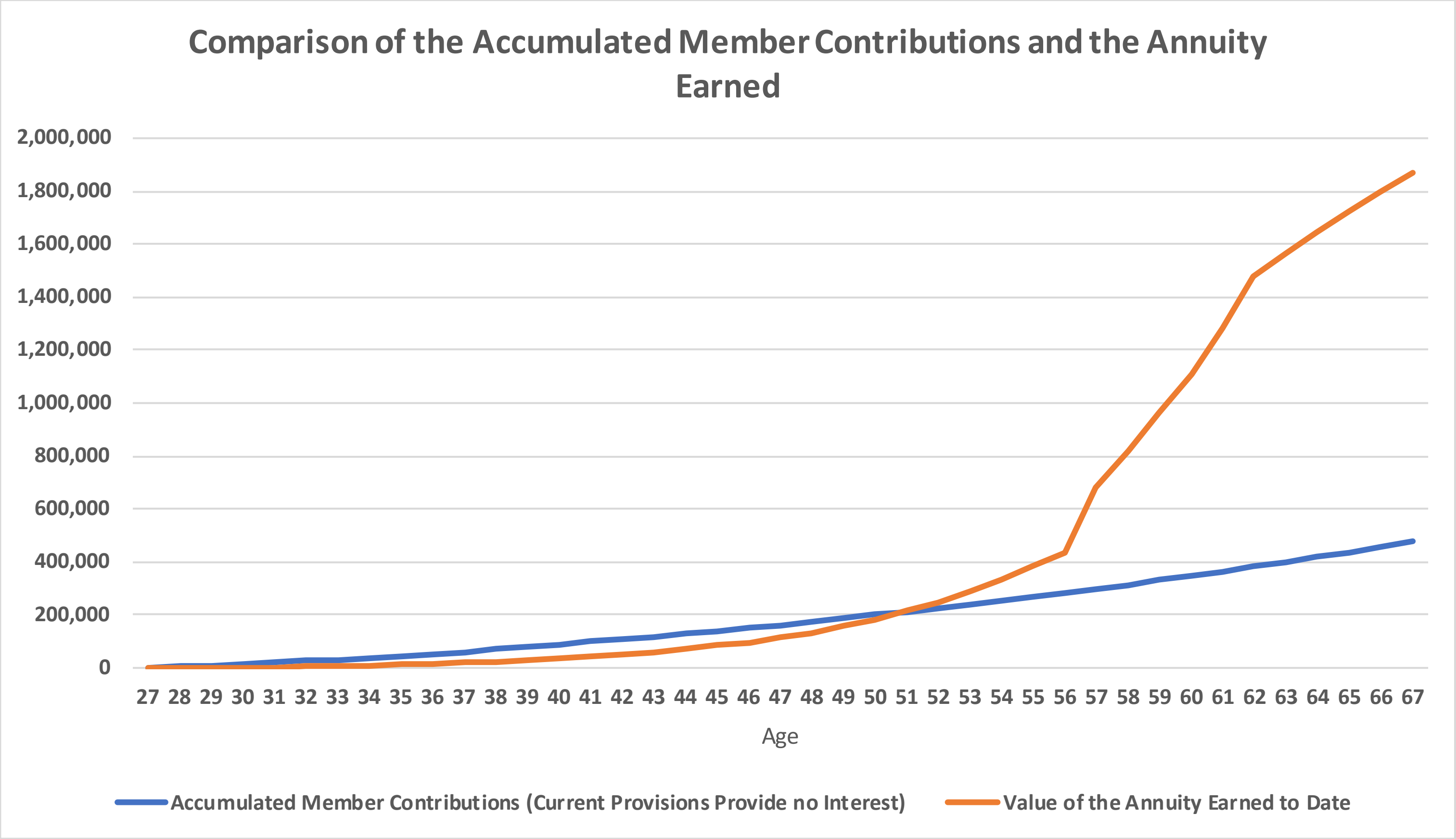


Current COLA is 50% of the investment performance formula, and 50% of the inflation formula
The Investment COLA Only scenario would make it 100% of the investment performance formula

Request 1.C Option C (Alternative)

Prospective 4-Tier Accrual Rates (1.25% for 10 or less YoS; 1.50% for 11 to 20 YoS; 2.00% for 21 to 30 YoS; 2.50% for 31 or over YoS) for State Employees, Teachers, and MERS General. All DC Contributions Diverted to DB.

- Currently, in ERSRI, members earn no interest on their contributions into the DB plan
- In Option C, the benefit accruals in the first 10 – 20 years are very low in comparison to the 8.75% contribution rate
- So if a member hired younger works 10-20 years, the value of the benefit earned is still less than just the value of the member contributions, even without interest
- So for any member that terminates service with less than 20 years of service, the refund of member contributions is their best choice, which means they would have had their take home pay 8.75% smaller for their entire employment period and given an interest free loan to the retirement system

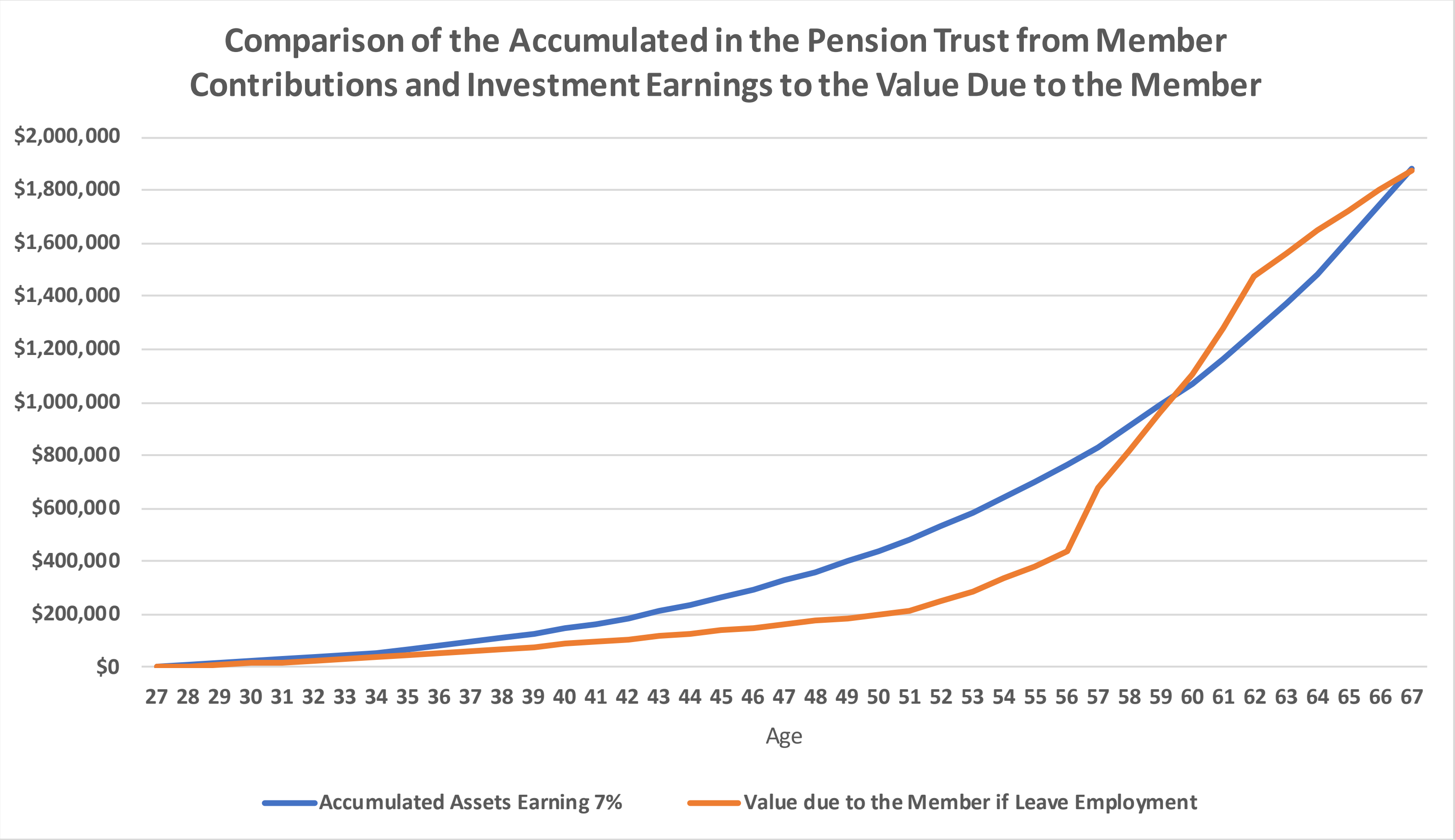


Request 1.C Option C (Alternative)

Prospective 4-Tier Accrual Rates (1.25% for 10 or less YoS; 1.50% for 11 to 20 YoS; 2.00% for 21 to 30 YoS; 2.50% for 31 or over YoS) for State Employees, Teachers, and MERS General. All DC Contributions Diverted to DB.

