

# Individual State Agency Fiscal Note

|                             |                                    |  |
|-----------------------------|------------------------------------|--|
| <b>Bill Number:</b> 5698 SB | <b>Title:</b> Plan 1 retiree COLAs | <b>Agency:</b> AFN-Actuarial Fiscal Note - State Actuary |
|-----------------------------|------------------------------------|--|

## Part I: Estimates

**No Fiscal Impact**

### Estimated Cash Receipts to:

NONE

### Estimated Operating Expenditures from:

|                             | FY 2022 | FY 2023     | 2021-23     | 2023-25     | 2025-27     |
|-----------------------------|---------|-------------|-------------|-------------|-------------|
| <b>Account</b>              |         |             |             |             |             |
| All Other Funds-State 000-1 | 0       | 45,200,000  | 45,200,000  | 113,000,000 | 120,100,000 |
| General Fund-State 001-1    | 0       | 207,400,000 | 207,400,000 | 527,500,000 | 570,700,000 |
| <b>Total \$</b>             | 0       | 252,600,000 | 252,600,000 | 640,500,000 | 690,800,000 |

### Estimated Capital Budget Impact:

NONE

*The cash receipts and expenditure estimates on this page represent the most likely fiscal impact . Factors impacting the precision of these estimates , and alternate ranges (if appropriate) , are explained in Part II.*

Check applicable boxes and follow corresponding instructions:

- If fiscal impact is greater than \$50,000 per fiscal year in the current biennium or in subsequent biennia , complete entire fiscal note form Parts I-V.
- If fiscal impact is less than \$50,000 per fiscal year in the current biennium or in subsequent biennia , complete this page only (Part I).
- Capital budget impact, complete Part IV.
- Requires new rule making, complete Part V.

|                                     |                       |                  |
|-------------------------------------|-----------------------|------------------|
| Legislative Contact:                | Phone:                | Date: 04/20/2022 |
| Agency Preparation: Aaron Gutierrez | Phone: 360-786-6152   | Date: 04/20/2022 |
| Agency Approval: Luke Masselink     | Phone: 360-786-6154   | Date: 04/20/2022 |
| OFM Review: Marcus Ehrlander        | Phone: (360) 489-4327 | Date: 05/05/2022 |

## Part II: Narrative Explanation

### II. A - Brief Description Of What The Measure Does That Has Fiscal Impact

Briefly describe by section number, the significant provisions of the bill, and any related workload or policy assumptions, that have revenue or expenditure impact on the responding agency .

### II. B - Cash receipts Impact

Briefly describe and quantify the cash receipts impact of the legislation on the responding agency, identifying the cash receipts provisions by section number and when appropriate the detail of the revenue sources. Briefly describe the factual basis of the assumptions and the method by which the cash receipts impact is derived. Explain how workload assumptions translate into estimates . Distinguish between one time and ongoing functions .

### II. C - Expenditures

Briefly describe the agency expenditures necessary to implement this legislation (or savings resulting from this legislation), identifying by section number the provisions of the legislation that result in the expenditures (or savings). Briefly describe the factual basis of the assumptions and the method by which the expenditure impact is derived. Explain how workload assumptions translate into cost estimates. Distinguish between one time and ongoing functions.

## Part III: Expenditure Detail

### III. A - Operating Budget Expenditures

| Account         | Account Title   | Type  | FY 2022 | FY 2023     | 2021-23     | 2023-25     | 2025-27     |
|-----------------|-----------------|-------|---------|-------------|-------------|-------------|-------------|
| 000-1           | All Other Funds | State | 0       | 45,200,000  | 45,200,000  | 113,000,000 | 120,100,000 |
| 001-1           | General Fund    | State | 0       | 207,400,000 | 207,400,000 | 527,500,000 | 570,700,000 |
| <b>Total \$</b> |                 |       | 0       | 252,600,000 | 252,600,000 | 640,500,000 | 690,800,000 |

