Multiple Agency Fiscal Note Summary

Bill Number: 1201 HB	**Title:** Retirement system funding

Estimated Cash Receipts

NONE

Estimated Operating Expenditures

Agency Name	2023-25				2025-27				2027-29			
	FTEs	GF-State	NGF-Outlook	Total	FTEs	GF-State	NGF-Outlook	Total	FTEs	GF-State	NGF-Outlook	Total
Department of Retirement Systems	.0	0	0	0	.0	0	0	0	.0	0	0	0
Actuarial Fiscal Note - State Actuary	.0	(425,700,000)	(425,700,000)	(425,700,000)	.0	(371,600,000)	(371,600,000)	(683,000,000)	.0	(399,200,000)	(399,200,000)	(731,000,000)
Total $	**0.0**	**(425,700,000)**	**(425,700,000)**	**(425,700,000)**	**0.0**	**(371,600,000)**	**(371,600,000)**	**(683,000,000)**	**0.0**	**(399,200,000)**	**(399,200,000)**	**(731,000,000)**

Estimated Capital Budget Expenditures

Agency Name	2023-25			2025-27			2027-29		
	FTEs	Bonds	Total	FTEs	Bonds	Total	FTEs	Bonds	Total
Department of Retirement Systems	.0	0	0	.0	0	0	.0	0	0
Actuarial Fiscal Note - State Actuary	.0	0	0	.0	0	0	.0	0	0
Total $	**0.0**	**0**	**0**	**0.0**	**0**	**0**	**0.0**	**0**	**0**

Estimated Capital Budget Breakout

NONE

Prepared by: Marcus Ehrlander, OFM	**Phone:** (360) 489-4327	**Date Published:** Final

Individual State Agency Fiscal Note

Bill Number: 1201 HB	**Title:** Retirement system funding	**Agency:** 124-Department of Retiremen Systems

Part I: Estimates

☒ **No Fiscal Impact**

Estimated Cash Receipts to:

NONE

Estimated Operating Expenditures from:

NONE

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:	David Pringle	Phone: 360-786-7310	Date: 01/12/2023
Agency Preparation:	Mike Ricchio	Phone: 360-664-7227	Date: 01/17/2023
Agency Approval:	Mark Feldhausen	Phone: 360-664-7194	Date: 01/17/2023
OFM Review:	Marcus Ehrlander	Phone: (360) 489-4327	Date: 01/17/2023

Part II: Narrative Explanation

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

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

This bill amends RCW 41.45.060 (Basic state and employer contribution rates—Methods used—Role of council—Role of state actuary) and 41.45.150 (Unfunded liabilities—Employer contribution rates) to “supersede” the portion of the employer contribution rate used to amortize the unfunded actuarial accrued liabilities (UAALs) in Plan 1 of the Public Employees' Retirement System (PERS) and Teachers' Retirement System (TRS). It also repeals Sec. 747 of the biennial operating budget, passed in the 2021 Session, that would have transferred $800,000,000 to TRS Plan 1 to apply to its UAAL.

These changes do not have a cost impact on the Department of Retirement Systems as implementing and communicating rate changes are normal processes for the agency.

II. B - Cash receipts Impact

Cash receipts impact of the legislation on the responding agency with the cash receipts provisions identified by section number and when appropriate, the detail of the revenue sources. Description of the factual basis of the assumptions and the method by which the cash receipts impact is derived. Explanation of how workload assumptions translate into estimates. Distinguished between one time and ongoing functions.

II. C - Expenditures

Agency expenditures necessary to implement this legislation (or savings resulting from this legislation), with the provisions of the legislation that result in the expenditures (or savings) identified by section number. Description of the factual basis of the assumptions and the method by which the expenditure impact is derived. Explanation of how workload assumptions translate into cost estimates. Distinguished between one time and ongoing functions.

Part III: Expenditure Detail

III. A - Operating Budget Expenditures

NONE

III. B - Expenditures by Object Or Purpose

NONE

III. C - Operating FTE Detail:

FTEs listed by classification and corresponding annual compensation. Totals 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

Acquisition and construction costs not reflected elsewhere on the fiscal note and description of potential financing methods.

