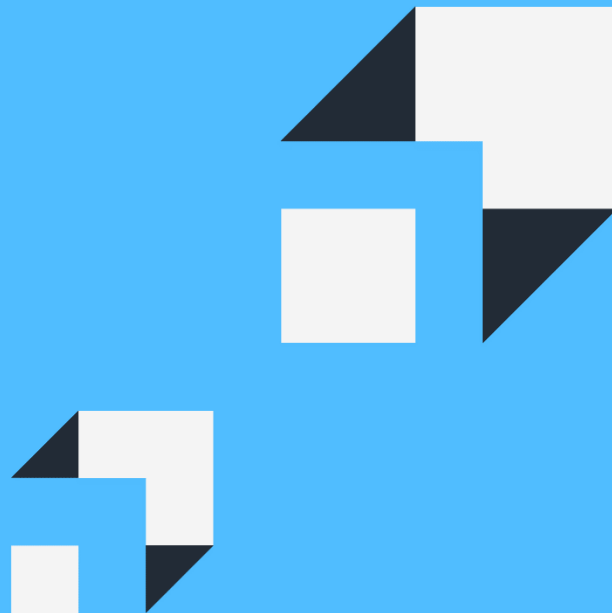# WA Cares Fund Actuarial Valuation as of June 30, 2024

Commissioned by the Washington Office of the State Actuary

December 10, 2024

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Milliman

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APPENDICES

I.   OVERVIEW

The Washington State Office of the State Actuary (OSA) engaged Milliman to provide actuarial analysis for WA Cares Fund, referred to as the Long-Term Services and Supports (LTSS) Trust Program in current law (RCW 50B.04[1]). This report is intended to provide actuarial analysis in support of OSA's duties outlined in RCW 50B.04.020. We also understand the report findings will be used to help inform the WA Cares Fund Risk Management Framework, approved by the LTSS Trust Commission on November 10, 2021,[2] for ongoing program monitoring.

This report summarizes a valuation of the program as of June 30, 2024. Our analysis reflects the program defined in current law as of the publication of this report. To the extent details of program features are not included in the law, we relied on feedback from OSA and the Washington State Department of Social and Health Services (DSHS) for modeling parameters and assumptions.

WA Cares Fund began collecting revenue from participants on July 1, 2023. This report serves as our first actuarial valuation subsequent to the July 1, 2023 start date. As the program matures and benefits become payable starting July 1, 2026, modifying and / or expanding the metrics in this valuation report should be considered, as appropriate.

COMMENTS ON LONG-TERM ACTUARIAL PROJECTIONS

For the purposes of this report, we use the terms LTSS and long-term care (LTC) interchangeably for broadly describing the services covered under WA Cares Fund. Per discussions with OSA and DSHS, we modeled WA Cares Fund cash flows over a 75-year horizon, as 75 years is a common period over which to evaluate a public program using a "pay-as-you-go" approach through a dedicated trust fund.

Actual expenditures and related required revenue will inevitably vary from the estimates shown throughout the report given the need to project results many years into the future. Examples of items that are difficult to project years into the future include the level of utilization of LTC services over time, the duration of care needs, charge trends by site of care, the emergence of new service and care modalities, wage growth and labor force participation, mortality rates for individuals not receiving care, mortality rates for individuals receiving care, the effectiveness of regulations and procedures to determine coverage and qualifications for benefits, migration patterns into and out of Washington, and program participation for individuals that can voluntarily opt in or opt out of the program. Section V provides further background on our modeling methodology and assumptions.

Any reader of this report should possess a certain level of expertise and background in actuarial projections related to financing LTSS / LTC benefits to assist in understanding the significance of the assumptions used and their impact on the illustrated results. The reader should be advised by actuaries or other professionals competent in the area of actuarial projections of the type in this report (among other experts) so as to properly interpret the estimates. The information included in this report should only be considered in its entirety. Please see Section VI for additional caveats and limitations regarding this report.

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[1] Washington Legislature (2024). Revised Code of Washington 50B.04. Retrieved on November 15, 2024 from
https://app.leg.wa.gov/RCW/default.aspx?cite=50B.04

[2] LTSS Trust Commission (2021). WA Cares Fund Risk Management Framework. Retrieved on October 23, 2024 from
https://leg.wa.gov/osa/additionalservices/Documents/LTSS.Trust.Commission.Risk.Management.FrameworkFINAL.pdf

II.   EXECUTIVE SUMMARY

WA Cares Fund is a social insurance program covering LTSS through a limited lifetime benefit. Individuals can qualify for benefits by contributing premium for the required number of years under one of the program's three qualification pathways and meeting the program's benefit eligibility threshold. WA Cares Fund assesses premiums as an employee-only payroll deduction on all wages for non-exempted individuals and self-employment income. Collected premium is deposited into a dedicated trust fund. Investment earnings on the fund will also be deposited into the fund, and benefits and administrative costs will be paid from the fund.

Our analysis included actuarial analysis under various scenarios and sensitivity tests. We use the following terms when describing our baseline analysis:

- Baseline refers to analysis estimates of the program under current law using a set of demographic, economic, and morbidity assumptions. The Baseline is comprised of multiple scenarios that reflect variation in the analysis for estimated uncertainty due to voluntary components of the program. All outcomes in the range should be viewed as equally likely given the uncertainty of voluntary participation.

- Base Scenario refers to a specific scenario from the Baseline. The Base Scenario serves as an "anchor middle point" for assumption sensitivity testing. This allows testing to be illustrated as incremental impacts to a point estimate for ease of presentation. The Base Scenario is presented as a point estimate, but is not intended to be interpreted as a "most likely" scenario.

Exhibit 1 attached to this report includes a detailed summary of the key program features under statute (as of the report date) and the modeling design parameters used for the Baseline analysis. Exhibit 2 contains projected Base Scenario cash flows. A glossary of terms and metrics used in this report is provided in Appendix C, which includes the following key metrics presented in this Executive Summary:

- **Actuarial balance** refers to the fund sufficiency (or deficiency) to pay expected program expenditures over the 75-year projection horizon on a present value basis. Actuarial balance is a term also used by the Social Security Administration (SSA) in their annual Old-Age, Survivors, and Disability Insurance (OASDI) Trustees Report.[3] In this valuation report, we express actuarial balance as both a dollar value and a percentage of claims (including claim expenses) to give users of this report a sense for both the value and the magnitude of the balance.

- **Fund ratio** represents the projected fund balance as a percentage of program expenditures in any given year. This metric can be used to evaluate the fund's sufficiency to pay expected benefit payments in a particular program year.

- The **fund depletion year** refers to the year (if any) during which we project the fund to reach $0 under a given modeling scenario over the 75-year projection horizon. The **benefit reduction factor** is related to the fund depletion year. Specifically, once the fund is depleted, the benefit reduction factor is the percentage that benefits must be reduced through the end of the projection to maintain program solvency. Please note, many modeled scenarios do not suggest the fund will be depleted at any point during the projection horizon. We indicate such scenarios with a fund depletion year and benefit reduction factor of "n/a."

SUMMARY OF KEY FINDINGS

Our analysis produces a range of positive and negative actuarial balances under the Baseline, including a positive actuarial balance under the Base Scenario. This range is further widened when considering our assumption sensitivity testing, as the actuarial balance and other program metrics are highly sensitive to the underlying modeling assumptions. The fund ratio is estimated to exceed 100% for the next 75 years under most scenarios, including the Base Scenario. Figure 1 summarizes the key findings for the Base Scenario, Baseline, and assumption sensitivities.

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[3] Social Security Administration (2024). 2024 OASDI Trustees Report. Retrieved October 23, 2024 from https://www.ssa.gov/OACT/TR/2024/tr2024.pdf

Figure 1
Washington Office of the State Actuary
Summary of Key Findings

Base Scenario

Actuarial balance is $4.4 billion under the Base Scenario

The actuarial balance would be negative if modeled claims were 3.5% or more higher

The fund ratio is estimated to be greater than 100% for the next 75 years

Baseline

Actuarial balance varies from negative $11.9 billion to positive $26.4 billion

Under high adverse selection, benefits need to be reduced by 25% starting in 2078 when the fund is depleted

Under low adverse selection, the fund ratio is estimated to be greater than 100% for the next 75 years

Assumption Sensitivities

Actuarial balance varies from negative $96.1 billion to positive $130.5 billion

Under the most adverse scenario, benefits need to be reduced by 46% starting in 2054 when the fund is depleted

Under the most positive scenario, the fund ratio is estimated to be greater than 100% for the next 75 years

BASE SCENARIO KEY FINDINGS

We project an actuarial balance of $4.4 billion for the Base Scenario, which indicates a sufficiency position as of the valuation date for WA Cares Fund over the projection horizon. As shown in Figure 2 below, the actuarial balance for the Base Scenario is 3.5% as a percentage of the present value (PV) of claims, which indicates that the actuarial balance would be negative if the present value of modeled claims were more than 3.5% higher than projected. Figure 2 presents the calculation of the Base Scenario actuarial balance using the annual estimated net investment earned rate (NIER) to discount future cash flows.

Figure 2
Washington Office of the State Actuary
Base Scenario Actuarial Balance
*Values in Billions	Discount Rate = NIER[1]*

Present value of future premiums	$130.4	(1)
Present value of future claims	$118.6	(2)
Present value of future expenses	$8.7	(3)
PV of future premium less expenditures	$3.1	(4) = (1) - (2) - (3)
Modeled fund level as of June 30, 2024	$1.3	(5)
Cost of 100% fund ratio target: year 75	$0.0	(6)
Actuarial balance	**$4.4**	(7) = (4) + (5) - (6)
As a percent of claims[2]	**3.5%**	(7) / [(2) x claims expense load]

[1] All amounts in billions; using net investment earned rates (NIER) for discounting.
[2] We also calculate actuarial balance as a percentage of claims (including claim expenses).

Section III of this report contains additional findings and metrics related to projections of the Base Scenario.

BASELINE KEY FINDINGS

The Baseline results, rather than the Base Scenario results alone, should be considered when evaluating the financial position of WA Cares Fund as the Baseline considers different participation rates and adverse selection related to the voluntary aspects of the program. Among the scenarios tested in the Baseline, we observed actuarial balances ranging from negative $11.9 billion to positive $26.4 billion.

Figure 3 below illustrates the projected fund ratio by year for the Base Scenario (blue line) alongside the high and low adverse selection scenarios (gray lines), which represent the range of Baseline scenarios. The blue dotted line represents a 100% target fund ratio. As shown in the figure, the fund ratio level varies greatly depending on the level of assumed adverse selection.

FIGURE 3: BASELINE FUND RATIO
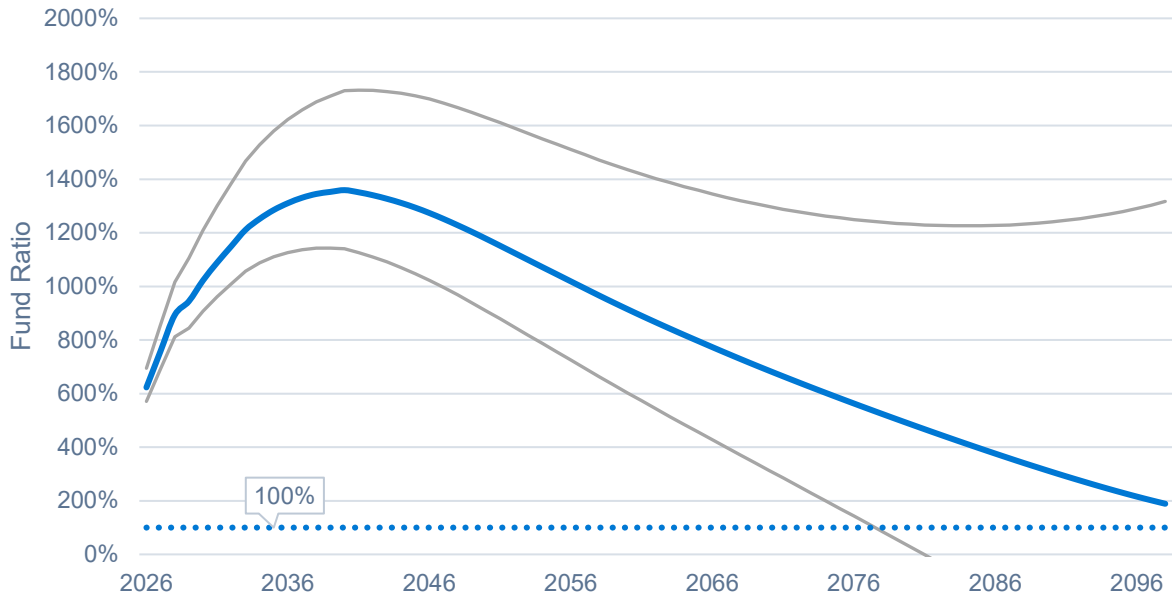
Section III of this report contains additional findings and metrics related to projections of the Baseline.

ASSUMPTION SENSITIVITIES KEY FINDINGS

The sensitivity of the modeling results under different conditions and the program's ability to adjust features when experience materializes differently from expectations are vital components for the ongoing monitoring of the program. Actuarial balance varies from negative $96.1 billion to positive $130.5 billion under the assumption sensitivity scenarios.

Figure 4 below illustrates the projected fund ratio by year for the Base Scenario (blue line) alongside each of the assumption sensitivities (gray lines). The blue dotted line represents a 100% target fund ratio. As shown in the figure, the fund ratio pattern varies greatly based on the sensitivity test. Many sensitivity tests are projected to have a positive fund level throughout the 75-year projection horizon, while other tests result in a depleted fund level at some point during the projection horizon.

FIGURE 4: SENSITIVITIES FUND RATIO
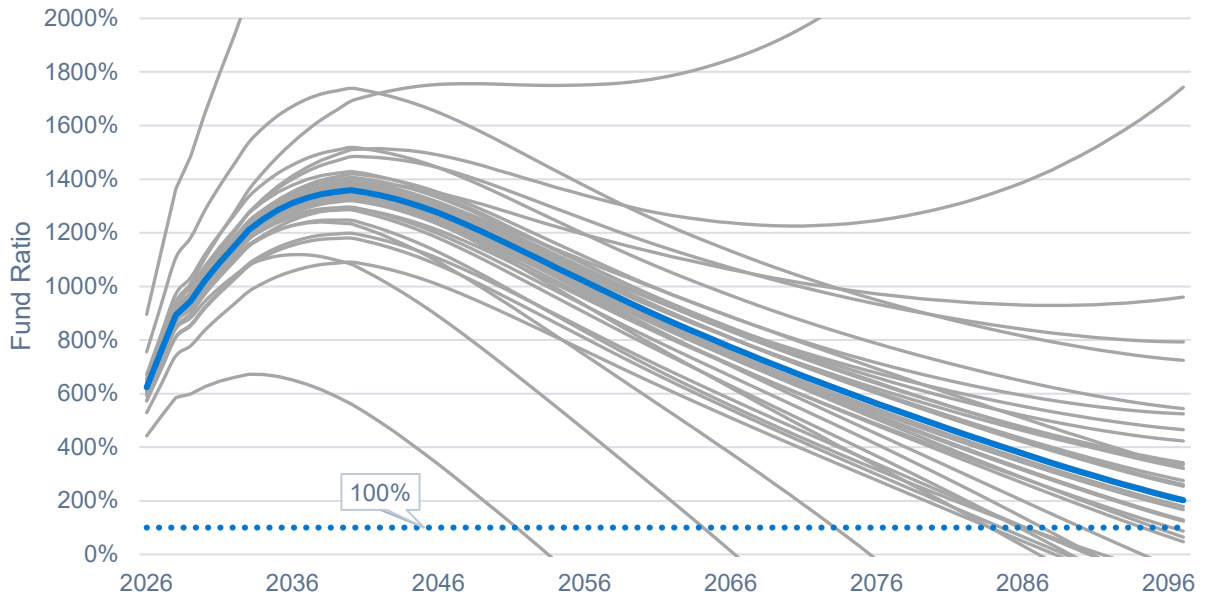
Section IV of this report contains detailed results related to assumption sensitivity testing.

