Multiple Agency Fiscal Note Summary

Bill Number: 6017 SB	**Title:** PERS and TRS plan 1 COLAs

Estimated Cash Receipts

NONE

Estimated Expenditures

Agency Name	2015-17			2017-19			2019-21		
	FTEs	GF-State	Total	FTEs	GF-State	Total	FTEs	GF-State	Total
Department of Retirement Systems	.6	0	241,792	.0	0	0	.0	0	0
Actuarial Fiscal Note - State Actuary	.0	547,700,000	702,300,000	.0	639,500,000	809,200,000	.0	700,000,000	886,100,000
Total	**0.6**	**$547,700,000**	**$702,541,792**	**0.0**	**$639,500,000**	**$809,200,000**	**0.0**	**$700,000,000**	**$886,100,000**

Estimated Capital Budget Impact

NONE

Prepared by: Jane Sakson, OFM	**Phone:** 360-902-0549	**Date Published:** Final 6/18/2015

* See Office of the Administrator for the Courts judicial fiscal note

** See local government fiscal note

FNPID: 42286

FNS029 Multi Agency rollup

Individual State Agency Fiscal Note

Bill Number: 6017 SB	Title: PERS and TRS plan 1 COLAs	Agency: 124-Department of Retirement Systems

Part I: Estimates

☐ **No Fiscal Impact**

Estimated Cash Receipts to:

NONE

Estimated Expenditures from:

	FY 2016	FY 2017	2015-17	2017-19	2019-21
FTE Staff Years	1.2	0.0	0.6	0.0	0.0
Account					
Department of Retirement Systems Expense Account-State 600-1	241,792	0	241,792	0	0
Total $	241,792	0	241,792	0	0

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:	Pete Cutler	Phone: (360)786-7474	Date: 02/16/2015
Agency Preparation:	Rose Bossio	Phone: 360-664-7286	Date: 02/20/2015
Agency Approval:	Marcie Frost	Phone: 360-664-7224	Date: 02/20/2015
OFM Review:	Jane Sakson	Phone: 360-902-0549	Date: 02/20/2015

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.

Beginning July 1, 2015, this bill provides retirees of Plan 1 of the Public Employees' Retirement System (PERS) and Teachers' Retirement System (TRS) with a yearly CPI-based Cost of Living Adjustment (COLA). The new COLA is the same as the COLA provided to retirees of Plans 2 and 3 in the same retirement systems.

NOTE: Due to the complexity of the required modifications to DRS' integrated mainframe systems, the agency will not be able to implement these changes by July 1, 2015. DRS will need to pay a retroactive COLA for July 2015 once the system changes are completed.

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.

No impact.

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.

ADMINISTRATIVE ASSUMPTIONS

- Retirees who purchased the AutoCOLA will continue to receive it.
- The AutoCOLA and the new COLA will be calculated separately and not compounded.
- Retirees who fall below the minimum benefit will continue to receive a Minimum COLA, unless the new COLA increases their benefit above the minimum benefit.
- Retirees who fall below the Adjusted Minimum Benefit limit will continue to receive an adjustment, unless the new COLA increases their benefit above the Adjusted Minimum Benefit limit.
- All prior Uniform, Minimum and Auto COLAs will be included in calculating the new COLA.
- The COLA banking details will be determined by DRS and/or the Office of the State Actuary (OSA).

The assumptions above were used in developing the following workload impacts and cost estimates.

BENEFITS/CUSTOMER SERVICE

Retirement Specialists (RSs) will support the modifications of DRS' automated systems by participating in business requirement development and user acceptance testing activities. RSs will need additional time to process manual adjustments on complex accounts (those with AutoCOLA or Adjusted Minimum Benefit combined with the new COLA), and the annual COLA project team will require additional team member participation and testing due to the inclusion of this new COLA. RSs will assist in updates to member communications and internal reference and training materials. RSs will provide additional customer service to respond to a higher volume of customer calls when this legislation goes into effect.

Retirement Specialist 3 – 790 hours (salary/benefits) = $27,635

MEMBER COMMUNICATIONS

Costs for updating DRS publications, educational materials and website.