NONE

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

NONE

Part V: New Rule Making Required

Provisions of the bill that require the agency to adopt new administrative rules or repeal/revise existing rules.

Individual State Agency Fiscal Note

Bill Number: 1201 HB	Title: Retirement system funding	Agency: AFN-Actuarial Fiscal Note - State Actuary

Part I: Estimates

☐ **No Fiscal Impact**

Estimated Cash Receipts to:

NONE

Estimated Operating Expenditures from:

		FY 2024	FY 2025	2023-25	2025-27	2027-29
Account						
All Other Funds-State	000-1	0	0	0	(311,400,000)	(331,800,000)
General Fund-State	001-1	0	(425,700,000)	(425,700,000)	(371,600,000)	(399,200,000)
	Total $	0	(425,700,000)	(425,700,000)	(683,000,000)	(731,000,000)

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:	David Pringle	Phone: 360-786-7310	Date: 01/12/2023
Agency Preparation:	Aaron Gutierrez	Phone: 360-786-6152	Date: 01/18/2023
Agency Approval:	Kyle Stineman	Phone: 3607866153	Date: 01/18/2023
OFM Review:	Marcus Ehrlander	Phone: (360) 489-4327	Date: 01/18/2023

Part II: Narrative Explanation

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

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

II. B - Cash receipts Impact

Cash receipts impact of the legislation on the responding agency with the cash receipts provisions identified by section number and when appropriate, the detail of the revenue sources. Description of the factual basis of the assumptions and the method by which the cash receipts impact is derived. Explanation of how workload assumptions translate into estimates. Distinguished between one time and ongoing functions.

II. C - Expenditures

Agency expenditures necessary to implement this legislation (or savings resulting from this legislation), with the provisions of the legislation that result in the expenditures (or savings) identified by section number. Description of the factual basis of the assumptions and the method by which the expenditure impact is derived. Explanation of how workload assumptions translate into cost estimates. Distinguished between one time and ongoing functions.

Part III: Expenditure Detail

III. A - Operating Budget Expenditures

Account	Account Title	Type	FY 2024	FY 2025	2023-25	2025-27	2027-29
000-1	All Other Funds	State	0	0	0	(311,400,000)	(331,800,000)
001-1	General Fund	State	0	(425,700,000)	(425,700,000)	(371,600,000)	(399,200,000)
		Total $	0	(425,700,000)	(425,700,000)	(683,000,000)	(731,000,000)

III. B - Expenditures by Object Or Purpose

	FY 2024	FY 2025	2023-25	2025-27	2027-29
FTE Staff Years					
A-Salaries and Wages					
B-Employee Benefits		(425,700,000)	(425,700,000)	(683,000,000)	(731,000,000)
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-					
Total $	0	(425,700,000)	(425,700,000)	(683,000,000)	(731,000,000)

III. C - Operating FTE Detail: *FTEs listed by classification and corresponding annual compensation. Totals 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

Acquisition and construction costs not reflected elsewhere on the fiscal note and description of potential financing methods.

NONE

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

NONE

Part V: New Rule Making Required

Provisions of the bill that require the agency to adopt new administrative rules or repeal/revise existing rules.

SUMMARY OF RESULTS

BRIEF SUMMARY OF BILL: This bill changes the funding policy for the PERS and TRS Plans 1 Unfunded Actuarial Accrued Liability (UAAL).

COST SUMMARY

Change in Projected Plan 1 UAAL Rates						
	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
PERS 1	0.00%	0.00%	(3.50%)	(3.50%)	(3.50%)	(3.50%)
TRS 1	0.00%	(5.75%)	0.00%	0.00%	0.00%	0.00%

Note: Actual results may vary from these projections.

Budget Impacts			
(Dollars in Millions)	2023-2025	2025-2027	2023-2029
General Fund-State	($425.7)	($371.6)	($1,196.5)
Local Government	($75.1)	($633.4)	($1,384.6)
Total Employer	**($500.8)**	**($1,316.4)**	**($3,224.2)**

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.

The budget impacts within this fiscal note exclude the savings in FY 2023 of repealing the $800 million appropriation to TRS 1 UAAL. We assume the savings of that provision, if enacted, would be included as part of the supplemental budget bill. The impacts of this repeal, however, are included in this fiscal note for subsequent biennia.

