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Luke Masselink, ASA, EA, MAAA
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PO Box 40914
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[Sent via email: luke.masselink@leg.wa.gov]

Re: Base Plan Updated to Reflect ESD Opt-Out Data

Dear Luke:

Per the request of the Washington State Office of the State Actuary (OSA) and Washington State Department of Social and Health Services (DSHS), we updated the Base Plan from our [2020 LTSS Trust Actuarial Study¹](#) (2020 Study) to reflect the opt-out data provided by the Washington State Employment Security Department (ESD) on March 3, 2022.

Please note, the estimates provided in this letter are prepared to assist in evaluating the impact of emerging opt-out data for WA Cares Fund. Any estimates around required program revenue are for discussion purposes only and not intended, and should not be used, for setting the program premium assessment.

All plan features, methodology, and assumptions are consistent with the modeling of the Base Plan in the 2020 Study with the exception of reflecting the emerging opt-out data. The results in this letter should be considered in their entirety, and in combination with our 2020 Study.

RESULTS

Compared to the Base Plan from our 2020 Study (which requires a 0.664% premium assessment), we estimate that incorporating emerging ESD data related to actual program opt-outs increases the required premium assessment by 0.036%. Based on testing various key assumptions (related only to the treatment of the ESD opt-out data), we observe the impact to the premium assessment could be as high as 0.061%. Please see the Sensitivity Tests section of this letter for additional information related to these tests.

Our 2020 Study included a number of different opt-out scenarios in our Baseline. The results of these tests produced premium assessments ranging from 0.66% to 0.81%. One such test, referred to above as the “Base Plan”, assumed 20% of the top decile of wage earners and 10% of the second decile of wage earners would opt-out of the program. We assumed the individuals that opt-out earned “average” wages for their decile (i.e., we did not assume the 20% that opted out of top decile were the top 20% of the top decile, but rather average wage earners for that decile). This equated to approximately 103,000 wage earners (or 3% of wage earners responsible for approximately 10% of wages in 2022) opting out at the start of the program. In the 2020 Study we estimated this discrete scenario requires a level premium assessment of 0.664% for the Current Law (Invest Treasuries) investment scenario.

To estimate the impact of the emerging opt-out data, we incorporated data provided by ESD on March 3, 2022 to model the counts, wages, and ages of the individuals who have opted out of the program as of fourth quarter 2021. Information from ESD indicated approximately 473,000 wage earners had approved requests to opt-out of the program as of that time. Additional information on our methodology and assumptions can be found in the following section of this letter. Per the assumptions in this letter, we estimate this discrete scenario requires an increase of 0.036% to the level premium assessment of 0.664% estimated under the Base Plan.

¹ Giese, C. et al. (December 14, 2020). 2020 Long-Term Services and Supports Trust Actuarial Study. Milliman Report. Retrieved August 25, 2021, from <https://leg.wa.gov/osa/additionalservices/Documents/Milliman2020WALTSSTrustActuarial%20Study.pdf>

More details comparing the impact of the emerging ESD opt-out data to the 2020 Study results can be found in Attachment A.

DATA CONSIDERATIONS

Where information is unknown or unavailable, we made the following assumptions in our analysis which should be considered as they have the potential to impact the resulting premium assessment.

- In January 2022, Governor Jay Inslee signed House Bills (HB) 1732 and 1733 which, among other program changes, delayed the start of the WA Cares Fund until July 1, 2023. **The impact of HB 1732 and 1733 are not reflected in this letter's results.**
- As described throughout this letter, our analysis reflects emerging actual opt-out data provided by ESD; however, **the wages and demographics of the individuals that do not opt-out and remain in the WA Cares Fund continue to be estimates and are not yet available in a direct data source.** To the extent the average wages, wage growth, and demographics of the population participating in the WA Cares Fund differ from our projections, the required premium assessment will also vary from our estimates.
- Per the ESD data, we project the average 2021 annual wages for the opt-out population to be \$188,000. We are treating the wages in the data provided to be consistent with the wage base assumed as part of our 2020 Study (i.e., covered earnings as defined in the 2020 OASDI Trustees Report). **As we work to reconcile our projection of wages with ESD and OSA, these projections may need to be updated.**
- We assume approximately 473,000 individuals have opted out of the program. This includes the 438,000 with approved opt-out requests included in the data from ESD, plus an additional 35,000 individuals for whom ESD does not have wage data. Per ESD, we assumed 7.5% of approved individuals opting out of the program were not included in the wage data. **We do not make an assumption to project any additional opt-outs through the remainder of the opt-out window in 2022.**
- Since we do not have wage or age data for the 35,000 individuals without corresponding ESD data, we assume their average wages and age distribution follows the patterns of the 438,000 individuals for which we have data. **To the extent the wages and ages of this population differs from the rest of the opt-out population, the required premium assessment will also vary from our projections.**
- Given the ESD data does not contain information related to gender, we assume a 50% / 50% split between males and females for the opt-out population. **To the extent the gender distribution varies from this assumption, the results may also vary from our projections.**
- We project the wages of the opt-out population to grow in line with our projections for the general population (~3.5%). **Given high wage earners may experience different (and potentially higher) wage growth than the general population, sensitivity testing this assumption may be important in future analysis.**