III. BASELINE RESULTS

Our Baseline analysis includes projections for WA Cares Fund using our best estimate modeling assumptions. The Baseline includes multiple scenarios for potential adverse selection arising due to uncertainty in projecting voluntary components of the program. In this section, we present the highest and lowest adverse selection scenarios modeled. All outcomes in the Baseline should be viewed as equally likely. Within our Baseline, we include a Base Scenario of adverse selection to serve as an "anchor middle point" but this should not be interpreted as a "most likely" scenario. We also use the Base Scenario as an anchor point for assumption sensitivity testing in Section IV.

In our modeling, we considered the impact of different potential levels of adverse selection for the following populations that may voluntarily choose to participate in WA Cares Fund:

- Individuals moving out of state and electing portable benefits
- Employees who attest to having LTC insurance purchased before November 1, 2021
- Self-employed individuals
- Veterans of the United States military with a service-connected disability of 70 percent or greater
- Spouses or registered domestic partners of an active-duty service member
- Employees who hold a nonimmigrant visa for temporary workers
- Employees of a Washington employer, but who maintain a permanent, primary residence outside of Washington
- Federally recognized tribes

Background on assumptions and methodology used to model the adverse selection scenarios is provided in Section V.

ACTUARIAL BALANCE

Across all Baseline tests, the actuarial balance ranges from negative $11.9 billion (high adverse selection) to positive $26.4 billion (low adverse selection) using a valuation date of June 30, 2024. For the Base Scenario, we estimate WA Cares Fund to have an actuarial balance of $4.4 billion.

Figure 5 below presents the components used to calculate the actuarial balance under the Base Scenario assuming future cash flows are discounted using the NIER.

Figure 5 Washington Office of the State Actuary Base Scenario Actuarial Balance *Values in Billions | Discount Rate = NIER[1]*		
Present value of future premiums	$130.4	(1)
Present value of future claims	$118.6	(2)
Present value of future expenses	$8.7	(3)
PV of future premium less expenditures	$3.1	(4) = (1) - (2) - (3)
Modeled fund level as of June 30, 2024	$1.3	(5)
Cost of 100% fund ratio target: year 75	$0.0	(6)
Actuarial balance	**$4.4**	(7) = (4) + (5) - (6)
As a percent of claims[2]	**3.5%**	(7) / [(2) x claims expense load]

[1] All amounts in billions; using net investment earned rates (NIER) for discounting.
[2] We also calculate actuarial balance as a percentage of claims (including claim expenses).

In Figure 6 below, we summarize the actuarial balance for the Baseline range using the same NIER discounting.

Figure 6 Washington Office of the State Actuary Baseline Actuarial Balance Discount Rate = NIER[1]		
Actuarial Balance by Scenario	**Actuarial balance ($ billions)**	**As a percent of claims**
Base scenario	$4.4	3.5%
High adverse selection	($11.9)	(8.7%)
Low adverse selection	$26.4	22.8%

[1] Using net investment earned rates (NIER) for discounting.

SENSITIVITY TO DISCOUNT RATE

The discount rate is a key assumption when evaluating projected cash flows that occur many years in the future, such as our projections for WA Cares Fund using a 75-year projection horizon. To illustrate the sensitivity of the discount rate, we provide the actuarial balance in Figure 7 below under three additional discounting scenarios: 3.0%, 4.0%, and 5.0%, respectively. Given the importance and results sensitivity related to the discount rate, we provide many of the results in this report under NIER discounting, as well as these three additional scenarios. As shown in Figure 7, we estimate a positive actuarial balance under most discount rate assumptions, but estimate a negative actuarial balance under the 3.0% scenario.

Figure 7 Washington Office of the State Actuary Base Scenario Actuarial Balance				
	Discount Rate			
Actuarial Balance	**NIER**	**3.0%**	**4.0%**	**5.0%**
Amount ($ billions)	$4.4	($5.9)	$3.8	$8.7
As a percent of claims	3.5%	(2.8%)	2.9%	9.9%

Figure 8 below presents the range of actuarial balance across the Baseline. As a percent of claims, the actuarial balance varies from negative 14.5% to positive 30.2% across all adverse selection and discount rate scenarios.

Figure 8 Washington Office of the State Actuary Baseline Actuarial Balance				
	Discount Rate			
Actuarial Balance by Scenario	**NIER**	**3.0%**	**4.0%**	**5.0%**
Amount ($ billions)				
Base scenario	$4.4	($5.9)	$3.8	$8.7
High adverse selection	($11.9)	($33.9)	($13.8)	($2.8)
Low adverse selection	$26.4	$30.2	$27.6	$25.0
As a percent of claims				
Base scenario	3.5%	(2.8%)	2.9%	9.9%
High adverse selection	(8.7%)	(14.5%)	(9.3%)	(2.9%)
Low adverse selection	22.8%	15.4%	22.1%	30.2%

FUND RATIO

WA Cares Fund will use premiums and investment income deposited into a dedicated trust fund to finance the program's benefits and expenses. Per discussions with OSA and DSHS, we modeled the fund on a "pay as you go" basis over a 75-year horizon. In other words, we modeled credits to the fund each year for premiums collected and investment income earned (collectively, revenue) and debits from the fund each year for benefits and expenses paid (collectively, expenditures). This implies that for any given year in our modeling, the fund level represents the accumulation of past revenue and expenditures.

The fund ratio, which is equal to the projected fund balance as a percentage of program expenditures, is one metric that can be used to evaluate the fund's sufficiency to pay expected benefit payments in any program year.

Figure 9 below shows the projected fund ratio by year (blue line). As shown in the figure, under the Base Scenario, we expect the fund ratio to be above 100% in every year, meaning we expect the fund will always have a sufficient balance in each year to pay program expenditures.

Figure 9 also displays expenditures by year (on an undiscounted basis; shown in green) to show how expenditures vary over the 75-year projection horizon. The figure shows that the fund level increases in the early years of the 75-year projection horizon when revenue exceeds expenditures. WA Cares Fund vesting rules are a significant driver of this pattern. The fund level decreases in the later years of the 75-year projection horizon when expenditures exceed revenue.

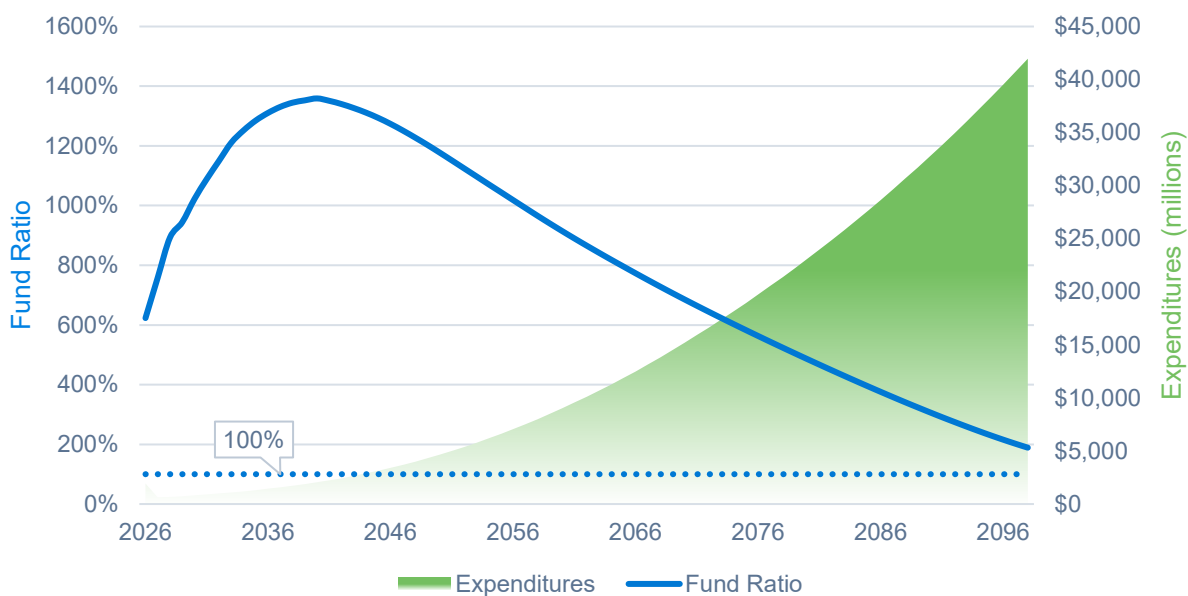**FIGURE 9: BASE SCENARIO FUND RATIO**

Figure 10 below illustrates the projected fund ratio by year for the Base Scenario (blue line) alongside the high and low adverse selection scenarios (gray lines) that make up the Baseline. The blue dotted line represents a 100% target fund ratio. As shown in the figure, the fund ratio pattern varies greatly depending on the level of assumed adverse selection.

FIGURE 10: BASELINE FUND RATIO
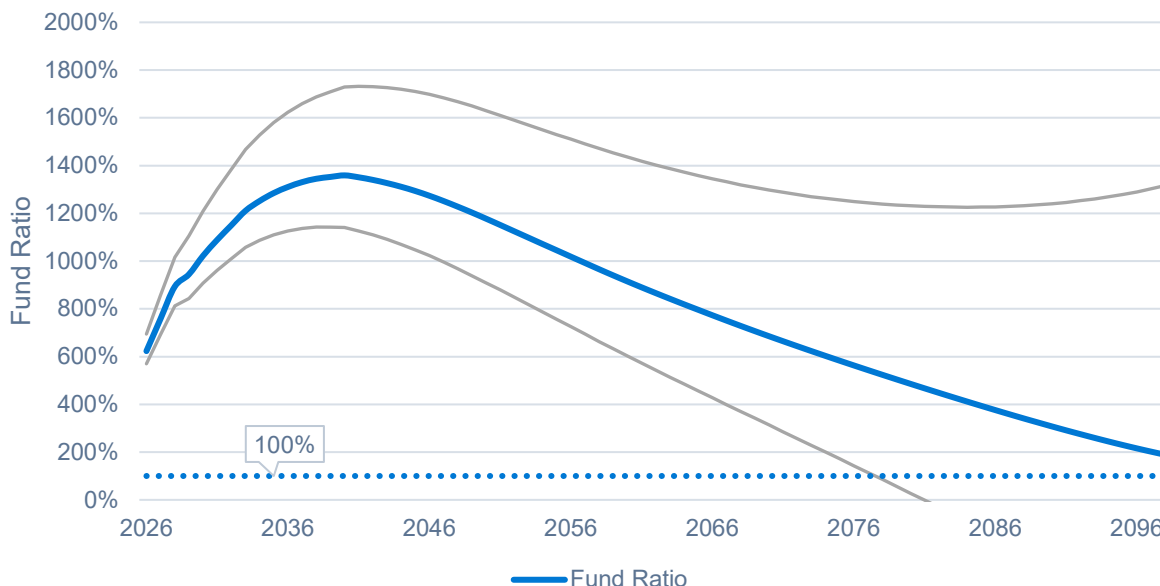
FUND DEPLETION

Analyzing the earliest year the fund is depleted (if any) provides another metric to assist in evaluating WA Cares Fund's cash flows. The fund depletion year refers to the year during which we project the fund to reach $0 under a given modeling scenario over the 75-year projection horizon. The benefit reduction factor is related to the fund depletion year and indicates the percentage that benefits must be reduced through the end of the projection to maintain program solvency. Note, many modeled scenarios do not suggest the fund will be depleted at any point during the projection horizon. We indicate such scenarios with a fund depletion year and benefit reduction factor of "n/a."

Figure 11 below shows the fund depletion year and benefit reduction factor for the high adverse selection and low adverse selection scenarios of the Baseline. For the Base Scenario and low adverse selection scenario, the fund is not expected to be depleted within the 75-year projection horizon. The fund is projected to be depleted within the 75-year projection horizon under the high adverse selection scenario in projection year 2078. Under the high adverse selection scenario, if benefits were reduced by 25% beginning after 2078, the program could maintain solvency.

Figure 11 Washington Office of the State Actuary Baseline Fund Depletion		
Scenario	Fund Depletion Year	Benefit Reduction Factor
Base scenario	n/a	n/a
High adverse selection	2078	25%
Low adverse selection	n/a	n/a

PROGRAM EXPENDITURES AS A PERCENTAGE OF TAXABLE WAGES

Figure 12 below shows the level 0.58% premium assessment over the 75-year projection horizon compared to the annual program expenditures expressed as a percentage of wages. This presentation illustrates how the relationship of expenditures versus assessed premiums changes over time, which helps to further demonstrate why the fund level increases and decreases in Figure 9 above.

As shown in Figure 12, the program expenditures as a percentage of wages are estimated to spike due to projected "pent-up demand" when individuals can start claiming benefits in 2026. After returning to "normal" levels, the program

expenditures as a percentage of wages are estimated to steadily increase as more of the population satisfies vesting requirements. After reaching a peak around 2080, program expenditures as a percentage of wages are estimated to start decreasing as wage growth (assumed to be 3.55% on an ultimate basis) outpaces the benefit indexing (assumed to be 2.4% on an ultimate basis).