HIGHLIGHTS OF ACTUARIAL ANALYSIS

- This bill results in an expected savings to the impacted retirement systems because it lowers annual UAAL contributions (from employers) below what is expected under current law.
- Based on our current law projections, we estimate $5.7 billion in total employer contributions to the PERS 1 and TRS 1 UAAL from FYs 2024 through 2029. We estimate this bill would lower those contributions by $3.2 billion.
- We estimate this bill would not impact the expected UAAL pay-off date of PERS 1 but would extend the expected pay-off date of TRS 1 by 3 years.
    - As of our June 30, 2021, AVR, PERS 1 and TRS 1 have a combined UAAL of $4.7 billion with a projected pay-off year of 2026 and 2023 for PERS 1 and TRS 1, respectively, under current law and rate-adoption practices.
- Lower contributions improve short-term budget affordability and increase the chance that the UAAL continues or reemerges in the future, but also decrease the chance PERS 1 and TRS 1 have funded statuses above 100 percent in the future.
- Higher than expected future returns would lower the expected savings of this bill. Lower than expected future returns may result in the continuation, or reemergence of the UAAL. Please see the section **HOW THE RESULTS CHANGE WHEN THE ASSUMPTIONS CHANGE** for more information.

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 changes PERS and TRS Plans 1 UAAL funding policy in three ways.

1. Revised Code of Washington (RCW) 41.45.060 is revised to state that the general policy of amortizing the UAAL over a rolling ten-year period can be superseded by any rates established in RCW 41.45.150. Current law states that the rolling ten-year amortization is subject to any minimum or maximum rates in RCW 41.45.150.
2. Ends current minimum rates and creates new prescribed rates. These new rates are separate from, and do not alter, any amounts required by RCW 41.45.070 to amortize Plans 1 benefit improvements effective after June 30, 2009. The new rates are as follows:

    a. For PERS and PSERS, the current minimum rate of 3.50 percent ends on June 30, 2025, and is replaced with a rate of 0.00 percent from July 1, 2025, to June 30, 2029, that supersedes rates established in RCW 41.45.060.

    b. For SERS, the current minimum rate of 3.50 percent ends on August 31, 2025, and is replaced with a rate of 0.00 percent from September 1, 2025, to August 31, 2029, that supersedes rates established in RCW 41.45.060.

    c. For TRS, the current minimum rate of 5.75 percent ends on August 31, 2024, and is replaced with a rate of 0.00 percent from September 1, 2024, to August 30, 2029, that supersedes rates established in RCW 41.45.060.

3. Repeals the one-time $800 million payment to TRS 1 UAAL set for June 30, 2023 (see 2021 Chapter 334 Section 747). This bill and House Bill 1141 both repeal this additional UAAL contribution.

This bill also modifies the Office of the State Actuary's (OSA) duties following an actuarial valuation. Instead of reviewing the appropriateness of the minimum rates, OSA shall review the appropriateness of establishing, removing, or adjusting minimum rates.

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.

Effective Date: June 30, 2023.

What Is the Current Situation?

Under current law, PERS 1 and TRS 1 UAAL rates have two components:

- ❖ **Base UAAL Rates –** The UAAL, excluding the unfunded cost of any Plan 1 benefit improvements (see below) is amortized over a rolling ten-year period, as a level percentage of projected system payroll.
  - ▪ This calculation is subject to any minimum or maximum rates.
  - ▪ RCW 41.45.150 establishes minimum rates as follows:
    - ◊ 3.50 percent for PERS, PSERS, and SERS.
    - ◊ 5.75 percent for TRS.
- ❖ **Amortization of Past Benefit Improvements –** The expected cost of benefit improvements enacted after June 30, 2009, is amortized over a fixed ten-year period as a level percentage of projected system payroll. These rates are collected in addition to Base UAAL rates.

After completing each valuation, OSA is required to review the appropriateness of the minimum contribution rates.

In addition to contribution rates, a one-time payment of $800 million to the TRS 1 UAAL is set to occur on June 30, 2023. This one-time payment is over, and above, the standard UAAL rates collected over retirement system salaries.