- The retirement system would have invested the money, expected to earn 7% returns

- The difference between the assets accumulated from the member's contribution and the value due the member is significant for anyone that hires young and works less than 30 years



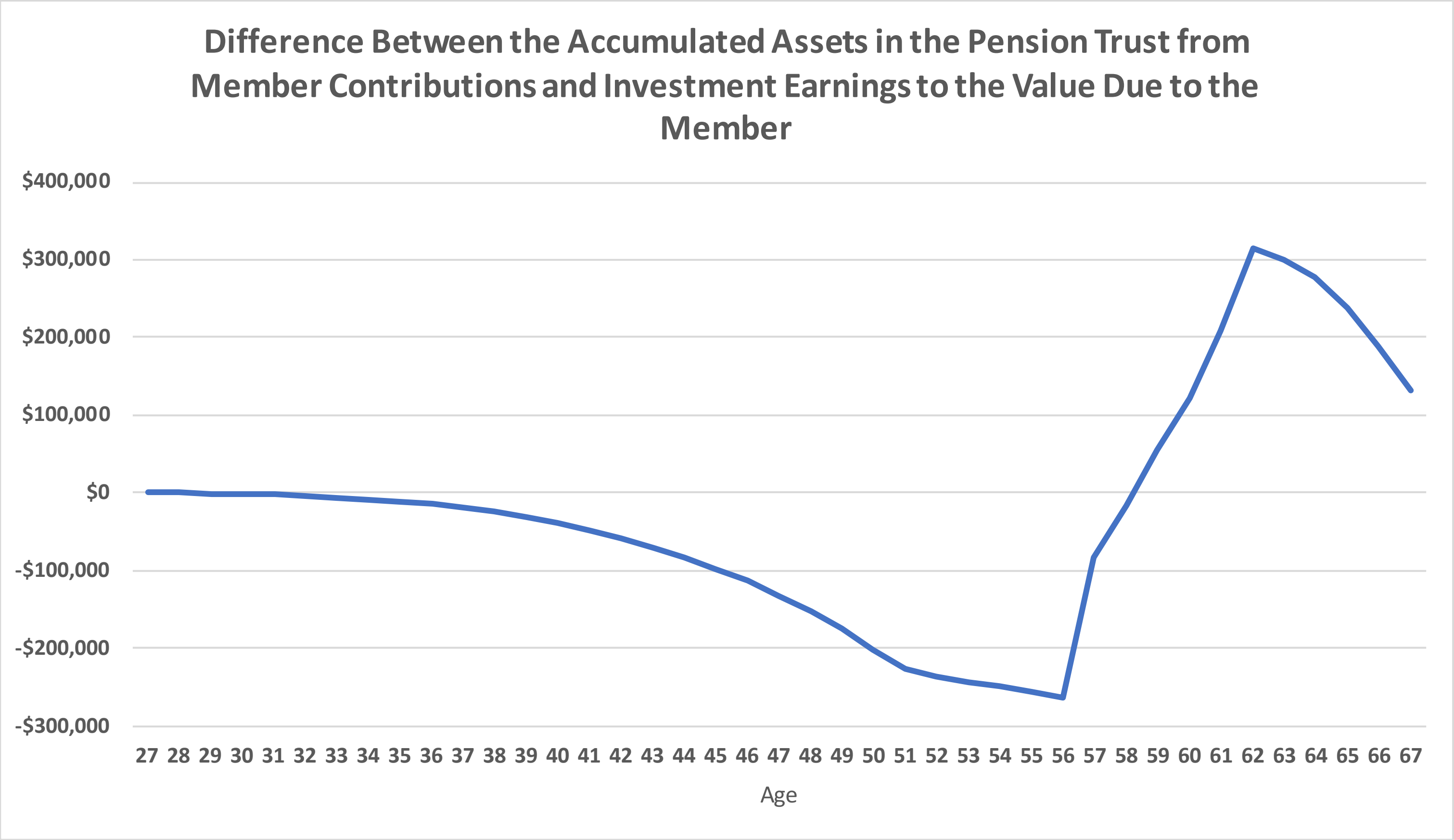
Request 1.C Option C (Alternative)

Prospective 4-Tier Accrual Rates (1.25% for 10 or less YoS; 1.50% for 11 to 20 YoS; 2.00% for 21 to 30 YoS; 2.50% for 31 or over YoS) for State Employees, Teachers, and MERS General. All DC Contributions Diverted to DB.

- It is not just a simple situation where the employer monies are being diverted to long career employees, but anyone that works less than 30 years in this case is economically contributing to the benefits of the few members that make it all the way

- This attribute is not as pronounced in all Defined Benefit Plans, or perhaps doesn't exist at all

- It is a function of the size of the member contribution rate, the accrual pattern, and what the member is entitled to if they leave employment

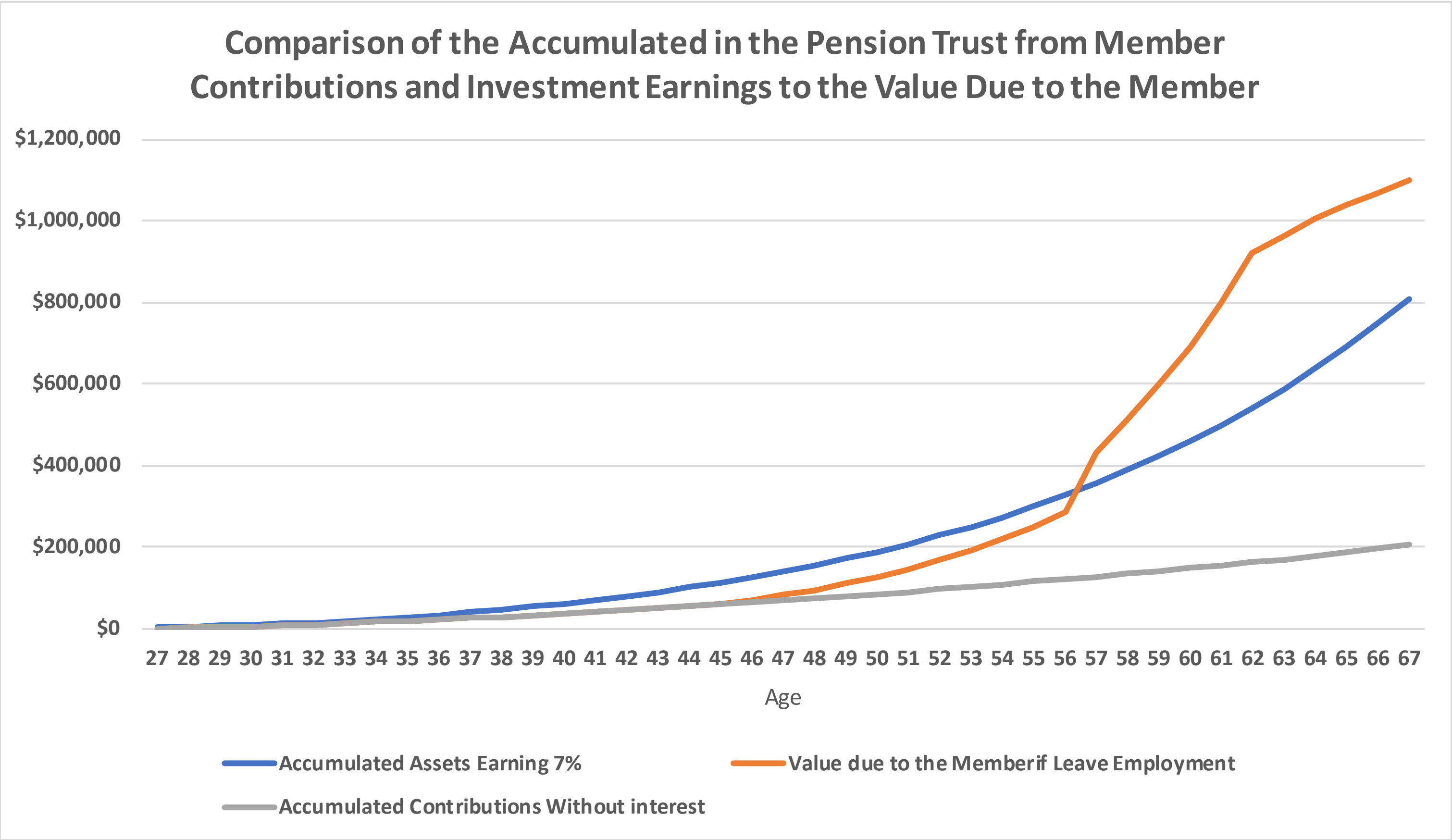


Same Analysis for Current 1% DB Plan

- The current 1% defined benefit plan with 3.75% member contribution rate is not as back loaded and does not have the same magnitude of difference between the accumulated assets and the value due to the member

- The patterns of accrual is closer to the pattern of asset accumulation

- Although it is uncommon for the refunds to include no interest



The DB Component as a Non-Contributory Plan?