Communications Consultant 5 – 160 hours (salaries/benefits) = $7,239

AUTOMATED SYSTEMS

Modifications will be required to the Benefits System to calculate and apply the new COLA, and the agency will need to make text changes to Online Account Access and Estimate Letters. The following resources will be required to complete this work:

Programmer hours – 1,210 hours at $95 per hour = $114,950
Info Tech Specialist 4 – 620 hours (salaries/benefits) = $28,664
CTS* cost of $500 per week for 31 programmer weeks = $15,500

Total Estimated Automated Systems Costs = $159,114

*cost for mainframe computer processing time and resources at CTS/DES

PROJECT MANAGEMENT

Consistent with knowledge and experience of other DRS projects of similar complexity, implementing the new PERS and TRS Plan 1 COLA will require formal project management.

Project Manager – 900 hours (salaries/benefits) = $47,804

ESTIMATED TOTAL COST TO IMPLEMENT THIS BILL: $241,792

Part III: Expenditure Detail

III. A - Expenditures by Object Or Purpose

	FY 2016	FY 2017	2015-17	2017-19	2019-21
FTE Staff Years	1.2		0.6		
A-Salaries and Wages	82,190		82,190		
B-Employee Benefits	29,152		29,152		
C-Professional Service Contracts					
E-Goods and Other Services	130,450		130,450		
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:	$241,792	$0	$241,792	$0	$0

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

Job Classification	Salary	FY 2016	FY 2017	2015-17	2017-19	2019-21
Communications Consultant 5	69,756	0.1		0.0		
Info Tech Specialist 4	71,496	0.3		0.2		
Project Manager	83,496	0.4		0.2		
Retirement Specialist 3	51,864	0.4		0.2		
Total FTE's	276,612	1.2		0.6		0.0

Part IV: Capital Budget Impact

NONE

Part V: New Rule Making Required

Identify provisions of the measure that require the agency to adopt new administrative rules or repeal/revise existing rules.

No impact.

Individual State Agency Fiscal Note

Bill Number: 6017 SB	Title: PERS and TRS plan 1 COLAs	Agency: AFN-Actuarial Fiscal Note - State A

Part I: Estimates

☐ **No Fiscal Impact**

Estimated Cash Receipts to:

NONE

Estimated Expenditures from:

		FY 2016	FY 2017	2015-17	2017-19	2019-21
Account						
All Other Funds-State	000-1	75,500,000	79,100,000	154,600,000	169,700,000	186,100,000
General Fund-State	001-1	249,000,000	298,700,000	547,700,000	639,500,000	700,000,000
	Total $	324,500,000	377,800,000	702,300,000	809,200,000	886,100,000

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:	Pete Cutler	Phone: (360)786-7474	Date: 02/16/2015
Agency Preparation:	Aaron Gutierrez	Phone: 360-786-6152	Date: 06/18/2015
Agency Approval:	Matt Smith	Phone: 360-786-6147	Date: 06/18/2015
OFM Review:	Jane Sakson	Phone: 360-902-0549	Date: 06/18/2015

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 - Expenditures by Object Or Purpose

NONE

Part IV: Capital Budget Impact

NONE

Part V: New Rule Making Required

Identify provisions of the measure that require the agency to adopt new administrative rules or repeal/revise existing rules.

SUMMARY OF RESULTS

BRIEF SUMMARY OF BILL: This bill creates a new automatic COLA for PERS 1 and TRS 1 that is identical to the Plans 2/3 COLA.

COST SUMMARY

Impact on Contribution Rates (Effective FY 2016)				
System/Plan	PERS	TRS	SERS	PSERS
Plan 1 UAAL	2.65%	5.81%	2.65%	2.65%

Budget Impacts			
(Dollars in Millions)	2015-2017	2017-2019	25-Year
General Fund-State	$547.7	$639.5	$3,492.1
Local Government	$514.3	$579.9	$3,189.4
Total Employer	$1,216.7	$1,389.1	$7,620.1

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 provides larger benefits in retirement than have been anticipated and funded during affected members' careers. As a result, the bill increases the UAAL in PERS 1 and TRS 1 by a combined $4.7 billion (on a present value basis). The additional total employer contributions to fund the increased UAAL, on a future values basis, equal $7.6 billion over the next 25 years.