### III. B - Expenditures by Object Or Purpose

|                                      | FY 2022 | FY 2023     | 2021-23     | 2023-25     | 2025-27     |
|--------------------------------------|---------|-------------|-------------|-------------|-------------|
| FTE Staff Years                      |         |             |             |             |             |
| A-Salaries and Wages                 |         |             |             |             |             |
| B-Employee Benefits                  |         | 252,600,000 | 252,600,000 | 640,500,000 | 690,800,000 |
| C-Professional Service Contracts     |         |             |             |             |             |
| E-Goods and Other Services           |         |             |             |             |             |
| G-Travel                             |         |             |             |             |             |
| J-Capital Outlays                    |         |             |             |             |             |
| M-Inter Agency/Fund Transfers        |         |             |             |             |             |
| N-Grants, Benefits & Client Services |         |             |             |             |             |
| P-Debt Service                       |         |             |             |             |             |
| S-Interagency Reimbursements         |         |             |             |             |             |
| T-Intra-Agency Reimbursements        |         |             |             |             |             |
| 9-                                   |         |             |             |             |             |
| <b>Total \$</b>                      | 0       | 252,600,000 | 252,600,000 | 640,500,000 | 690,800,000 |

**III. C - Operating FTE Detail:** List FTEs by classification and corresponding annual compensation . Totals need to agree with total FTEs in Part I and Part IIIA

NONE

### III. D - Expenditures By Program (optional)

NONE

## Part IV: Capital Budget Impact

### IV. A - Capital Budget Expenditures

NONE

**IV. B - Expenditures by Object Or Purpose**

NONE

**IV. C - Capital Budget Breakout**

*Identify acquisition and construction costs not reflected elsewhere on the fiscal note and describe potential financing methods*

NONE

**IV. D - Capital FTE Detail:** *List FTEs by classification and corresponding annual compensation . Totals need to agree with total FTEs in Part IVB*

NONE

**Part V: New Rule Making Required**

**SUMMARY OF RESULTS**

**BRIEF SUMMARY OF BILL:** For all eligible PERS 1 and TRS 1 annuitants, this bill enacts an annual, automatic, CPI-based benefit increase of up to 3.0 percent per year.

**COST SUMMARY**

| Impact on Contribution Rates (Effective 9/1/2022) |       |       |       |       |
|---|-------|-------|-------|-------|
|   | PERS  | TRS   | SERS  | PSERS |
| Plan 1 UAAL                                       | 1.39% | 2.61% | 1.39% | 1.39% |

Consistent with [RCW 41.45.070](#), PERS, TRS, SERS, and PSERS employers will fund the cost of this benefit improvement through a supplemental contribution rate starting September 1, 2022, and collected over a ten-year period. There is no impact to employee rates as a result of this bill.

| Budget Impacts        |              |              |                |
|-----------------------|--------------|--------------|----------------|
| (Dollars in Millions) | 2022-2023    | 2023-2025    | 10-Year        |
| General Fund-State    | \$207        | \$528        | \$2,946        |
| Local Government      | \$115        | \$290        | \$1,591        |
| <b>Total Employer</b> | <b>\$368</b> | <b>\$930</b> | <b>\$5,151</b> |

*Note: We use long-term assumptions to produce our short-term budget impacts. Therefore, our short-term budget impacts will likely vary from estimates produced from other short-term budget models.*

**HIGHLIGHTS OF ACTUARIAL ANALYSIS**

- ❖ This bill results in a cost to the retirement systems and an increase to the UAAL. Larger benefits would be provided to eligible PERS 1 and TRS 1 annuitants than under current law, and these benefits were not anticipated or funded during impacted members' careers.
- ❖ Approximately 70 percent of PERS 1 annuitants and 90 percent of TRS 1 annuitants are expected to receive benefit increases under this bill. Annuitants not expected to receive a benefit increase are those currently receiving a COLA as part of the Basic or Alternate Minimum benefit. Currently active and terminated vested members are eligible for this COLA upon retirement.
- ❖ This bill is expected to:
  - Increase PERS 1 liability by \$1,789 million (15 percent increase) and TRS 1 liability by \$1,616 million (19 percent increase) on a present value basis.
  - Immediately decrease the PERS 1 funded ratio by 8 percent and the TRS 1 funded ratio by 10 percent.
- ❖ Key assumptions that impact the cost of this bill are inflation, mortality, and investment returns. Actual future experience, and how much it differs from assumed, will determine the true costs of this bill and impact full funding for both plans. See the **Appendix** for further discussion on these risks and their potential impact.

*See the remainder of this fiscal note for additional details on the summary and highlights presented here.*

## WHAT IS THE PROPOSED CHANGE?

### Summary of Bill

This bill impacts the following systems:

- ❖ Public Employees' Retirement System (PERS).
- ❖ Teachers' Retirement System (TRS).
- ❖ School Employees' Retirement System (SERS).
- ❖ Public Safety Employees' Retirement System (PSERS).