Who Is Impacted and How?

This bill impacts all PERS, TRS, SERS, and PSERS employers through an expected decrease in PERS 1 and TRS 1 UAAL contribution rates. This bill will not affect member contribution rates or their benefits.

WHY THIS BILL HAS AN EXPECTED SAVINGS AND WHO RECEIVES IT

Why This Bill Has a Savings

This bill reduces the expected employer contributions to PERS and TRS Plans 1 UAAL.

Who Will Receive These Savings?

The expected savings that result from this bill will be realized 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. Any savings from the repeal of the scheduled $800 million appropriation to TRS 1 UAAL is expected to be realized by the General Fund-State (GF-S).

HOW WE VALUED THESE SAVINGS

We relied on our most recent projections model, [2021 Valuation Projections Model], to calculate the current law cost of the retirement systems. Our Projections Model is like the Actuarial Valuation Report (AVR) but includes additional assumptions and methodology for experience beyond the measurement date. For instance, we make assumptions for demographics of new entrants and how many new entrants annually join the retirement plans. This allows the Projections Model to estimate funding progress and contribution rates at future measurement dates which was necessary to determine the impacts of this bill.

We modeled the current law cost of the retirement systems consistent with data, assets, assumptions, and methods documented on our Projections webpage. To analyze the impact of this bill, we then adjusted the following assumptions and methods.

Assumptions We Made

This bill removes the PERS and TRS Plans 1 minimum rates in Fiscal Year (FY) 2025 and FY 2024, respectively. Our projections model does not assume any reinstitution of minimum rates resulting from an OSA review given that reinstating a minimum rate would require an additional change to law. Based on our understanding of the bill, we assume any PERS 1 or TRS 1 UAAL that continues, or reemerges, will be funded via rolling ten-year amortization rate beginning with the 2029-31 Biennium.

We assume any benefit improvements enacted, after June 30, 2009, will be separately funded over a fixed ten-year period and are not impacted under this bill.

How We Applied These Assumptions

Consistent with the bill, our projections model removed the $800 million TRS 1 UAAL payment that was assumed to occur on June 30, 2023. Additionally, our projection model applied lower Base UAAL contribution rates as outlined in the following tables.

Projected PERS 1 Base UAAL Rate		
FY	Current Law	Under Bill
2023	3.50%	3.50%
2024	3.50%	3.50%
2025	3.50%	3.50%
2026	3.50%	0.00%
2027	3.50%	0.00%
2028	3.50%	0.00%
2029	3.50%	0.00%
2030+	0.00%	0.00%

Projected TRS 1 Base UAAL Rate		
FY	Current Law	Under Bill
2023	5.75%	5.75%
2024	5.75%	5.75%
2025	5.75%	0.00%
2026	0.00%	0.00%
2027	0.00%	0.00%
2028	0.00%	0.00%
2029	0.00%	0.00%
2030+	0.00%	0.00%

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. For more detail, please see **Appendix A**.

ACTUARIAL RESULTS

How the Liabilities Changed

This bill does not change the present value of future benefits payable so there is no impact on the actuarial funding of the affected plans due to liability changes.

As of our most recent 2021 AVR, we estimate the PERS 1 UAAL is $2.9 billion and the TRS 1 UAAL is $1.8 billion. The UAAL amounts exclude the unfunded cost of any Plan 1 benefit improvements.

How the Assets Changed

This bill does not change asset values as measured in our most recent valuation (June 30, 2021); however, it does impact assets within our projections model at future measurement dates. This bill reduces the expected TRS 1 assets, within our projections model, by $800 million beginning on June 30, 2023. In addition, we modeled lower UAAL contributions relative to our expectations under current law.

The total amount of expected change in assets due to reduced UAAL contributions are summarized in the **How This Impacts Budgets and Employees** section. Please note that this table does not include any expected loss in investment earnings on the contributions that are not expected to be made under this bill.

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 Projected Contribution Rates Changed

Under current law, we expect the UAAL will be paid off at the end of FY 2026 for PERS and FY 2023 for TRS. Based on current law and rate-setting practices, the Base UAAL rates are expected to be collected until the end of FY 2029 for PERS and FY 2025 for TRS.