HOW THE RESULTS CHANGE WHEN THE ASSUMPTIONS CHANGE

The cost of this bill will depend, among other items, on actual long-term inflation. If actual inflation is higher than the assumed 3 percent per year, the expected cost of this bill will not change because the maximum COLA provided under this bill is limited to 3 percent. However, if actual long-term inflation is below 3 percent, the actual cost of this bill would be lower than expected. For example, if we assume 2.5 percent long-term inflation instead of 3 percent per year, the expected 25-year total employer cost of the bill drops from $7.6 to $5.8 billion.

HOW THE FINANCIAL RISKS CHANGE

Overall, we found affordability and "pay-go" (term defined in glossary) risks increase under this bill. Larger contribution requirements to fund the increased UAAL increase affordability risks and increase assumed future funding shortfalls in the future. This combined with larger future benefit payments increase both the chance and amount of future pay-go.

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

WHAT IS THE PROPOSED CHANGE?

Summary Of Benefit Improvement

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 creates a new automatic Cost-Of-Living-Adjustment (COLA) for PERS 1 and TRS 1 members that is identical to the Plans 2/3 COLA.

The new COLA will be structured as follows. Once a year beginning July 1, 2015, the Department of Retirement Systems (DRS) must determine the following for any plan member who has been retired for at least a year:

- The original dollar amount of the retirement allowance as of June 30, 2015, or at the effective date of retirement, whichever is later.
- The ratio between two indices:
    - The index for the prior calendar year prior to July 1, 2014, or at the effective date of retirement, whichever is later.
    - The index for the calendar year prior to the date of determination.

The index to be used is the Consumer Price Index (CPI) for Seattle Urban Wage Earners and Clerical Workers.

- The ratio of the applicable indices (719.942 / 706.291) would provide a 1.93 percent COLA on July 1, 2015 under this bill for eligible members.

The resulting ratio is used to adjust benefits, subject to the following. The adjustment may not:

- Exceed 3 percent,
- Differ from the previous adjustment by more than 3 percent, or
- Be negative.

Effective Date: Immediately.

What Is The Current Situation?

The PERS and TRS Plans 1 currently provide COLAs under two types of minimum retirement benefits only: the Basic and the Alternative.

The Basic minimum is a fixed dollar amount per month multiplied by the member's total years of service. The Basic minimum is currently $50.75* and increases on July 1 every year by the dollar amount of the Uniform COLA (UCOLA).

The Alternative minimum is a fixed dollar amount per month (currently $1,688.26*) that increases by 3 percent each year. Eligible members must have at least:

- 20 years of service and be retired for at least 25 years, or
- 25 years of service and be retired for at least 20 years.

Currently, the Plans 1 have an unfunded past-service liability, referred to as the UAAL. The UAAL is the portion of the liability for benefits earned to date that is not covered by the plan's actuarial value of assets.

Statute establishes minimum employer contribution rates for the Plans 1 UAAL. The minimum rates for PERS and TRS are 3.50 percent and 5.75 percent, respectively. These rates are collected as a percentage of members' salaries (including members outside the Plans 1). Minimum rates become effective beginning July 1, 2015, and remain in effect until the Plans 1 UAAL is paid off.

TRS employers contribute to the TRS 1 UAAL. PERS employers and employers in SERS and PSERS contribute toward the PERS 1 UAAL.

Until it was repealed in 2011, the primary COLA provided in the Plans 1 had been the UCOLA. The UCOLA was a fixed dollar amount multiplied by the member's total years of service. The UCOLA was an automatic, annual, service-based COLA that increased 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.

More information on the UCOLA repeal is available here.

**As of July 1, 2014. Note: The Alternative Minimum amounts are adjusted if the member elects voluntary payment options upon retirement. Throughout this fiscal note, we refer to the Alternative Minimum amount prior to any voluntary reductions.*

Who Is Impacted And How?

We estimate this bill could affect all Plan 1 members of these systems through improved benefits. We estimate this bill will increase the benefits for a typical member by providing an annual COLA during retirement. Based on our assumption for inflation, we expect the applicable CPI index will grow by 3 percent per year over the long-run.