Request	Baseline	Change from Baseline
Description	No Changes	Current Hybrid, Member Contribution Rate Decreased from 3.75% to 0% into the DB Plan
State Employees and Teachers Combined		
Normal cost (New Entrant)	6.31%	-0.36%
Unfunded actuarial accrued liability	$4,495 million	-$4 million
Funded ratio	62.8%	0.0%
Projected FY 2025 Contribution		
a. Percent of payroll	26.53%	3.25%
b. Estimated annual dollar amount - State	$370.2 million	$41.8 million
c. Estimated annual dollar amount - Local	$174.1 million	$25.0 million
d. Estimated annual dollar amount - Total	$544.3 million	$66.8 million

- The current 1% Hybrid would be a very strong benefit as a non-contributory plan
- This could be a long-term goal of the program
- There could be a process created to bring the member rate down over time as the employer contribution rate decreases
- This gives more take home pay to the member

Employer money is more efficient in the DB Plan, and Member money is more efficient in the DC plan

Request	Baseline	Change from Baseline		
Description	No Changes	Current Hybrid, Member Contribution Rate Decreased from 3.75% to 2.75% into the DB Plan, Member Contribution into DC Plan Raised from 5% to 6%	1% Less Employer Contribution in to DC Plan	Combined
State Employees and Teachers Combined				
Normal cost (New Entrant)	6.31%	-0.36%	NA	-0.36%
Unfunded actuarial accrued liability	$4,495 million	$6 million	NA	$6 million
Funded ratio	62.8%	0.0%	NA	-0.03%
Projected FY 2025 Contribution				
a. Percent of payroll	26.53%	0.87%	-0.98%	-0.11%
b. Estimated annual dollar amount - State	$370.2 million	$11.1 million	-$12.0 million	-$.9 million
c. Estimated annual dollar amount - Local	$174.1 million	$6.7 million	-$7.1 million	-$.4 million
d. Estimated annual dollar amount - Total	$544.3 million	$17.8 million	-$19.1 million	-$1.3 million

Members not Covered by Social Security

- Some Teachers and Public Safety are not covered by Social Security
- There are current provisions that Teachers and their employers contribute 2% of payroll each (4% total) into these member's DC accounts
- For Public Safety the amounts are 3% and 3%, for a total of 6%
- The Social Security portion of the "three legged stool" is supposed to be a guaranteed portion, so these members only have the 1% multiplier defined benefit as a guarantee
- If these members can be put in Social Security, that could solve that
- If they can not be, then an alternative could put these contributions into the Defined Benefit Plan and have higher multipliers per year of service for these members.
  - The 2%/2% for Teachers would finance an additional 0.7% per year multiplier
  - The 3%/3% for Public Safety would also finance an additional 0.7% per year multiplier

Request 3.G

Allow members to Annuitize their Defined Contribution Balances into the Defined Benefit Plan at Retirement

- This would allow members to transfer their Defined Contribution Balance into the Defined Benefit Plan at retirement in exchange for a monthly annuity that would be paid in addition to their Defined Benefit annuity
- The DB plan can provide exchange ratios that:
  - Provide more annuity per $1,000 transferred than private options, or even the ones provided by TIAA
  - Provide cost of living escalators
  - Are known in advance, not dependent on interest rates at the time of retirement
- Without taking on meaningfully more risk and without additional UAAL
  - This is because the DB plan has a longer time horizon and a potential additional revenue source to make up potential shortfalls over time, if necessary

GRS

Request 3.G

Allow members to Annuitize their Defined Contribution Balances into the Defined Benefit Plan at Retirement

- For example, current private sector options or TIAA are priced based on:
  - Market based interest rates (currently 3-4%)
  - Margin for mortality risk
  - Administrative fees
  - Profit
- The Defined Benefit Plan could provide pricing based on:
  - 6% fixed interest rate
  - Minimally margined mortality risk
  - Minimally more administrative cost compared to cost that already exist
  - 2% expected COLA priced in (actual would be dependent on actual investment performance)
    - The ERSRI benefit already has an investment correlated COLA, which can be used to mitigate the risk by taking on these liabilities
    - This proposal would provide the same annual COLA as the investment portion of the COLA
    - This would apply to the whole annuity, not considered in the Defined Benefit limits
  - This effectively makes the guaranteed return 4%, while pricing is provided at 6%, and the retiree continues to have upside if returns exceed expectations
- Should increase the value of the Defined Contribution benefit by more than 15%

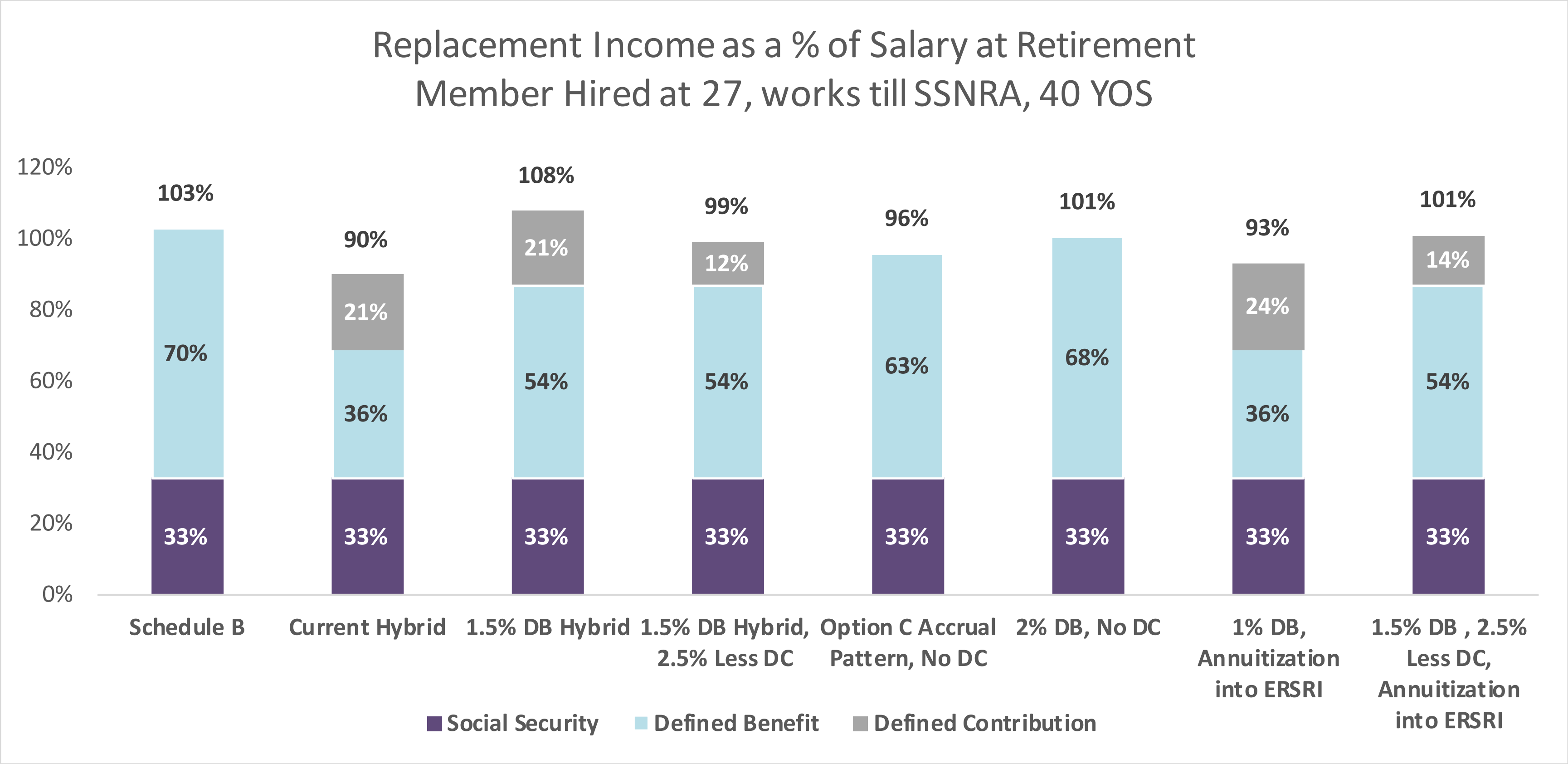
GRS

Request 3.G

Allow members to Annuitize their Defined Contribution Balances into the Defined Benefit Plan at Retirement