This bill prescribes new Base UAAL Rates and also repeals the June 30, 2023, appropriation to TRS 1. As a result, we expect the Plans 1 UAALs will be paid off at the end of FY 2026 for both PERS and TRS. As discussed in the **How We Applied These Assumptions** section, Base UAAL rates that exceed 0.00 percent are expected to continue until the end of FY 2025 for PERS and FY 2024 for TRS.

The table below summarizes the Total UAAL rates used to estimate budget impacts under this bill. Please see **Appendix B** for additional details including components of the Total UAAL Rates (Base UAAL and Benefit Improvement rates) as well as the funded status displayed on an annual basis.

Projected Total UAAL Rates for Each Fiscal Year*							
Fiscal Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
PERS 1							
Current Law	3.85%	3.85%	3.85%	3.85%	3.85%	3.85%	3.75%
Under Bill	3.85%	3.85%	3.85%	0.35%	0.35%	0.35%	0.25%
Difference	**0.00%**	**0.00%**	**0.00%**	**(3.50%)**	**(3.50%)**	**(3.50%)**	**(3.50%)**
TRS 1							
Current Law	6.46%	6.46%	6.46%	0.71%	0.71%	0.71%	0.50%
Under Bill	6.46%	6.46%	0.71%	0.71%	0.71%	0.71%	0.50%
Difference	**0.00%**	**0.00%**	**(5.75%)**	**0.00%**	**0.00%**	**0.00%**	**0.00%**

**Total UAAL Rate = Base UAAL + Benefit Improvement Rate.*

Beyond FY 2029, we expect no difference in Total UAAL rates under current law and this bill. The above table relies on future experience matching our assumptions. Please see **HOW THE RESULTS CHANGE WHEN THE ASSUMPTIONS CHANGE** section for information on the impact when experience differs from our assumptions.

How This Impacts Budgets and Employees

Budget Impacts					
(Dollars in Millions)	**PERS**	**TRS**	**SERS**	**PSERS**	**Total**
2023-2025					
General Fund	$0.0	($425.7)	$0.0	$0.0	($425.7)
Non-General Fund	0.0	0.0	0.0	0.0	0.0
Total State	**$0.0**	**($425.7)**	**$0.0**	**$0.0**	**($425.7)**
Local Government	0.0	(75.1)	0.0	0.0	(75.1)
Total Employer	**$0.0**	**($500.8)**	**$0.0**	**$0.0**	**($500.8)**
Total Employee	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
2025-2027					
General Fund	($204.1)	$0.0	($126.1)	($41.5)	($371.6)
Non-General Fund	(306.1)	0.0	0.0	(5.3)	(311.4)
Total State	**($510.2)**	**$0.0**	**($126.1)**	**($46.8)**	**($683.0)**
Local Government	(510.2)	0.0	(103.1)	(20.1)	(633.4)
Total Employer	**($1,020.3)**	**$0.0**	**($229.2)**	**($66.9)**	**($1,316.4)**
Total Employee	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
2023-2029					
General Fund	($421.2)	($425.7)	($261.2)	($88.4)	($1,196.5)
Non-General Fund	(631.8)	0.0	0.0	(11.4)	(643.2)
Total State	**($1,053.0)**	**($425.7)**	**($261.2)**	**($99.8)**	**($1,839.7)**
Local Government	(1,053.0)	(75.1)	(213.7)	(42.8)	(1,384.6)
Total Employer	**($2,105.9)**	**($500.8)**	**($474.9)**	**($142.6)**	**($3,224.2)**
Total Employee	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**

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 budget impacts within this fiscal note exclude the savings in FY 2023 of repealing the $800 million appropriation to TRS 1 UAAL. We assume the savings of that provision, if enacted, would be included as part of the supplemental budget bill. If the savings from the repeal of the TRS 1 UAAL appropriation were included in the table above then the 2023-29 total GF-S and Total Employer savings is $1.9965 billion and $4.0242 billion, respectively.