This bill impacts all PERS, TRS, SERS, and PSERS employers through increased 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 PERS and TRS Plans 1 members (and beneficiaries) during retirement.

Who Will Pay For These Costs?

The costs from this bill will be paid by employers of PERS, TRS, SERS, and PSERS according to the standard funding method.

HOW WE VALUED THESE COSTS

Assumptions We Made

Consistent with our current inflation assumption (and how we model COLAs for the Plans 2/3), we assumed Plan 1 retirement benefits would grow by 3 percent each year. Should actual inflation be lower than expected, the cost of this bill will decrease. Please see the **How The Results Change When The Assumptions Change** portion of this fiscal note for more details on this assumption.

For purposes of developing the contribution rate increase to fund the cost of this benefit improvement over the next ten years (the "supplemental rate" required under RCW 41.45.070), we assumed a 7.7 percent rate of future investment return consistent with the currently prescribed long-term rate of return assumption that will apply over most of the required ten-year funding period.

Otherwise, we developed these costs using the same assumptions as disclosed in the *June 30, 2013, Actuarial Valuation Report* (AVR) and as described on the Projections Disclosures webpage of the Office of the State Actuary website.

How We Applied These Assumptions

DRS confirmed the minimum benefits will continue to be paid under this bill if the minimum benefit is more valuable than the underlying annuity with a COLA. As a result, the value of the minimum benefits decline because fewer members will qualify for those benefits.

First, we used our valuation software to provide a 3 percent COLA to (1) all currently eligible inactive members, and (2) all active members a year after they are assumed to retire. As part of this step, we also removed the minimum benefit programming so it could be captured entirely as follows.

Second, we calculated the liability attributable to paying the minimum benefits. Using an Excel model, we individually compared a member's projected retirement benefit (with a 3 percent COLA) to the Basic and Alternative minimums. The excess of the minimum benefits over the underlying lifetime annuity is added back to the obligations of the system.

Otherwise, we developed these costs using the same methods as disclosed in the AVR.

Special Data Needed

We developed these costs using the same assets and data as disclosed in the AVR.

ACTUARIAL RESULTS

How The Liabilities Changed

This bill will impact the actuarial funding of PERS 1 and TRS 1 by increasing the present value of future benefits payable under the systems as shown below.

Impact on Pension Liability			
(Dollars in Millions)	**Current**	**Increase**	**Total**
Actuarial Present Value of Projected Benefits			
(The Value of the Total Commitment to all Current Members)			
PERS 1	$13,012	$2,422	$15,434
TRS 1	$9,491	$2,258	$11,749
Unfunded Actuarial Accrued Liability			
*(The Portion of the Plan 1 Liability that is Amortized According to Funding Policy)**			
PERS 1	$4,692	$2,422	$7,114
TRS 1	$2,649	$2,258	$4,908
Unfunded Projected Unit Credit Liability			
(The Value of the Total Commitment to all Current Members Attributable to Past Service that is Not Covered by Current Assets)			
PERS 1	$4,831	$2,367	$7,198
TRS 1	$2,732	$2,190	$4,922

Note: Totals may not agree due to rounding.
**PERS 1 and TRS 1 are amortized over a 10-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 of the members, 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 actuarial contribution rate results in the supplemental contribution rate shown on page one that applies in the current biennium. This fixed rate is collected for a 10-year period, consistent with how benefit improvements are funded in PERS 1 and TRS 1 under RCW 41.45.070.

Impact on Contribution Rates (Effective FY 2016)				
System/Plan	**PERS**	**TRS**	**SERS**	**PSERS**
Current Members				
Employee (Plan 2)	0.00%	0.00%	0.00%	0.00%
Employer				
Normal Cost	0.00%	0.00%	0.00%	0.00%
Plan 1 UAAL	2.65%	5.81%	2.65%	2.65%
Total	**2.65%**	**5.81%**	**2.65%**	**2.65%**

How This Impacts Budgets And Employees

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.