This bill provides retirees in PERS Plan 1 and TRS Plan 1 (Plans 1) with an annual, automatic, Consumer Price Index (CPI)-based benefit increase of up to 3.0 percent per year beginning July 1, 2022. To be eligible, retirees must be retired for a year as of July 1, 2022. Annuitants receiving the Basic or Alternate Minimum, or temporary disability benefits are not eligible for the benefit increases under this bill.

For more information on the administration of Cost-Of-Living Adjustment (COLA) benefit increases, including how the inflation cap works, see the Department of Retirement Systems' (DRS) Retiree Resources [webpage](#).

Effective Date: July 1, 2022.

In this summary, we only include changes pertinent to our actuarial fiscal note. See the legislative bill report for a complete summary of the bill.

### What Is the Current Situation?

Before it was repealed in 2011, the primary COLA provided in Plans 1 was the Uniform COLA (UCOLA). The UCOLA was a fixed dollar amount multiplied by the member's total Years Of Service (YOS) and increased annually by 3.0 percent every July 1. The UCOLA was payable on the first calendar year in which the recipient turned age 66 and had been retired for one year. By July 1, 2010, the UCOLA was \$1.88 per month/per year of service. This amounted to an annual increase of \$677 for a recipient with 30 YOS.

Statute specified that future increases to the UCOLA were not a contractual right and the Legislature exercised the option to discontinue the UCOLA for most plan members during the 2011 Legislative Session.

Currently, Plans 1 provide automatic COLAs under two types of minimum retirement benefits only: The Basic Minimum and the Alternate Minimum.

The Basic Minimum is a fixed dollar amount per month multiplied by the member's total YOS and increases on July 1 every year by the dollar amount of the UCOLA. The Basic Minimum is currently \$67.49<sup>1</sup>. If a member's benefit falls below this amount, they receive the UCOLA annual increase, which is \$2.61/month per year of service as of July 1, 2021.

The Alternate Minimum is a fixed dollar amount per month (currently \$2,076.34<sup>1</sup>) that increases by 3.0 percent each year. Eligible members must have at least:

- ❖ 20 YOS and be retired for at least 25 years, or
- ❖ 25 YOS and be retired for at least 20 years.

An optional CPI-based COLA is also available to Plans 1 members who elect it at retirement. First available in 1990, the optional COLA provides an annual increase in the retirement allowance. The increase is based on changes in the CPI for Urban Wage Earners and Clerical Workers for the Seattle area, up to a maximum of 3.0 percent per year. The optional COLA begins one year after retirement—regardless of age or service—and is in addition to any other COLAs received. Members who elect the optional COLA receive an actuarially reduced retirement allowance to offset the expected cost of the COLA over their lifetime.

In the 2018 Legislative Session, the Legislature passed [Senate Substitute Bill 6340](#) (Chapter 151, Laws of 2018), which provided a 1.5 percent COLA capped at \$62.50 per month for Plans 1 members not receiving a minimum benefit who had been retired for a year as of July 1, 2018. This one-time COLA went into effect on July 1, 2018.

In the 2020 Legislative Session, the Legislature passed [Engrossed House Bill 1390](#) (Chapter 329, Laws of 2020) which provided a 3.0 percent COLA capped at \$62.50 per month for Plans 1 members not receiving a minimum benefit who had been retired for a year as of July 1, 2020. This one-time COLA went into effect on July 1, 2020.<sup>2</sup>

### Who Is Impacted and How?

As of June 30, 2019, we expect this bill would increase the retirement benefits for approximately 60,700 out of the total 78,200 Plans 1 annuitants (78 percent) who are not receiving the Basic or Alternate Minimum benefits. We assume annuitants receiving a minimum benefit will not be impacted, since the annual increase to the minimum benefit is expected to exceed the COLA provided under this bill. However, per input provided by DRS, members who elected to receive an optional COLA upon retirement would be eligible for this bill's COLA.

All eligible annuitants would receive an annual, CPI-based benefit increase of up to 3.0 percent per year under this bill. Additionally, all active and terminated vested members of Plans 1 are eligible for this COLA at retirement. The following table summarizes the estimated headcounts under this bill.

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<sup>1</sup>Dollar amounts are as of July 1, 2021. The Basic and Alternate Minimum amounts are adjusted if the member elects a voluntary payment option upon retirement. Throughout this fiscal note, we refer to these Minimum amounts prior to any voluntary reductions.