FIGURE 12: LEVEL 0.58% PREMIUM ASSESSMENT VERSUS BASE SCENARIO PROGRAM OUTGO AS A PERCENTAGE OF TAXABLE WAGES
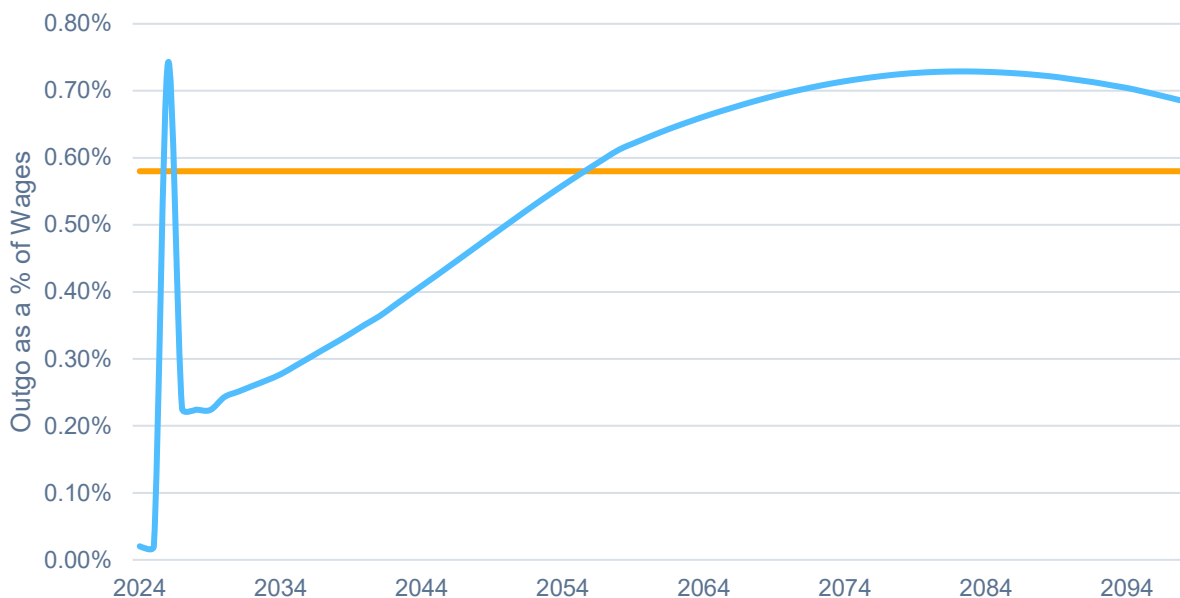
REQUIRED PREMIUM ASSESSMENT

The premium assessment for WA Cares Fund is 0.58% of wages as defined in current law. Resolving for the "required premium assessment" rate can also help inform the adequacy of the current premium rate. We define the required premium assessment as the percentage of wages that is necessary to maintain a fund ratio of 100% or greater for each year of the 75-year projection horizon. Under the Baseline, we estimate a required premium assessment of 0.48% to 0.65% (0.57% for the Base Scenario).

Note, these estimates are not intended, and should not be used, for setting the program premium assessment. Many other factors may be applicable to consider when setting program premiums, such as the sensitivity of results under different conditions and the program's ability to adjust features when experience materializes differently from expectations.

For reference, Appendix A of this report includes a detailed walkthrough of impacts to the required premium assessment compared to our prior report.
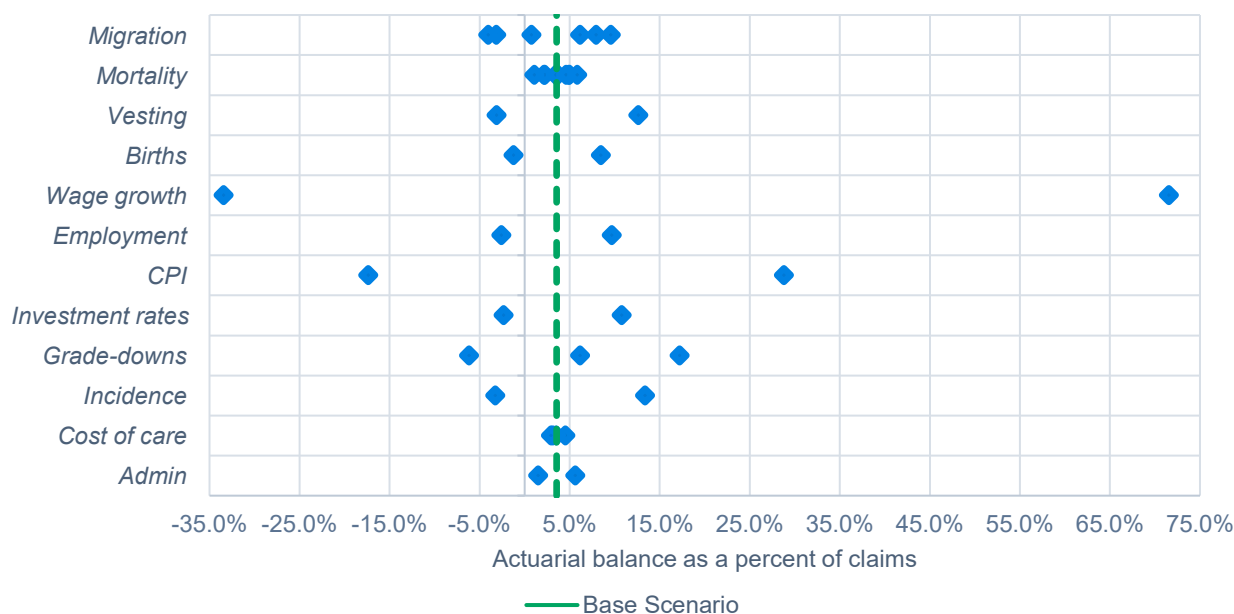
IV. ASSUMPTION SENSITIVITIES

Section IV summarizes sensitivity testing of key assumptions. The tests included in this section were selected to illustrate the sensitivity of results to a broad range of assumptions at different levels, but the results contained herein are not intended to be bounds of all possible outcomes.

Assumption sensitivity testing results should be taken into consideration as part of the WA Cares Fund Risk Framework. The sensitivity of the modeling results under different conditions and the program's ability to adjust features when experience materializes differently from expectations are vital components for the ongoing monitoring of the program. The results in this section demonstrate financial outcomes of WA Cares Fund are highly sensitive to the underlying modeling assumptions used.

Figure 13 below summarizes the actuarial balance as a percentage of claims produced by each of our sensitivity tests for each modeling assumption category (blue markers) relative to the Base Scenario (dashed green line). A wider "gap" between the dashed green line represents greater sensitivity. We provide details on each of the tests modeled in the subsections that follow.

FIGURE 13: IMPACT OF ASSUMPTION SENSITIVITIES ON ACTUARIAL BALANCE AS A PERCENT OF CLAIMS

ASSUMPTION SENSITIVITIES SUMMARY

Figure 14 below presents the range of actuarial balance across all sensitivities. As a percent of claims, the actuarial balance varies from negative 54.1% to positive 161.7% across all assumption sensitivities, assuming the NIER discount rates.

Figure 14 Washington Office of the State Actuary Assumption Sensitivity Actuarial Balance Range				
	Discount Rate			
Actuarial Balance	NIER	3.0%	4.0%	5.0%
Amount ($ billions)	($96.1) to $130.5	($181.7) to $218.7	($105.1) to $140.6	($61.2) to $94.8
As a percent of claims	(54.1%) to 161.7%	(59.5%) to 160.9%	(54.6%) to 161.1%	(48.7%) to 163.1%

Figure 15 below illustrates the projected fund ratio by year for the Base Scenario (blue line) alongside each of the assumption sensitivities (gray lines). The blue dotted line represents a 100% target fund ratio. As shown in the figure, the fund ratio pattern varies greatly based on the sensitivity test. Many sensitivity tests are projected to have a positive fund level throughout the 75-year projection horizon, while other tests result in a depleted fund level. For presentation purposes, we do not show fund ratios above 2000% or below 0% (which implies the fund would be depleted).

FIGURE 15: SENSITIVITIES FUND RATIO
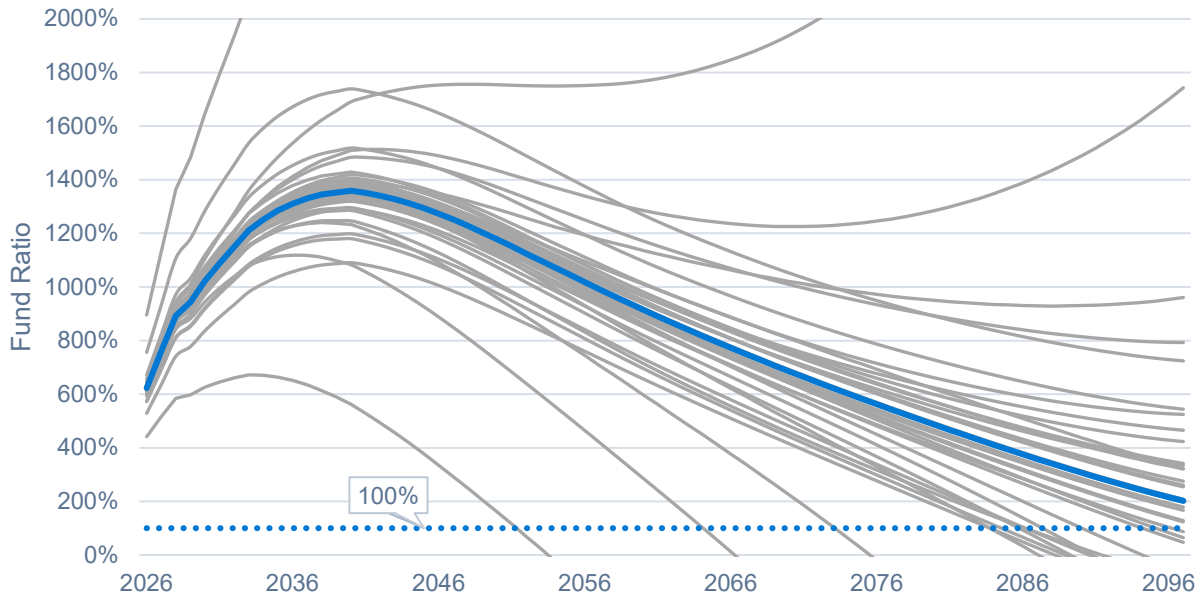
SENSITIVITY TESTING TO MIGRATION

Domestic and international migration in and out of Washington impacts projected WA Cares Fund cash flows because migration influences the overall population of the state of Washington – and the population migrating out of the state who may elect portable benefits. The Baseline assumes a net annual migration consistent with projections from the Washington State Office of Financial Management. We ran six sensitivities: two where we increased or decreased in-migration (domestic and international) by 25%, two where we increased or decreased out-migration (domestic and international) by 25%, and two where we increase or decrease the spread between in- and out-migration by 25%.

Figure 16 Washington Office of the State Actuary Migration Sensitivity Actuarial Balance				
		Discount Rate		
Actuarial Balance by Scenario	**NIER**	**3.0%**	**4.0%**	**5.0%**
Amount ($ billions)				
Base scenario	$4.4	($5.9)	$3.8	$8.7
High net migration	$7.8	($0.4)	$7.6	$11.3
Low net migration	$0.9	($11.4)	$0.1	$6.0
High in-migration	$12.3	$5.0	$12.3	$15.5
Low in-migration	($2.9)	($15.6)	($3.8)	$2.4
High out-migration	($4.3)	($19.4)	($5.5)	$2.0
Low out-migration	$13.3	$8.2	$13.5	$15.6
As a percent of claims				
Base scenario	3.5%	(2.8%)	2.9%	9.9%
High net migration	6.1%	(0.2%)	5.5%	12.5%
Low net migration	0.8%	(5.7%)	0.1%	7.1%
High in-migration	7.9%	1.9%	7.3%	14.0%
Low in-migration	(3.2%)	(10.3%)	(3.9%)	3.7%
High out-migration	(4.0%)	(10.8%)	(4.7%)	2.6%
Low out-migration	9.6%	3.4%	8.9%	15.7%

Figure 17 below shows the projected fund depletion year and benefit reduction factor required under each of the migration sensitivity tests.

Figure 17 Washington Office of the State Actuary Migration Sensitivity Fund Depletion		
Scenario	**Fund Depletion Year**	**Benefit Reduction Factor**
Base scenario	n/a	n/a
High net migration	n/a	n/a
Low net migration	n/a	n/a
High in-migration	n/a	n/a
Low in-migration	2091	26%
High out-migration	2090	25%
Low out-migration	n/a	n/a

SENSITIVITY TESTING TO MORTALITY

In our modeling, we applied separate mortality rates to active (i.e., non-disabled) lives and disabled lives. Mortality rates have generally been decreasing by age over the last 100 years, and we assume future improvement of mortality rates in the Baseline based on OASDI projections. As mortality rates decrease, the life expectancy of the population increases, thus increasing the pool of individuals who may incur an LTSS need (all else equal).

We ran six sensitivities: increasing or decreasing mortality rates at each age by 10% for all lives, as well as tests where we only change the mortality for active lives and disabled lives, respectively. Additionally, we ran three mortality improvement scenarios (no improvement, high improvement, and low improvement, where the high and low scenarios are derived from the 2024 OASDI Trustees Report projections).

Figure 18 Washington Office of the State Actuary Mortality Sensitivity Actuarial Balance				
		Discount Rate		
Actuarial Balance by Scenario	**NIER**	**3.0%**	**4.0%**	**5.0%**
Amount ($ billions)				
Base scenario	$4.4	($5.9)	$3.8	$8.7
High mortality	$6.0	($3.0)	$5.6	$9.8
Low mortality	$2.7	($8.9)	$2.0	$7.5
High active mortality	$5.9	($3.2)	$5.5	$9.7
Low active mortality	$2.8	($8.7)	$2.1	$7.6
High disabled mortality	$4.5	($5.7)	$4.0	$8.8
Low disabled mortality	$4.3	($6.0)	$3.7	$8.6
No mortality improvement	$5.5	($3.9)	$5.1	$9.5
High mortality improvement	$1.4	($11.6)	$0.6	$6.8
Low mortality improvement	$7.0	($0.9)	$6.7	$10.3
As a percent of claims				
Base scenario	3.5%	(2.8%)	2.9%	9.9%
High mortality	5.0%	(1.5%)	4.3%	11.4%
Low mortality	2.2%	(4.2%)	1.5%	8.4%
High active mortality	4.9%	(1.6%)	4.2%	11.2%
Low active mortality	2.2%	(4.1%)	1.6%	8.5%
High disabled mortality	3.7%	(2.7%)	3.0%	10.0%
Low disabled mortality	3.5%	(2.9%)	2.8%	9.8%
No mortality improvement	4.6%	(1.9%)	3.9%	11.0%
High mortality improvement	1.1%	(5.4%)	0.4%	7.6%
Low mortality improvement	5.8%	(0.5%)	5.1%	12.0%

Figure 19 below shows the projected fund depletion year and benefit reduction factor required under each of the mortality sensitivity tests. As shown below, the fund is not expected to be depleted within the 75-year projection horizon for any of the mortality sensitivities tested.

Figure 19 Washington Office of the State Actuary Mortality Sensitivity Fund Depletion		
Scenario	**Fund Depletion Year**	**Benefit Reduction Factor**
Base scenario	n/a	n/a
High mortality	n/a	n/a
Low mortality	n/a	n/a
High active mortality	n/a	n/a
Low active mortality	n/a	n/a
High disabled mortality	n/a	n/a
Low disabled mortality	n/a	n/a
No mortality improvement	n/a	n/a
High mortality improvement	n/a	n/a
Low mortality improvement	n/a	n/a

SENSITIVITY TESTING TO VESTING

To become qualified to receive WA Cares Fund benefits, individuals must pay the premium assessment for a specified number of years (i.e., a "vesting period"). Excluding near-retirees, an individual is vested (i.e., qualified) by premium payments for three of the last six years or for 10 total years during his or her entire work history.

