LEGISLATIVE REPORT

# Actuarial Annual Report for Paid Family and Medical Leave

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# Executive summary

This report documents the results of an actuarial valuation of Washington state's Paid Family and Medical Leave (Paid Leave) program, as required by RCW 50A.05.050. The valuation assesses the financial health of the Paid Leave program and recommends future premium rates needed to pay benefits and manage operations into the future. The valuation is based on data current as of June 30, 2023.

The Employment Security Department (Employment Security) recommends further exploration of adopting actuarial premium rates and shifting to an actuarial rate setting approach to support greater fund stability and better match the program's expenditures. Over time, the actuarial model would provide greater fund stability while potentially leading to a lower tax burden for employers.

The program has a little more than three years of claim experience during unusual pandemicera times. Looking ahead, Employment Security expects shifting social dynamics and wage and employment growth to continue, and pandemic phenomena to die down while legislative impacts (e.g., allowances for death of a child and post-natal care amendments) are fully integrated.

Fund projections:

- Under the current formula, the Paid Leave fund is projected to experience a short-term deficit as of April 2025 due to a lower premium rate and a continued increase in program benefits.
- The fund is expected to be \$216 million by FY 2024, and \$122 million by FY 2025, which are lower than three months of benefit payments and administrative costs.
- Under an actuarial rate setting model as described in this report, the Paid Leave program financial condition is projected to improve overtime and stabilize, limit rate fluctuations, and gradually build a reserve.

# Introduction

As required under RCW 50A.05.050, this report documents the results of an actuarial valuation of the Paid Family and Medical Leave (Paid Leave) program.

The primary purpose of this valuation is to assess the financial health of the program, advise the lowest future premium rates necessary to maintain the solvency of the Family and Medical Leave Insurance Account, and stabilize the premium rate for the next four fiscal years (FY) 2024-2027 based on the data as of June 30, 2023.

The report contains four sections:

- Summary of results providing high-level program trends and a summary of premium rates.
- Financial condition (or health) evaluting the program financial health as of the end of FY 2023 and discussing the key drivers.
- Actuarial pricing review entailing assessments of actuarial ratemaking while determining the premium rate level, and the projections (FY 2024-2027) of the program fund balance.
- Appendices summarizing the principal actuarial assumptions and methods, and additional information used to prepare this report.

### Reliance and uncertainties

In performing the actuarial analysis, Employment Security relied on the Paid Leave admistrative data and other public information from various sources. It should also be noted that Employment Security identified opportunities to improve data quality, accuracy, and completeness. While Employment Security did determine that the key numerical information is mostly accurate, the inaccuracies provided an insignificant impact to the analysis at program level is expected.

Actuarial Standards of Practice guide actuaries when performing and communicating their work. As with all projections, there are elements of uncertainty, and the actual experience will almost certainly differ from the projected. The further out the projection, the greater the uncertainty becomes. Although Employment Security endeavors to assess and reduce these uncertainties as much as possible, the reader should be aware that these uncertainties cannot be eliminated.

# Background

The Washington state Legislature enacted the Paid Family and Medical Leave Insurance Program in 2017 with bipartisan support. Washington was the fifth state in the nation to implement such a program and the first to do so from scratch, rather than building on a longstanding temporary disability program. It is a social insurance program paid for by both employees and employers. Premium assessment began in 2019 and benefits became available in 2020.

Generally, Washington's Paid Leave program allows for up to 12 weeks of paid family leave or paid medical leave for eligible Washington workers who have worked at least 820 hours during a qualifying year. Under certain circumstances, individuals may qualify for 16 or 18 weeks of combined family and medical leave. The law requires employment protection and continuation of employer provided health care benefits for many employees– those in larger companies who have been with their employer for at least a year and worked 1,250 hours in the past year. Benefits are progressive, providing up to 90% of participants' weekly pay for each week of leave, and are portable across jobs.

While Washington's Paid Leave program is relatively new, it has undergone many changes since being adopted in 2017. Below is a timeline that depicts the major implementation milestones and legislative changes.



Graph 1: PFML Legislative Changes

During the implementation phase of the program, accepting voluntary plan<sup>1</sup> applications was the first aspect to go live. This occurred in September 2018. Employers were required to start withholding premiums on Jan. 1, 2019, with wage reporting and premium remittance begining in April 2019. In addition to implementing wage reporting and premium collections in 2019, the program started offering an elective coverage<sup>2</sup> opt-in for self-employed individuals and conditional waivers<sup>3</sup>. Claim applications and benefits became available starting Jan. 1, 2020.

Since the launch of benefits, there have been several notable changes to the program. In 2022, Second Substitute Senate Bill 5649<sup>4</sup> (2SSB 5649) made several changes to the program, including:

- establishing the office of actuarial services within Employment Security;
- setting up a legislative task force on paid family and medical leave insurance premiums; and
- requiring the Office of Financial Management to contract with an external actuary to develop a report to the Legislature covering the insurance account experience, recommendations, and comparative analysis of other states' premium provisions.

This bill also made adjustments regarding benefit claims. First, 2SSB 5649 adds leave for the loss of a child and allows employees who take bonding leave to take up to seven days of family leave following the death of a child, if the employee did or would have qualified for medical leave for pregnancy or childbirth recovery, or if the employee did or would have qualified for family leave to bond with a new child. In addition, the definition for "postnatal" to mean the first six weeks after a birth, was added. This changed birth-related claims that would have otherwise been categorized as family bonding leave to postnatal medical leave. This change does not expand coverage but does impact rate setting through adjusting the share of the premium rate contibution for employers and employees. This legislation took effect June 9, 2022.

Additionally, Employment Security responded to stakeholder concerns about policies related to the waiting week by working with the Paid Family and Medical Leave Advisory Committee and other rulemaking stakeholders to make revisions. Hours of leave taken during the waiting week will no longer count against the total hours available in a 12-month period. The maximum possible number of hours of leave remains the same. This does not change the allowable length of leave, only how the hours are treated during the waiting week. In addition to family

<sup>&</sup>lt;sup>1</sup> Voluntary plan employers are those who may offer an existing paid family, medical or combination leave program to their employers. They are exempt from all or partial premium contributions depending on their plan type. More information can be found in <u>RCW 50A.30</u>.

<sup>&</sup>lt;sup>2</sup> For more information about elective coverage, see <u>RCW 50A.10.010</u>.

<sup>&</sup>lt;sup>3</sup> For more information about conditional waivers, see <u>RCW 50A.10.040</u>.

<sup>&</sup>lt;sup>4</sup> For more information, see <u>Second Substitute Senate Bill 5649</u>.

bonding and family military exigency, the waiting week requirement was removed for medical claims to recover from childbirth. Other uses of medical leave and leave to care for a family member with a serious health condition continue to require a waiting week. Employment Security implemented these changes to coincide with the 2022 legislative session, taking effect on June 9, 2022.