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

Our office performs annual risk assessments to help us demonstrate and assess the effect of unexpected experience on pension plans. The risk assessment allows us to measure how affordability and funded status can change if investment experience, expected state revenue growth, and inflation do not match our long-term assumptions. Our annual risk assessment also considers past practices, for funding and benefit enhancements, and their impact on pension plan risk if those practices continue.

The following table displays our latest risk measurements as of June 30, 2021. The figures in this table were not reproduced for this bill but we may update this fiscal note prior to the end of the 2023 Legislative Session to reflect updated figures. For more information, please see our Risk Assessment, Commentary on Risk, and Glossary webpages.

Select Measures of Pension Risk as of June 30, 2021		
	FY 2022-41	**FY 2042-71**
Affordability Measures		
Chance of Pensions Double their Current Share of GF-S*	1%	2%
Chance of Pensions Half their Current Share of GF-S*	44%	42%
Solvency Measures		
Chance of PERS 1, TRS 1, in Pay-Go**	<1%	2%
Chance of Open Plan in Pay-Go**	<1%	1%
Chance of PERS 1, TRS 1, Total Funded Status Below 60%	5%	1%
Chance of Open Plans Total Funded Status Below 60%	20%	31%

**Pensions approximately 4.9% of current GF-S budget; does not include higher education.*
***When today's value of annual pay-go cost exceeds $50 million.*

We would expect this bill would improve short-term affordability of the plans but the impacts to long-term affordability could vary. The affordability of the plans is impacted in three ways under this bill:

1. Short-term affordability is improved with the repeal of the $800 million payment to the TRS 1 UAAL scheduled for June 30, 2023.

2. Short-term affordability is improved through FY 2029 when Base UAAL contribution rates are prescribed as 0.00 percent compared to higher Base UAAL rates (due to Plan 1 minimum rates) collected under current law.
3. Long-term affordability can either improve or worsen under this bill. Under this bill, Base UAAL payments for FY 2030 (and beyond) are funded via ten-year rolling amortization rate which results in lower (and more stable) rates that would be expected to be collected for a longer period of time relative to Base UAAL rates under current law. This bill would be considered more affordable when the UAAL is present in both current law and this bill.

   It's also possible that the UAAL is paid off earlier under current law due to the additional funding. This bill becomes less affordable in those years.

Changes to plan affordability will often produce a counteractive effect on solvency. For example, as affordability improves, the solvency risks of the plans worsen under this bill compared to current law. The solvency of the plans is impacted in two ways under this bill:

1. The Plans 1 are expected to have fewer future assets to pay required obligations and serve as a buffer to offset any adverse future experience.
2. In the absence of any minimum rate, any UAAL that continues, or reemerges, in the event of adverse experience, is not expected to be paid off using the ten-year rolling amortization rate. An example of the UAAL continuing in perpetuity under adverse experience can be found in the next section.

Additionally, this bill may impact the liquidity risks of the plans. Any changes made to the Plans 1 cash flows could impact the liquidity of the Commingled Trust Fund (CTF) and ultimately the investment earnings of the trust. If cash flows are reduced and depending on the size and timing of those reductions, liquidity issues for the CTF could arise and may require selling assets earlier than expected.

HOW THE RESULTS CHANGE WHEN THE ASSUMPTIONS CHANGE

The best estimate results can vary under a different set of assumptions. Under this bill, the PERS 1 and TRS 1 UAAL is expected to be paid off by the end of FY 2026 for both plans; however, the future asset returns can impact the funding levels of the plans and whether additional UAAL contributions are required.

To test how sensitive our best estimate results are to the return on assets assumption, we looked at what would happen under different assumed short-term and long-term return on assets experience. In these illustrations, we did not assume any reinstitution of minimum rates resulting from an OSA review given that reinstating a minimum rate would require an additional change to law.

Unless noted otherwise, each sensitivity or stress test was performed using data, assets, assumptions, and methods disclosed in the **How We Valued These Savings** section of this fiscal note.