We ran two sensitivities on the vesting assumption excluding near-retirees: increasing or decreasing the percentage of individuals who are vested in each year by 10%. For some cohorts, we did not increase by a full 10% to keep the vesting rates below the assumed ultimate vesting rate cap.

Figure 20 Washington Office of the State Actuary Vesting Sensitivity Actuarial Balance				
Actuarial Balance by Scenario	**NIER**	**Discount Rate**		
		3.0%	**4.0%**	**5.0%**
Amount ($ billions)				
Base scenario	$4.4	($5.9)	$3.8	$8.7
High vesting	($4.1)	($19.8)	($5.3)	$2.4
Low vesting	$14.2	$10.7	$14.5	$15.8
As a percent of claims				
Base scenario	3.5%	(2.8%)	2.9%	9.9%
High vesting	(3.1%)	(8.9%)	(3.7%)	2.6%
Low vesting	12.6%	5.6%	11.9%	19.6%

Figure 21 below shows the projected fund depletion year and benefit reduction factor required under each of the vesting sensitivity tests.

Figure 21 Washington Office of the State Actuary Vesting Sensitivity Fund Depletion		
Scenario	**Fund Depletion Year**	**Benefit Reduction Factor**
Base scenario	n/a	n/a
High vesting	2089	18%
Low vesting	n/a	n/a

SENSITIVITY TESTING TO BIRTHS

Under the Baseline, birth rates are sourced from information provided in the 2024 OASDI Trustees Report calibrated to Washington data. We tested using either the high or low birth rate patterns observed by state across the country (e.g., the "high birth rates" test sets the Washington birth rate to the state with the highest birth rate). As more children are born, the average age of the population decreases, and there are more working individuals relative to the elderly, resulting in a larger wage base.

Figure 22 Washington Office of the State Actuary Births Sensitivity Actuarial Balance				
Actuarial Balance	**NIER**	**Discount Rate**		
		3.0%	**4.0%**	**5.0%**
Amount ($ billions)				
Base scenario	$4.4	($5.9)	$3.8	$8.7
High births	$10.3	$5.1	$10.3	$12.6
Low births	($1.5)	($16.7)	($2.6)	$4.8
As a percent of claims				
Base scenario	3.5%	(2.8%)	2.9%	9.9%
High births	8.5%	2.4%	7.8%	14.4%
Low births	(1.2%)	(8.0%)	(1.9%)	5.4%

Figure 23 below shows the projected fund depletion year and benefit reduction factor required under each of the births sensitivity tests.

Figure 23 Washington Office of the State Actuary Births Sensitivity Fund Depletion		
Scenario	Fund Depletion Year	Benefit Reduction Factor
Base scenario	n/a	n/a
High births	n/a	n/a
Low births	2095	19%

SENSITIVITY TESTING TO WAGE GROWTH

As wages increase, the premium base increases and the premium rate necessary to fund program benefits decreases. We acknowledge that wage growth may accompany price inflation, but for these sensitivities, we examine the impact of modifying wage growth in isolation. Wage growth assumptions under the Baseline derive from the 2024 OASDI Trustees Report intermediate assumption (3.55% in the ultimate year). We tested using either the high or low 2024 Trustees Report assumptions (4.77% and 2.34% in the ultimate year, respectively).

Figure 24 Washington Office of the State Actuary Wage Growth Sensitivity Actuarial Balance				
		Discount Rate		
Actuarial Balance	NIER	3.0%	4.0%	5.0%
Amount ($ billions)				
Base scenario	$4.4	($5.9)	$3.8	$8.7
High wage growth	$87.8	$144.7	$94.4	$65.0
Low wage growth	($41.0)	($85.2)	($45.4)	($23.0)
As a percent of claims				
Base scenario	3.5%	(2.8%)	2.9%	9.9%
High wage growth	71.6%	69.2%	71.1%	74.1%
Low wage growth	(33.4%)	(40.8%)	(34.2%)	(26.2%)

Figure 25 below shows the projected fund depletion year and benefit reduction factor required under each of the wage growth sensitivity tests.

Figure 25 Washington Office of the State Actuary Wage Growth Sensitivity Fund Depletion		
Scenario	Fund Depletion Year	Benefit Reduction Factor
Base scenario	n/a	n/a
High wage growth	n/a	n/a
Low wage growth	2067	46%

SENSITIVITY TESTING TO EMPLOYMENT

We tested two sensitivities on employment rates in which we increase or decrease the count of workers in every year by 5%. For this test, we assumed the annual increase or decrease in employment only impacts the number of individuals paying premiums and does not have an impact on the assumed vesting rate for individuals (which may be affected by a change in employment levels.)

Figure 26 Washington Office of the State Actuary Employment Sensitivity Actuarial Balance				
Actuarial Balance	**Discount Rate**			
	NIER	**3.0%**	**4.0%**	**5.0%**
Amount ($ billions)				
Base scenario	$4.4	($5.9)	$3.8	$8.7
High employment	$11.9	$5.9	$11.9	$14.5
Low employment	($3.2)	($17.7)	($4.2)	$2.9
As a percent of claims				
Base scenario	3.5%	(2.8%)	2.9%	9.9%
High employment	9.7%	2.8%	9.0%	16.5%
Low employment	(2.6%)	(8.5%)	(3.2%)	3.3%

Figure 27 below shows the projected fund depletion year and benefit reduction factor required under each of the employment sensitivity tests.

Figure 27 Washington Office of the State Actuary Employment Sensitivity Fund Depletion		
Scenario	**Fund Depletion Year**	**Benefit Reduction Factor**
Base scenario	n/a	n/a
High employment	n/a	n/a
Low employment	2091	18%

SENSITIVITY TESTING TO CONSUMER PRICE INDEX (CPI)

The Baseline assumes the $36,500 pool of money (as of July 2026) will be inflated at a rate consistent with a regional CPI – assumed to have an ultimate rate of 2.4%. We tested sensitivities in which CPI will be annually 0.5% higher or lower than in our Baseline modeling.

Figure 28 Washington Office of the State Actuary Consumer Price Index Sensitivity Actuarial Balance				
Actuarial Balance	**Discount Rate**			
	NIER	**3.0%**	**4.0%**	**5.0%**
Amount ($ billions)				
Base scenario	$4.4	($5.9)	$3.8	$8.7
High CPI trend	($26.7)	($63.1)	($29.9)	($11.8)
Low CPI trend	$28.4	$37.9	$30.0	$24.7
As a percent of claims				
Base scenario	3.5%	(2.8%)	2.9%	9.9%
High CPI trend	(17.4%)	(23.7%)	(18.0%)	(10.9%)
Low CPI trend	28.8%	23.0%	28.1%	34.5%

Figure 29 below shows the projected fund depletion year and benefit reduction factor required under each of the CPI sensitivity tests.

Figure 29 Washington Office of the State Actuary Consumer Price Index Sensitivity Fund Depletion		
Scenario	**Fund Depletion Year**	**Benefit Reduction Factor**
Base scenario	n/a	n/a
High CPI trend	2076	34%
Low CPI trend	n/a	n/a

SENSITIVITY TESTING TO INVESTMENT RATES

The investment rate determines the level of investment income earned on the program fund. We tested increasing or decreasing the net investment earned rates by 100 basis points for each year of the projection.

Figure 30 Washington Office of the State Actuary Investment Rate Sensitivity Actuarial Balance				
Actuarial Balance		**Discount Rate**		
	NIER	**3.0%**[1]	**4.0%**[1]	**5.0%**[1]
Amount ($ billions)				
Base scenario	$4.4	($5.9)	$3.8	$8.7
Plus 100 basis points	$8.7	($5.9)	$3.8	$8.7
Minus 100 basis points	($4.5)	($5.9)	$3.8	$8.7
As a percent of claims				
Base scenario	3.5%	(2.8%)	2.9%	9.9%
Plus 100 basis points	10.8%	(2.8%)	2.9%	9.9%
Minus 100 basis points	(2.4%)	(2.8%)	2.9%	9.9%

[1] Result does not change from Base Scenario as investment income rate is independent from the discount rate.

Figure 31 below shows the projected fund depletion year and benefit reduction factor required under each of the CPI sensitivity tests.

Figure 31 Washington Office of the State Actuary Consumer Price Index Sensitivity Fund Depletion		
Scenario	**Fund Depletion Year**	**Benefit Reduction Factor**
Base scenario	n/a	n/a
Plus 100 basis points	n/a	n/a
Minus 100 basis points	2092	13%

SENSITIVITY TESTING TO ECONOMIC ASSUMPTION GRADE-DOWNS

We observed Washington wages to be approximately 18% higher than the national average. For our Baseline modeling, we maintain the 18% differential for the first 10 years of projected wages, and then grade down the differential to 0% over the subsequent 25 years, such that our projected wages will approximate national average wages from OASDI by year 35 of the projection. Here we present a sensitivity where we "turn off" this grade-down and thus maintain the 18% differential for the entire projection.

Using a similar approach, we modeled CPI as 2.75% (consistent with OSA's long-term assumption of Washington CPI) until 2030, and then over 25 years grade down to OASDI's nationwide CPI projection of 2.40%, such that CPI beginning in 2055 and for the rest of the projection is 2.40%. We ran a sensitivity where we "turn off" this grade-down and thus use 2.75% CPI for the entire projection.

We tested scenarios removing these grade-downs for wage growth and CPI in isolation, and we performed one additional test where we removed both grade-downs simultaneously. Removing both grade-downs simultaneously reflects that wage growth and CPI trends may be positively correlated (e.g., CPI could be considered a component of wage growth).

Figure 32 Washington Office of the State Actuary Economic Grade-Down Sensitivity Actuarial Balance				
		Discount Rate		
Actuarial Balance	**NIER**	**3.0%**	**4.0%**	**5.0%**
Amount ($ billions)				
Base scenario	$4.4	($5.9)	$3.8	$8.7
No grade-down of wage ratio	$21.1	$23.4	$22.1	$20.3
No grade-down of CPI ratio	($8.4)	($30.1)	($10.0)	$0.5
No grade-down of both ratios	$8.3	($0.8)	$8.1	$12.1
As a percent of claims				
Base scenario	3.5%	(2.8%)	2.9%	9.9%
No grade-down of wage ratio	17.2%	11.2%	16.6%	23.2%
No grade-down of CPI ratio	(6.2%)	(12.9%)	(6.8%)	0.5%
No grade-down of both ratios	6.1%	(0.4%)	5.5%	12.7%

Figure 33 below shows the projected fund depletion year and benefit reduction factor required under each of the economic grade-down sensitivity tests.

Figure 33 Washington Office of the State Actuary Economic Grade-Down Sensitivity Fund Depletion		
Scenario	**Fund Depletion Year**	**Benefit Reduction Factor**
Base scenario	n/a	n/a
No grade-down of wage ratio	n/a	n/a
No grade-down of CPI ratio	2088	27%
No grade-down of both ratios	n/a	n/a

SENSITIVITY TESTING TO INCIDENCE

We ran sensitivities on claim incidence rates to increase or decrease the rates by 20%. As an example, if the baseline incidence rate was 15% for a 90-year-old male, here we would test the impact of changing the incidence rate to 18% (i.e., 15% x (1 + 20%) = 18%) and 12% (i.e., 15% x (1 - 20%) = 12%).

Figure 34 Washington Office of the Sate Actuary Incidence Sensitivity Actuarial Balance				
		Discount Rate		
Actuarial Balance	**NIER**	**3.0%**	**4.0%**	**5.0%**
Amount ($ billions)				
Base scenario	$4.4	($5.9)	$3.8	$8.7
High incidence	($4.3)	($19.5)	($5.5)	$2.0
Low incidence	$15.1	$11.2	$15.4	$16.8
As a percent of claims				
Base scenario	3.5%	(2.8%)	2.9%	9.9%
High incidence	(3.3%)	(8.8%)	(3.9%)	2.2%
Low incidence	13.4%	5.8%	12.6%	20.9%

Figure 35 below shows the projected fund depletion year and benefit reduction factor required under each of the incidence sensitivity tests.

WA Cares Fund Actuarial Valuation as of June 30, 2024
Commissioned by the Washington Office of the State Actuary
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December 10, 2024

Figure 35 Washington Office of the State Actuary Incidence Sensitivity Fund Depletion		
Scenario	Fund Depletion Year	Benefit Reduction Factor
Base scenario	n/a	n/a
High incidence	2089	18%
Low incidence	n/a	n/a

SENSITIVITY TESTING TO UTILIZATION / COST OF CARE

WA Cares Fund allows beneficiaries to combine the program's "benefit units," which effectively causes the program to have no daily benefit limit when covering approved services. Therefore, we assume under the Base Scenario that individuals will incur the average commercial daily cost of care in Washington. We test four sensitivities related to benefit utilization and the cost of care.

Under the Baseline, we project many beneficiaries will utilize and exhaust their full lifetime benefit (i.e., $36,500 as of July 2026 and inflated thereafter). Since the tests on cost of care and utilization change the benefit amount utilized on a daily basis, but do not change the lifetime pool of money available to beneficiaries, the impact to the actuarial balance is relatively low.

- The first two sensitivities test increasing or decreasing the projected Base Scenario cost of care by 33%
- We ran an additional sensitivity assuming care at home is received every day (i.e., 100% days utilization) rather than roughly five out of every seven days as assumed in the Baseline
- Finally, we tested the impact of immediately paying out the entire lifetime benefit upon a beneficiary going on claim

Figure 36 Washington Office of the State Actuary Utilization / Cost of Care Sensitivity Actuarial Balance				
		Discount Rate		
Actuarial Balance	NIER	3.0%	4.0%	5.0%
Amount ($ billions)				
Base scenario	$4.4	($5.9)	$3.8	$8.7
High mix cost of care	$3.9	($6.7)	$3.3	$8.3
Low mix cost of care	$5.5	($4.1)	$5.0	$9.5
100% days utilization for care at home	$4.3	($6.0)	$3.8	$8.6
Immediate lifetime pool payout	$3.6	($7.0)	$3.0	$8.0
As a percent of claims				
Base scenario	3.5%	(2.8%)	2.9%	9.9%
High mix cost of care	3.1%	(3.2%)	2.5%	9.4%
Low mix cost of care	4.5%	(2.0%)	3.8%	11.0%
100% days utilization for care at home	3.5%	(2.9%)	2.8%	9.8%
Immediate lifetime pool payout	2.9%	(3.3%)	2.2%	9.1%

Figure 37 below shows the projected fund depletion year and benefit reduction factor required under each of the utilization / cost of care sensitivity tests. As shown below, the fund is not expected to be depleted within the 75-year projection horizon for any of the utilization / cost of care sensitivities tested.

Figure 37 Washington Office of the State Actuary Utilization / Cost of Care Sensitivity Fund Depletion		
Scenario	Fund Depletion Year	Benefit Reduction Factor
Base scenario	n/a	n/a
High mix cost of care	n/a	n/a
Low mix cost of care	n/a	n/a
100% days utilization for care at home	n/a	n/a
Immediate lifetime pool payout	n/a	n/a

SENSITIVITY TESTING TO ADMINISTRATIVE EXPENSES

Under the Baseline, we assume administrative expenses equal to 3.5% of premium plus 3.5% of claims. We tested two sensitivities on administrative expenses – higher (4.5% of premium plus 4.5% of claims) and lower (2.5% of premium plus 2.5% of claims).