In 2023, the Legislature also passed Substitute Senate Bill 5286<sup>5</sup>, which revised the paid leave program's premium rate calculation. The revised premium rate calculation removes the solvency surchage and replaces it with a formula-based premium rate.

## Summary of results

The Paid Leave program was implemented in calendar year (CY) 2019 and started receiving claims in Jan CY 2020, the year the pandemic started. The combined forces of the social dynamic shift through and after the pandemic, early program growth, and legislative changes caused program utilization to grow beyond expectations.

The graph below shows the leave benefit payment for each month was significantly higher than the same month of the previous year. For example, payments from January 2021 were at \$50 million, compared to \$101 million from January 2023. At the same time, Employment Security observed a similar upward trend throughout the year for each fiscal year.



Graph 1: Monthly benefit payment (\$)

The surge of benefit payments is attributed to both the increase in the average weekly benefit amount and the escalated number of claims. The following graph displays the number of paid

<sup>&</sup>lt;sup>5</sup> For more information, see <u>Substitute Senate Bill 5286</u>.

weekly claims rising to new levels every year. For example, the number of paid weekly claims was at 73,000 in Jan FY 2021 and jumped to 123,000 in Jan FY 2023. To convert the paid weekly claims to number of claimants, we could assume claimants take four full weeks of benefits each month and therefore divide the paid weekly claims by four. The program provided benefits to at least 18,000 claimants in Jan FY 2021, and 31,000 in Jan FY 2023.



Graph 2: Monthly paid weekly claim count (000')

Conversely, the premium rates (the rate per gross wage dollar up to social security cap) did not go up accordingly, nor fast enough. The table below lists premium rate history since the program started January 2019.

Table 1: Paid Leave p	premium rate history
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Calendar Year (CY)	Premium Rate
Jan 1, 2019 – Dec 31 2019	0.4000%
Jan 1, 2020 – Dec 31 2020	0.4000%
Jan 1, 2021 – Dec 31 2021	0.4000%
Jan 1, 2022 – Dec 31 2022	0.6000%
Jan 1, 2023 – Dec 31 2023	0.8000%

Therefore, the historically collected premium has not matched the pace of the benefit payments. There was some cash accumulated in CY 2019 since no claims were processed until Jan 2020. However, the inadequate premium rates later triggered the downward trend in cash position. The following graph recorded the account cash position over time, and the

continuous reduction finally depleted the cash position from \$438 million in FY 2021 to \$1 million in FY 2023.



Graph 3: Monthly Paid Leave fund balance (\$)

#### Where the Paid Leave program is headed

As of now, Employment Security has a little over three years of claim experience under an unusual time (start to post pandemic era). Looking ahead, Employment Security expects the trend arising from shifting social dynamics and wage and employment growth will continue, but pandemic phenomena before FY 2023 will either die down or decelerate while statutory requirements are fully realized.

Under this "expected" scenario, the projected actuarial premium rates are shown in the following table. While developing the premium rates, Employment Security intends to improve the program financial condition overtime, limit fluctuations, and build up a three-month reserve<sup>6</sup>.

For the same "expected" scenario, the projected baseline premium rates are resulted from the premium rate formula established in RCW 50A.10.030<sup>7</sup>.

<sup>&</sup>lt;sup>6</sup> For more information, see <u>Second Substitute Senate Bill 5649 (2022)</u>.

<sup>&</sup>lt;sup>7</sup> For more information, see <u>Substitute Senate Bill 5286 (2023)</u>.

Calendar Year (CY)	Premium Rate			Rate YOY ange
Start Date – End Date	Actuarial	Baseline	Actuarial	Baseline
Jan 1, 2024– Dec 31 2024	0.8265%	0.7357%*	3%	-8%
Jan 1, 2025 – Dec 31 2025	0.8749%	0.9331%	6%	27%
Jan 1, 2026 – Dec 31 2026	0.9134%	0.9937%	4%	6%
Jan 1, 2027 – Dec 31 2027	0.9524%	0.9725%	4%	-2%

Table 2: Projected premium rates – actuarial vs. baseline

\*Estimated premium rate from the projected fund balance as of September 2023, and official baseline premium will be published end of Oct 2023

The projected baseline premium rates will experience a temporary drop from 0.8000% effective on Jan 1, 2024. This lower premium rate is benefited from the \$200 million cash injection provided by the Legislature in 2022 and estimated from the projected fund balance as of September 2023. Compared to uprising expenditures, Employment Security expects a small cash deficit in early April 2025 due to this rate reduction. Following CY 2024, the baseline premium rate will rebound and rise for a few rate cycles until 2027.

The table below shows the financial projections under the "expected" scenario. (1a) is based on the projected actuarial premium rates using ratemaking approach and (1b) is based on the projected baseline premium rates.

Table 3: Paid Leave financial projections under actuarial and baseline premium rates

\$ Millions	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
(1a) Actuarial Premium Collection		\$1,727	\$1,845	\$2,020	\$2,189
(1b) Baseline Premium Collection		\$1,674	\$1,736	\$2,166	\$2,340
(2) Leave Benefit Payment		\$1,594	\$1,745	\$1,901	\$2,059
(3) Net Administrative Costs		\$75	\$86	\$94	\$102
(4a) Fund Balance = (4a@Prior FY) + (1a) – (2) – (3)	\$212	\$270	\$284	\$310	\$340
(4b) Fund Balance = (4b@Prior FY) + (1b) – (2) – (3)	\$212	\$216	\$122	\$294	\$475

Note: Numbers may not add up due to rounding

With the baseline premium rate drop for CY 2024, Employment Security anticipates the projected fund balance will drop below its end of FY 2023 level before picking up in FY 2026.

### How the future can look different

The projection measures in the prior section are based on best estimate assumptions regarding the future. These assumptions are made on an expected basis. Meanwhile, the areas where the future may be different from the expected should be considered, which would drive the biggest deviation from the projection.

- Social dynamics salaries, ages, companies' leave policies, workforce composition, and family dynamics may differ from the Employment Security's assumptions
- Legislative or policy changes any of these changes not known at the time of preparing the report could lead to deviations from projected results
- Economic conditions any recession in the coming four years could impact the workforce and the program revenue, and the length and the magnitude can significantly impact the projections
- Others there are always operational changes and risks to run an insurance program, such as system breakdowns, policy changes from court decisions, and public perceptions about the program (rates or financial status). Certain impacts are temporary (system breakdown) and some could be permenant (court decisions)

Therefore, taking actions to improve the program's financial condition sooner rather than later, enhancing existing processes, and identifying opportunities for improvement will help the program cope with uncertainty in the future.