SENSITIVITY TESTS

Based on testing various key assumptions (related only to the treatment of the ESD opt-out data), we observe the impact to the premium assessment from incorporating emerging ESD opt-out data could be as high as 0.061%. The results of this testing should be taken into consideration when evaluating the potential impact of the emerging opt-out data on the financial soundness of the WA Cares Fund. Note, while we consider this to be a reasonable level of potential deviation from our best estimate, it should not be considered a bound for the required premium assessment, which could fall outside of the aforementioned range. We tested the following assumptions related to the incorporation of the ESD opt-out data:

- *Morbidity Test*

While the ESD data provided actual age and wage information for individuals who have opted out of the WA Cares Fund, it does not provide information about the health status or relative morbidity risk of this population. Any time choice or a voluntary aspect to participation is introduced into a program, unpredictability related to adverse selection can make projections challenging. Given this unpredictability, we constructed an “extreme” morbidity sensitivity test of modeled adverse selection, where we assume that projected revenue for the 473,000 opt-out individuals is removed, but we do not reduce claims (i.e., we assume that those who opted out are all individuals who will not require LTSS). This test serves as the upper end of our illustrated range and results in an increase of 0.061% compared to the 2020 Study Base Plan.

- *Revenue Test*

While the 2021 wages for those who have elected to opt-out are mostly known, the future growth of those wages is unknown. As mentioned in the Data Considerations section, higher wage earners may experience different (and potentially higher) wage growth than the average. We sensitivity tested the impact of the opt-out population experiencing annual wage growth 100 basis points higher than the average and found the impact to fall within the aforementioned range.

- *Ultimate count of opt-outs*

Washingtonians who owned long-term care coverage as of November 1, 2021 have until the end of 2022 to apply for the WA Cares Fund exemption. We tested the impact of 10% more individuals opting out of the program by the end of 2022 (assuming their average wages, ages, and our assumed relative morbidity were consistent with the 473,000 individuals who have already opt-ed out), and the impact to the premium assessment fell within the aforementioned range. If we assumed different average wages, age distributions, or relative morbidity for this population, the resulting required premium assessment could exceed the estimate range. On an approximate basis, each 10% increase in the count of opt-outs raises the impact to the required premium assessment by approximately 0.004% (i.e., assuming 10% more people, or 47,300 more people opted out, changed the impact compared to the 2020 Base Plan from 0.036% to 0.040%).

METHODOLOGY AND ASSUMPTIONS

We include assumptions and methodology related to modifying the Base Plan to reflect emerging opt-out data from ESD provided on March 3, 2022. The information in this letter should be considered along with the sources and methodology used to develop the Base Plan, described starting on page 31 of the 2020 Study.

Truncated Data Adjustments

For privacy reasons, the information provided by ESD censored wage information for the top 5% of the opt-out population. As illustrated in Figure 2, we use aggregate data provided by ESD to estimate the average wage for the censored population.

Additionally, ESD indicated that the data provided only represented approximately 92.5% of approved individuals who had opted out of the program. We made an adjustment (also illustrated in Figure 1) to account for the remaining 7.5% of the opt-out population for whom we did not have age or wage data.

Figure 1
Washington Office of the State Actuary
Opt-Out Statistics

		4Q 2021 ESD		
		Data		Source
Bottom 95% Earners				
(1)	Approved Population	415,746	WACares_OptOut_AnonymizedTable_Update20220301.xlsx	
(2)	Average 2021 Wage ¹	\$140,621	WACares_OptOut_AnonymizedTable_Update20220301.xlsx	
Top 5% Earners (Estimate)				
(3)	Approved Population	21,964	WACares_OptOut_AnonymizedTable_Update20220301.xlsx	
(4)	Average Wage ²	\$1,075,750	$[(5) \times (6) - (1) \times (2)] / (3)$	
Total				
(5)	Approved Population	437,710	WACares_OptOut_AnonymizedTable_Update20220301.xlsx	
(6)	Average 2021 Wage	\$187,545	WACares_OptOut_WageDistribution_Update20220301.xlsx	
Total, including 7.5% Unmappable Individuals Opting Out				
(7)	Approved Population ³	473,200	$(5) / [1 - 0.075]$	
(8)	Average 2021 Wage	\$187,545	We are assuming wages consistent with (6) above	

¹ Average wage for approved individuals opting out with a wage below the censored level (\$478,277).