Figure 38 Washington Office of the State Actuary Administrative Expenses Sensitivity Actuarial Balance				
		Discount Rate		
Actuarial Balance	NIER	3.0%	4.0%	5.0%
Amount ($ billions)				
Base scenario	$4.4	($5.9)	$3.8	$8.7
High administrative expenses	$1.9	($10.0)	$1.1	$6.8
Low administrative expenses	$6.8	($1.8)	$6.5	$10.5
As a percent of claims				
Base scenario	3.5%	(2.8%)	2.9%	9.9%
High administrative expenses	1.5%	(4.8%)	0.9%	7.7%
Low administrative expenses	5.6%	(0.9%)	5.0%	12.1%

Figure 39 below shows the projected fund depletion year and benefit reduction factor required under each of the administrative expense sensitivity tests. As shown below, the fund is not expected to be depleted within the 75-year projection horizon for any of the expense sensitivities tested.

Figure 39 Washington Office of the State Actuary Administrative Expenses Sensitivity Fund Depletion		
Scenario	Fund Depletion Year	Benefit Reduction Factor
Base scenario	n/a	n/a
High administrative expenses	n/a	n/a
Low administrative expenses	n/a	n/a

SENSITIVITY TESTING TO ASSUMPTIONS IN COMBINATION

We modeled several "combined" scenarios to further highlight the modeling sensitivity for certain key assumptions, including instances where some economic assumptions may be positively correlated (e.g., if wages increase, the CPI will move in the same "direction" and also increase):

- Higher wage growth, CPI trend: increased the annual wage growth and CPI by 50 basis points

- Lower wage growth, CPI trend: decreased the annual wage growth and CPI by 50 basis points

- Combined "positive" scenario: increased the wage growth to use the high rates from the 2024 OASDI Trustees Report, decreased CPI by 50 basis points annually, increased net investment earned rates by 100 basis points annually, decreased incidence by 20%, decreased the assumed cost of care by 33%, increased mortality by 10%, and decreased vesting by 10%

- Combined "adverse" scenario: decreased the wage growth to use the low rates from the 2024 OASDI Trustees Report, increased CPI by 50 basis points annually, decreased net investment earned rates by 100 basis points annually, increased incidence by 20%, increased the assumed cost of care by 33%, decreased mortality by 10%, and increased vesting by 10%

Figure 40 Washington Office of the State Actuary Combined Sensitivity Tests Actuarial Balance				
		Discount Rate		
Actuarial Balance	NIER	3.0%	4.0%	5.0%
Amount ($ billions)				
Base scenario	$4.4	($5.9)	$3.8	$8.7
High wage growth, CPI trend	$56.8	$87.5	$60.7	$44.5
Low wage growth, CPI trend	($17.0)	($41.3)	($19.2)	($7.0)
Combined positive scenario	$130.5	$218.7	$140.6	$94.8
Combined adverse scenario	($96.1)	($181.7)	($105.1)	($61.2)
As a percent of claims				
Base scenario	3.5%	(2.8%)	2.9%	9.9%
High wage growth, CPI trend	36.9%	32.9%	36.4%	41.2%
Low wage growth, CPI trend	(17.2%)	(25.0%)	(18.0%)	(9.7%)
Combined positive scenario	161.7%	160.9%	161.1%	163.1%
Combined adverse scenario	(54.1%)	(59.5%)	(54.6%)	(48.7%)

Figure 41 below shows the projected fund depletion year and benefit reduction factor required under each of the combined sensitivity tests.

Figure 41 Washington Office of the State Actuary Combined Sensitivity Tests Fund Depletion		
Scenario	Fund Depletion Year	Benefit Reduction Factor
Base scenario	n/a	n/a
High wage growth, CPI trend	n/a	n/a
Low wage growth, CPI trend	2076	40%
Combined positive scenario	n/a	n/a
Combined adverse scenario	2054	46%

V.   METHODOLOGY AND ASSUMPTIONS

We project beneficiaries and costs for WA Cares Fund using Milliman's projection modeling software, Integrate. The projection starts with the historical population of the state of Washington by age, sex, and region, and is projected forward. The projected Washington population is estimated based on the number of births, deaths, and net migrants in each future year.

To calculate the beneficiaries and costs for the projected population in each year, the model utilizes Milliman's proprietary *LTC Guidelines (Guidelines)* calibrated from an insured basis to the estimated Washington population characteristics. The *Guidelines* provide frequencies, continuance curves, utilization assumptions, and claims costs developed from a large number of product designs based on data from the past two decades. The *Guidelines* are updated triennially to reflect the most comprehensive and current information available in the market.

The projection is for the 75-year period 2024 through 2099. A 75-year projection has been established by the Social Security Administration (SSA) and the Centers for Medicare and Medicaid Services (CMS) as the standard projection period for determining the financial status of a public insurance program. The 75-year period covers the expected lifetime of the majority of residents just entering their working ages. Thus, a 75-year projection period covers all the working years and all of the benefit years of those just beginning their participation. The model produces year-by-year cash flow projections, such that the value and scope of the program can be estimated for any of the years in the 75-year projection period.

Revenue to the program consists of premiums and interest earned on the fund. Expenditures to the program consist of benefit payments for covered services and administrative expenses. We projected each of these items on a year-by-year basis for 75 years.

DEMOGRAPHIC ASSUMPTIONS

The demographic assumptions relate to the projection of the population of Washington. The covered population is of fundamental importance in the estimation of costs. The income to the program depends on the number of contributors and the outgo of the program depends on the number of beneficiaries. Estimates of the number of contributors and of the number of beneficiaries are based on the population projection.

The estimate of the resident population starts with the census count of the resident population for Washington by age and sex as of 2016. We use a 2016 starting population to build up an estimated starting disabled population at the time of first program payments (2026).

We reviewed the projected population over the 75-year horizon for reasonableness compared to forecasts in the 2024 Old-Age, Survivors, and Disability Insurance (OASDI) Trustees Report[4] and the Washington Office of Financial Management (OFM) "Forecast of the State Population" from November 2023[5] (2023 OFM Population Forecast). Our reasonableness review included examining for each year the projected total population count of Washington versus nationwide and the distribution of the population by attained age (i.e., less than 20, 20 to 64, and 65-plus). OFM also reviewed portions of our population projections for reasonableness.

Starting population

The estimate of the starting population comes from the 2023 OFM Population Forecast, which provides a detailed census estimate by age and gender.

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[4] Social Security Administration (2024). 2024 OASDI Trustees Report. Retrieved October 23, 2024 from https://www.ssa.gov/OACT/TR/2024/tr2024.pdf

[5] Washington Office of Financial Management (2023). 2023 Forecast of the State Population. Retrieved October 23, 2024 from https://ofm.wa.gov/sites/default/files/public/dataresearch/pop/stfc/stfc_2023.pdf

Migration

We projected two types of migration separately in our modeling:

- *Domestic migration* – We projected the number of individuals who move into Washington from another U.S. state (or out of Washington to another U.S. state) each year using historical data from the ACS State-to-State Migration Flows files.[6] We assumed the age-gender distribution of domestic migrants in any year will resemble the age-gender distribution of in-state residents in that year. We tracked in-migration and out-migration separately.

- *International migration* – We projected the number of individuals who move into Washington from another country (or out of Washington to another country) each year using historical data from the ACS State-to-State Migration Flows files. We assumed the age-gender distribution of international migrants in any year to be based on ACS data specific to individuals moving into and out of the United States.[7] We tracked in-migration and out-migration separately; however, we did not model or track the legal status of international migrants.

We calibrated the total net migration (including both domestic and international) to the 2023 OFM Population Forecast. Total net migration is calculated as domestic in-migration minus domestic out-migration plus international in-migration minus international out-migration. The OFM forecast projects net migration through calendar year 2042, at which point the ultimate annual net migration is estimated to be 61,300. Beyond 2042, we assume annual net migration will hold steady at 61,300 for the remainder of the 75-year projection horizon.

Births

We projected the number of births in Washington in each future year using state-specific fertility rates from the Centers for Disease Control and Prevention's (CDC's) National Vital Statistics Report on births[8]. We trended these fertility rates according to the nationwide fertility rate projection provided in the 2024 OASDI Trustees Report. We modeled births by applying these fertility rates to the projected female population in Washington by age and projection year.

Deaths

We applied separate mortality rates to the active lives (i.e., individuals not currently meeting the benefit eligibility threshold) versus disabled lives.

- <u>Active life mortality</u>: We calculated current and projected U.S. active life mortality rates by age and sex using multiple sources, including the Milliman *LTC Guidelines*, 2024 OASDI Trustees Report (after backing out disabled life mortality), Society of Actuaries (SOA) 2012 Individual Annuity Mortality (IAM) table (after backing out disabled life mortality), and SOA Intercompany data.

- <u>Disabled life mortality</u>: We calculated current and projected U.S. disabled life mortality rates by age, sex, duration, and care setting using data from the Milliman *LTC Guidelines.*

The projected U.S. mortality rates were calibrated to Washington using the CDC's age-adjusted mortality rates by state. This data shows that Washington's mortality rates are 6% to 10% less than the national average.

We estimated mortality improvement rates by age and sex using the 2024 OASDI Trustees Report. The Trustees Report mortality rates are projected through 2100. We assumed the annual rate of mortality improvement applies to both active and disabled lives.

ECONOMIC ASSUMPTIONS

Economic parameters, such as trends in the labor force, wages, and costs of LTC services, are of primary importance for the projection of the income and expenditures of the program. Because WA Cares Fund is financed by a payroll

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[6] American Community Survey (2024). State-to-State Migration Flows. Retrieved October 23, 2024 from https://www.census.gov/data/tables/time-series/demo/geographic-mobility/state-to-state-migration.html

[7] American Community Survey (2024). Geographic Mobility by Selected Characteristics in the United States. Retrieved October 23, 2024 from https://data.census.gov/

[8] Centers for Disease Control and Prevention (2024). National Vital Statistics Reports: Births. Retrieved October 23, 2024 from https://www.cdc.gov/nchs/data/nvsr/nvsr73/nvsr73-02.pdf

premium assessment, labor force participation and wage level will directly affect annual program income. Likewise, the index used to trend benefits affects program liabilities in the future, and the interest rate assumption affects the investment income earned on the fund balance.

We reviewed the projected count of workers and wage levels over the 75-year horizon for reasonableness by comparing to actual program experience data for WA Cares Fund participants and exemptions provided to Milliman by the Washington Employee Security Department (ESD) on August 16, 2024. Our reasonableness review involved calibrating the projected count of workers and average wage levels in 2024 to the ESD data.

Workers

Rates of U.S. workers as a proportion of U.S. total lives by age and sex were provided to Milliman by the Social Security Administration. We adjusted these rates to Washington-specific levels using the ratio of Washington labor force participation rate (LFPR) to nationwide LFPR. Finally, we calibrate worker counts to program experience worker data provided by ESD to Milliman regarding WA Cares Fund participants and exemptions. To identify working disabled individuals, we leveraged Washington-specific data on the rates of individuals employed while disabled from the American Community Survey.

Wages

Projections of U.S. average taxable earnings through 2100 are provided in the 2024 OASDI Trustees Report. Taxable earnings refer to the amount of covered earnings subject to the Social Security payroll tax. In order to estimate a WA Cares Fund wage base, we made the following adjustments to the OASDI taxable earnings:

- We adjusted from nationwide to Washington-specific earnings using the ratio of the average income in Washington over the average income in the United States. Income data for this adjustment comes from BLS Occupational Employment Statistics, which shows Washington average income is approximately 18% higher than nationwide average income (as observed over calendar years 2019 to 2023). For our projection, we maintained the 18% differential for the first 10 years of the projection, and then graded off the Washington-specific wage adjustment over the subsequent 25 years, such that our projected wages will approximate national average wages from OASDI by year 35 of the projection. We chose to grade off the Washington-specific wage adjustment given Washington average income and nationwide average income have historically been closer together with the exception of approximately the last 10 years. Note, for eligible individuals who leave Washington but elect to continue paying the premium assessment (via the portability benefit), we assumed their wage levels would be in-line with the nationwide average (i.e., excluding the 18% Washington-to-nationwide differential).
- We converted the taxable earnings into covered earnings using the ratio of taxable earnings to covered earnings from the 2024 OASDI Trustees Report. Covered earnings represent the wage base subject to the Medicare tax after adjusting for the Social Security wage limit.
- Certain wages will be subject to WA Cares Fund premium assessment that are excluded from the OASDI covered earnings definition (such as employee wages used for 125 cafeteria plan contributions). To convert our wage base from OASDI covered earnings to gross wages under WA Cares Fund, we multiplied by the ratio of National Income and Product Accounts (NIPA) wages to covered earnings provided by the Social Security Administration.
- Finally, we calibrate average wages to program experience wage data provided by ESD to Milliman regarding WA Cares Fund participants and exemptions.

We multiplied average gross wages subject to the WA Cares Fund premium assessment by the projected count of workers in each projection year to determine the premium assessment base in that year.

Benefit inflation index

We inflated benefits using an estimate of the Washington Consumer Price Index (CPI-WA). To develop a CPI-WA projection vector, we started with an assumption of 2.75% based on OSA's 2023 Economic Experience Study.[9] Similar

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[9] Office of the State Actuary (2023). 2023 Report on Financial Condition and Economic Experience Study. Retrieved October 23, 2024 from https://leg.wa.gov/osa/presentations/Documents/2023.EES.pdf

to the grade-off of wages described above, we graded down from 2.75% to 2.40% (which is the projected CPI value from the 2024 OASDI Trustees Report) over a period of 25 years beginning in 2030, such that by 2055, we assumed a value of 2.40% for the remainder of the projection.

Cost of care

As WA Cares Fund does not enforce a daily benefit maximum, we assume individuals will incur the average Washington cost of care each day at private market rates depending on what services they are receiving (e.g., skilled nursing facility, assisted living facility, or home health care). We determined the median cost of care in Washington by care setting starting with the 2023 Genworth Cost of Care Survey[10] and inflated the values into the future using 4% facility (nursing home and assisted living) trend and 3% home health care trend. We selected these cost of care trends based on actuarial judgment and observed historical cost of care trends by care setting.

Vesting

In order to become eligible for benefits, a worker must become vested (or in other words, become insured). To vest in WA Cares Fund benefit, an individual must work and pay premiums for a specified number of years. We used the 2006 Social Security Earnings Public Use Microdata File[11] (2006 is the most recent year the Microdata File was assembled) as our starting point to estimate the percentage of Washingtonians that would become vested by age, sex, and projection year. This data provides annual earnings information (i.e., a lifetime earnings profile) for a 1% random sample of all Social Security numbers issued before January 1, 2007.