# Financial condition

## Summary

In this section, Employment Security uses the Paid Leave program financial statements<sup>8</sup>, and prepared actuarial income statement, actuarial balance sheet<sup>9</sup> and actual cash flow to measure the program's financial condition.

<sup>&</sup>lt;sup>8</sup> FY 2023 financial statements are prepared by the Chief Financial Accountant as of September 12, 2023. There could be changes to pension entries from the Office of Financial Management later but won't be materially different.

<sup>&</sup>lt;sup>9</sup> FY 2023 balance sheet was the first year adopting the actuarial claim payable. For reporting purpose, we restated claim payable for FY 2021&2022 balance sheet assuming same principle had been carried through. Please note

- The income statement indicates if the program has been adequately priced to result in positive income (enough revenue covers total expenditures, including both leave benefits and administrative cost).
- The balance sheet shows if there are enough contingency reserves or equity (including retained earnings overtime and injected fund or capital) set aside to guard against possible future unexpected events or expenditures.
- The cash flow exhibits the ability of the program to pay its expenditures when due.

Employment Security advises the reader to take into consideration all three outlined conditions before making an assessment on the financial condition of the Paid Leave program. The overall health of the program is dependent on various components and historical experience may not match the future projections.

The following table is a summarized actuarial income statement<sup>10</sup> from fiscal year (FY) 2021 to current FY 2023.

	FY 2021	FY 2022	FY 2023
(1) Total Revenue	\$673	\$960	\$1,514
(2a) Claims <sup>11</sup>	\$831	\$1,081	\$1,386
(2b) Administration Expenses	\$38	\$51	\$75
(2) Total Expenditures	\$869	\$1,132	\$1,461
(3) Net Income (Loss) = (1) – (2)	\$(196)	\$(171)	\$52
(4) Net Income (Loss) after Contribution	\$(196)	\$(171)	\$252*
(5) Financial Leave Benefit Ratio = (2a) / (1)	123.4%	112.5%	91.6%
(6) Financial Combined Ratio = (2) / (1)	129.1%	117.8%	96.5%

Table 4: Summary of income statement (\$ million)

Note: \* include \$200 million cash injection

Numbers may not add up due to rounding.

In summation, the program experienced a net loss of \$315 million from FY2021 to FY2023 and a net loss of \$115 million after the \$200 million state contribution. The negative net income (financial combined ratio > 100%) or loss was driven by inadequate revenues (inadequate premium rate) to cover the total expenditures incurred during the same year. There were

that the restated balance sheets are meant to address historical financial condition under same principle in this report and should not be used for any other purpose.

<sup>&</sup>lt;sup>10</sup> Income statements restated (2a) Claims, (3) Net Income (Loss) and (4) Net Income (Loss) after contribution based on restated balance sheets. Like footnote #15, the restated income statements should not be used for any other purpose.

<sup>&</sup>lt;sup>11</sup> Claims are restated to reflect restated claim payable in FY 2021 & 2022 balance sheet. Mathematically the claims are the sum of the paid leave benefit and the year-over-year change of incurred but not reserved claim liability.

increases in revenues, mainly aided by the wage growth and a higher premium rate of 0.6000% effective Jan. 1, 2022 (mid of FY 2022) and 0.8000% effective Jan. 1, 2023 (mid of FY 2023). As a result, FY 2022 net loss reduced to \$171 million from net loss of \$196 million in FY 2021, and FY 2023 generated net income of \$52 million.

The following table shows the impact from the program net income (loss) on its contingency reserve since FY 2021, and its contingency reserve position at end of each fiscal year (2021-2023).

	FY 2021	FY 2022	FY 2023
(1) Total Assets	\$574	\$454	\$772*
(2) Total Liability	\$228	\$279	\$345
(2a) Claims payable <sup>12</sup>	\$167	\$195	\$256
(2b) Other liability	\$61	\$84	\$89
Previous Contingency Reserve	\$542	\$346	\$175
Net Income (Loss) <sup>13</sup>	\$(196)	\$(171)	\$52
Net Income (Loss) after Contribution <sup>14</sup>			\$252*
(3) Total Contingency Reserve <sup>15</sup> = (1) – (2)	\$346	\$175	\$427*

Table 5: Summary of balance sheet (\$ million)

Note: \* includes \$200 mil cash injection

Numbers may not add up due to rounding.

Combined with Table 4, the program's contingency reserve decreased from \$542 million at beginning of FY 2021 to \$227 million (excluding cash injection of \$200 million) in FY 2023 due to a net loss from FY 2021 to FY 2023. With the \$200 million cash contribution, the latest contingency reserve level increased to \$427 million, and this amount is close to the required contingency reserve (about \$505 million) under National Association of Insurance Commissions (NAIC) for similar insurance risk.

The table below presents the cashflow contribution by different activities from FY 2021 to FY 2023, as well as the ending cash and cash equivalents position for each fiscal year.

<sup>&</sup>lt;sup>12</sup> Claim payable reflects the claims that have incurred but not reserved (IBNR). For FY2021 & 2022, the published historical claim payables were about \$5 million and \$7 million, respectively.

<sup>&</sup>lt;sup>13</sup> Net Income (Loss) is from Table 4, item (3).

<sup>&</sup>lt;sup>14</sup> Net Income (Loss) after contribution is from Table 4, item (4).

<sup>&</sup>lt;sup>15</sup> Total Contingency Reserve can be calculated two ways, one is directly calculated as the difference between total assets and total actuarial liability, and the other is calculated via previous year contingency reserve and the net income from current year.

Table 6: Summary of cash flow as of June 30, 2023 (\$ million)

	FY 2021	FY 2022	FY 2023
(1) Cash and Cash Equivalents at Beginning of the Year	\$449	\$284	\$28
(2) Net Cash Provided by Operating Activities	\$(161)	\$(254)	\$(14)
(3) Investment of Other Financing Activities	\$(4)	\$(2)	\$(7)
(4) Other Payment or Contribution			\$200
<ul><li>(5) Net Increase (Decrease) in Cash and Cash Equivalents</li><li>= (2) + (3) + (4)</li></ul>	\$(165)	\$(256)	\$179*
(6) Cash and Cash Equivalents at End of Year = (1) + (5)	\$284	\$28	\$207*

Note: \*include \$200 mil cash injection

Numbers may not add up due to rounding.

The program incurred negative cash from operating activities for each fiscal year (FY2021 to FY 2023). Comparing to the previous two fiscal years (FY 2021, FY 2022), FY 2023 was the first time the program produced a net cash decrease less than \$50 million. Over the past three years, the program cash position dropped from \$449 million at the beginning of FY 2021 to \$7 million without contribution. The program's cash position indicates no funds available to pay its expenditures when due until the \$200 million cash injection happened in June 2023.