<sup>2</sup>Though not reflected in the analysis, in the 2022 Session, the Legislature passed [Senate Bill 5676](#) (Chapter 52, Laws of 2022) which provides a 3.0 percent COLA capped at \$110 per month for Plans 1 members not receiving a minimum benefit who will be retired for a year as of July 1, 2022. We do not believe the impact from this bill would significantly change the estimates provided in this fiscal note.

| Estimated Headcounts as of June 30, 2019   |        |        |
|--|--------|--------|
|  | PERS 1 | TRS 1  |
| Total Annuitants   | 45,600 | 32,600 |
| Annuitants Not Receiving Minimum Benefit That Will Receive Annual CPI-Based COLA | 32,000 | 28,700 |
| Total Active and Terminated Vested Members                                       | 1,900  | 500    |

This bill impacts all PERS, TRS, SERS, and PSERS employers through increased Unfunded Actuarial Accrued Liability (UAAL) contribution rates. This bill will not affect member contribution rates.

**WHY THIS BILL HAS A COST AND WHO PAYS FOR IT**

**Why This Bill Has a Cost**

This bill has a cost because it provides larger benefits for eligible Plans 1 annuitants than the benefits provided under current law.

**Who Will Pay for These Costs?**

The costs that result from this bill will be paid by employers of PERS, TRS, SERS, and PSERS according to the standard funding method. PERS, SERS, and PSERS employers make PERS 1 UAAL payments, whereas TRS employers make TRS 1 UAAL payments.

**HOW WE VALUED THESE COSTS**

We modeled the current law cost of the retirement systems using our [June 30, 2020, Actuarial Valuation Report](#) (AVR) and the assumptions and methods found on our [Projections](#) webpage. We also reflected the [economic assumptions](#) adopted by the Pension Funding Council (PFC) during the 2021 Interim. This set of assumptions, methods, and data form our new “base model.”

To analyze the impact of this bill, we then adjusted the following assumptions, methods, or data used in the base model.

**Assumptions We Made**

We made an adjustment for assumed demographic changes from the valuation date, June 30, 2019, to the effective date of this bill, July 1, 2022. Based on 2020 AVR projections, which account for expected mortality and new retirements, and our professional judgement, we estimate the annuitant population on July 1, 2022, will be approximately 6 percent smaller in both Plans 1. We therefore reduced the liability impact from this bill by 6 percent for both plans.

**How We Applied These Assumptions**

The fiscal impact of this bill represents the change in projected contributions.

To estimate the fiscal impact of this bill, we compared projected pension contributions under current law to the projected contributions we expect under this bill. The projected pension contributions reflect contributions from the current members as well as future hires.

We amortized the cost of this bill over a fixed ten-year period, consistent with Plans 1 current law funding policy for benefit improvements.

**ACTUARIAL RESULTS**

**How the Liabilities Changed**

This bill will impact the actuarial funding of Plans 1 by increasing the present value of future benefits payable to the members. The impact of increasing these benefits for current members is shown below.

| <b>Impact on Pension Liability</b>   |                 |                 |              |
|--|-----------------|-----------------|--------------|
| <i>(Dollars in Millions)</i>   | <b>Current*</b> | <b>Increase</b> | <b>Total</b> |
| <b>Actuarial Present Value of Projected Benefits</b>   |                 |                 |              |
| <i>(The Value of the Total Commitment to All Current Members)</i>  |                 |                 |              |
| <b>PERS 1</b>  | \$12,018        | \$1,789         | \$13,806     |
| <b>TRS 1</b>   | \$8,729         | \$1,616         | \$10,345     |
| <b>Unfunded Actuarial Accrued Liability</b>  |                 |                 |              |
| <i>(The Portion of the Plan 1 Liability that is Amortized According to Funding Policy)**</i>   |                 |                 |              |
| <b>PERS 1</b>  | \$4,194         | \$1,789         | \$5,983      |
| <b>TRS 1</b>   | \$2,893         | \$1,616         | \$4,509      |
| <b>Unfunded Entry Age Accrued Liability</b>  |                 |                 |              |
| <i>(The Value of the Total Commitment to All Current Members Attributable to Past Service that is Not Covered by Current Assets)</i> |                 |                 |              |
| <b>PERS 1</b>  | \$4,512         | \$1,779         | \$6,290      |
| <b>TRS 1</b>   | \$3,160         | \$1,612         | \$4,772      |

*Note: Totals may not agree due to rounding.*

*\*Current liabilities measured as of June 30, 2019, and reflect updated economic assumptions adopted by the PFC.*

*\*\*PERS 1 and TRS 1 are amortized over a ten-year period.*

**How the Assets Changed**

This bill does not change asset values, so there is no impact on the actuarial funding of the affected plans due to asset changes.