Expected Short-term Return Stress Test

While we expect the CTF to earn 7.0 percent over the long-term, short-term volatility can impact the projected funded status and the resulting contribution rate requirements. Recently, the CTF experienced significantly higher-than-expected returns in FY 2021 (31.62 percent return for CTF) which can sometimes be followed by a period of lower-than-expected returns. For FY 2022, the total CTF return was approximately 0.2 percent. Given recent investment volatility, we calculated what future return on assets for FY 2023 would prevent the plans from reaching/maintaining an expected funded status of 100 percent (or higher) through FY 2029, if all other assumptions are realized. Under this stress test, we found a FY 2023 return of approximately 3.00 percent (or below) would result in a continuation of the UAAL for both plans. Any UAAL would be funded through the ten-year rolling amortization rate following FY 2029. Absent favorable experience afterwards, a ten-year rolling amortization rate may not result in the plans attaining 100 percent funding.

Long-term Return on Assets Assumption Sensitivity

In addition to a short-term stress test, we examined the overall impact if the return on assets were one percent higher (or lower) than assumed for all future years beginning in FY 2023.

A long-term return on assets assumption of 8 percent would result in improved funding levels, relative to our best estimate, as well as an earlier UAAL payoff date for both plans.

A long-term return on assets assumption of 6 percent is not expected to result in sufficient assets to cover pension obligations for either PERS or TRS Plans 1 under this bill. In this scenario, Base UAAL contributions would be expected to resume in the 2029-31 Biennium and continue for the life of the plan. Also, the funded status decreases annually because of consistent under performance of the assets.

We expect less savings under the 8 percent return scenario because the current law projection will have fewer expected years of Base UAAL payments if it experiences 8 percent returns annually. For the 6 percent return scenario, we expect no change in budget impact prior to FY 2029, relative to our best estimate, but an expected cost from this bill beginning in FY 2030. If the current law projection experiences 6 percent annually then the asset reserves would help to offset these lower-than-expected returns as discussed in the **Comments on Risk** section. Please see **Appendix C** for additional details including annual Base UAAL and funded status under this sensitivity.

Other Thoughts on Sensitivity of Results

While we tested the sensitivity of return on assets assumption, there are other factors that may influence the plan experience. For example, future longevity of plan members can play a significant role in the funding requirements of a plan.

Members living longer (or shorter) than expected would result in higher (or lower) pension obligations. Our projections model doesn't have the functionality to test demographic experience that differs from expectations, but our **Commentary on Risk** webpage (**Demographic Risks** section) provides examples of how mortality experience impacts AVR results.

The results of this fiscal note are also sensitive to the methods we currently apply when we calculate required UAAL rates under current law funding policy. A change in future methods could change the results of this fiscal note.

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.
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 2023 Legislative Session. 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.

Kyle Stineman, ASA, MAAA
Actuary

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APPENDIX A

How We Applied These Assumptions

We estimated the fiscal impact of this bill by comparing projected pension contributions under this bill to contributions under current law. The projected employer contributions reflect current member and future hire payroll.

To determine the projected contributions under current law, or the "base", we relied on projection system output. Projected pension contributions equal contributions rates from future AVRs multiplied by future payroll.

To determine the projected costs under this bill, we modified the base described above to reflect the provisions of the bill and assumptions noted above. We then multiplied the respective new contribution rates reflecting these changes by future payroll.

APPENDIX B

How the Projected Contribution Rates and Funded Status Changed

The following tables outline the expected contribution rates and funded status under current law and this bill.

PERS Plan 1 Projections							
Fiscal Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
Current Law							
Base UAAL Rates*	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Benefit Improvement Rates	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.25%
Total UAAL Rates	**3.85%**	**3.85%**	**3.85%**	**3.85%**	**3.85%**	**3.85%**	**3.75%**
Funded Status of Base Benefits*	85%	91%	99%	108%	120%	133%	146%
Under Bill							
Base UAAL Rates*	3.50%	3.50%	3.50%	0.00%	0.00%	0.00%	0.00%
Benefit Improvement Rates	0.35%	0.35%	0.35%	0.35%	0.35%	0.35%	0.25%
Total UAAL Rates	**3.85%**	**3.85%**	**3.85%**	**0.35%**	**0.35%**	**0.35%**	**0.25%**
Funded Status of Base Benefits*	85%	91%	99%	101%	103%	105%	105%