Looking back at three fiscal years (FY 2021 to FY 2023), the program's financial condition has been deteriorating, mainly driven by the challenge of implementing adequate premium rates matching the increasing expenditures. At the conclusion of FY 2023, the program contains some contingency reserve to protect its solvency from unexpected events or trends, especially with the \$200 million cash injection. Meanwhile, the program continued a premium rate increase in FY 2023 (0.8000%) and the rate action led to positive net income with a much smaller net cash decrease compared to the past.

Looking ahead, Employment Security expects the program total expenditures will continue to rise. Following the rate setting structure in current statute, Employment Security projects likely short-term deficits to occur in the coming years as the fund stabilizes. Conversely, lawmakers could consider shifting to an actuarial rate setting approach, which would support greater fund stability.

## Historical experience in detail

The program's financial condition as of end of fiscal year 2023 has been mainly driven by the question of whether implemented premium rates were adequate to pay for the increasing expenditures. In this subsection, Employment Security presents how different types of leave

contributed to this upward trend over the past three years (FY 2021- 2023), then looks into the effect from each demographic group using the leave counts (or claim counts).

While analyzing Washington's program experience, Employment Security also investigated other states. What was found is that some social dynamic shift through, and post, the pandemic era was also observed in California and Rhode Island, which had relatively longer histories than Washington. However, the comparison only gives a general direction because each state is unique due to its program specifics, economic composition, and population demographics.

## Historical experience by leave type

In Washington, there are four main leave types to account for different situations. Under family, there is bonding and care, while under medical there is leave for one's own health (SelfMed) and care relating to pregnancy or birth (xSelfMed). There is also military leave – this has been stable across years with an annual count around 100, less than 0.1% of total leave counts.

The following graph (left) shows that the leave counts went up for these four major leave types from FY 2021 to FY 2023, but each went up at a different pace and caused the year-over-year shift in distribution (right). Ranked by count (left), SelfMed is the most used, followed by Bonding. xSelfMed surpassed Care in 2023 to claim third place.



Graph 4: Historical leave counts (000') and share by major leave type.

The leave share (right) split between family (Bonding & Care) and medical (SelfMed & xSelfMed) has not changed significantly, shifting about 2% in favor of medical. Conversely, the leave shares within medical have changed drastically. SelfMed leave was around 45% in FY 2021 and FY 2022. By 2023, the SelfMed leave share declined by 7% to 38% and xSelfMed rose by 9% to 17% in 2023. The shift reflects the implementation of 2SSB 5649 in June 2022.

## Historical experience by demographics

Examining program usage by age, gender, and type of employment, there is an insignificant shift by age for most major claim types, except xSelfMed, where claimnants are more spread across age band compared to previous years. Meanwhile, there were prominent shifts by gender and varied by leave type, but milder movement by type of employment with a consistent trend across leave types.



Graph 5: Historical leave Counts (000') by gender

In the graph above, for family leaves (Bonding & Care), the number of bonding leaves (top left chart) taken by male surpassed female from 2022. This shift is likely driven by a combination of factors, such as lack of an employer provided paid paternity benefit and an increasing share in household or childcare by males post pandemic era. Within care (top right chart), there does not appear to be a similar trend, and females are still taking the leading role to care for a family member.

In the same graph, for medical leaves (SelfMed & xSelfMed), the number of SelfMed leaves (bottom left chart) taken by males climbed, and at a faster rate than females since FY 2022. The bottom right chart indicates that most xSelfMed leaves were taken by females and surged since the 2SSB 5649 changes came into effect (June 2022).

To cross exam the impact from 2SSB 5649 with the number of bonding leaves taken by females, in FY 2021, there were more bonding claims than xSelfMed leaves (33K vs. 14K). In FY

2023, there were fewer leaves taken for bonding than for xSelfMed (34K vs. 41K). Due to the confidentiality of medical records, Employment Security is not able to determine which bonding and medical leaves were triggered by the same pregnancy or birth event and answer why there are more xSelfMed leaves than bonding leaves. It may be that 2SSB 5649 filled a gap in coverage for female employees that were not offered such paid benefits by their employers.

Meanwhile, Employment Security examined the leave mix between full-time (39+ hours/week) and part-time workers. The majority of the changes from early in the program happened in 2022, when full time workers had a relatively larger increase across all leave types compared to part-time workers. After 2022, this trend continues with smaller movement.



Graph 6: Leave share by full time workers.

Comparing across employment types (following graph, page 18) Employment Security found consistent up and down trends by leave types. However, there has been a noticeable difference in the type of leave utilizations between the two types of employees. Full-time employees are more willing to take bonding leaves than part-time employees. There could be many factors driving the discrepancies, with job security and disposable personal time possibly among them.



### Graph 7: Historical leave counts (000') by employment type

# Actuarial pricing review

The Paid Leave program premium rate is implemented on a calendar year basis (January 1 – December 31). To solve for the premium rate, aka contribution rates, that projects the program experience from 2024 to 2027, Employment Security developed an actuarial model to evaluate the program financial condition under two different scenarios. They are:

- (1) Baseline premium rates based on calculations outlined in RCW 50A.10.030<sup>16</sup>.
- (2) Actuarial premium rates with 2% provision<sup>17</sup> excluding interest income.

In this section, the projected program performance from projected rate period 2024 to 2027 under each scenario is summarized. Then the report elaborates on the implications for the Paid Leave program financial condition. Lastly, the report expands the assumptions and methodology supporting this actuarial pricing review.

The following terms are included in this section:

- Projected rate period calendar and leave year (CY-LY) 2024 2027.
- Covered employees (millions) projection of employees during projected period based on historical employee participation and the employment growth forecast.
- Taxable Wages (\$ millions) projection of taxable wages based on latest taxable wage and employment, and the wage and employment growth forecast.

<sup>&</sup>lt;sup>16</sup> For more information, see <u>Substitute Senate Bill 5286 (2023)</u>.

<sup>&</sup>lt;sup>17</sup> Actuarial provision assumption is based on the program financial health as of FY2023 and projected financial health under the proposed actuarial rates. The actuarial provision assumption will be revised accordingly if the future rate actions materially differ from the proposed actuarial scenario.