**How the Present Value of Future Salaries (PVFS) Changed**

This bill does not change the PVFS, so there is no impact on the actuarial funding of the affected plans due to PVFS changes.

**How Contribution Rates Changed**

The rounded increase in the required UAAL contribution rate results in the supplemental contribution rates shown in the following table which apply in the current biennium. This fixed rate is collected for a ten-year period consistent with



how benefit improvements are funded in Plans 1 under the [Revised Code of Washington \(RCW\) 41.45.070](#).

| Impact on Contribution Rates |              |              |              |              |
|------------------------------|--------------|--------------|--------------|--------------|
| System/Plan                  | PERS         | TRS          | SERS         | PSERS        |
| <b>Current Members</b>       |              |              |              |              |
| Employee (Plan 2)            | 0.00%        | 0.00%        | 0.00%        | 0.00%        |
| <b>Employer</b>              |              |              |              |              |
| Normal Cost                  | 0.00%        | 0.00%        | 0.00%        | 0.00%        |
| Plan 1 UAAL                  | 1.39%        | 2.61%        | 1.39%        | 1.39%        |
| <b>Total</b>                 | <b>1.39%</b> | <b>2.61%</b> | <b>1.39%</b> | <b>1.39%</b> |

**How This Impacts Budgets and Employees**

| Budget Impacts        |                  |                  |                |                |                  |
|-----------------------|------------------|------------------|----------------|----------------|------------------|
| (Dollars in Millions) | PERS             | TRS              | SERS           | PSERS          | Total            |
| <b>2022-2023</b>      |                  |                  |                |                |                  |
| General Fund          | \$29.7           | \$154.4          | \$18.9         | \$4.4          | \$207.4          |
| Non-General Fund      | 44.5             | 0.0              | 0.0            | 0.6            | 45.2             |
| <b>Total State</b>    | <b>\$74.2</b>    | <b>\$154.4</b>   | <b>\$18.9</b>  | <b>\$5.0</b>   | <b>\$252.6</b>   |
| Local Government      | 74.2             | 23.1             | 14.2           | 3.7            | 115.2            |
| <b>Total Employer</b> | <b>\$148.5</b>   | <b>\$177.5</b>   | <b>\$33.1</b>  | <b>\$8.7</b>   | <b>\$367.8</b>   |
| <b>Total Employee</b> | <b>\$0.0</b>     | <b>\$0.0</b>     | <b>\$0.0</b>   | <b>\$0.0</b>   | <b>\$0.0</b>     |
| <b>2023-2025</b>      |                  |                  |                |                |                  |
| General Fund          | \$74.3           | \$394.3          | \$47.2         | \$11.7         | \$527.5          |
| Non-General Fund      | 111.4            | 0.0              | 0.0            | 1.6            | 113.0            |
| <b>Total State</b>    | <b>\$185.7</b>   | <b>\$394.3</b>   | <b>\$47.2</b>  | <b>\$13.3</b>  | <b>\$640.5</b>   |
| Local Government      | 185.7            | 58.9             | 35.6           | 9.6            | 289.8            |
| <b>Total Employer</b> | <b>\$371.4</b>   | <b>\$453.3</b>   | <b>\$82.8</b>  | <b>\$22.9</b>  | <b>\$930.4</b>   |
| <b>Total Employee</b> | <b>\$0.0</b>     | <b>\$0.0</b>     | <b>\$0.0</b>   | <b>\$0.0</b>   | <b>\$0.0</b>     |
| <b>2022-2032</b>      |                  |                  |                |                |                  |
| General Fund          | \$403.6          | \$2,216.5        | \$256.1        | \$69.4         | \$2,945.5        |
| Non-General Fund      | 605.4            | 0.0              | 0.0            | 9.5            | 614.9            |
| <b>Total State</b>    | <b>\$1,009.0</b> | <b>\$2,216.5</b> | <b>\$256.1</b> | <b>\$78.9</b>  | <b>\$3,560.5</b> |
| Local Government      | 1,009.0          | 331.2            | 193.2          | 57.1           | 1,590.5          |
| <b>Total Employer</b> | <b>\$2,018.0</b> | <b>\$2,547.7</b> | <b>\$449.2</b> | <b>\$136.0</b> | <b>\$5,151.0</b> |
| <b>Total Employee</b> | <b>\$0.0</b>     | <b>\$0.0</b>     | <b>\$0.0</b>   | <b>\$0.0</b>   | <b>\$0.0</b>     |