² Assumed average wage for approved individuals opting out with a wage above the censored level (\$478,277).

³ 7.5% of individuals who have an approved opt-out application are unmappable in ESD's system. We assume these individuals follow the same distribution as the 437,710 individuals in the data.

Ultimately, we assume approximately 473,000 individuals have approved requests for opting out of the program. This includes:

- Approximately 416,000 with approved opt-out requests for whom we have seriatim age and wage data
- Approximately 22,000 individuals who represent the top 5% of wage earners for whom we have age data, but need to estimate the average wages
- Approximately 35,000 individuals who ESD does not have data on, whom we assume follow age and wage distributions consistent with the remainder of the opt-out population

Covered Wages

Per the ESD data, we project the average annual 2021 wages for the opt-out population to be approximately \$188,000, trended to 2022. We treat the wages in the data provided to be consistent with the wage base assumed as part of our 2020 Study (i.e., covered earnings as defined in the 2020 OASDI Trustees Report).

Gender Distribution

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

Wage Growth

We project the wages of the opt-out population to grow in line with our projections for the general population (approximately 3.5% annual growth).

CAVEATS AND LIMITATIONS

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

- This letter 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 any third party even if we permit the distribution of our work product to such third party.

This information provides alternative tests to the Base Plan presented in the 2020 LTSS Trust Actuarial Study provided on December 14, 2020, which should be read in its entirety with this letter. In completing this analysis, we relied on information provided by OSA, DSHS, ESD, and publicly available data. We accepted without audit, but reviewed the information for general reasonableness. Our summary may not be appropriate if this information is not accurate.

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

Milliman has developed certain models to estimate the values included in this letter. The intent of the models is to estimate the required revenue impact of emerging opt-out data of the WA Cares Fund. We have 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 actuarial standards of practice.

Guidelines issued by the American Academy of Actuaries require actuaries to include their professional qualifications in all actuarial communications. Chris Giese is a member of the American Academy of Actuaries and meet the qualification standards for performing the analyses in this letter.

The terms of the Personal Services Contract with Washington State OSA effective December 2, 2021, apply to this information.



Sincerely,



Christopher J. Giese, FSA, MAAA
Principal and Consulting Actuary

CJG/db

Attachment



APPENDIX A
COMPARISON TO 2020 STUDY

APPENDIX A COMPARISON TO 2020 STUDY BASE PLAN

Per OSA and DSHS' request, we prepared this appendix to provide additional background comparing the "Updated with ESD Opt-Out Data" test to two scenarios included in our [2020 LTSS Trust Actuarial Study²](#) (2020 Study). We produced various opt-out scenarios as part of the 2020 Study, but this appendix focuses on two of the scenarios modeled, as described below.

1. 20% Top Decile, 10% Second Decile Opt-Out (commonly referred to as the assumed "Base Plan").

We assumed 20% of the top decile of wage earners and 10% of the second decile of wage earners will opt-out of the program. We assumed those individuals that opt-out earned "average" wages for their decile (i.e., we did not assume the 20% that opted out of top decile were the top 20% of the top decile, but rather average wage earners for that decile). This equated to 3% of wage earners (responsible for approximately 10% of wages in 2022) opting out at the start of the program.

We estimate this discrete scenario requires a level premium assessment of 0.664% for the Current Law (Invest Treasuries) investment scenario.

2. 45% of All Wage Earners Opt-out.

We also examined private market, stand-alone LTC insurance premiums and carved out individuals for whom it could be cheaper to purchase private market coverage than to pay a 0.58% payroll assessment at the start of the program. For this scenario, we looked at private market coverage with a \$50 daily benefit maximum and no inflation protection. This coverage is intended to represent the "cheapest" available coverage in the private market, and be leaner (i.e., lower daily benefit and no inflation protection) than the coverage offered by the LTSS Trust Program.

When projecting the number of individuals who may opt-out of the program for this alternative, we compared private LTC market premium rates to the amount individuals would pay in the form of a payroll premium assessment. For example, if the annual premium available for a 60-year-old in the private market was approximately \$420, we assumed individuals who made more than \$72,400 ($\$420 / 0.58\% = \$72,400$) would opt-out of the program. We performed this comparison by age because private market coverage is issue age rated. We projected that approximately 45% of wage earners (responsible for approximately 75% of wages in 2022) would opt-out at the start of the program under this alternative.

We estimate this discrete scenario requires a level premium assessment of 0.686% for the Current Law (Invest Treasuries) investment scenario.