- Premium rate projection of rates as percentage of the taxable wages and based on projected rate period.
- Assessed premium (\$ millions) projection of premium assessed based on the wages earned during the projected period and expected to be paid by the employees and employers or elective policy holders.
- Premium exemption (\$ millions) projection of assessed premium exempt from small employers.
- Ultimate leave benefit (\$ millions) projection on a leave year basis, and the ultimate payments for the leaves first starting in the projected rate period.
- Administrative expenditures (\$ millions) projection based on steady state assumption that the cost is a fixed proportion of actuarial best estimate premium rates.
- Interest income (\$ millions) interest income based on monthly fund ending balance and the overnight rate forecast from Washington State Treasurer's Office.
- Pricing income (loss) (\$ millions) the projection of net gain or loss based on the implemented premium rates, equal to the assessed premium subtracting the total expenditures net of estimated interest income. A positive pricing income over time will build up the fund reserve to protect the program solvency from unexpected events.
- Leave benefit ratio the projected ratio of leave expenditure to assessed premium.
- Expense ratio the projected ratio of administrative expenditures to assessed premium.
- Combined ratio the projected ratio of total net expenditures (leave expenditures plus administrative expenditures minus interest income) to assessed premium. A combined ratio (pricing) of 100% indicates break even, over 100% means inadequate premium rate, and below 100% implies sufficient premium rate to cover all the expenditures for the pricing year (rate year).
- Fund reserve (\$ millions) the reserve is to protect the fund solvency from unexpected events.

## Pricing review summary

The pricing review for both baseline and actuarial premium rates is based on actuarial assumptions that drive the future leave benefit experience. Employment Security did not include the cost of small employer grants as part of the total expenditures due to its immateriality. In addition, no changes to the voluntary plan participation from the latest year were assumed.

To look ahead, Employment Security expects the future leave benefit experience to continue to trend up at a higher rate than employment and wage growth.

- (1) With the received \$200 million from the Supplemental Operating Budget on June 15, 2023, there will be temporary relief in the baseline premium rate effective Jan. 1, 2024. The baseline premium rate will drop to 0.7357% in 2024 and generate a loss at about \$159 million. After 2024, the baseline premium rate will bounce back to a much higher level (0.9331% in 2025, 0.9937% in 2026, and 0.9725% in 2027) to catch up both the total expenditures and ensure future fund solvency.
- (2) According to the actuarial model, the actuarial premium rate would trend with the future expenditure and start building up the solvency reserve gradually with an average annual income of about \$40 million. The actuarial premium rate will increase gradually to 0.8265% in 2024, followed by 0.8749% in 2025, 0.9134% in 2026 and 0.9524% in 2027.

Each premium rate scenario will result in different combined ratios and generate different pricing income (loss) and fund reserve contributions from CY-LY 2024 to 2027. The following tables summarize the pricing income (loss) from each premium rate scenario:

Amount (million)	CY-LY 2024	CY-LY 2025	CY-LY 2026	CY-LY 2027
(1) Baseline Premium Rates	0.7357%	0.9331%	0.9937%	0.9725%
(2) Covered Employees	3.551	3.569	3.586	3.604
(3) Taxable Wages	\$236,291	\$245,501	\$255,060	\$264,982
(4) Premium Exemption	(\$139)	(\$185)	(\$205)	(\$209)
(5) Assessed Premium	\$1,599	\$2,106	\$2,329	\$2,368
$=(1) \times (3) + (4)$				
(6) Ultimate Leave Benefit	\$1,682	\$1,849	\$2,005	\$2,171
(7) Administration Expenses	\$77	\$85	\$92	\$100
(8) Interest Income	\$1	\$1	\$2	\$2
(9) Pricing Income (Loss)	(\$159)	\$172	\$234	\$99
= (5) - (6) - (7) + (8)				
(10) Leave Benefit Ratio = (6) / (5)	105.2%	87.8%	86.1%	91.7%
(11) Net Expense Ratio = [(7)-(8)]/ (5)	4.8%	4.0%	3.9%	4.1%
(12) Combined Ratio = (10) + (11)	110.0%	91.8%	90.0%	95.8%

Table 7: Projected pricing income (loss) from baseline premium rates

Note: Numbers may not add up due to rounding

Table 8: Projected pricing income (loss) from actuarial premium rates

Amount (million)	CY-LY 2024	CY-LY 2025	CY-LY 2026	CY-LY 2027
(1) Baseline Premium Rates	0.8265%	0.8749%	0.9134%	0.9524%
(2) Covered Employees	3.551	3.569	3.586	3.604

(3) Taxable Wages	\$236,291	\$245,501	\$255,060	\$264,982
(4) Premium Exemption	(\$157)	(\$173)	(\$189)	(\$205)
(5) Assessed Premium	\$1,796	\$1,974	\$2,141	\$2,319
$= (1) \times (3) + (4)$				
(6) Ultimate Leave Benefit	\$1,682	\$1,849	\$2,005	\$2,171
(7) Administration Expenses	\$77	\$85	\$92	\$100
(8) Interest Income	\$1	\$1	\$1	\$1
(9) Pricing Income (Loss)	\$38	\$41	\$45	\$49
= (5) - (6) - (7) + (8)				
(10) Leave Benefit Ratio = (6) / (5)	93.6%	93.6%	93.6%	93.6%
(11) Net Expense Ratio = [(7)-(8)]/ (5)	4.3%	4.3%	4.3%	4.3%
(12) Combined Ratio = (10) + (11)	97.9%	97.9%	97.9%	97.9%

At the end of the projected rate period, each projection of premium rate scenarios will contribute to the program contingency reserve by \$345 million (baseline premium rates) and \$173 million (actuarial premium rates) respectively. At the same time, the program will exempt smaller employers with assessed premium amounts of about \$739 million (baseline premium rates) over the four years.

Based on the projection at CY-LY basis, we use a cash flow model to project the fund balance for next 48 months, four fiscal years (2024-2027). Graphs 7 and 8 illustrate the program cash balance (or fund balance) movement and suggest:

- (1) The baseline premium rates scenario produces the lowest fund balance, deficit of \$21 million in October of FY 2025 and maximum fund balance at \$646 million in November of FY 2027. The ending fund balance by FY 2027 expects to be \$475 million, about 92% of the quarterly paid expenditures.
- (2) The actuarial premium rates scenario produces the lowest fund balance of \$170 million in October of FY 2025, and maximum fund balance of \$512 million in November of FY 2027. The ending fund balance by FY 2027 expects to be \$340 million, about 66% of the quarterly paid expenditures.



#### Graph 8: Monthly fund balance (\$) projection – baseline premium rates

Graph 9: Monthly fund balance (\$) projection – actuarial premium rates



## Data and assumptions

## Covered employees and wages

Usually, the covered employees and taxable wage show seasonal growth. Covered employees exhibit seasonality in the second and third quarter of the year and decline in the fourth and first quarter, and taxable wages present a downward trend from the second to the fourth quarter due to the social security cap. Therefore, the data is analyzed using rolling four quarters to mitigate the seasonality impact to the year-over-year change.