As with the costs developed in the actuarial valuation, the emerging costs of the systems will vary from those presented in the AVR or this fiscal note to the extent that actual experience differs from the actuarial assumptions.

Budget Impacts					
(Dollars in Millions)	**PERS**	**TRS**	**SERS**	**PSERS**	**Total**
2015-2017					
General Fund	$102.3	$395.9	$42.8	$6.8	$547.7
Non-General Fund	153.7	0.0	0.0	0.9	154.7
Total State	**$256.1**	**$395.9**	**$42.8**	**$7.7**	**$702.4**
Local Government	291.1	161.7	53.1	8.4	514.3
Total Employer	**$547.1**	**$557.5**	**$95.9**	**$16.1**	**$1,216.7**
Total Employee	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
2017-2019					
General Fund	$112.2	$472.9	$46.9	$7.4	$639.5
Non-General Fund	168.6	0.0	0.0	1.0	169.7
Total State	**$280.9**	**$472.9**	**$46.9**	**$8.5**	**$809.2**
Local Government	319.3	193.2	58.3	9.2	579.9
Total Employer	**$600.2**	**$666.1**	**$105.2**	**$17.6**	**$1,389.1**
Total Employee	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
2015-2040					
General Fund	$620.8	$2,570.5	$259.6	$41.2	$3,492.1
Non-General Fund	932.9	0.0	0.0	5.7	938.6
Total State	**$1,553.8**	**$2,570.5**	**$259.6**	**$46.8**	**$4,430.7**
Local Government	1,766.3	1,049.9	322.5	50.7	3,189.4
Total Employer	**$3,320.0**	**$3,620.4**	**$582.1**	**$97.6**	**$7,620.1**
Total Employee	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**

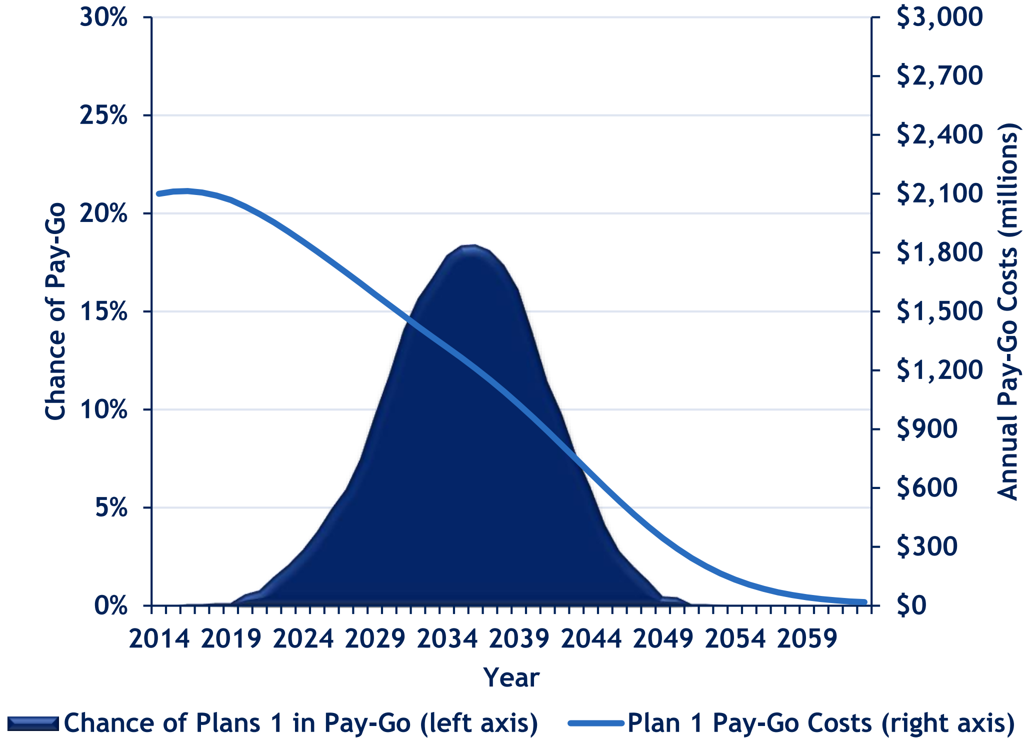
Note: Totals may not agree due to rounding. We use long-term assumptions to produce our short-term budget impacts. Therefore, our short-term budget impacts will likely vary from estimates produced from other short-term budget models.