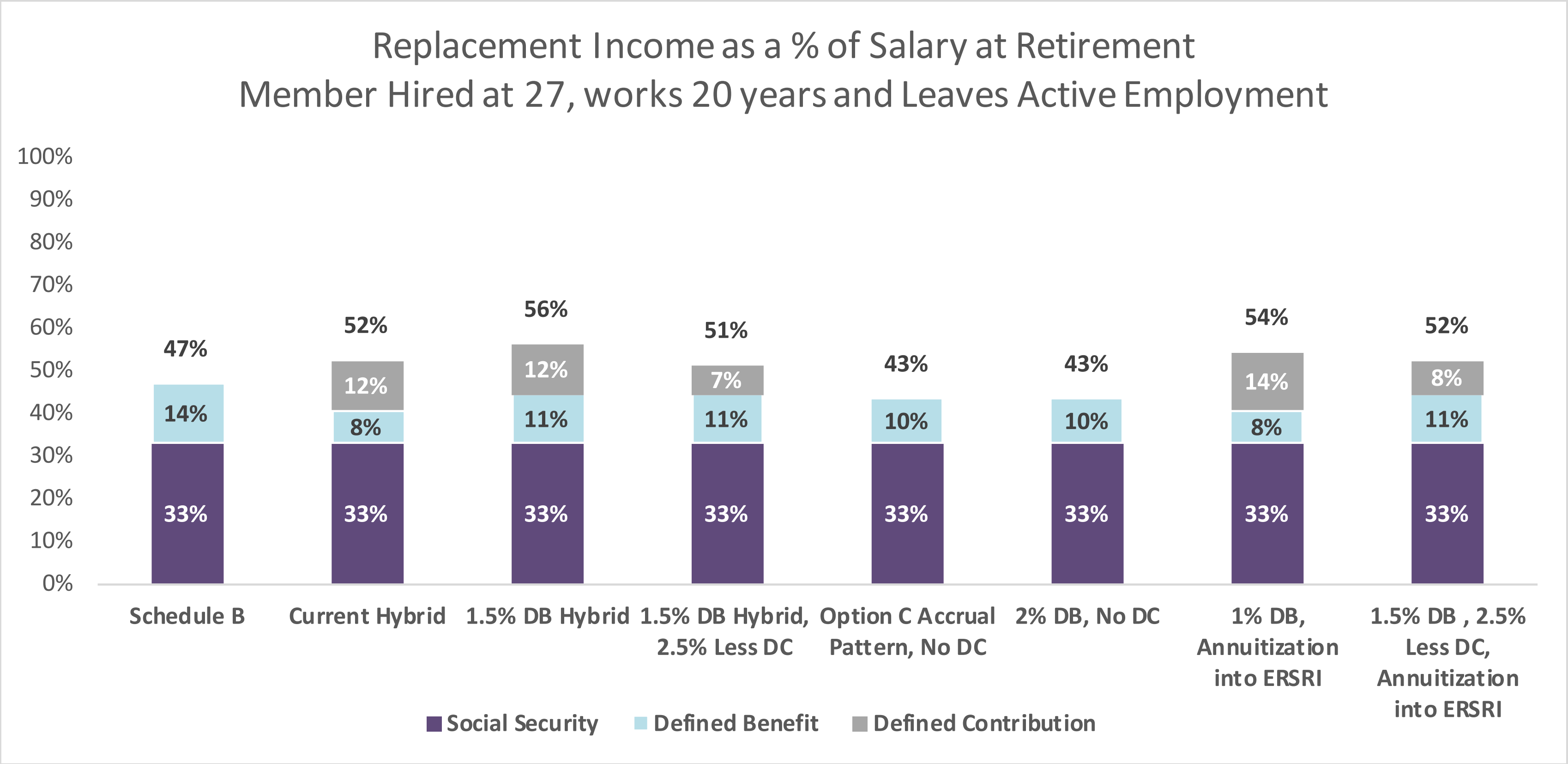
- Example member, age 65, with $100,000 DB balance
- Estimated annual annuity from private company: $5,000-$6,500
  - But fixed amount for remaining lifetime
- Estimated annual annuity from proposal: $6,500
  - Expected to grow at 2% annually, will range from 0% to 4% each year based on actual returns of ERSRI

Benefit Examples and Comparisons



Replacement Income is calculated over the member's expected retirement lifetime with full inflation purchasing power protection
Most research recommends 70-80% replacement to keep same standards of living

Benefit Examples and Comparisons



Replacement Income is calculated over the member's expected retirement lifetime with full inflation purchasing power protection
Most research recommends 70-80% replacement to keep same standards of living

Transition Defined Contribution Plan into a Cash Balance Plan

- A final step continuing down the path from the idea of Annuitizing into the DB Plan would be to bring the Defined Contribution component into the Defined Benefit Plan as a Cash Balance Plan
  - Basically, the DC assets would be invested along side the DB assets and the investment returns credited to the members' accounts
  - For example, the annual interest credit could be the <u>5-year return</u> of ERSRI, not less than 0%.
    - If the 0% floor ever came into play, future credits would be lower until the shortfall is made up
  - This takes most of the short-term risk away from members nearing retirement
  - This also takes poor decision making out of the member's hands, which has been shown to be a significant reason individuals typically underperform institutional investors over time
  - If a member terminates employment they could roll their money into an IRA or leave it and let it accumulate, just like the current DC plan
  - The balance would then be annuitized at retirement similar to previous slides
  - This would be expected to add another 5-10% of value to the "Defined Contribution" component of the Hybrid

GRS

Components of the Hybrid Plan

- Defined Benefit Plans generally reward late career hires the most, can be punitive to members who hire young and leave employment before retirement, even if after 20-25 years in some cases
- Defined Contribution Plans generally reward early hires the most, as they have more time to generate earnings, provide value to workers with shorter careers, but have difficulty providing meaningful benefits to members hired later in their careers
- Thus, the two components address the different populations to try to allow value to all members
- The Cash Balance/Annuitize into the DB plan options are ways to optimize the Defined Contribution Portion of the Hybrid Program

Wrap Up and Discussion

Appendix: Detailed Results for Each Scenario

Request 1.A

3 Year Final Average Compensation for State Employees, Teachers, and MERS General.

Item	State Employees: Current Provisions	State Employees: Based on Proposal	State Employees: Change	MERS General: Current Provisions	MERS General: Based on Proposal	MERS General: Change
Normal cost	7.63%	7.83%	0.20%	7.47%	7.66%	0.19%
Unfunded actuarial accrued liability	$1,984 million	$2,028 million	$45 million	$157 million	$170 million	$12 million
Funded ratio	60.4%	59.8%	-0.6%	88.7%	87.9%	-0.8%
Projected FY 2025 Contribution						
a. Percent of payroll	28.54%	29.17%	0.63%	11.25%	11.77%	0.52%
b. Estimated annual dollar amount	$241.4 million	$246.7 million	$5.3 million	$33.8 million	$35.4 million	$1.6 million

Item	Teachers: Current Provisions	Teachers: Based on Proposal	Teachers: Change
Normal cost	7.01%	7.18%	0.17%
Unfunded actuarial accrued liability	$2,511 million	$2,568 million	$57 million
Funded ratio	64.5%	64.0%	-0.5%
Projected FY 2025 Contribution			
a. Percent of payroll	25.12%	25.69%	0.57%
b. Estimated annual dollar amount	$302.9 million	$309.7 million	$6.9 million

$7.7 million needed per year for State Employees to not be expected to extend time to 80% funded

$9.8 million needed per year for Teachers to not be expected to extend time to 80% funded

Request 1.B.