Covered Employees

The covered employees' growth exhibited about 2.4% annual growth over three years between Q2 2020 and Q2 2023 and close to 3.1% annual growth between Q2 2022 and Q2 2023. The observed trend is lower than the June forecast from the state's Economic and Revenue Forecast Council's (ERFC) outlook on Employment growth (4.7% for 2022 and 2.1% for 2023).

Wage data

Employment Security observed consistent wage growth for employees covered under the program between family and medical coverage. The premium wage (taxable wage) for both medical and family coverage presented a trend close to a 9% annual increase over three years and slightly higher than a 9% annual increase between Q2 2022 and Q2 2023.

4 Quarters Rolling	Covered Employees	Family Taxable Wage (\$ million)	Medical Taxable Wage (\$ million)
20203	3,263,419	\$177,821	\$176,158
20204	3,244,192	\$180,268	\$178,982
20211	3,214,591	\$181,559	\$180,399
20212	3,242,945	\$187,592	\$186,552
20213	3,290,167	\$192,328	\$191,439
20214	3,337,808	\$196,790	\$196,061
20221	3,383,429	\$202,818	\$202,082
20222	3,425,091	\$207,575	\$206,838
20223	3,470,208*	\$214,409	\$213,658
20224	3,494,542*	\$216,177	\$215,429
20231	3,516,990*	\$222,949	\$222,195
20232	3,531,583*	\$226,116*	\$225,496*

Table 9: Covered employees and wage data

Note: \* indicates the numbers are estimates due to the correction of employers' wage report

### Projected employment and wage growth

Employment Security assumes the number of covered employees and the annual taxable wages will grow between 2024-2027 based on the latest forecast "June 2023"

from the state's ERFC<sup>18</sup>, and the latest state population forecast "November 2022" from the Forecast and Research Division, Office of Financial Management<sup>19</sup>. The annual growth assumptions leverage both forecasts due to the unemployment rate already hitting an historical low. The table below summarizes the growth rate:

Table 10: Washington state economic and revenue projections, June 2023, State population forecast, November 2022

	Employment	oloyment Wage & Salary		Population
Year	Growth	Disbursements	Price Index	(Age 22-67)
		Growth	Growth	Growth
2023	2.1%	3.7%	3.7%	0.7%
2024	0.2%	4.4%	2.4%	0.4%
2025	0.7%	5.1%	2.0%	0.4%
2026	1.0%	5.4%	1.0%	0.5%
2027	1.0%	5.4%	2.0%	0.5%

## Leave benefit

The program started receiving claims on Jan. 1, 2020, observing significant volatility in the first and second quarters of 2020, so that period was excluded from the following analysis. The ultimate leave benefit is determined by how often covered employees use the program, the length of leaves taken, and the taxable wages of the covered employees.

### Leave benefit utilization

The leave benefit utilization rate (UR) is the number of leave claims per thousand covered employees. Some of the initial filed claims will be denied after review, so the approved UR is the number of leave claims per thousand covered employees not being denied after the adjudication process.

The program's initial filed medical leave utilization rate produced a steeper upward trend compared to family leave since 2022, with signs that the trend is slowing down. The annual trend was 9.3% between Q3 2020 to Q3 2023 for family and 14.8% for medical. Meanwhile, Employment Security observed improved approval rates of both coverages, which continued the upward trend in the most recent quarter.

<sup>&</sup>lt;sup>18</sup> Washington State Economic and Revenue Forecast, June 2023 Volume XLVIV, No. 2

<sup>&</sup>lt;sup>19</sup> State of Washington Forecast of the State Population, November 2022 Forecast

The program started recording denial reasons in detail after 2022 and presented a consistent mix of denial reasons since then. There were about 30% denial from self-withdrawn, 30% from insufficient hours, 15% from missing documents, 11% due to "wrong" filed timing, and 5% maxing their leave weeks.

Leave		Family	/	Medical				
Quarter	UR	Approval%	Approved UR	UR	Approval%	Approved UR		
20203	6.48	81.3%	5.27	6.83	77.4%	5.29		
20204	6.16	84.1%	5.18	7.13	77.3%	5.51		
20211	6.57	84.2%	5.54	7.52	78.1%	5.87		
20212	7.06	86.8%	6.13	7.89	80.6%	6.37		
20213 (E)	7.75	86.6%	6.72	8.52	79.6%	6.78		
20214 (E)	7.18	87.2%	6.26	7.88	81.2%	6.40		
20221 (E)	7.51	86.7%	6.51	8.48	79.9%	6.78		
20222 (E)	7.27	87.9%	6.39	8.90	81.4%	7.25		
20223 (E)	7.52	89.3%	6.71	9.54	82.5%	7.87		
20224 (E)	7.63	90.2%	6.89	9.11	82.5%	7.51		
20231 (E)	8.11	89.2%	7.23	10.14	82.4%	8.36		
20232 (E)	8.12	90.5%	7.35	9.99	84.3%	8.42		

Table 11: Historical benefit utilization rate and approval rate

Note: (E) indicates the rates are estimates based on the reserve analysis and follow claims reserving manual<sup>20</sup>.

The projected trend for leave UR is based on the observed historical trend and leave type mix change. A slightly downward movement in the family projected approval rate due to the increasing share of care leaves is expected. For the medical leaves, Employment Security expects xSelfMed claims to normalize and SelfMed trend to take over in the long run.

Table 12: Projected annual trend for leave approved utilization rates.

Drojected		Family		Medical			
Projected Period	UR	Approval%	Approved	UR	Approval%	Approved	
Periou			UR			UR	
Latest Q +4Qs	2.5%	0.6%	3.1%	2.9%	1.9%	4.8%	
Latest Q +8Qs	1.2%	0.3%	1.6%	1.8%	1.6%	3.0%	
Latest Q +12Qs	0.6%	0.2%	0.7%	0.9%	0.9%	1.4%	
Latest Q +16Qs	0.6%	0.2%	0.7%	0.9%	0.9%	1.4%	

With the projected trend, Employment Security calculates the projected approved UR at a quarterly basis, then computes the projection of approved leave count using the product of projected covered employees and the projected approved utilization rate.

<sup>&</sup>lt;sup>20</sup> Claim reserving methods could be found in the Institute and Faculty of Actuaries *Claims Reserving Manual* 

### Leave benefit cost per claim

The cost of each non-denied claim, namely leave benefit cost per claim, is mainly dependent on the length of the leave (duration) and the wage of the claimants. The longer the leave duration or the more the claimants earned in the qualified period, the higher the cost of the leave benefit.

The ultimate benefit per family claim was around \$5,900 three years ago and above \$7,000 now. A similar increase was observed for medical leaves, which went from an average cost of about \$5,100 to \$6,600. The increase per claim is mostly driven by the claimants' weekly wages.