*Note: Totals may not agree due to rounding. We use long-term assumptions to produce our short-term budget impacts. Therefore, our short-term budget impacts will likely vary from estimates produced from other short-term budget models.*

The analysis of this bill does not consider any other proposed changes to the systems. The combined effect of several changes to the systems could exceed the sum of each proposed change considered individually.

**Comments on Risk**

See the **Appendix** for a commentary on risk and how the results change when the assumptions change for this bill.

**ACTUARY'S CERTIFICATION**

The undersigned certifies that:

1. The actuarial assumptions, methods, and data used are reasonable for the purposes of this pricing exercise. The use of another set of assumptions methods and data may also be reasonable and might produce different results.
2. The risk analysis summarized in this Actuarial Fiscal Note (AFN) involves the interpretation of many factors and the application of professional judgment. We believe that the assumptions, methods, and data used in our risk assessment model are reasonable for the purposes of this pricing exercise. However, the use of another set of assumptions, methods, and data could also be reasonable and could produce different results.
3. We prepared this AFN based on our current understanding of the bill as of the date shown in the footer. If the bill or our understanding of the bill changes, the results of a future AFN based on those changes may vary from this AFN. Additionally, the results of this AFN may change after our next annual update of the underlying actuarial measurements.
4. We prepared this AFN and provided opinions in accordance with Washington State law and accepted actuarial standards of practice as of the date shown in the footer of this AFN.

We prepared this AFN to support legislative deliberations during the 2022 Legislative Interim. This AFN may not be appropriate for other purposes.

We advise readers of this AFN to seek professional guidance as to its content and interpretation, and not to rely on this communication without such guidance. Please read the analysis shown in this AFN as a whole. Distribution of, or reliance on, only parts of this AFN could result in its misuse and may mislead others.

The undersigned, with actuarial credentials, meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

While this AFN is meant to be complete, the undersigned is available to provide extra advice and explanations as needed.



Luke Masselink, ASA, EA, MAAA  
Senior Actuary

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**APPENDIX**

**Comments on Risk**

The results presented in the body of this fiscal note represent the expected costs of this bill if future experience occurs as assumed. This **Appendix** focuses on the risks that could emerge if future experience is different than assumed.

There are three key risks that impact the actual cost of this bill:

- ❖ **Inflation Risk**—Since the annual COLA provided by this bill is CPI-based.
- ❖ **Mortality Risk**—Since this assumption projects how long annuitants will receive benefits from this bill.
- ❖ **Investment Risk**—Since investment returns determine how much of this bill’s cost will need to be funded by increased employer contributions.

The actual experience and how that differs from assumed will also inform the following:

- ❖ **When Full Funding Is Projected to Occur**—Since Plans 1 minimum UAAL contribution rates remain effective until the Plan’s funded ratio reaches 100 percent, per [RCW 41.45.150](#).
- ❖ **Likelihood of a UAAL**—Since when one exists, additional contributions may be required to reach full funding. However, even after full funding occurs, future funded ratios could drop below 100 percent due to emerging risks. This leads to the question, what is a reasonable funding policy if a UAAL re-emerges?

The following sections will explore each of these topics. However, keep in mind that if future experience occurs differently than assumed, it won’t change the supplemental rates identified on page one of this fiscal note, since those rates are based on our best estimate assumptions. It will, however, cost more/less to pay the full cost of this bill if experience is more/less expensive than assumed.