1 Year Final Average Compensation for MERS Police and Fire

Item	Current Provisions	Based on Proposal	Change	Current Provisions	Based on Proposal	Change
				MERS Police and Fire		
Normal cost				18.93%	20.10%	1.17%
Unfunded actuarial accrued liability				$129 million	$167 million	$38 million
Funded ratio				86.5%	83.3%	-3.2%
Projected FY 2025 Contribution						
a. Percent of payroll				17.33%	20.55%	3.22%
b. Estimated annual dollar amount				$25.6 million	$30.4 million	$4.8 million

Request 1.C Option A

Prospective Increase the Accrual Rate from 1.0% to 1.5% for State Employees, Teachers, and MERS General

Item	Current Provisions	Based on Proposal	Change	Current Provisions	Based on Proposal	Change
	State Employees			MERS General		
Normal cost (New Entrant)	6.67%	9.33%	2.66%	6.88%	9.73%	2.85%
Unfunded actuarial accrued liability	$1,984 million	$2,072 million	$88 million	$157 million	$190 million	$33 million
Funded ratio	60.4%	59.3%	-1.1%	88.7%	86.6%	-2.1%
Projected FY 2025 Contribution						
a. Percent of payroll	28.54%	30.38%	1.84%	11.25%	13.39%	2.14%
b. Estimated annual dollar amount	$241.4 million	$257.0 million	$15.6 million	$33.8 million	$40.2 million	$6.4 million

Item	Current Provisions	Based on Proposal	Change
	Teachers		
Normal cost (New Entrant)	6.06%	8.56%	2.50%
Unfunded actuarial accrued liability	$2,511 million	$2,712 million	$201 million
Funded ratio	64.5%	62.7%	-1.8%
Projected FY 2025 Contribution			
a. Percent of payroll	25.12%	27.62%	2.50%
b. Estimated annual dollar amount	$302.9 million	$333.0 million	$30.2 million

$20.2 million needed per year for State Employees to not be expected to extend time to 80% funded

$40.6 million needed per year for Teachers to not be expected to extend time to 80% funded

Request 1.C Option A (alternative)

Prospective increase the Accrual Rate from 1.0% to 1.5% for State Employees, Teachers, and MERS General

Offset by moving 2.5% of the current member contribution going into the Defined Contribution Plan being diverted to the DB Plan

Item	Current Provisions	Based on Proposal	Change	Current Provisions	Based on Proposal	Change
	State Employees			MERS General		
Normal cost (New Entrant)	6.67%	9.70%	3.03%	6.88%	9.97%	3.09%
Unfunded actuarial accrued liability	$1,984 million	$2,065 million	$81 million	$157 million	$188 million	$30 million
Funded ratio	60.4%	59.4%	-1.0%	88.7%	86.8%	-1.9%
Projected FY 2025 Contribution						
a. Percent of payroll	28.54%	28.45%	-0.09%	11.25%	11.11%	-0.14%
b. Estimated annual dollar amount	$241.4 million	$240.6 million	-$0.8 million	$33.8 million	$33.4 million	-$0.4 million

Item	Current Provisions	Based on Proposal	Change
	Teachers		
Normal cost (New Entrant)	6.06%	8.86%	2.80%
Unfunded actuarial accrued liability	$2,511 million	$2,704 million	$193 million
Funded ratio	64.5%	62.8%	-1.7%
Projected FY 2025 Contribution			
a. Percent of payroll	25.12%	25.32%	0.20%
b. Estimated annual dollar amount	$302.9 million	$305.3 million	$2.5 million

$3.5 million needed per year for State Employees to not be expected to extend time to 80% funded

$12.5 million needed per year for Teachers to not be expected to extend time to 80% funded

Request 1.C Option B

Prospective 3-Tier Accrual Rates (1.25% for 10 or less YoS; 1.50% for 11 to 20 YoS; 2.00% for 21 or over YoS) for State Employees, Teachers, and MERS General

Item	Current Provisions	Based on Proposal	Change	Current Provisions	Based on Proposal	Change
	State Employees			MERS General		
Normal cost (New Entrant)	6.67%	9.14%	2.47%	6.88%	9.41%	2.53%
Unfunded actuarial accrued liability	$1,984 million	$2,136 million	$152 million	$157 million	$209 million	$52 million
Funded ratio	60.4%	58.6%	-1.8%	88.7%	85.5%	-3.2%
Projected FY 2025 Contribution						
a. Percent of payroll	28.54%	31.40%	2.86%	11.25%	14.27%	3.02%
b. Estimated annual dollar amount	$241.4 million	$265.6 million	$24.2 million	$33.8 million	$42.9 million	$9.1 million

Item	Current Provisions	Based on Proposal	Change
	Teachers		
Normal cost (New Entrant)	6.06%	8.84%	2.78%
Unfunded actuarial accrued liability	$2,511 million	$2,890 million	$379 million
Funded ratio	64.5%	61.2%	-3.3%
Projected FY 2025 Contribution			
a. Percent of payroll	25.12%	29.49%	4.37%
b. Estimated annual dollar amount	$302.9 million	$355.5 million	$52.6 million

$32.2 million needed per year for State Employees to not be expected to extend time to 80% funded
$72.3 million needed per year for Teachers to not be expected to extend time to 80% funded

Request 1.C Option C

Prospective 4-Tier Accrual Rates (1.25% for 10 or less YoS; 1.50% for 11 to 20 YoS; 2.00% for 21 to 30 YoS; 2.50% for 31 or over YoS) for State Employees, Teachers, and MERS General

Item	Current Provisions	Based on Proposal	Change	Current Provisions	Based on Proposal	Change
	State Employees			MERS General		
Normal cost (New Entrant)	6.67%	9.15%	2.48%	6.88%	9.42%	2.54%
Unfunded actuarial accrued liability	$1,984 million	$2,161 million	$177 million	$157 million	$216 million	$58 million
Funded ratio	60.4%	58.3%	-2.1%	88.7%	85.1%	-3.6%
Projected FY 2025 Contribution						
a. Percent of payroll	28.54%	31.75%	3.21%	11.25%	14.52%	3.27%
b. Estimated annual dollar amount	$241.4 million	$268.6 million	$27.2 million	$33.8 million	$43.6 million	$9.8 million
	Teachers					
Normal cost (New Entrant)	6.06%	9.00%	2.94%			
Unfunded actuarial accrued liability	$2,511 million	$2,971 million	$460 million			
Funded ratio	64.5%	60.6%	-3.9%			
Projected FY 2025 Contribution						
a. Percent of payroll	25.12%	30.27%	5.15%			
b. Estimated annual dollar amount	$302.9 million	$365.0 million	$62.1 million			

$36.5 million needed per year for State Employees to not be expected to extend time to 80% funded
$86.0 million needed per year for Teachers to not be expected to extend time to 80% funded

Request 1.C Option C (Alternative)

Prospective 4-Tier Accrual Rates (1.25% for 10 or less YoS; 1.50% for 11 to 20 YoS; 2.00% for 21 to 30 YoS; 2.50% for 31 or over YoS) for State Employees, Teachers, and MERS General. All DC Contributions Diverted to DB.

Item	Current Provisions	Based on Proposal	Change
State Employees			
Normal cost (New Entrant)	6.67%	9.92%	3.25%
Unfunded actuarial accrued liability	$1,984 million	$2,148 million	$165 million
Funded ratio	60.4%	58.4%	-2.0%
Projected FY 2025 Contribution			
a. Percent of payroll	28.54%	27.88%	-0.66%
b. Estimated annual dollar amount	$241.4 million	$235.8 million	-$5.6 million
Teachers			
Normal cost (New Entrant)	6.06%	9.58%	3.52%
Unfunded actuarial accrued liability	$2,511 million	$2,957 million	$446 million
Funded ratio	64.5%	60.7%	-3.8%
Projected FY 2025 Contribution			
a. Percent of payroll	25.12%	25.67%	0.55%
b. Estimated annual dollar amount	$302.9 million	$309.6 million	$6.7 million

Item	Current Provisions	Based on Proposal	Change
MERS General			
Normal cost (New Entrant)	6.88%	10.19%	3.31%
Unfunded actuarial accrued liability	$157 million	$211 million	$54 million
Funded ratio	88.7%	85.4%	-3.3%
Projected FY 2025 Contribution			
a. Percent of payroll	11.25%	9.95%	-1.30%
b. Estimated annual dollar amount	$33.8 million	$29.9 million	-$3.9 million

$3.1 million needed per year for State Employees to not be expected to extend time to 80% funded
$29.9 million needed per year for Teachers to not be expected to extend time to 80% funded

There would be an additional $7 million and $12 million annual savings for State Employees and Teachers, respectively from the elimination of the employer 1% DC contribution

Request 1.C Option D

Prospective 2% Accrual Rates for State Employees, Teachers, and MERS General. All DC Contributions Diverted to DB.