How the Risk Measures Changed

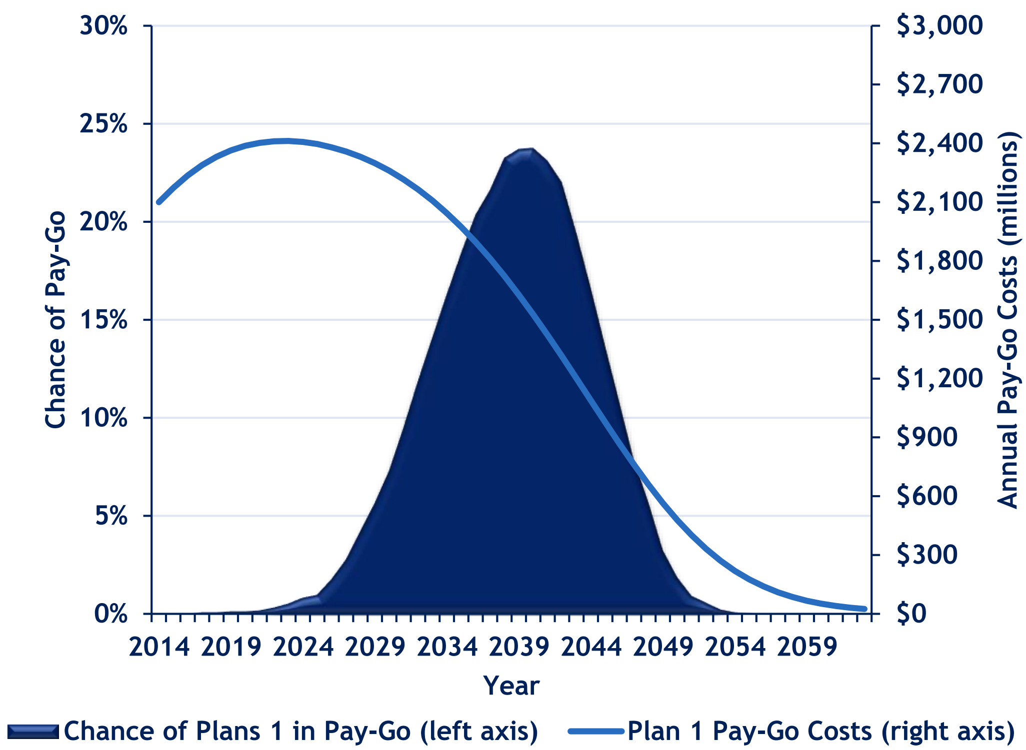
Using our risk model, we compared risk measures with and without the COLA benefit improvement to evaluate how specific financial risks change under this bill. We focused our analysis on the pay-as-you-go or "pay-go" risk; the risk that plan assets will be insufficient to cover benefit payments in the future. Before this bill, the Plans 1 (including PERS 1 and TRS 1) face a combined 19 percent chance of pay-go in the year 2036. After this bill, the pay-go risk increases to approximately 24 percent in 2040.

The pay-go risk measures change over time. We've provided graphical illustrations on these results below for PERS 1 and TRS 1. Note that the "Plan 1 Pay-Go Costs" increase after the bill. In other words, the expected benefit payments are larger because of the COLA. The likelihood of paying those benefits under a pay-go situation also increases as a result of this bill. This is illustrated by the growing shaded region in the graph under this bill.

Current Law



Under This Bill



A more detailed set of risk and affordability measures can be found in the tables below. The risk measures reflect results when "Past Practices" continue in the areas of funding and future benefit improvements.