***Inflation Risk***

The annual COLA provided under this bill is CPI-based, and our current regional CPI assumption is 2.75 percent per year. The following table summarizes the impact on this pricing if actual CPI growth is 0.25 percent higher or lower than our assumption.

| <b>Impacts from COLA Assumption Changes</b>    |                  |                   |                  |
|--|------------------|-------------------|------------------|
| <i>(Dollars in Millions)</i>                   | <b>2.5% COLA</b> | <b>2.75% COLA</b> | <b>3.0% COLA</b> |
| <b>Increase in Projected Benefit Liability</b> |                  |                   |                  |
| <b>PERS 1</b>                                  | \$1,567 (-12%)   | \$1,789           | \$2,023 (+13%)   |
| <b>TRS 1</b>                                   | \$1,416 (-12%)   | \$1,616           | \$1,825 (+13%)   |

To put these results in context, if actual annual COLA experience is 3.0 percent per year, which is the maximum annual increase allowed under this bill, the liability associated with this bill will increase by approximately 13 percent from our best estimate. Therefore, collecting the supplemental rates summarized on page one for ten years would not be expected to pay the full cost of this bill. Remaining costs could be paid for through higher UAAL contributions. By contrast, if actual annual COLA experience is lower than our 2.75 percent assumption, the ten-year supplemental rate is expected to exceed this bill’s cost, all else being equal.

***Mortality and Investment Risk***

In addition to inflation, actual mortality and investment return experience will determine the true cost of this bill. For example, if annuitants live longer/shorter than assumed, the actual cost of this bill will increase/decrease. Alternatively, if future investment returns are higher/lower than the 7.0 percent per year assumption, the cost required to be funded through pension contributions will be lower/higher than estimated.

However, unlike inflation risk, mortality and investment risk are not new to these plans, as these risks are already present in current law benefits. This bill is expected to increase the liabilities associated with those benefits by 15 to 20 percent. This bill therefore also increases each plan’s exposure to mortality and investment risk. To provide additional context around investment risk, in the Likelihood of a UAAL section below, we highlight the variability of each plan’s projected funded ratio both under current law and after reflecting this bill.

***Projected Full Funding***

For Plans 1, we define full funding as having a funded ratio of at least 100 percent. This represents the point at which these plans have enough assets on hand to pay all future expected benefits if experience occurs as assumed (e.g., future investment returns average 7.0 percent per year).

This is also an important threshold for Plans 1 because, per RCW 41.45.150, the minimum UAAL contribution rates (3.50 percent for PERS 1 and 5.75 percent for TRS 1) remain effective until the plan’s funded ratio reaches 100 percent. As shown by the table below, we project the full funding date for both Plans 1 will be delayed by roughly two years based on our best estimate assumptions after reflecting the benefit increases from this bill. The actual date each plan reaches full funding could be earlier or later than the years in the table.

| Expected Full Funding by Fiscal Year End |             |            |
|--|-------------|------------|
|  | Before Bill | After Bill |
| PERS 1                                   | 2025        | 2027       |
| TRS 1                                    | 2023        | 2025       |

***Likelihood of a UAAL***

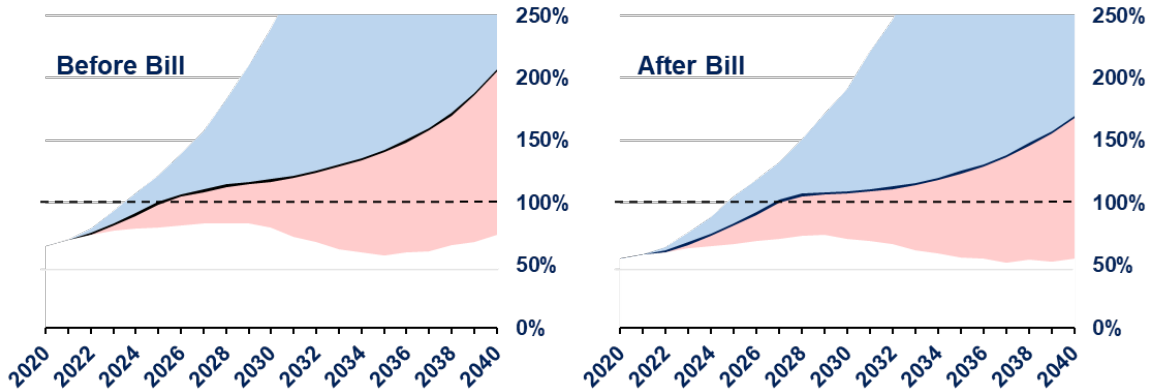
Future experience won't play out exactly as we expect, and this variance can impact plan funding. To provide insight into this variability and highlight each plan's investment risk, we performed stochastic analysis and summarized the plans' projected funded ratios.