Item	Current Provisions	Based on Proposal	Change
	State Employees		
Normal cost (New Entrant)	6.67%	12.66%	5.99%
Unfunded actuarial accrued liability	$1,984 million	$2,153 million	$170 million
Funded ratio	60.4%	58.4%	-2.0%
Projected FY 2025 Contribution			
a. Percent of payroll	28.54%	28.39%	-0.15%
b. Estimated annual dollar amount	$241.4 million	$240.1 million	-$1.3 million
	Teachers		
Normal cost (New Entrant)	6.06%	11.50%	5.44%
Unfunded actuarial accrued liability	$2,511 million	$2,912 million	$401 million
Funded ratio	64.5%	61.0%	-3.5%
Projected FY 2025 Contribution			
a. Percent of payroll	25.12%	25.68%	0.56%
b. Estimated annual dollar amount	$302.9 million	$309.7 million	$6.8 million

$7.6 million needed per year for State Employees to not be expected to extend time to 80% funded
$27.6 million needed per year for Teachers to not be expected to extend time to 80% funded

There would be an additional $7 million and $12 million annual savings for State Employees and Teachers, respectively from the elimination of the employer 1% DC contribution

Request 1.C Option D (Alternative)

Prospective 2% Accrual Rates for State Employees, Teachers, and MERS General. All DC Contributions Diverted to DB. Members can reestablish past service at 2% by purchasing using DC balances.

Item	Current Provisions	Based on Proposal	Change
	State Employees		
Normal cost (New Entrant)	6.67%	12.66%	5.99%
Unfunded actuarial accrued liability	$1,984 million	$2,063 million	$79 million
Funded ratio	60.4%	59.4%	-1.0%
Projected FY 2025 Contribution			
a. Percent of payroll	28.54%	29.23%	0.69%
b. Estimated annual dollar amount	$241.4 million	$247.3 million	$5.9 million
	Teachers		
Normal cost (New Entrant)	6.06%	11.50%	5.44%
Unfunded actuarial accrued liability	$2,511 million	$2,687 million	$176 million
Funded ratio	64.5%	62.9%	-1.6%
Projected FY 2025 Contribution			
a. Percent of payroll	25.12%	25.54%	0.42%
b. Estimated annual dollar amount	$302.9 million	$307.9 million	$5.0 million

$10.0 million needed per year for State Employees to not be expected to extend time to 80% funded
$14.2 million needed per year for Teachers to not be expected to extend time to 80% funded

There would be an additional $7 million and $12 million annual savings for State Employees and Teachers, respectively from the elimination of the employer 1% DC contribution

GRS

Request 1.C Option E

Current Hybrid, Member Contribution Rate Decreased from 3.75% to 0% into the DB Plan

Item	Current Provisions	Based on Proposal	Change
	State Employees		
Normal cost (New Entrant)	6.67%	6.25%	-0.42%
Unfunded actuarial accrued liability	$1,984 million	$1,982 million	-$2 million
Funded ratio	60.4%	60.4%	0.0%
Projected FY 2025 Contribution			
a. Percent of payroll	28.54%	31.51%	2.97%
b. Estimated annual dollar amount	$241.4 million	$266.5 million	$25.1 million
	Teachers		
Normal cost (New Entrant)	6.06%	5.75%	-0.31%
Unfunded actuarial accrued liability	$2,511 million	$2,509 million	-$2 million
Funded ratio	64.5%	64.5%	0.0%
Projected FY 2025 Contribution			
a. Percent of payroll	25.12%	28.58%	3.46%
b. Estimated annual dollar amount	$302.9 million	$344.5 million	$41.7 million

Request 1.D

Prospective 2.5% Accrual Multiplier for MERS Police and Fire

Item	Current Provisions	Based on Proposal	Change
	MERS Police and Fire		
Normal cost (New Entrant)	18.89%	21.27%	2.38%
Unfunded actuarial accrued liability	$129 million	$144 million	$15 million
Funded ratio	86.5%	85.2%	-1.3%
Projected FY 2025 Contribution			
a. Percent of payroll	17.33%	19.55%	2.22%
b. Estimated annual dollar amount	$25.6 million	$28.9 million	$3.3 million

Request 2.A

Rule of 90 unreduced retirement eligibility instead of 95, Minimum Age 60 for State Employees, Teachers, and MERS General.

Item	State Employees: Current Provisions	State Employees: Based on Proposal	State Employees: Change	MERS General: Current Provisions	MERS General: Based on Proposal	MERS General: Change
Normal cost	7.63%	7.72%	0.09%	7.47%	7.53%	0.06%
Unfunded actuarial accrued liability	$1,984 million	$2,005 million	$21 million	$157 million	$162 million	$4 million
Funded ratio	60.4%	60.1%	-0.3%	88.7%	88.4%	-0.3%
Projected FY 2025 Contribution						
a. Percent of payroll	28.54%	28.83%	0.29%	11.25%	11.43%	0.18%
b. Estimated annual dollar amount	$241.4 million	$243.9 million	$2.5 million	$33.8 million	$34.3 million	$0.5 million

Item	Teachers: Current Provisions	Teachers: Based on Proposal	Teachers: Change
Normal cost	7.01%	7.22%	0.21%
Unfunded actuarial accrued liability	$2,511 million	$2,596 million	$85 million
Funded ratio	64.5%	63.7%	-0.8%
Projected FY 2025 Contribution			
a. Percent of payroll	25.12%	25.92%	0.80%
b. Estimated annual dollar amount	$302.9 million	$312.5 million	$9.7 million

$3.6 million needed per year for State Employees to not be expected to extend time to 80% funded

$14.1 million needed per year for Teachers to not be expected to extend time to 80% funded

Request 2.B

3% per year Early Retirement Reduction Factor for State Employees, Teachers, and MERS General.

Item	Current Provisions	Based on Proposal	Change	Current Provisions	Based on Proposal	Change
	State Employees			MERS General		
Normal cost	7.63%	7.73%	0.10%	7.47%	7.65%	0.18%
Unfunded actuarial accrued liability	$1,984 million	$2,002 million	$18 million	$157 million	$164 million	$7 million
Funded ratio	60.4%	60.2%	-0.2%	88.7%	88.2%	-0.5%
Projected FY 2025 Contribution						
a. Percent of payroll	28.54%	28.81%	0.27%	11.25%	11.62%	0.37%
b. Estimated annual dollar amount	$241.4 million	$243.7 million	$2.3 million	$33.8 million	$34.9 million	$1.1 million

Item	Current Provisions	Based on Proposal	Change
	Teachers		
Normal cost	7.01%	7.16%	0.15%
Unfunded actuarial accrued liability	$2,511 million	$2,563 million	$52 million
Funded ratio	64.5%	64.0%	-0.5%
Projected FY 2025 Contribution			
a. Percent of payroll	25.12%	25.63%	0.51%
b. Estimated annual dollar amount	$302.9 million	$309.1 million	$6.2 million

$3.3 million needed per year for State Employees to not be expected to extend time to 80% funded

$8.9 million needed per year for Teachers to not be expected to extend time to 80% funded

Request 2.C.a.

MERS Police and Fire Can Retire at Age 57 with 20 YOS.

Currently can retire at age 50 with 25 YOS or any age with 27 YOS or SSNRA with 5 YOS.

Item	Current Provisions	Based on Proposal	Change
	MERS Police and Fire		
Normal cost	18.93%	19.10%	0.17%
Unfunded actuarial accrued liability	$129 million	$134 million	$5 million
Funded ratio	86.5%	86.1%	-0.4%
Projected FY 2025 Contribution			
a. Percent of payroll	17.33%	17.75%	0.42%
b. Estimated annual dollar amount	$25.6 million	$26.2 million	$0.6 million

Request 2.C.b

MERS Police and Fire Can Retire at Age 62 with 5 YOS.

Currently can retire at age 50 with 25 YOS or any age with 27 YOS or SSNRA with 5 YOS.