Individuals are assumed to be fully vested if they work at least 500 hours per year for three of the last six years or for 10 years total over their lifetimes. To find the percentage of the working population meeting these requirements, we observed the work histories of the random sample of data. For each age, the percentage of individuals who had recorded income for three of the previous six years or eight years total is tabulated. We used eight instead of 10 years in this tabulation because becoming insured under this program provides an added incentive to potentially continue working for those who are almost insured. For each year of the program, we vary the number of years of work history to be included in this tabulation. For example, in year 10 of the program, we only considered work history for individuals going back 10 years to estimate vesting percentages. Because of this, the vesting percentages by age and gender vary in each program year. We used the American Time Use Survey to determine the percentage of workers who work more than 500 hours per year (approximately 95%) and applied this percentage to the vesting percentages by age, gender, and program year.

We adjusted our vesting assumptions for several subsets of the population.

- We observed that females' work histories changed significantly over the course of the data collection period (1951 through 2006), with the last five to ten years (i.e., 1996 to 2006) approximately equal to males' work histories. As such, we set the female vesting percentages equal to the male vesting percentages.

- We did not vary vesting assumptions for individuals who migrate into Washington from another state or country. This may be a conservative assumption because we are implicitly assuming individuals are able to apply their full work histories as they move into Washington from other states. However, our testing of this assumption generally showed smaller impacts to the calculated premium assessment and seemed appropriate given that we do not know how many individuals moving into the state lived in Washington previously and would move into the state with some relevant work history.

- Since there is no minimum age for disability, we also considered individuals working while disabled (as opposed to a cohort of elderly individuals utilizing WA Cares Fund). We assume 100% of individuals working while disabled will qualify for and begin drawing benefits from WA Cares Fund after three years of work experience.

- Individuals born before January 1, 1968 (or "near retirees") are eligible to receive prorated benefits, or 10% of the full benefit amount for each year of premium payments up to 100%. For this population, we separately tabulate the

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[10] Genworth (2024). Cost of Care Survey: Median Cost Data Tables. Retrieved October 23, 2024 from
https://pro.genworth.com/riiproweb/productinfo/pdf/282102.pdf

[11] Social Security Administration (2006). SSA Earnings Public-Use File, 2006. Retrieved October 23, 2024 from
https://www.ssa.gov/policy/docs/microdata/epuf/index.html

percentage of individuals by number of years of recorded wages, since the years of wages will determine the prorated benefit amount. After segmenting near retirees by years vested, we apply a prorating adjustment to the assumed benefit for each cohort. For example, for individuals we project will have four years of vesting credits, we multiply their projected benefits by 40% (= 4 / 10).

Interest rates

The net investment earned rate (NIER) used in our Base Scenario and related sensitivity tests of investment income are based on discussions with OSA, DSHS, and the Washington State Investment Board (WSIB).

Based on the investment plan prepared by SIB,[12] investment returns start at 4.4% for 15 years, then grade down to 4.0% over 15 years, then remain at 4.0% over the rest of the projection. We grade down to 4.0% based on an examination of the average return over the last 20 years of the Bloomberg U.S. Universal Bond Index (which is the benchmark index SIB plans to target over the long run).

The NIER reflects expected investments returns on WA Cares Fund account balance net of investment expenses and the cost of defaults.

Premium adjustments

In collaboration with ESD and SIB, we incorporated two adjustments related to how the fund will be administered.

- We modeled a one-quarter investment income lag which reflects that premiums are deposited into the SIB fund on average approximately one quarter after those premiums are assessed.
- We also modeled a premium collection adjustment which reflects that only 98% of premiums assessed are anticipated to be ultimately collected each year.

Fund balance

The fund balance as of June 30, 2024 is approximately $1.3 billion for WA Cares Fund. Please refer to Appendix B for a buildup of this value.

MORBIDITY ASSUMPTIONS

To calculate the beneficiaries and costs for the projected population in each year, we started with data and research from the Milliman *LTC Guidelines*. The *Guidelines* provide claim frequencies, continuance curves, utilization assumptions, and claims costs from a large number of fully insured LTC product designs sold over the past two decades. The *Guidelines* are periodically updated to reflect the most comprehensive and current information available in the market. The first set of *Guidelines* was developed in 1992 and is updated regularly, with the most recent edition completed in 2023.

We adjusted the *Guidelines* data from an insured basis to a general population basis consistent with assumed Washington population characteristics. We did not assume any future morbidity improvement as part of our modeling.

Given WA Cares Fund is the first-of-its-kind social insurance LTC program in the United States, there is no direct data source to use for comparison at this time. To review our projections for reasonableness, we reviewed model output for various claim statistics by projection year (such as claim incidence and prevalence rates) based on actuarial judgement and observations of projections for other of LTC programs.

Benefit eligibility criteria

A person's ability to perform activities of daily living (ADLs) and / or a person's cognitive ability in addition to physical abilities are frequently used as indications of the need for LTC services (and serve as the foundation for benefit eligibility criteria for many LTC programs). Current law defines the benefit eligibility criteria for WA Cares Fund as requiring assistance with at least three ADLs. Since this definition requires further clarification, for the purposes of this actuarial

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[12] Washington State Investment Board (2022). Long-Term Services & Supports Trust Account. Retrieved September 20, 2022 from
https://www.sib.wa.gov/docs/policies/2_35_600.pdf

study we relied upon direction from OSA and DSHS to assume the type and minimum number of ADLs considered by care setting to be consistent with the current definitions used under the State of Washington Medicaid program nursing facility level of care (NFLOC).[13]

Benefit utilization

In the absence of a daily benefit maximum, we assumed in our modeling that individuals will incur the average cost of care per day observed in the private market for receiving benefits by care setting. We further adjusted utilization at the beginning of a claim to reflect that WA Cares Fund will cover higher, one-time costs related to helping individuals stay in their home. We assumed home care beneficiaries incur services roughly five out of seven days per week.

Since there is no minimum age for disability, we also considered benefits for individuals working while disabled. We assumed the working disabled would utilize the entire benefit pool of money upon becoming vested. As an example, an individual assumed to be vested in 2026 was modeled to receive the full pool of money of $36,500 in that year.

Individuals born before January 1, 1968 (i.e., "near retirees") are eligible to receive prorated benefits, or 10% of the full benefit amount for each year of premium payments up to 100%. We apply a utilization adjustment to the projected benefits to account for individuals exhausting their partial benefits more quickly than they would exhaust their full benefits. This is because we assume individuals with partial benefits would likely still use a similar benefit amount per day as individuals with full benefits; they would just use it more quickly.

Incidence

Incidence refers to the rate of new cases of qualifying individuals in a population satisfying the benefit eligibility criteria for WA Cares Fund. We use the Milliman *LTC Guidelines* incidence rates as a starting basis for our projections; however, the *Guidelines* in their original form are representative of a fully-insured population. A fully-insured population will have different morbidity from the WA Cares Fund population for a few reasons, including:

- Fully-insured data may have inherent anti-selection as it reflects individuals who choose to purchase coverage for care and may have reason to believe they will need care in the future.
- Fully-insured data typically reflects a higher average income and lower incidence than the general population, all else equal.
- Most private LTC insurance policyholders were required to complete underwriting, indicating they were relatively healthy at least when they first purchased coverage. There is no underwriting qualification as part of WA Cares Fund (although individuals will need to be at least healthy enough to work in order to satisfy vesting requirements).

We calibrated the *Guidelines* incidence rates to an estimated WA Cares Fund population basis using a variety of data sources, including selection factors from the *Guidelines* and other industry general population prevalence studies. While general population data exists, morbidity data reflecting a "public option" program does not exist and was not used for this actuarial study. It is unknown how individuals will behave in reaction to the availability of a social insurance LTC benefit.

VOLUNTARY POPULATIONS

By definition, universal mandatory programs will produce average program experience because the enrolled population will include all workers. Voluntary programs (or programs with voluntary components, such as WA Cares Fund), however, are subject to adverse selection (i.e., individuals that anticipate higher-than-average costs will be most likely to participate). Below, we outline our modeling considerations for WA Cares Fund features that add voluntary aspects to the program. When individual choice or a voluntary aspect to participation is introduced into a program, unpredictability related to participation rates and adverse selection can make rate setting and projections challenging. Below, we describe our assumptions for modeling various voluntary populations along with commentary about adverse selection associated with each population.

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[13] Washington Legislature (2024). Washington Administrative Code Title 388 Chapter 106. Retrieved November 15, 2024 from
https://apps.leg.wa.gov/wac/default.aspx?cite=388-106-0355

Note, based on a review of actual program experience thus far, we observed fewer individuals have opted out of or opted into WA Cares Fund compared to some of the assumptions described below (for populations that have already had some choice to participate). Given the limited program experience to date, we did not calibrate our projections to actual program experience for this report (except for the private LTC insurance exemption, as the choice to participate is "complete"), but will continue to monitor experience and make changes in future reports, as appropriate.

Individuals electing portable benefits

WA Cares Fund includes a portable benefit for individuals who have moved out of Washington after contributing to the program for at least three years. Once a worker moves out of Washington, they can elect to maintain coverage under WA Cares Fund by continuing to pay a premium. The individual would self-attest to their wage annually and continue to pay 0.58% of that wage each year until retirement. In our modeling, we assume individuals electing portability to earn wages consistent with the nationwide average.

We assumed 25% of individuals migrating out of Washington will elect the portability benefit. We also assumed a degree of adverse selection (i.e., we assumed two-times higher claim levels) in our Baseline modeling. The levels of participation and adverse selection have a large influence on the cost of portable benefits, and different assumptions would yield different projected premiums and benefit payments. We chose the aforementioned participation and adverse selection assumptions for illustrative purposes; they are not intended to represent a "most likely outcome" of these unknown parameters.

Employees who attest to having purchased private LTC insurance before November 1, 2021

WA Cares Fund allowed individuals to opt out of the program through December 31, 2022 if they had qualifying private market LTC coverage prior to November 1, 2021. To model the impact of this provision, we reflected actual opt-out data provided by ESD on June 30, 2024. The total count of opt-outs as of June 30, 2024 was roughly 432,000. We used the following methodology to incorporate the ESD data into our projections. Our Base Scenario assumed a middle-level of participation and adverse selection related to participation.

- Truncated data adjustments

  For privacy reasons, the information provided by ESD censored wage information for the top 5% of the opt-out population. We used aggregate data provided by ESD to estimate the average wage for the censored population. Ultimately, the count of 432,000 opt-outs breaks down as follows:

  - Approximately 411,000 with approved opt-out requests for whom we have age and wage data for each individual.
  - Approximately 21,000 individuals who represent the top 5% of wage earners for whom we have age data, but need to estimate the average wages.

- Average wages

  Per the ESD data, we projected the average annual 2024 wages for the opt-out population to be approximately $207,000. We assumed wages for this population were consistent with the definition of wages that would have been assessed under the WA Cares Fund program.

- Gender distribution

  Given the ESD data does not contain information related to gender, we assumed a 50% / 50% split between males and females for the opt-out population.

- Wage growth

  We projected the wages of the opt-out population to grow in-line with our projections for program participants.

- Morbidity

  We assumed individuals who opted out of the program through the private market exemption are, on average, "healthier" than the rest of the modeled population (i.e., their expected LTC costs are lower) since many individuals in this population recently purchased private LTC coverage in order to qualify for the exemption and therefore either needed to pass underwriting recently or are actively working. We apply factors to decrease the expected claim costs of the opt-out population to reflect this assumption (referred to as positive selection). These factors are

derived from group selection factors from Milliman's *LTC Guidelines* and "wear off" over time, as the impact of the private market opt-out decreases.

Conversely, we apply factors to increase the claim costs of the remaining population (referred to as adverse selection), such that the combined expected claim costs for the total population is consistent with the total population without any private market opt out.

Self-employed individuals

WA Cares Fund allows participation for self-employed individuals to be fully voluntary, where they are only enrolled after "opting in" to the program. Self-employed individuals will be subject to the following "ground rules":

1. Limiting opt-in to a three-year window for self-employed individuals to opt in once premium collection begins in 2023 (or going forward once an individual becomes self-employed).

2. Once an individual has opted in, the opt-in is permanent.

3. ESD has statutory authority to verify income reported by the self-employed similar to the statutory authority they have to do so for employer reporting of worker wages.

While the goal of the ground rules is to reduce self-employed adverse selection, it is yet to be seen how effective the ground rules will be in accomplishing this goal. Due to this uncertainty, we examined various discrete scenarios by carving in certain percentages of premiums and claims to model the potential impact of adverse selection due to this provision. The discrete scenarios considered different combinations of premiums and claims adjustments in the event the "average" self-employed individual who opts in is different than the "average" non-self-employed individual participating in the program. For reference, we modeled roughly 10% of premiums and 60% of claims for self-employed individuals in our Base Scenario to reflect the potential for adverse selection for both premiums (e.g., lower wage base and / or work history) and claims (e.g., less "healthy" than average).

We rely upon ACS data[14] to project the self-employed population in Washington in each year of the projection. This data indicates approximately 350,000 to 400,000 individuals are self-employed workers at the beginning of our projection.

Other voluntary population exemptions

WA Cares Fund allows several populations the choice to be exempt from the program. As a result, WA Cares Fund effectively becomes a voluntary program for individuals in the following populations:

- Veterans of the United States military with a service-connected disability of 70 percent or greater

  Our Base Scenario assumes a middle-level of participation and adverse selection related to participation. Given the relatively small size of this population (less than 25,000 as of 2022, based on BLS data), the impact of this exemption is relatively small.

- Spouses or registered domestic partners of active-duty military members

  Our Base Scenario assumes a middle-level of participation and adverse selection related to participation. Given the relatively small size of this population (less than 15,000 as of 2022, based on data provided by DSHS and Department of Labor statistics), the impact of this exemption is relatively small.

- Employees who hold a nonimmigrant visa for temporary workers

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[14] American Community Survey (2020). Class of Worker by Sex for the Civilian Employed Population. Retrieved October 23, 2024 from https://data.census.gov

Our Base Scenario assumes a middle-level of participation and adverse selection related to participation. Given the relatively small size of this population (nearly 23,000 individuals holding H2A visas[15] and 30,000 individuals holding H1B visas[16] in Washington as of 2020), the impact of this exemption is relatively small.

- Employees of a Washington employer, but who maintain a permanent, primary residence outside of Washington

    Our Base Scenario assumes that 0% of the population would elect to participate.

- Federally recognized tribes

    Tribal governments and the businesses they operate are not automatically included in WA Cares Fund. WA Cares Fund allows tribal governments to elect coverage for all of the tribe's businesses and allows tribal governments to opt out of the program at any time. Our Base Scenario assumes a middle-level of participation and adverse selection related to participation. We run a high adverse selection sensitivity despite the fact the opt-in decision lies with the tribal government rather than with the employee to highlight the sensitivity of this assumption, but adverse selection may be less since choice is not made by an individual. Given the relatively small size of this population (approximately 37,000 as of 2022[17]), the impact of this exemption is relatively small.

ADMINISTRATIVE EXPENSES

Given the administrative structure of the program is not yet fully determined, we assumed administrative expenses to be 3.5% of premiums and 3.5% of benefits based on our discussions with OSA and DSHS, and our high-level review of other government programs and programs offering LTC benefits. This assumption is intended to reflect the average, long-term administrative needs of the program and may not be consistent with how expenses will fluctuate on an annual basis.