Pension Score Card - Current Law			
Category *(Dollars in Billions)*	**Value**	**Year**	**Score**
Affordability			
Chance Pensions will Consume More than 8% of GF-S[1]	3.7%	2024	87
5% Chance GF-S[1] Consumption will Exceed	7.5%	2024	68
5% Chance Employer Contribution Rate will Exceed	16.9%	2034	56
Risk			
Chance of PERS 1, TRS 1 in Pay-Go[2]	18.4%	2036	42
Chance of Open Plan in Pay-Go[2]	5.5%	2062	55
5% Chance Annual Pay-Go Cost[3] in PERS 1, TRS 1 Exceed	$1.3	2021	42
5% Chance Annual Pay-Go Cost[3] in Open Plans Exceed	$12.5	2062	0
Chance of Total Funded Status Below 60%	24.7%	2062	39
Total Weighted Score			**54**

[1]Approximately 3% of current GF-S budget; does not include higher education.
[2]When today's value of annual cost exceeds $25 million.
[3]Pay-Go costs on top of normal pension costs.

Pension Score Card - Under This Bill			
Category *(Dollars in Billions)*	**Value**	**Year**	**Score**
Affordability			
Chance Pensions will Consume More than 8% of GF-S[1]	10.0%	2024	64
5% Chance GF-S[1] Consumption will Exceed	9.1%	2024	49
5% Chance Employer Contribution Rate will Exceed	18.4%	2034	50
Risk			
Chance of PERS 1, TRS 1 in Pay-Go[2]	23.8%	2040	36
Chance of Open Plan in Pay-Go[2]	6.2%	2062	54
5% Chance Annual Pay-Go Cost[3] in PERS 1, TRS 1 Exceed	$1.7	2028	38
5% Chance Annual Pay-Go Cost[3] in Open Plans Exceed	$12.5	2062	0
Chance of Total Funded Status Below 60%	25.8%	2049	37
Total Weighted Score			**44**

[1]Approximately 3% of current GF-S budget; does not include higher education.
[2]When today's value of annual cost exceeds $25 million.
[3]Pay-Go costs on top of normal pension costs.

Please see the *2010 Risk Assessment Report* (RAR) for a complete description of the development of the risk assessment model we used for this analysis. Since we published the RAR, we've made several changes to the model and the way we measure the pay-go risks. Please see the Risk Assessment page on our website for further information on changes to the model (including participant and asset data) since our last update and for additional background on how we developed and how to interpret the risk measures.

HOW THE RESULTS CHANGE WHEN THE ASSUMPTIONS CHANGE

To determine the sensitivity of the actuarial results to the Best-Estimate assumptions selected for this pricing, we varied the following assumption:

- We assumed "Lower Inflation" at 2.5 percent per year. This compares to the 3 percent best-estimate assumption.

The following table outlines how the 25-year budget impacts attributable to this bill change under the scenario we outlined above.

25-Year Budget Impacts		
(Dollars in Billions)	**Fiscal Note**	**Lower Inflation**
General Fund-State	$3.5	$2.7
Local Government	$3.2	$2.4
Total Employer	$7.6	$5.8

Note: Totals may not agree due to rounding.

The cost of this bill will depend, among other items, on actual long-term inflation. If actual inflation is higher than the assumed 3 percent per year, the expected cost of this bill will not change because the maximum COLA provided under this bill is limited to 3 percent. However, if actual long-term inflation is below 3 percent, the actual cost of this bill would be lower than expected. For example, if we assume 2.5 percent long-term inflation instead of 3 percent per year, the expected 25-year total employer cost of the bill drops from $7.6 to $5.8 billion.

Additionally, under this bill, active members may choose to retire earlier than under current law because they will have increased retirement income. With so few actives remaining, however, we do not expect any behavioral changes that do emerge to significantly impact the results of this fiscal note.

WHAT THE READER SHOULD KNOW

The Office of the State Actuary ("we") prepared this fiscal note based on our understanding of the bill as of the date shown in the footer. We intend this fiscal note to be used by the Legislature during the 2015 Legislative Session only.

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

ACTUARY'S CERTIFICATION

The undersigned hereby certifies that:

1. The actuarial cost methods are appropriate for the purposes of this pricing exercise.
2. The actuarial assumptions used are appropriate for the purposes of this pricing exercise.
3. The data on which this fiscal note is based are sufficient and reliable for the purposes of this pricing exercise.
4. Use of another set of methods assumptions may also be reasonable, and might produce different results.
5. The risk analysis summarized in this fiscal note involves the interpretation of many factors and the application of professional judgment. We believe that the data, assumptions, and methods used in our risk assessment model are reasonable and appropriate for the purposes of this pricing exercise. The use of another set of data, assumptions, and methods, however, could also be reasonable and could produce materially different results.
6. We prepared this fiscal note for the Legislature during the 2015 Legislative Session.
7. We prepared this fiscal note 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 fiscal note.