Item	Current Provisions	Based on Proposal	Change
	MERS Police and Fire		
Normal cost	18.93%	19.22%	0.29%
Unfunded actuarial accrued liability	$129 million	$131 million	$2 million
Funded ratio	86.5%	86.3%	-0.2%
Projected FY 2025 Contribution			
a. Percent of payroll	17.33%	17.74%	0.41%
b. Estimated annual dollar amount	$25.6 million	$26.2 million	$0.6 million

GRS

Request 2.D

MERS Police and Fire Can Retire at any age with 20 Years of Service

Item	Current Provisions	Based on Proposal	Change
	MERS Police and Fire		
Normal cost	18.93%	19.84%	0.91%
Unfunded actuarial accrued liability	$129 million	$146 million	$17 million
Funded ratio	86.5%	85.0%	-1.5%
Projected FY 2025 Contribution			
a. Percent of payroll	17.33%	19.16%	1.83%
b. Estimated annual dollar amount	$25.6 million	$28.3 million	$2.7 million

Request 3.A

Additional 1% Employer Contribution to the Defined Contribution Plan

Item	Current Provisions	Based on Proposal	Change
State Employees			
Normal cost			
Unfunded actuarial accrued liability			
Funded ratio			
Projected FY 2025 Contribution			
a. Percent of payroll		0.98%	0.98%
b. Estimated annual dollar amount		$7.3 million	$7.3 million
Teachers			
Normal cost			
Unfunded actuarial accrued liability			
Funded ratio			
Projected FY 2025 Contribution			
a. Percent of payroll		0.98%	0.98%
b. Estimated annual dollar amount		$11.8 million	$11.8 million
MERS General			
Normal cost			
Unfunded actuarial accrued liability			
Funded ratio			
Projected FY 2025 Contribution			
a. Percent of payroll		0.98%	0.98%
b. Estimated annual dollar amount		$2.9 million	$2.9 million

Request 3.F

Provide Public Safety Employees in ERSRI the Same Retirement Benefits as Police/Fire in MERS

Item	Current Provisions	Based on Proposal	Change
	State Employees		
Normal cost	7.63%	7.92%	0.29%
Unfunded actuarial accrued liability	$1,984 million	$2,001 million	$17 million
Funded ratio	60.4%	60.2%	-0.2%
Projected FY 2025 Contribution			
a. Percent of payroll	28.54%	28.99%	0.45%
b. Estimated annual dollar amount	$241.4 million	$245.2 million	$3.8 million

$4.7 million needed per year for State Employees to not be expected to extend time to 80% funded

GRS

Request 4.A.a.

Prospective Restoration of a 3% Compounding COLA (All limits, delays, etc remain unchanged)

Item	Current Provisions	Based on Proposal	Change	Current Provisions	Based on Proposal	Change
	State Employees			MERS General		
Normal cost	7.63%	8.00%	0.37%	7.47%	7.84%	0.37%
Unfunded actuarial accrued liability	$1,984 million	$2,312 million	$328 million	$157 million	$229 million	$72 million
Funded ratio	60.4%	56.7%	-3.7%	88.7%	84.3%	-4.4%
Projected FY 2025 Contribution						
a. Percent of payroll	28.54%	32.04%	3.50%	11.25%	13.56%	2.31%
b. Estimated annual dollar amount	$241.4 million	$271.0 million	$29.6 million	$33.8 million	$40.7 million	$6.9 million
	Teachers			MERS Police and Fire		
Normal cost	7.01%	7.44%	0.43%	18.93%	19.79%	0.86%
Unfunded actuarial accrued liability	$2,511 million	$2,990 million	$479 million	$129 million	$180 million	$51 million
Funded ratio	64.5%	60.4%	-4.1%	86.5%	82.1%	-4.4%
Projected FY 2025 Contribution						
a. Percent of payroll	25.12%	28.89%	3.77%	17.33%	20.99%	3.66%
b. Estimated annual dollar amount	$302.9 million	$348.3 million	$45.4 million	$25.6 million	$31.0 million	$5.4 million

Request 4.A.b.

Prospective 3% Non-Compounding COLA (All limits, delays, etc remain unchanged)

Item	Current Provisions	Based on Proposal	Change
	State Employees		
Normal cost	7.63%	7.94%	0.31%
Unfunded actuarial accrued liability	$1,984 million	$2,214 million	$230 million
Funded ratio	60.4%	57.7%	-2.7%
Projected FY 2025 Contribution			
a. Percent of payroll	28.54%	31.05%	2.51%
b. Estimated annual dollar amount	$241.4 million	$262.6 million	$21.2 million
	Teachers		
Normal cost	7.01%	7.36%	0.35%
Unfunded actuarial accrued liability	$2,511 million	$2,843 million	$332 million
Funded ratio	64.5%	61.6%	-2.9%
Projected FY 2025 Contribution			
a. Percent of payroll	25.12%	27.78%	2.66%
b. Estimated annual dollar amount	$302.9 million	$335.0 million	$32.1 million

Item	Current Provisions	Based on Proposal	Change
	MERS General		
Normal cost	7.47%	7.65%	0.18%
Unfunded actuarial accrued liability	$157 million	$191 million	$34 million
Funded ratio	88.7%	86.5%	-2.2%
Projected FY 2025 Contribution			
a. Percent of payroll	11.25%	12.34%	1.09%
b. Estimated annual dollar amount	$33.8 million	$37.1 million	$3.3 million
	MERS Police and Fire		
Normal cost	18.93%	19.31%	0.38%
Unfunded actuarial accrued liability	$129 million	$154 million	$25 million
Funded ratio	86.5%	84.3%	-2.2%
Projected FY 2025 Contribution			
a. Percent of payroll	17.33%	19.07%	1.74%
b. Estimated annual dollar amount	$25.6 million	$28.2 million	$2.6 million

Request 4.A.c.

3% Compounding COLA (Current Benefit Adjusted for all Previous Suspended COLAs)

Item	Current Provisions	Based on Proposal	Change	Current Provisions	Based on Proposal	Change
	State Employees			MERS General		
Normal cost	7.63%	8.00%	0.37%	7.47%	7.84%	0.37%
Unfunded actuarial accrued liability	$1,984 million	$2,744 million	$760 million	$157 million	$229 million	$72 million
Funded ratio	60.4%	52.4%	-8.0%	88.7%	84.3%	-4.4%
Projected FY 2025 Contribution						
a. Percent of payroll	28.54%	36.17%	7.63%	11.25%	13.56%	2.31%
b. Estimated annual dollar amount	$241.4 million	$305.9 million	$64.5 million	$33.8 million	$40.7 million	$6.9 million
	Teachers			MERS Police and Fire		
Normal cost	7.01%	7.44%	0.43%	18.93%	19.79%	0.86%
Unfunded actuarial accrued liability	$2,511 million	$3,696 million	$1,185 million	$129 million	$180 million	$51 million
Funded ratio	64.5%	55.2%	-9.3%	86.5%	82.1%	-4.4%
Projected FY 2025 Contribution						
a. Percent of payroll	25.12%	33.80%	8.68%	17.33%	20.99%	3.66%
b. Estimated annual dollar amount	$302.9 million	$407.6 million	$104.7 million	$25.6 million	$31.0 million	$5.4 million

Request 4.A.c. (alternative)

3% Compounding COLA for those retired before July 1, 2012
(Current Benefit Adjusted for all Previous Suspended COLAs)

Item	Current Provisions	Based on Proposal	Change	Current Provisions	Based on Proposal	Change
	State Employees			MERS General		
Normal cost	7.63%	7.63%	0.00%	7.47%	7.47%	0.00%
Unfunded actuarial accrued liability	$1,984 million	$2,474 million	$490 million	$157 million	$157 million	$0 million
Funded ratio	60.4%	55.0%	-5.4%	88.7%	88.7%	0.0%
Projected FY 2025 Contribution						
a. Percent of payroll	28.54%	33.22%	4.68%	11.25%	11.25%	0.00%
b. Estimated annual dollar amount	$241.4 million	$281.0 million	$39.6 million	$33.8 million	$33.8 million	$0.0 million
	Teachers			MERS Police and Fire		
Normal cost	7.01%	7.01%	0.00%	18.93%	18.93%	0.00%
Unfunded actuarial accrued liability	$2,511 million	$3,354 million	$843 million	$129 million	$129 million	$0 million
Funded ratio	64.5%	57.6%	-6.9%	86.5%	86.5%	0.0%
Projected FY 2025 Contribution						
a. Percent of payroll	25.12%	30.99%	5.87%	17.33%	17.33%	0.00%
b. Estimated annual dollar amount	$302.9 million	$373.6 million	$70.8 million	$25.6 million	$25.6 million	$0.0 million

Request 4.A.d.

A One-Time 3.00% Non-Compounding COLA (All limits, delays, etc remain unchanged)

Item	Current Provisions	Based on Proposal	Change
	State Employees		
Normal cost	7.63%	7.63%	0.00%
Unfunded actuarial accrued liability	$1,984 million	$2,035 million	$52 million
Funded ratio	60.4%	59.8%	-0.6%
Projected FY 2025 Contribution			
a. Percent of payroll	28.54%	29.03%	0.49%
b. Estimated annual dollar amount	$241.4 million	$245.6 million	$4.2 million
	Teachers		
Normal cost	7.01%	7.01%	0.00%
Unfunded actuarial accrued liability	$2,511 million	$2,586 million	$75 million
Funded ratio	64.5%	63.8%	-0.7%
Projected FY 2025 Contribution			
a. Percent of payroll	25.12%	25.64%	0.52%
b. Estimated annual dollar amount	$302.9 million	$309.2 million	$6.3 million

$6.9 million needed per year for State Employees to not be expected to extend time to 80% funded
$10.2 million needed per year for Teachers to not be expected to extend time to 80% funded

In lieu of impact above, annual conribution of $6.0 million for State Employees to finance on a pay-as-you-go basis
In lieu of impact above, annual conribution of $9.5 million for Teachers to finance on a pay-as-you-go basis

Request 4.A.e.