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[15] Department of Homeland Security (2019). Yearbook of Immigration Statistics 2019. Retrieved August 31, 2021 from https://www.dhs.gov/immigration-statistics/yearbook/2019.

[16] MyVisaJobs.com (2020). Top H1B Visa Sponsor by Work State: 2020 H1B Visa Reports. Retrieved August 23, 2021 from www.myvisajobs.com/Reports /2020-H1B-Visa-Category.aspx?T=WS#LCA.

17 Washington Tribes (2022). Washington Tribes. Retrieved October 2, 2022, from https://www.washingtontribes.org/

VI.   CAVEATS AND LIMITATIONS

This report was prepared for the internal use of the Washington Office of the State Actuary (OSA) and the Washington Department of Social and Health Services (DSHS) and it should not be distributed, in whole or in part, to any external parties without the prior permission of Milliman, subject to the following exception:

- This report shall be a public record that shall be subject to disclosure to the State Legislature and its committees, persons participating in legislative reviews and deliberations, and parties making a request pursuant to the Washington Public Records Act.

We do not intend this information to benefit or create a legal liability to any third party. This communication must be read in its entirety.

The information in this report contains actuarial modeling and analysis regarding premiums, claims, and expenses projected for WA Cares Fund. The projections are intended to provide actuarial analysis in support of OSA's duties outlined in RCW 50B.04.020 and help inform the WA Cares Fund Risk Management Framework for ongoing program monitoring. The report may not be appropriate, and should not be used, for other purposes.

Milliman has developed certain models to estimate the values included in this report. The intent of the models was to evaluate revenues and expenditures for the WA Cares Fund program. We reviewed the models, including their inputs, calculations, and outputs for consistency, reasonableness, and appropriateness to the intended purpose and in compliance with generally accepted actuarial practice and relevant ASOPs.

In completing this analysis, we relied on information provided by OSA, DSHS, SIB, ESD, and publicly available data, which we accepted without audit. However, we did review this information for general reasonableness.

Many assumptions were used to construct the estimates in this report. Actual results will differ from the projections in this report. Experience should be monitored as it emerges, and corrective actions taken when necessary.

Guidelines issued by the American Academy of Actuaries require actuaries to include their professional qualifications in all actuarial communications. Chris Giese, Annie Gunnlaugsson, and Evan Pollock are members of the American Academy of Actuaries and meet the qualification standards for performing the analyses in this report.

EXHIBITS

Exhibit 1
Washington Office of the State Actuary
Summary of Law as of June 30, 2024 and Modeled Parameters for 2024 Baseline

Program Specification	Current Law Summary	Law Reference	Modeled Parameter for Baseline Analysis
Covered Services	Long-term services and supports including, but not limited to, in-home personal care, assisted living services, nursing home services, and other services	RCW 50B.04.010	Comprehensive services, with focus on nursing home, assisted living, adult day care, and care at home (with adjustments for immediate payout of potential non-service expenses)
Minimum Age for Benefits	Age 18 or older	RCW 50B.04.010	Age 18 or older
Benefit Eligibility	Eligibility determination will include an evaluation that the individual requires assistance with at least three activities of daily living	RCW 50B.04.060	LTSS need meets a nursing facility level of care (NFLOC) threshold with certification need is expected to last 90 days or more
Daily Benefit Amount	Eligible beneficiaries may combine benefit units to receive more approved services per day as long as the total number of lifetime benefit units has not been exceeded	RCW 50B.04.060	None
Lifetime Maximum Benefit	A "benefit unit" means up to $100 paid by DSHS on a specific date. An eligible beneficiary may not receive more than the dollar equivalent of 365 benefit units over the course of the eligible beneficiary's lifetime.	RCW 50B.04.010	$36,500 as of July 1, 2026
Benefit Index	The benefit unit must be adjusted annually at a rate no greater than the Washington state consumer price index, as determined solely by the council. Any changes adopted by the council shall be subject to revision by the legislature.	RCW 50B.04.010	The remaining lifetime benefit will be inflated annually on July 1 at WA-CPI with the first inflation adjustment to be applied on July 1, 2027
Benefit Structure	If DSHS reimburses an LTSS provider for approved services provided to an eligible beneficiary and the payment is less than the benefit unit, only the portion of the benefit unit that is used shall be taken into consideration when calculating the person's remaining lifetime limit on receipt of benefits	RCW 50B.04.060	Reimbursement at commercial rates
Waiting / Claim Adjudication Period	DSHS must make benefit determination within 45 days from receipt of a request by a beneficiary to use a benefit	RCW 50B.04.060	The first 30 days of benefit will be paid by the beneficiary as claims are adjudicated

Exhibit 1
Washington Office of the State Actuary
Summary of Law as of June 30, 2024 and Modeled Parameters for 2024 Baseline

Program Specification	Current Law Summary	Law Reference	Modeled Parameter for Baseline Analysis
"Vesting" Requirements for Full Benefits	Individuals are deemed qualified if they paid premiums for the equivalent of either: (a) A total of ten years without interruption of five or more consecutive years; (b) Three years within the last six years from the date of application for benefits. Individuals must work 500+ hours during each year.	RCW 50B.04.050	3 of last 6 years, or 10 years total with 500+ annual hours requirement
Near-retiree "Vesting" Requirements for Partial Benefits	Individuals born before January 1, 1968 may receive 1/10 of benefit units for each year of premium payments up to 100%. Individual must have worked 500+ hours during each year.	RCW 50B.04.050	Partial vesting for those born before January 1, 1968
Portability	Individuals who relocate outside of Washington may elect to continue participation if they have been assessed premiums for at least three years in which they worked at least 500 hours in each of those years in Washington	RCW 50B.04.180	Individuals who migrate out of Washington will elect to continue in program under various participation / adverse selection scenarios
Program Revenue Source	Beginning July 1, 2023, ESD will assess a premium of 0.58% of an individual's wages. Beginning January 1, 2026, and biennially thereafter, the premium rate shall be set by the pension funding council at a rate no greater than 0.58%.	RCW 50B.04.080	Payroll premium assessment applied to gross wages, where applicable wages were defined through discussions with ESD
Investment Policy	All investments made by the state investment board shall be made with the degree of judgment and care required under RCW 43.33A.140 and the investment policy established by the state investment board.	RCW 50B.04.110	Starting net investment earned rate of 4.4% grading down to 4.0%, where returns reflect SIB's short-term return expectations and long-term benchmark consistent with their investment policy
Private Market Opt Out	An employee who attests to having LTC insurance purchased before November 1, 2021 may apply for an exemption. Exempt employees are permanently ineligible for coverage. ESD must accept applications for exemptions only from October 1, 2021 through December 31, 2022.	RCW 50B.04.085	Counts of private market exemptions and their respective wages will be based on currently available ESD data, with scenarios for adverse selection
Self-Employed Opt In	Any self-employed person may elect coverage (before July 1, 2026, or within three years of becoming self-employed for the first time). Once elected, the individual may not withdraw coverage.	RCW 50B.04.090	Various participation / adverse selection scenarios
Other Exempted Populations	Beginning January 1, 2023, ESD shall accept & approve voluntary exemptions from: (a) A veteran of the United States military with a service-connected disability of 70 percent or greater (b) A spouse or registered domestic partner of an active duty service member (c) An employee who holds a nonimmigrant visa for temporary workers (d) An employee of a Washington employer, but who maintains a permanent, primary residence outside of Washington	RCW 50B.04.055	Various participation / adverse selection scenarios
Tribal Employers	A federally recognized tribe may elect coverage or opt out at any time for any reason it deems necessary	RCW 50B.04.095	Various participation / adverse selection scenarios

Exhibit 2
Washington Office of the State Actuary
Projected Cash Flows for 2024 Base Scenario ($millions)[1]

| State Fiscal Year | Description | Discount Adjustment | Program Revenue | | Program Expenditures | | Yearly Net Program Cash Flows[2] | Fund Level (End of Year) |
			Premium	Investment Income	Benefit Payments	Expenses		
2025	Jul 24-Jun 25	0.979	$1,309	$67	$0	$46	$1,263	$2,602
2026	Jul 25-Jun 26	0.937	$1,327	$123	$0	$46	$1,281	$3,897
2027	Jul 26-Jun 27	0.898	$1,352	$150	$1,624	$104	($376)	$3,506
2028	Jul 27-Jun 28	0.860	$1,384	$162	$474	$65	$845	$4,365
2029	Jul 28-Jun 29	0.824	$1,425	$192	$484	$67	$874	$5,248
2030	Jul 29-Jun 30	0.789	$1,460	$229	$494	$68	$897	$6,153
2031	Jul 30-Jun 31	0.756	$1,490	$266	$553	$71	$866	$7,026
2032	Jul 31-Jun 32	0.724	$1,520	$303	$585	$74	$862	$7,894
2033	Jul 32-Jun 33	0.693	$1,551	$339	$618	$76	$857	$8,757
2034	Jul 33-Jun 34	0.664	$1,579	$375	$651	$78	$850	$9,613
2035	Jul 34-Jun 35	0.636	$1,592	$410	$681	$80	$831	$10,450
2036	Jul 35-Jun 36	0.609	$1,604	$445	$718	$81	$804	$11,259
2037	Jul 36-Jun 37	0.584	$1,615	$478	$756	$83	$776	$12,039
2038	Jul 37-Jun 38	0.559	$1,627	$511	$795	$85	$747	$12,789
2039	Jul 38-Jun 39	0.536	$1,639	$542	$834	$87	$719	$13,511
2040	Jul 39-Jun 40	0.513	$1,650	$569	$874	$88	$687	$14,199
2041	Jul 40-Jun 41	0.492	$1,660	$593	$916	$90	$654	$14,853
2042	Jul 41-Jun 42	0.471	$1,670	$616	$956	$92	$623	$15,476
2043	Jul 42-Jun 43	0.452	$1,681	$638	$1,004	$94	$583	$16,057
2044	Jul 43-Jun 44	0.433	$1,691	$657	$1,053	$96	$542	$16,598
2045	Jul 44-Jun 45	0.416	$1,702	$675	$1,102	$98	$502	$17,097
2046	Jul 45-Jun 46	0.399	$1,711	$690	$1,151	$100	$461	$17,554
2047	Jul 46-Jun 47	0.383	$1,720	$704	$1,200	$102	$418	$17,968
2048	Jul 47-Jun 48	0.367	$1,729	$715	$1,250	$104	$375	$18,339
2049	Jul 48-Jun 49	0.353	$1,738	$725	$1,301	$106	$331	$18,664
2050	Jul 49-Jun 50	0.339	$1,746	$733	$1,351	$108	$286	$18,945
2051	Jul 50-Jun 51	0.325	$1,754	$739	$1,402	$110	$242	$19,181
2052	Jul 51-Jun 52	0.313	$1,762	$743	$1,453	$113	$197	$19,372
2053	Jul 52-Jun 53	0.301	$1,769	$745	$1,503	$115	$152	$19,517
2054	Jul 53-Jun 54	0.289	$1,777	$745	$1,552	$117	$108	$19,618
2055	Jul 54-Jun 55	0.278	$1,783	$748	$1,599	$118	$65	$19,676
2056	Jul 55-Jun 56	0.267	$1,788	$750	$1,646	$120	$22	$19,691
2057	Jul 56-Jun 57	0.257	$1,793	$750	$1,690	$122	($19)	$19,664
2058	Jul 57-Jun 58	0.247	$1,796	$748	$1,733	$124	($61)	$19,596
2059	Jul 58-Jun 59	0.238	$1,799	$745	$1,774	$125	($101)	$19,487
2060	Jul 59-Jun 60	0.228	$1,811	$741	$1,814	$127	($130)	$19,348
2061	Jul 60-Jun 61	0.220	$1,821	$735	$1,851	$129	($158)	$19,181
2062	Jul 61-Jun 62	0.211	$1,831	$729	$1,886	$130	($186)	$18,987
2063	Jul 62-Jun 63	0.203	$1,840	$721	$1,920	$132	($212)	$18,766
2064	Jul 63-Jun 64	0.195	$1,848	$712	$1,951	$133	($237)	$18,520
2065	Jul 64-Jun 65	0.188	$1,854	$703	$1,980	$134	($260)	$18,250
2066	Jul 65-Jun 66	0.180	$1,860	$692	$2,008	$135	($283)	$17,957
2067	Jul 66-Jun 67	0.174	$1,865	$681	$2,033	$136	($304)	$17,643
2068	Jul 67-Jun 68	0.167	$1,869	$669	$2,057	$137	($325)	$17,307
2069	Jul 68-Jun 69	0.160	$1,872	$656	$2,079	$138	($345)	$16,952
2070	Jul 69-Jun 70	0.154	$1,874	$642	$2,098	$139	($363)	$16,579
2071	Jul 70-Jun 71	0.148	$1,875	$628	$2,116	$140	($380)	$16,188
2072	Jul 71-Jun 72	0.143	$1,876	$612	$2,131	$140	($396)	$15,782
2073	Jul 72-Jun 73	0.137	$1,875	$597	$2,144	$141	($410)	$15,363
2074	Jul 73-Jun 74	0.132	$1,873	$581	$2,155	$141	($422)	$14,930
2075	Jul 74-Jun 75	0.127	$1,871	$564	$2,163	$141	($433)	$14,487
2076	Jul 75-Jun 76	0.122	$1,868	$547	$2,170	$141	($443)	$14,034
2077	Jul 76-Jun 77	0.117	$1,864	$530	$2,174	$141	($451)	$13,573
2078	Jul 77-Jun 78	0.113	$1,860	$512	$2,177	$141	($458)	$13,104
2079	Jul 78-Jun 79	0.108	$1,855	$494	$2,178	$141	($464)	$12,631
2080	Jul 79-Jun 80	0.104	$1,850	$476	$2,177	$141	($468)	$12,153
2081	Jul 80-Jun 81	0.100	$1,845	$458	$2,174	$141	($470)	$11,674
2082	Jul 81-Jun 82	0.096	$1,840	$440	$2,170	$140	($471)	$11,193
2083	Jul 82-Jun 83	0.093	$1,834	$421	$2,165	$140	($471)	$10,713
2084	Jul 83-Jun 84	0.089	$1,829	$403	$2,158	$140	($469)	$10,235
2085	Jul 84-Jun 85	0.086	$1,823	$385	$2,150	$139	($466)	$9,760
2086	Jul 85-Jun 86	0.082	$1,818	$367	$2,141	$139	($462)	$9,290
2087	Jul 86-Jun 87	0.079	$1,812	$349	$2,131	$138	($457)	$8,825
2088	Jul 87-Jun 88	0.076	$1,807	$331	$2,120	$137	($451)	$8,366
2089	Jul 88-Jun 89	0.073	$1,802	$314	$2,108	$137	($444)	$7,915
2090	Jul 89-Jun 90	0.070	$1,796	$297	$2,096	$136	($435)	$7,472
2091	Jul 90-Jun 91	0.068	$1,792	$280	$2,081	$136	($425)	$7,040
2092	Jul 91-Jun 92	0.065	$1,787	$264	$2,067	$135	($415)	$6,618
2093	Jul 92-Jun 93	0.063	$1,782	$248	$2,052	$134	($404)	$6,207
2094	Jul 93-Jun 94	0.060	$1,777	$232	$2,035	$133	($391)	$5,809
2095	Jul 94-Jun 95	0.058	$1,772	$217	$2,019	$133	($379)	$5,424
2096	Jul 95-Jun 96	0.056	$1,769	$203	$2,002	$132	($365)	$5,053
2097	Jul 96-Jun 97	0.054	$1,766	$189	$1,984	$131	($350)	$4,698
2098	Jul 97-Jun 98	0.051	$1,763	$176	$1,966	$130	($334)	$4,360
2099	Jul 98-Jun 99	0.049	$1,759	$163	$1,946	$130	($317)	$4,038

[1] For illustration purposes, we used the Base Plan investment returns vector to discount cash flows to to June 30, 2024.