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

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

Matthew M. Smith, FCA, EA, MAAA
State Actuary

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GLOSSARY OF ACTUARIAL TERMS

Actuarial Accrued Liability: Computed differently under different funding methods, the actuarial accrued liability generally represents the portion of the present value of fully projected benefits attributable to service credit that has been earned (or accrued) as of the valuation date.

Actuarial Present Value: The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of actuarial assumptions (i.e. interest rate, rate of salary increases, mortality, etc.).

Aggregate Funding Method: The Aggregate Funding Method is a standard actuarial funding method. The annual cost of benefits under the Aggregate Method is equal to the normal cost. Under this method, all plan costs (for past and future service credit) are included under the normal cost. Therefore, the method does not produce an unfunded actuarial accrued liability outside the normal cost. It's most common for the normal cost to be determined for the entire group rather than on an individual basis for this method.

Entry Age Normal Cost Method (EANC): The EANC method is a standard actuarial funding method. The annual cost of benefits under EANC is comprised of two components:

- Normal cost.
- Amortization of the unfunded actuarial accrued liability.

The normal cost is most commonly determined on an individual basis, from a member's age at plan entry, and is designed to be a level percentage of pay throughout a member's career.

Normal Cost: Computed differently under different funding methods, the normal cost generally represents the portion of the cost of projected benefits allocated to the current plan year.

Projected Unit Credit (PUC) Liability: The portion of the Actuarial Present Value of future benefits attributable to service credit that has been earned to date (past service) based on the PUC method.

Projected Benefits: Pension benefit amounts that are expected to be paid in the future taking into account such items as the effect of advancement in age as well as past and anticipated future compensation and service credits.

Unfunded Actuarial Accrued Liability (UAAL): The excess, if any, of the actuarial accrued liability over the actuarial value of assets. In other words, the present value of benefits earned to date that are not covered by plan assets.

Unfunded PUC Liability: The excess, if any, of the Present Value of Benefits calculated under the PUC cost method over the Valuation Assets. This is the portion of all benefits earned to date that are not covered by plan assets.

GLOSSARY OF RISK TERMS

Affordability: Measures the affordability of the pension systems. Affordability risk measures the chance that pension contributions will cross certain thresholds with regards to the General-Fund and contribution rates.

"Current Law": Scenarios in which assumptions about Legislative behavior are excluded. These scenarios show projections regarding the current state of Washington statutes.

Optimistic: A measurement of the pension system under favorable conditions (above expected investment returns, for example). Optimistic refers to the 75^{th} percentile, where there is a 25 percent chance of the measurement being better and 75 percent chance of the measurement being worse. Very optimistic refers to the 95^{th} percentile.

"Past Practices": Scenarios in which assumptions regarding Legislative behavior are introduced. These assumptions include actual contributions below what are actuarially required and improving benefits over time. These scenarios are meant to project past behavior into the future.

Pay-Go: The trust fund runs out of assets, and payments from the General-Fund must be made to meet contractual obligations.

Pessimistic: A measurement of the pension system under unfavorable conditions (below expected investment returns, for example). Pessimistic refers to the 25^{th} percentile, where there is a 75 percent chance of the measurement being better and 25 percent chance of the measurement being worse. Very pessimistic refers to the 5^{th} percentile.

Premature Pay-Go: Pay-go payments, measured in today's value, which might be considered "significant" in terms of the potential impact on the General-Fund.

Risk: Measures the risk metrics of the pension systems, including the chance that the pension systems will prematurely run out of assets, the amount of potential pay-go contributions, and the chance that the funded status will cross a certain threshold.

Risk Tolerance: The amount of risk an individual or group is willing to accept with regards to the likelihood and severity of unfavorable outcomes.