Grant Full COLA in 2024 Instead of 25% (2.71% vs 0.71%) for those impacted by the 80% Suspension

Item	Current Provisions	Based on Proposal	Change
State Employees			
Normal cost	7.63%	7.63%	0.00%
Unfunded actuarial accrued liability	$1,984 million	$2,022 million	$39 million
Funded ratio	60.4%	59.9%	-0.5%
Projected FY 2025 Contribution			
a. Percent of payroll	28.54%	28.91%	0.37%
b. Estimated annual dollar amount	$241.4 million	$244.5 million	$3.1 million
Teachers			
Normal cost	7.01%	7.01%	0.00%
Unfunded actuarial accrued liability	$2,511 million	$2,567 million	$56 million
Funded ratio	64.5%	64.0%	-0.5%
Projected FY 2025 Contribution			
a. Percent of payroll	25.12%	25.51%	0.39%
b. Estimated annual dollar amount	$302.9 million	$307.6 million	$4.7 million

$5.2 million needed per year for State Employees to not be expected to extend time to 80% funded

$7.6 million needed per year for Teachers to not be expected to extend time to 80% funded

In lieu of impact above, annual conribution of $4.3 million for State Employees to finance on a pay-as-you-go basis

In lieu of impact above, annual conribution of $6.7 million for Teachers to finance on a pay-as-you-go basis

Request 4.A.f.

A One-Time 3.00% COLA which would Impact Future COLAs (All limits, delays, etc remain unchanged)

Item	Current Provisions	Based on Proposal	Change
	State Employees		
Normal cost	7.63%	7.63%	0.00%
Unfunded actuarial accrued liability	$1,984 million	$2,040 million	$56 million
Funded ratio	60.4%	59.7%	-0.7%
Projected FY 2025 Contribution			
a. Percent of payroll	28.54%	29.07%	0.53%
b. Estimated annual dollar amount	$241.4 million	$245.9 million	$4.5 million
	Teachers		
Normal cost	7.01%	7.01%	0.00%
Unfunded actuarial accrued liability	$2,511 million	$2,592 million	$81 million
Funded ratio	64.5%	63.8%	-0.7%
Projected FY 2025 Contribution			
a. Percent of payroll	25.12%	25.68%	0.56%
b. Estimated annual dollar amount	$302.9 million	$309.7 million	$6.8 million

$7.5 million needed per year for State Employees to not be expected to extend time to 80% funded

$11.0 million needed per year for Teachers to not be expected to extend time to 80% funded

In lieu of impact above, annual conribution of $6.0 million for State Employees to finance on a pay-as-you-go basis

In lieu of impact above, annual conribution of $9.5 million for Teachers to finance on a pay-as-you-go basis

Request 4.A.g.

A One-Time 2.00% COLA which would Impact Future COLAs (All limits, delays, etc remain unchanged)

Item	Current Provisions	Based on Proposal	Change
	State Employees		
Normal cost	7.63%	7.63%	0.00%
Unfunded actuarial accrued liability	$1,984 million	$2,020 million	$36 million
Funded ratio	60.4%	59.9%	-0.5%
Projected FY 2025 Contribution			
a. Percent of payroll	28.54%	28.89%	0.35%
b. Estimated annual dollar amount	$241.4 million	$244.3 million	$2.9 million
	Teachers		
Normal cost	7.01%	7.01%	0.00%
Unfunded actuarial accrued liability	$2,511 million	$2,563 million	$52 million
Funded ratio	64.5%	64.0%	-0.5%
Projected FY 2025 Contribution			
a. Percent of payroll	25.12%	25.48%	0.36%
b. Estimated annual dollar amount	$302.9 million	$307.3 million	$4.4 million

$4.8 million needed per year for State Employees to not be expected to extend time to 80% funded
$7.1 million needed per year for Teachers to not be expected to extend time to 80% funded

In lieu of impact above, annual conribution of $4.0 million for State Employees to finance on a pay-as-you-go basis
In lieu of impact above, annual conribution of $6.3 million for Teachers to finance on a pay-as-you-go basis

GRS

Request 4.A.h.

No longer have the 80% threshold applied for those retired before 7/1/2012

Item	Current Provisions	Based on Proposal	Change
	State Employees		
Normal cost	7.63%	7.63%	0.00%
Unfunded actuarial accrued liability	$1,984 million	$2,085 million	$102 million
Funded ratio	60.4%	59.2%	-1.2%
Projected FY 2025 Contribution			
a. Percent of payroll	28.54%	29.51%	0.97%
b. Estimated annual dollar amount	$241.4 million	$249.6 million	$8.2 million
	Teachers		
Normal cost	7.01%	7.01%	0.00%
Unfunded actuarial accrued liability	$2,511 million	$2,678 million	$167 million
Funded ratio	64.5%	63.0%	-1.5%
Projected FY 2025 Contribution			
a. Percent of payroll	25.12%	26.28%	1.16%
b. Estimated annual dollar amount	$302.9 million	$316.9 million	$14.0 million

$13.5 million needed per year for State Employees to not be expected to extend time to 80% funded
$22.7 million needed per year for Teachers to not be expected to extend time to 80% funded

In lieu of impact above, annual conribution of $4.0 million for State Employees to finance on a pay-as-you-go basis
In lieu of impact above, annual conribution of $6.3 million for Teachers to finance on a pay-as-you-go basis

GRS

Request 4.B. - Option A

COLA Threshold reduced to 75% Rounded Ratio, Assumed to Return 1 Year Sooner

Item	Current Provisions	Based on Proposal	Change
State Employees			
Normal cost	7.63%	7.63%	0.00%
Unfunded actuarial accrued liability	$1,984 million	$2,017 million	$33 million
Funded ratio	60.4%	60.0%	-0.4%
Projected FY 2025 Contribution			
a. Percent of payroll	28.54%	28.86%	0.32%
b. Estimated annual dollar amount	$241.4 million	$244.1 million	$2.7 million
Teachers			
Normal cost	7.01%	7.01%	0.00%
Unfunded actuarial accrued liability	$2,511 million	$2,543 million	$32 million
Funded ratio	64.5%	64.2%	-0.3%
Projected FY 2025 Contribution			
a. Percent of payroll	25.12%	25.34%	0.22%
b. Estimated annual dollar amount	$302.9 million	$305.6 million	$2.7 million

Request 4.B. - Option B

COLA Threshold reduced to 70% Rounded Ratio, Assumed to Return 2 Years Sooner

Item	Current Provisions	Based on Proposal	Change
	State Employees		
Normal cost	7.63%	7.63%	0.00%
Unfunded actuarial accrued liability	$1,984 million	$2,048 million	$65 million
Funded ratio	60.4%	59.6%	-0.8%
Projected FY 2025 Contribution			
a. Percent of payroll	28.54%	29.16%	0.62%
b. Estimated annual dollar amount	$241.4 million	$246.6 million	$5.2 million
	Teachers		
Normal cost	7.01%	7.01%	0.00%
Unfunded actuarial accrued liability	$2,511 million	$2,574 million	$63 million
Funded ratio	64.5%	63.9%	-0.6%
Projected FY 2025 Contribution			
a. Percent of payroll	25.12%	25.56%	0.44%
b. Estimated annual dollar amount	$302.9 million	$308.2 million	$5.3 million

GRS

Request 4.D

Repeal post-retirement employment restrictions for police and fire personnel relating to the number of days a retiree can work without incurring penalties.

Item	Current Provisions	Based on Proposal	Change
	MERS Police and Fire		
Normal cost	18.93%	21.83%	2.90%
Unfunded actuarial accrued liability	$129 million	$179 million	$50 million
Funded ratio	86.5%	82.3%	-4.2%
Projected FY 2025 Contribution			
a. Percent of payroll	17.33%	23.32%	5.99%
b. Estimated annual dollar amount	$25.6 million	$30.2 million	$4.6 million

GRS

A Deferred Retirement Option Program (DROP) for MERS Police and Fire

Item	Current Provisions	Based on Proposal	Change
	MERS Police and Fire		
Normal cost	18.93%	21.83%	2.90%
Unfunded actuarial accrued liability	$129 million	$179 million	$50 million
Funded ratio	86.5%	82.3%	-4.2%
Projected FY 2025 Contribution			
a. Percent of payroll	17.33%	23.32%	5.99%
b. Estimated annual dollar amount	$25.6 million	$30.2 million	$4.6 million