[2] Excluding investment income.

APPENDIX A

Walkthrough of Modeling Changes from

2022 Actuarial Study

APPENDIX A

Walkthrough of Modeling Changes from 2022 Actuarial Study

This appendix summarizes a walkthrough of key modeling differences comparing this report (2024 Actuarial Valuation) to the analysis completed for our 2022 WA Cares Fund Actuarial Study[18] dated October 20, 2022 (2022 Actuarial Study). Figure A-1 below shows the key modeling changes in "steps" for the required premium assessment. We provide additional details on each step following Figure A-1. Note, estimates around required program revenue are not intended, and should not be used, for setting the program premium assessment.

In the 2022 Actuarial Study, we estimated the required premium assessment for our "2022 Baseline" to range from 0.52% to 0.63%. To illustrate the incremental impact of modeling updates since the 2022 Actuarial Study, we focused on the "2022 Base Plan," which yielded a required premium assessment of 0.57%. The "2024 Baseline" required premium assessment for the 2024 Actuarial Valuation ranges from 0.48% to 0.65%, and the "2024 Base Scenario" is estimated to require a premium assessment of 0.57%. The range widens to 0.24% to 1.31% when including results from our assumption sensitivity testing.

Note, the impacts to premium relative to the Base Scenario presented in Figure A-1 and throughout this report may vary from previous actuarial analysis completed subsequent to the 2022 Actuarial Study due to the modeling changes described in this section.

	Figure A-1 Washington Office of the State Actuary Key Modeling Changes Compared to 2022 Actuarial Study		
#	Update	Level Premium Assessment Required	Impact from Previous Step
	2022 "Baseline"	0.52% to 0.63%	
	2022 "Base Plan"	0.57%	
1	Update program parameters	0.61%	0.04%
2	Update economic assumptions	0.53%	-0.08%
3	Update other assumptions	0.58%	0.05%
4	Incorporate investment income lag and premium collection adjustment	0.59%	0.01%
5	Use new investment returns	0.57%	-0.02%
	2024 "Base Scenario"	0.57%	
	2024 "Baseline"	0.48% to 0.65%	

UPDATE PROGRAM PARAMETERS

As shown in Figure A-1, the projected required premium assessment increased by four basis points (0.04%) due to program parameter updates. This includes the following items.

- Benefit eligibility criteria updated to NFLOC with 90-day forward certification (decreases premium by 0.05%)

  Modeling in the 2022 Actuarial Study assumed benefit eligibility criteria consistent with two potential pathways under the State of Washington Medicaid program: 1) nursing facility level of care (NFLOC) pathway[19] and 2) Medicaid personal care (MPC) pathway.[20] DSHS requested we adjust our modeling for the 2024 Actuarial Valuation to reflect a benefit eligibility threshold that only includes the NFLOC pathway and removes the MPC pathway. In addition, DSHS provided guidance that the program would institute a 90-day forward certification that would require an individual's LTSS need is expected to last for at least 90 days. We adjusted incidence rates downward to model this updated benefit eligibility definition.

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[18] Giese, C. et al. (October 20, 2022). *2022 WA Cares Fund Actuarial Study*. Milliman Report. Retrieved November 17, 2024, from https://leg.wa.gov/osa/additionalservices/Documents/Report01-2022WACaresFundActuarialStudy.pdf

[19] https://apps.leg.wa.gov/wac/default.aspx?cite=388-106-0355

[20] https://apps.leg.wa.gov/wac/default.aspx?cite=388-106-0210

- Portability provision added to benefit offering (increases premium by 0.09%)

  House Bill 2467, which was signed into law on March 15, 2024, includes a provision for an employee who has elected coverage who relocates outside of Washington may elect to continue participation in the program after paying premiums in-state for three years.[21] Benefits for out-of-state participants will be available beginning in 2030 per DSHS. The modeling impact due to incorporating this provision is based on a projection for how many workers leave Washington each year (described in Section V).

UPDATE ECONOMIC ASSUMPTIONS

As shown in Figure A-1, the projected required premium assessment decreased by eight basis points (0.08%) due to economic assumption updates. This includes the following items.

- Workforce assumption updates (decreases premium by 0.06%)

  We updated assumptions to determine worker counts by age, gender, and projection year using the latest data provided by the Social Security Administration. Additionally, we leveraged actual program experience data from the first year of WA Cares Fund to apply a final calibration adjustment to worker rates in order to align our projection with program experience thus far.

- Wage level assumption updates (decreases premium by 0.02%)

  We updated assumptions related to wage levels and wage growth using information from the 2024 OASDI Trustees Report and BLS data. Additionally, we leveraged actual program experience data from the first year of the program to apply a final calibration adjustment to average wage levels in order to align our projection with program experience thus far.

UPDATE OTHER ASSUMPTIONS

As shown in Figure A-1, the projected required premium assessment increased by five basis point (0.05%) due to updates to other assumptions. This includes the following items.

- Update incidence assumptions (increases premium by 0.02%)

  Separate from the incidence updates described above that were the result of a change in benefit eligibility criteria, we also updated the base incidence assumptions to reflect research from the latest version of the Milliman *Long-Term Care Guidelines*.

- Update migration assumptions (increases premium by 0.03%)

  We updated migration assumptions using the 2023 OFM Population Forecast and the ACS State-to-State Migration Flows. Net migration (i.e., domestic in-migration plus international in-migration minus domestic out-migration minus international out-migration) remained approximately in-line with the 2022 Actuarial Study; however, we increased domestic in-migration and domestic out-migration based on ACS data patterns. Increased out-migration has an upward effect on the premium assessment based on the presence of the portability provision.

- Update births and deaths assumptions (increases premium by 0.01%)

  We updated births and deaths assumptions using the 2024 OASDI Trustees Report.

- Update all other assumptions (decreases premium by 0.01%)

  We updated other assumptions, such as recalibrating the starting population to the OFM Population Forecast, assumptions related to workers with disabilities, and the calibrating the starting modeled fund level as of June 30, 2024 to actual program experience (as described in Appendix B).

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[21] WA Legislature (2024). House Bill 2467. Retrieved October 23, 2024 from
https://app.leg.wa.gov/billsummary?BillNumber=2467&Initiative=false&Year=2023

INCORPORATE INVESTMENT INCOME LAG AND PREMIUM COLLECTION ADJUSTMENT

As shown in Figure A-1, the projected required premium assessment increased by one basis point (0.01%) due to incorporating the investment income lag and premium collection adjustment.

▪ Incorporate investment income lag and premium collection adjustment (increases premium by 0.01%)

In collaboration with ESD and SIB, we incorporated two adjustments related to how the fund will be administered. The investment income lag reflects that premiums are deposited into the SIB fund on average approximately one quarter after those premiums are assessed. The premium collection adjustment reflects that only 98% of premiums assessed are anticipated to be ultimately collected each year.

USE NEW INVESTMENT RETURNS

As shown in Figure A-1, the projected required premium assessment decreased by two basis points (0.02%) due to using new investment returns.

▪ Use new investment returns (decreases premium by 0.02%)

In collaboration with SIB, we updated projected Base Scenario investment returns to assume 4.4% returns for the first 15 years of the projection based on SIB's 2023 Fixed Income return of 4.4%. After 15 years, we grade down to 4.0% over 15 years, after which we assume 4.0% returns for the remainder of the projection, which is based on a review of historical returns for the Bloomberg U.S. Universal Bond Index.

APPENDIX B

Modeled Fund Level as of June 30, 2024

APPENDIX B

Modeled Fund Level as of June 30, 2024

Figure B-1 below demonstrates our estimation of the modeled fund level as of June 30, 2024. We use an estimated fund level because an exact fund amount as of June 30, 2024 was not available. We reviewed our estimated fund compared to quarterly reports from ESD for reasonableness as a starting point.

This modeled fund level serves as the fund's starting point in our modeling for the 75-year projection horizon starting June 30, 2024. Below the figure, we provide additional details on each step. This calculation is a high-level estimation (rounded to the nearest $100 million) to be used in the actuarial valuation of the program and does not represent a detailed account of all actual program transactions and account balances.

	Figure B-1 Washington Office of the State Actuary Modeled Fund Level as of June 30, 2024		
	Revenue		**Source**
	Premium assessed		
(1a)	July through September 2023	$340,302,392	ESD
(1b)	October through December 2023	$346,772,818	ESD
(1c)	January through March 2024	$352,193,922	ESD
(1d)	April through June 2024	$348,534,756	ESD
(2)	Collected premium adjustment	0.98	ESD
(3)	Estimated premium collected	$1,360,047,809	(1) x (2)
(4)	Investment return percentage	0.0278	SIB
(5)	Investment lag adjustment	0.75	ESD and SIB
(6)	Investment income	$13,164,017	[(3) - (10)] / 2 x (4) x (5)
(7)	**Total revenue**	**$1,373,211,827**	(3) + (6)
	Expenses		
(8)	Loan payoff	$66,933,815	ESD
(9)	Agency expenses	$30,378,521	ESD
(10)	**Total expenses**	**$97,312,336**	(8) + (9)
(11)	**Modeled fund level**	**$1,275,899,491**	(7) - (10)
	Modeled fund level, rounded	**$1,300,000,000**	

As shown in Figure B-1, we calculate the modeled June 30, 2024 fund level as follows:

- Premiums assessed by quarter for the first year of the program were provided to Milliman by ESD. We apply a 0.98 factor to total assessed premiums to reflect roughly 2% of assessed premiums will never be collected based on emerging program experience and conversations with ESD.

- Investment income is earned on the fund throughout the year. For the purposes of this simplified calculation, we estimate the annual investment income by applying the return percentage to the average fund balance over the course of the year, or the average of the prior year and the current year modeled fund level excluding investment income. The modeled fund level excluding investment income is calculated as Total Premium Collected less Total Expenses. Because State Fiscal Year 2023-2024 is the first year of the program, the prior year modeled fund level is $0. Therefore, investment income is ultimately calculated as the average of $0 and the current year Total Premiums Collected less Total Expenses, multiplied by the investment return percentage and the investment lag adjustment.

  - The investment return percentage of 2.78% was provided to Milliman by SIB.

  - The investment lag adjustment of 0.75 is based on discussions with both ESD and SIB, who indicated that premiums are deposited into the fund on approximately a one-quarter lag. Therefore, only three quarters of investment income are earned as of the valuation date.

- Expenses to date were provided by ESD and include both a transaction to the State's General Fund to complete a loan payoff, as well as agency expenses incurred during the first 12 months of the program.

APPENDIX C

Glossary of Terms

APPENDIX C

Glossary of Terms

ACTUARIAL BALANCE

According to the OASDI Trustees Report, *actuarial balance* "is a summary measure of the program's financial status through the end of the 75-year valuation period. The actuarial balance measure includes the trust fund asset reserves at the beginning of the period, all cost and income during the valuation period, and the cost of reaching a target trust fund reserve of one year cost by the end of the period. […] A negative actuarial balance is called an actuarial deficit. The actuarial deficit represents the average amount of change in income or cost that is needed throughout the valuation period in order to achieve actuarial balance."[22]

In this report, we express actuarial balance as both a dollar value and a percentage of claims (including claim expenses) to give users of this report a sense for both the value and the magnitude of the balance.

ADVERSE SELECTION

Adverse selection occurs when individuals know more about their needs / characteristics than the program, and as a result, the program has a riskier population than the "average risk." Voluntary programs or features are more susceptible to adverse selection when there is guaranteed coverage and individual choice with no underwriting or rating classes, as there is with the voluntary features under WA Cares.

BASE SCENARIO

Base Scenario refers to a specific scenario from the Baseline. The Base Scenario serves as an "anchor middle point" for assumption sensitivity testing. This allows testing to be illustrated as incremental impacts to a point estimate for ease of presentation. The Base Scenario is presented as a point estimate but is not intended to be interpreted as a "most likely" scenario.

BASELINE

Baseline refers to analysis estimates of the program under current law using a set of demographic, economic, and morbidity assumptions. The Baseline is comprised of multiple scenarios that reflect variation in the analysis for estimated uncertainty due to the voluntary components of the program. All outcomes in the range should be viewed as equally likely given the uncertainty of voluntary participation.

BENEFIT REDUCTION FACTOR

The benefit reduction factor is related to the fund depletion year (if any). Specifically, once the fund is depleted, this metric is the percentage by which benefits must be reduced through the end of the projection to maintain program solvency. Note, many modeled scenarios do not suggest the fund will be depleted at any point during the projection horizon. We indicate such scenarios with a benefit reduction factor of "n/a."

CLAIM INCIDENCE RATE

Incidence refers to the rate of new cases of qualifying individuals in a population satisfying the benefit eligibility criteria (often referred to as an insurance claim).

DISCOUNT RATE

The discount rate is the annual percentage used to estimate the present value of future cash flows as of the valuation date. This report present results using a discount rate consistent with the expected investment returns of the program as well as various illustrative percentages.

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[22] Social Security Administration (2024). 2024 OASDI Trustees Report, Summary Measures. Retrieved October 23, 2024 from https://www.ssa.gov/OACT/TR/2024/tr2024.pdf

FUND DEPLETION YEAR

The fund depletion year refers to the year during which we project the fund to reach $0 under a given modeling scenario over the 75-year projection horizon. Note, many modeled scenarios do not suggest the fund will be depleted at any point during the projection horizon. We indicate such scenarios with a fund depletion year of "n/a."

FUND RATIO

The fund ratio is calculated as the projected fund balance in any given year as a percentage of the next year's program expenditures. This metric can be used to evaluate the fund's sufficiency to pay expected benefit payments in any program year.

MORTALITY RATE

Mortality refers to the rate of new deaths in a population. For this report, we model mortality rates by active lives and disabled lives separately, where the split between active and disabled lives depends on whether an individual satisfies the benefit eligibility criteria.

MODELED FUND LEVEL

The modeled fund level represents an approximation of the expected balance of the fund as of the valuation date (June 30, 2024 for the purposes of this report). This modeled fund level serves as the fund's starting point for the 75-year projection horizon starting June 30, 2024.

NET INVESTMENT EARNED RATE (NIER)

The anticipated returns as advised by the Washington State Investment Board (WSIB). Additional information related to the development of our interest rate assumptions is provided in Section V of this report.

REQUIRED PREMIUM ASSESSMENT

The premium assessment (as a percentage of total wages) that is necessary to maintain a positive fund balance over the 75-year projection horizon.

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