The average leave duration varies by claim type with family leave duration slightly longer than 8 weeks and medical leave duration about 7.4 weeks. Recently, family leaves showed a slightly decreasing trend in its leave duration due to a lower bonding claim share from 77% to 70%. Medical had a flat paid duration before Q2 2022 and exhibited a gradual upward trend since then.

		Family		Medical			
Leave	Weekly	Duration	Benefit per	Weekly	Duration	Benefit per	
Quarter	Benefit (\$)	(Weeks)	Claim (\$)	Benefit (\$)	(Weeks)	Claim (\$)	
20203	\$689	8.6	\$5,930	\$698	7.3	\$5,103	
20204	\$693	8.3	\$5,778	\$707	7.0	\$4,929	
20211	\$733	8.4	\$6,122	\$757	7.3	\$5,494	
20212	\$762	8.3	\$6,348	\$772	7.3	\$5,624	
20213 (E)	\$764	8.3	\$6,325	\$773	7.1	\$5,521	
20214 (E)	\$763	8.4	\$6,379	\$780	7.2	\$5,596	
20221 (E)	\$797	8.4	\$6,702	\$809	7.3	\$5,865	
20222 (E)	\$820	8.2	\$6,764	\$827	7.3	\$6,056	
20223 (E)	\$827	8.1	\$6,722	\$826	7.4	\$6,135	
20224 (E)	\$825	8.1	\$6,682	\$833	7.4	\$6,126	
20231 (E)	\$859	8.1	\$6,918	\$866	7.4	\$6,384	
20232(E)	\$878	8.0	\$7,038	\$887	7.4	\$6,602	

Table 13: Historical ultimate leave benefit per claim

Note: (E) indicates the rates are estimates based on the reserve analysis and follow claims reserving manual<sup>21</sup>.

Projected leave benefit per claim is mainly based on wage growth with seasonality adjustment, and the leave duration will change slightly from the mix shift by leave type.

<sup>&</sup>lt;sup>21</sup> Claim reserving methods could be found in the Institute and Faculty of Actuaries *Claims Reserving Manual* 

Projected	Family			Medical		
Period	Weekly Duration		Benefit per	Weekly	Duration	Benefit per
	Benefit		Claim	Benefit		Claim
Latest Q +4Qs	7.4%	-1.0%	6.3%	6.9%	0.2%	7.2%
Latest Q +8Qs	7.4%	-0.5%	6.9%	6.9%	0.1%	7.0%
Latest Q +12Qs	6.4%	0.0%	6.4%	6.5%	0.1%	6.5%
Latest Q +16Qs	6.4%	0.0%	6.4%	6.5%	0.1%	6.5%

Table 14: Projected annual trend for leave benefit per claim

Applying the projected trend to the latest cost per claim, Employment Security calculates the projected leave benefit per claim including seasonal adjustments. The projected leave benefits are the product of the projected leave benefit per claim and the projected approved leave count.

### Administrative expenses

Employment Security assumes a 4.6% flat ratio of estimated leave benefit for the projected rate period. The assumption is based on the following:

- Staff salaries make up most of the program expenses.
- The program is still in its growing stage and continues to build up staffing and capacity to support the public.
- Administrative expenses are likely to grow with the program capacity.

## Interest income

Employment Security assumes 1.0% interest rate accrual on the Paid Leave account.

# Appendix

## Appendix I - Paid Leave administrative data

The actuarial analysis relied largely on Paid Family and Medical Leave Administrative data. It is comprised primarily of administrative records supplied by employers (regarding wages reporting and premium assessments) and benefit customers (regarding claim types, durations, and payments).

Some of the administrative records from employers were adjusted after initial submission, and the corrected data as of June 2023 is reflected in the analysis.

Wage reports are required on a quarterly basis. Employers submit wage reports to Employment Security on a quartertly basis. The principal data pulled from these wage reports include the total hours worked and gross wage paid within the prior quarter for each employee. Using these records, Employment Security assesses premiums for each employer, which are remitted toEmployment Security in each month following the end of the quarter. Reporting months are April, July, October, and January. While employers report total gross wages for employees, premiums are only assessed on wages up to the social security wage cap<sup>22</sup>.

Premium responsibility is split between employees and employers. Employers may withhold from employees up to 100% of the family leave premium and up to 45% of the medical leave premium. Employers with 50 or more employees are responsible for 55% of the medical leave premium. Small businesses (employers with 49 or fewer employees) are exempt from paying the employer portion of the premium. However, when a small business receives a small business grant, they are required to pay the employer portion of the premium for the next three years. Those who are self-employed and independent contractors electing coverage are responsible only for the employee share of the premium. Employers with approved voluntary plans are still required to submit wage reports each quarter but if they offer both a family and medical plan they are not assessed premiums. If an employer offers family only or medical only voluntary plan they are assessed premiums for the plan they do not offer.

Those who are self-employed or working as independent contractors may choose to opt-in. This includes individuals who work independently and business owners who may have

<sup>&</sup>lt;sup>22</sup> Employers report total gross wages for employees; however, premiums are only assessed on wages up to the social security wage cap. This is \$160,200 in 2023. Annual social security wage caps are produced by the Social Security Administration and each year's wage cap can be found <u>here</u>.

employees already covered by the program and would like to obtain coverage for themselves. The initial participation period for elective coverage is three years, after which participation changes to an annual basis. Those electing coverage become eligible for leave at the beginning of the quarter after they opt-in and they have met the eligibility criteria of having worked 820 hours in the previous year.

Claim and benefit data are the other primary sources of administrative records. The data records the claim activities from the moment customers apply for benefits. When applying, we captured the date of the claims being filed, namely reported, and the type of claim leave being applied for. Through the application process, customers must verify employment history, provide a medical certification (if required), and dates of expected leave. They may also provide additional demographic information such as date of birth, gender, and race/ethnicity. To be eligible for benefits an individual must have worked 820 hours in either the base or alternative qualifying period and experience a qualifying event, such as a serious medical condition or the birth/placement of a child. Applicants approved to take leave must also submit weekly claims for each week of leave, relaying information about how many leave hours they took, whether they used other benefits (e.g., unemployment), and other information necessary to calculate the week's benefit payment<sup>23</sup>. Individuals are able to take up to the total number of hours in their typical work week and must take at least eigh consecutive hours of leave in a week. Using the administrative data, Employment Security is able to get accurate counts of applications and approved claims broken out by family or medical, as well as provide total weeks of leave used and total benefits paid on each claim for each customer.

The actuarial analysis relied primarily on the claims reported information as of evalution date, including reported and denied count and the benefits paid amount, weeks, and hours. All of the claims are classified on a claim reporting basis.