**Excludes separately amortized benefit improvements. Funded status is measured as of June 30.*

TRS Plan 1 Projections							
Fiscal Year	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
Current Law							
Base UAAL Rates*	5.75%	5.75%	5.75%	0.00%	0.00%	0.00%	0.00%
Benefit Improvement Rates	0.71%	0.71%	0.71%	0.71%	0.71%	0.71%	0.50%
Total UAAL Rates	**6.46%**	**6.46%**	**6.46%**	**0.71%**	**0.71%**	**0.71%**	**0.50%**
Funded Status of Base Benefits*	101%	111%	122%	126%	131%	137%	142%
Under Bill							
Base UAAL Rates*	5.75%	5.75%	0.00%	0.00%	0.00%	0.00%	0.00%
Benefit Improvement Rates	0.71%	0.71%	0.71%	0.71%	0.71%	0.71%	0.50%
Total UAAL Rates	**6.46%**	**6.46%**	**0.71%**	**0.71%**	**0.71%**	**0.71%**	**0.50%**
Funded Status of Base Benefits*	90%**	98%	99.8%	102%	104%	106%	107%

**Excludes separately amortized benefit improvements. Funded status is measured as of June 30.*
***Excludes the $800 million payment scheduled for 6/30/2023 which is repealed under this bill.*

Under current law and this bill, the funded status is expected to increase on an annual basis. This is primarily due to past investment performance. Consistent with the asset smoothing method, at each future measurement date, our projections model recognizes assets gains and losses that have been deferred from prior actual investment performances until those gains and losses are fully recognized. This is notable because of the FY 2021 CTF returns of 31.62 percent which significantly exceeded our expectations. The deferred asset gains from FY 2021 are steadily recognized but are not fully realized until the end of FY 2028. In addition, the funded status continues to increase because of expected returns on projected surplus assets.

APPENDIX C

How the Results Changes When the Assumptions Change

The tables below display how the best estimate Base UAAL calculation and Funded Status change when the return on assets is better (or worse) than our expectations.

PERS 1 Projections—Sensitivity of Return on Assets Assumption						
	6% Return		7% Return		8% Return	
FY	Base UAAL Rate	Funded Status	Base UAAL Rate	Funded Status	Base UAAL Rate	Funded Status
2023	3.50%	84%	3.50%	85%	3.50%	86%
2024	3.50%	89%	3.50%	91%	3.50%	94%
2025	3.50%	95%	3.50%	99%	3.50%	103%
2026	0.00%	96%	0.00%	101%	0.00%	106%
2027	0.00%	96%	0.00%	103%	0.00%	110%
2028	0.00%	97%	0.00%	105%	0.00%	114%
2029	0.00%	96%	0.00%	105%	0.00%	116%
2030	0.21%	95%	0.00%	106%	0.00%	119%
...	...	...	...	...	...	...
2040	0.25%	80%	0.00%	126%	0.00%	>150%
...	...	...	...	...	...	...
2050	0.13%	<50%	0.00%	>150%	0.00%	>150%

Note: Figures exclude separately amortized benefit improvements. Funded status is measured as of June 30.

TRS 1 Projections—Sensitivity of Return on Assets Assumption						
	6% Return		7% Return		8% Return	
FY	Base UAAL Rate	Funded Status	Base UAAL Rate	Funded Status	Base UAAL Rate	Funded Status
2023	5.75%	89%	5.75%	90%	5.75%	91%
2024	5.75%	96%	5.75%	98%	5.75%	101%
2025	0.00%	96%	0.00%	99.8%	0.00%	104%
2026	0.00%	96%	0.00%	102%	0.00%	107%
2027	0.00%	96%	0.00%	104%	0.00%	111%
2028	0.00%	98%	0.00%	106%	0.00%	115%
2029	0.00%	97%	0.00%	107%	0.00%	117%
2030	0.25%	96%	0.00%	107%	0.00%	121%
...	...	...	...	...	...	...
2040	0.36%	79%	0.00%	132%	0.00%	>150%
...	...	...	...	...	...	...
2050	0.18%	<50%	0.00%	>150%	0.00%	>150%

Note: Figures exclude separately amortized benefit improvements. Funded status is measured as of June 30.