Under the "Updated with ESD Opt-Out Data" test in Figure 1, we reflected actual fourth quarter 2021 ESD opt-out data provided on March 3, 2022 to determine the counts, wages, and ages of the individuals opting out of the program. We estimate this test requires a level premium assessment of 0.700% (0.664% + 0.036%) for the Current Law (Invest Treasuries) investment scenario. Our projections after reflecting updated opt-out data produce a higher premium assessment than the aforementioned scenarios from the 2020 Study for two main reasons: the population opting out is younger than previously modeled, and the population opting out has higher wages on average than previously modeled.

Ages of Population Opting Out of WA Cares Fund

The data from ESD suggests individuals opting out of the program are, on average, younger than what was assumed in the 2020 Study. When younger individuals opt-out of the program, the impact to the program is larger since the program's revenue will be impacted for a longer period of time than when individuals close to retirement opt-out (all else equal). Please see Figure 3 for the counts of individuals assumed to opt-out of the program by age group.

² Giese, C. et al. (December 14, 2020). 2020 Long-Term Services and Supports Trust Actuarial Study. Milliman Report. Retrieved August 25, 2021, from <https://leg.wa.gov/osa/additionalservices/Documents/Milliman2020WALTSSTrustActuarial%20Study.pdf>

APPENDIX A COMPARISON TO 2020 STUDY BASE PLAN

Notably as an example, the data suggests over 19,000 individuals under age 25 have already opted out of the program (as seen in Figure 2), which is significantly higher than was assumed in either test for the 2020 Study. Since the 45% Opt-out Scenario was based off of comparing individual wages and private market premium rates available to Washingtonians for stand-alone LTC coverage, we assumed no individuals under age 25 would opt-out of the program, as private market coverage is often not sold to those under age 25. When individuals under age 25 opt-out of WA Cares, the financial impact is significant since the program will forfeit (on average) decades worth of premiums from these individuals during their remaining working lives.

Figure 2
Washington Office of the State Actuary
Comparison of Ages of Opt-Out Population

Age band	Individuals Opting Out			Distribution of Opt-out Population		
	Base Plan from 2020 Study	45% Opt-out Scenario from 2020 Study	Using Actual Opt-Out Data	Base Plan from 2020 Study	45% Opt-out Scenario from 2020 Study	Using Actual Opt-Out Data
Under 25	Under 1,000	0	19,000	1%	0%	4%
25 to 34	16,000	473,000	134,000	16%	31%	28%
35 to 44	29,000	453,000	147,000	28%	30%	31%
45 to 54	31,000	381,000	106,000	30%	25%	22%
55 to 64	22,000	176,000	58,000	22%	12%	12%
Over 65	4,000	36,000	9,000	4%	2%	2%
Total	103,000	1,519,000	473,000	100%	100%	100%
Average age	46.4	41.9	41.2			

Wages of Population Opting Out of WA Cares Fund

The data from ESD suggests individuals opting out of the program have, on average, higher wages than what was assumed in the 2020 Study. Using the new ESD data, trended to 2022 levels, we project the average wages for the individuals opting out to be approximately \$194,000 (as seen in Figure 3). This is 4% higher than the average wage for the opt-out population modeled under the Base Plan (\$187,000) and 70% higher than the average wage for the opt-out population modeled under the 45% Opt-out scenario (\$114,000).

All else equal, the required premium assessment rate is higher because the updated data produces a lower remaining average wage per employee after the opt-out population is removed. Observing the differences in average wages across the scenarios captures the impact to wages in 2022, but modeled wages beyond 2022 also have a significant impact to the required premium assessment. As seen in Figure 3, the average of wages removed is more concentrated around younger ages than modeled. This results in decreased wages extending longer into the projection period than what was previously modeled in the 2020 Study, and ultimately increases the required premium assessment.

APPENDIX A COMPARISON TO 2020 STUDY BASE PLAN

Figure 3
Washington Office of the State Actuary
Comparison of Wages of Opt-Out Population

Age band	Average 2022 Wages for Individuals Opting Out			Distribution of Total 2022 Wages for Individuals Opting Out by Age Group		
	Base Plan from 2020 Study	45% Opt-out Scenario from 2020 Study	Using Actual Opt-Out Data ¹	Base Plan from 2020 Study	45% Opt-out Scenario from 2020 Study	Using Actual Opt-Out Data
Under 25	\$163,000	n/a	\$74,000	1%	0%	2%
25 to 34	\$163,000	\$82,000	\$154,000	14%	22%	25%
35 to 44	\$190,000	\$111,000	\$219,000	28%	29%	35%
45 to 54	\$194,000	\$129,000	\$236,000	31%	29%	27%
55 to 64	\$187,000	\$160,000	\$194,000	22%	16%	12%
Over 65	\$202,000	\$170,000	\$141,000	5%	4%	1%
Total	\$187,000	\$114,000	\$194,000	100%	100%	100%

¹ESD data presented 2021 wage data. The wages in this Figure are trended to assumed 2022 levels.