Employment Security has not discounted future investment earnings, nor has Employment Security explicitly made inflation adjustment to claim amount payable in the future. However, future claim benefit inflation (wage growth) to the extent evident in the past claim benefit development and the assumptions from the Economic Revenue and Forecast Council has been implicitly allowed.

To conduct claim valuation and pricing analysis, the data was divided into two categories: family and medical. These categories were further subdivided as follows:

Family

Bonding

<sup>&</sup>lt;sup>23</sup> Benefit amounts, duration, and calculation can be found in <u>RCW 50A.15.020</u>.

Care

Medical

- SelfMed
- xSelfMed (Birth, pregnancy related claims)

The data provided in this report come from the same source data as other published Paid Leave program administrative data. Employment Security has attempted to reconcile the claim amount, premium assessed (ending March 2023) used in our analysis against unaudited financial statement with claim payment and premium receivable used. As a result, Employment Security found no significant difference in the data. We have assumed that analysis drawn from the data is reasonable for conclusion and recommendations.

## Appendix II – Premium rates methodologies

(1) The baseline premium rate is defined in RCW 50A.10.030<sup>24</sup>, and the calculated premium rate is the ratio of (i) 140% of the prior fiscal year's expenses, including the total amount of benefits paid and Employment Security's administrative costs, substract the balance of the family and medical leave insurance account as of September 30 (ii) prior fiscal year's taxable wages. To illustrate it in formulation,

Baseline Premium rate

 $\frac{1.4 \times (claim \ paid \ benefits \ \& \ administrative \ Cost \ of \ preceding \ fiscal \ year) - fund \ balance}{Taxalbe \ wage \ of \ preceding \ fiscal \ year}$ 

(2) The actuarial premium rates are using the ratemaking method to ensure the projected premium is enough to cover the expected future expenditures and protect the program from insolvent at given scenarios or confidence level. All the components feeding the formula are the projection of given rate year.

Actuarial Premium Rate<sub>i</sub>

 $= \frac{Leave\ Expenditure_i + Administrative\ Cost_i}{Taxable\ Wage\ X\ Exeption_i} \div (1 - Target\ Combined\ Ratio)$ 

Notation

*i* = pricing year or rate year

 $\textit{Leave Expenditure} = \textit{Covered employees} \times \textit{Leave Frequency} \times \textit{Leave Severity}$  where

Leave Frequency = Incident Rate × Approval Rate

Leave Severity = Leave Duration × Weekly Benefit

<sup>&</sup>lt;sup>24</sup> Statute was amended by <u>Substitute Senate Bill 5286</u> in 2023.

Taxable Wage X Exemption = Taxable Wage  $\times (1 - Premium exemption\%)$ 

Target Combined Ratio = 1 - Provision of adverse deviation + Interest Income%

## Appendix III – Provision of adverse deviation

Employment Security conducts actuarial reserving analysis while estimating the ultimate leave benefit, and the estimation of the contingency reserve is performed based on the wellrecognized approach documented by Thomas Mack in "Measuring the Variability of Chain Ladder Reserve Estimation" (Mack Method). The idea is to bake the provision on top of the best estimated ultimate leave benefit for unexpected adverse events.

The Mack Method quantifies the variability of chain ladder reserve estimates without assuming any specific distribution and requiring no simulation by establishing a formula for the standard error as an estimate for the standard deviation of the outstanding claim reserves.

From the Chain Ladder method, the outstanding claims reserve for loss month is:

$$R_i = C_{i,I} - C_{i,k}$$

There is only a very small probability for  $C_{i,I}$ , a point estimate for the ultimate claim benefits amount to be exactly equal to the actual ultimate claim benefits amount. Employment Security therefore wants to know the average distance between the estimated  $C_{i,I}$ , and the future realized  $C_{i,I}$ 

The standard error (s.e.) ( $C_{i,I}$ ) of  $C_{i,I}$  is the standard error s.e. ( $R_i$ ) of the reserve estimate which is calculated as

$$((s.e.(R_i))^2 = C_{il}^2 \sum_{k=l+1-i}^{l-1} \frac{\sigma_k^2}{\lambda_k^2} \left[ \frac{1}{C_{ik}} + \frac{1}{\sum_{j=1}^{l-k} C_{jk}} \right]$$

Where

$$\sigma_k^2 = \frac{1}{I - k - 1} \sum_{j=1}^{I - k} C_{jk} \left[ \frac{C_{j,k+1}}{C_{jk}} - \lambda_k \right]^2$$

and the standard error of the overall reserve estimate is calculated as

$$((s.e.(R_i))^2 = \sum_{i=2}^{I} \left\{ ((s.e.(R_i))^2 + C_{iI} \left[ \sum_{j=i+1}^{I} C_{jI} \right] \sum_{k=I+1-i}^{I-1} \frac{2\sigma_k^2 / \lambda_k^2}{\sum_{n=1}^{I-k} C_{nk}} \right\}$$

*PFML Actuarial Annual Report* Washington State Employment Security Department Notation:

I = Total number of Loss Months analysed

 $C_{i,k} = Cumulative \ claims \ amount \ for \ Loss \ Month \ i \ and \ development \ month \ k$ 

 $R_i = IBNR$  estimate for loss month i

R = Total IBNR

 $\lambda_k = Link ratio for development month k$ 

IBNR = incurred but not reserved claim

## Appendix IV - Key recommendations

#### Data

The Office of Actuarial Service should invest resources in building its data warehouse. Given the program growth and obligation to the public, it's essential to have a consistent, accurate and complete data source to capture all activities with potential financial impact. A single source of truth can provide better and faster insights to all parties, enabling transparency to the public and all stakeholders.

### Financial statements

The Office of Actuarial Service and the OFM should work together to produce a GAAP report meeting the insurance industry standards, and the Office of Actuarial Service should put up a roadmap to produce SAP (Statutory Accounting Principles) financial statements, including balance sheet, income statement and cash flow statement.

With the accurate financial record, Employment Security will have better and consistent understanding of the program's financial health at a more refined level and be able to properly monitor and regulate the program's financial health.

### Premium rate

 Premium exemption: the program should keep in mind the effective rate collected by the program is about 8% (CY 2023) lower due to the exemption to small employers with less than 50 employees. Including this information will be helpful when communicating annual rate changes.  Program solvency standard: the program solvency standard should be used forward looking due to the substantial growth of the program. In addition, suggest stress testing if policy changes, or new coverages will have profound impact to the benefit payment.

### Conflicting wages

Certain types of income, if received at the same time as Paid Leave benefits, could be in conflict. There should be a systematic way to ensure these incomes are always being reported to the program while applying for leave benefit.

### Premium audit

The program should enforce timely reporting and payment. Employment Security observed certain types of accounts missing payment over 3-4 quarters in 7 out of 9 random samples during 2022.