Our stochastic analysis generates two thousand projections while allowing one or more assumptions to vary over time. The primary assumption being modified is future investment experience. This process provides a distribution of outcomes which we use to better understand the risk, range, and probability of these outcomes. For more information on this type of analysis, please see our [Risk Assessment](#) and [Commentary on Risk](#) webpages.

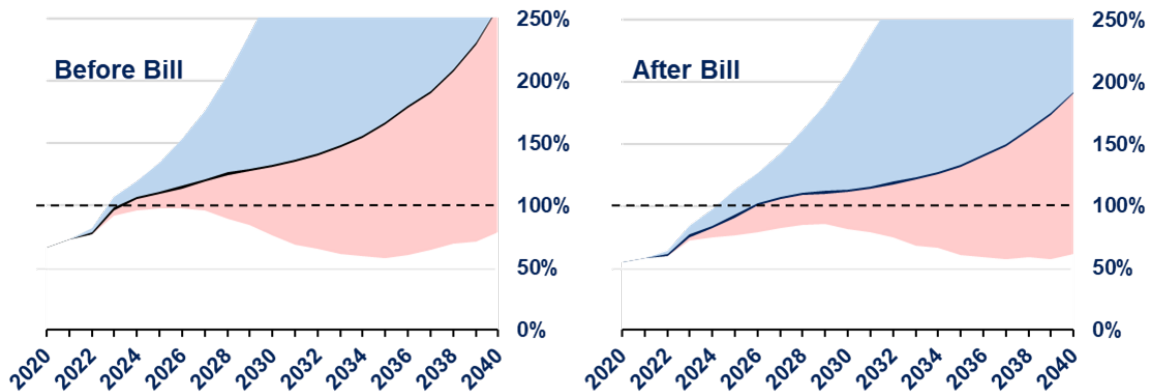
We then updated our stochastic analysis to incorporate the impacts of this bill and graphed the projected funded ratios below. For the purposes of this model, we generally assume the current Plan 1 funding policy, including minimum UAAL contribution rates, remains in effect when the funded ratio falls below 100 percent.

In the following graphs, the dashed black line represents full funding, or a 100 percent funded ratio. The solid black line represents the median path, or the path for which half the stochastic outcomes fall above and half fall below. The blue and pink shaded regions represent investment experience that is better or worse than assumed, respectively. These illustrations represent 90 percent of all outcomes, as we have excluded the 5 percent best and worst outcomes. Given these plans have a shrinking population, we have also only displayed outcomes until 2040. At this point, the liability of each plan is projected to be roughly 70 percent lower than it is in 2020, and the liabilities continue decreasing beyond 2040.

PERS 1 Funded Ratio



TRS 1 Funded Ratio



There are some high-level takeaways to draw from these graphs.

- ❖ If passed, the bill would immediately reduce the plans' funded ratio by roughly 8 percent for PERS 1 and 10 percent for TRS 1.
- ❖ Very strong asset returns in Fiscal Year (FY) 2021 support the projected funded ratio and mitigate some investment risk as those investment gains are recognized over an eight-year period ending in FY 2027.
- ❖ Both before and after this bill, the median paths (i.e., the solid black line) project a funded ratio well above 100 percent in 2040.
- ❖ Increased investment risk from this bill, however, leads to an overall lowering of each plan's projected funded ratio and an increase in the likelihood of the plans falling below 100 percent funded after the bill.
  - More specifically, before this bill, approximately 14 percent of PERS 1 outcomes and 11 percent of TRS 1 outcomes resulted in a projected funded ratio below 100 percent in 2040. After this bill, those figures are approximately 20 percent and 18 percent, respectively.

***Plans 1 Funding Policy Considerations***

Current Plan 1 funding policy, including minimum rates, is designed to achieve full funding for the Plans 1. However, legislative statutes do not clearly identify how Plan 1 funding will change once PERS 1 or TRS 1 have reached full funding. This includes the funding of any remaining supplemental rates from past benefit improvements or unfunded liability that re-emerges in the future. Per RCW 41.45.150, the state actuary is to recommend any adjustments to the minimum contribution rates to the PFC.

For purposes of our stochastic analysis, we assume the current funding policy, including the minimum rates described earlier in the Likelihood of a UAAL section, would remain in effect, regardless of the size of the UAAL. That approach may not be needed as other items need to be considered, including, but not limited to, potential plan overfunding, the relative size of the UAAL, and budgeting considerations.