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Correspondence Memorandum

Date: April 17, 2020

To: Group Insurance Board

From: Jim Guidry, Director
Benefit Services Bureau
Division of Retirement Services

Subject: Acceptance of State and Local Income Continuation Insurance (ICI) Actuarial Valuations

ETF requests the Group Insurance Board (Board) approve the State ICI Actuarial Valuation as of December 31, 2019. ETF also recommends the Board adopt Milliman's premium rate baseline scenario, which would result in a 0% premium increase for the 2021 plan year.

ETF requests the Board approve the Local ICI Actuarial Valuation as of December 31, 2019. ETF also recommends the local ICI plan premium holiday remain in effect for the 2021 plan year.

Milliman, Inc., has prepared its annual actuarial valuation of the State and Local ICI programs as of December 31, 2019. The State ICI valuation is highlighted by a fund balance that has reached 100% of actuarial liabilities and is the result of the Board's 2015 decision to approve a long-term plan to increase ICI premium rates by 20% annually from 2016 through 2020. At that time the State ICI fund balance stood at 64% of actuarial liabilities.

Additionally, the reserve balance in the Local ICI program continues to grow, resulting in another recommendation for a continuation of the premium holiday for that plan. More information on the State ICI plan reserves as well as options for reducing the Local ICI fund balance continues below.

An executive summary is on page six of each report.

State ICI Program

State ICI Targeted Reserve Review. The Board established a reserve policy in November 2019 for both the State and Local Income Continuation Insurance (ICI) programs and approved a reserve target of 135% of the State ICI program's actuarial

Reviewed and approved by Matt Stohr, Administrator, Division of Retirement Services

Matt Stohr Electronically Signed 5/4/20

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liabilities. At the end of 2018, the State ICI program's fund balance was $71.5 million and represented 79% of the program's actuarial liability of $90.5 million. While this was an improvement from previous years, the fund balance fell short of the designated target of 135% of program liabilities.

At the end of 2019, the fund balance had increased to $90.3 million and actuarial liabilities had decreased to $90.0 million (0.5% decrease). The fund balance is now at 100.2% of liabilities, which was the goal of the 20% rate increases approved by the Board in 2015, but it still falls short of the target of 135% of plan liabilities.

State ICI Plan Rate Recommendation. The 2019 State ICI valuation report provided by Milliman developed financial projections for three scenarios:

- Baseline scenario: No increase in contribution rates throughout the projection period and interest equals 7% of starting fund balances in every year.
- Scenario 1: 10% increase in contribution rates for the 2021 plan year, then rates are held level in future years. 7% assumed interest every year.
- Scenario 2: 20% increase in contribution rates for the 2021 plan year, then rates are held level in future years. 7% assumed interest every year.
- Scenario 3: No increase in contribution rates throughout the projection period and the fund earns -18% interest in 2020. 7% assumed interest in 2021 and beyond.

Scenario 3 is presented as an informational projection to illustrate one of the potential effects on the program out of a range of possible outcomes if the program's investment income faces difficulty recovering from the market declines being experienced at the time this Board memo was prepared.

ETF recommends the Board adopt Milliman's baseline scenario, which recommends no changes to ICI premium rates for the 2021 plan year. After a series of 20% premium rate increases from 2016 through 2020, combined with the current period of economic uncertainty, provision of some premium rate increase relief for employees is recommended.

Adopting the baseline scenario would also conform with the Board's ICI reserve policy, which gives the Board flexibility to adopt premium changes that reach the reserve target over a series of years rather than in one year alone. Milliman's projection for the baseline scenario will put the fund within the reserve target range (130-140% of liabilities) by the end of 2022. The target range was also established in the reserve policy adopted by the Board in November 2019.

It does not appear, at least initially, that increased claims activity will result from the current COVID-19 pandemic. This is due to the disease's short duration not meeting either the 30-day waiting period or the requirement to exhaust accumulated sick leave, whichever is longer. It is possible that serious cases which do result in extended hospital stays could result in approved claims, but those are anticipated to be infrequent. In addition, a quarantined individual who subsequently develops the disease may also have enough time beyond the elimination periods or accumulated sick leave to qualify for benefits under the plan. However, much is unknown about the impact of this disease on individuals, and the impact on claims could change if more enrollees become severely ill. The ICI program does not include death benefits.

Local ICI Program

Local ICI Targeted Reserve Review. The Board established a reserve target of 150% of actuarial liabilities for the local ICI program in November 2019. At the end of 2018, the local ICI program's fund balance was $38.9 million, and liabilities were $5.9 million, leaving the fund balance at 652% of liabilities. On December 31, 2019, the fund balance had risen to $39.6 million (1.7% increase) and actuarial liabilities had remained virtually unchanged at $5.9 million (an increase of approximately $4,000 or 0.06%). These changes have increased the fund reserve to 663% of plan liabilities. While this was a modest increase compared to previous years, it still represents movement away from the Board-designated reserve target.

Reducing the Local ICI Fund Balance. At the November 2019 meeting, the Board requested more information regarding options to potentially reduce the local ICI fund balance. The options considered include continuation of the current premium holiday, growth in employer participation in the program, and removing excess funds from the program, either through a transfer to the state ICI program or through a refund to employers. Based on the information presented below, ETF recommends the current premium holiday remain in force.

Remove excess funds from the program. Based on analysis from the Office of Legal Services, removing excess funds from the program appears to be outside of the Board's authority. As background, Chapter 40 of the Wisconsin Statutes provides the GIB with two options when excess moneys become available through the operations of the group insurance plans: (1) apportion the excess moneys to reduce premium payments in following years; and (2) establish reserves to stabilize costs in subsequent years. Specifically, the language of Wis. Stat. §40.03(6)(e) provides the following:

> Shall apportion all excess moneys becoming available to it through operation of the group insurance plans to reduce premium payments in following contract years or to establish reserves to stabilize costs in subsequent years. If it is determined that the excess became available due to favorable experience of specific groups of employers or specific employee groups, the apportionment may be made in a manner designated to benefit the specific employers or

employee groups only, or to a greater extent than other employers and employee groups.

2011 Attorney General Opinion Interpreting Wis. Stat. §40.03(6)(e). The interpretation of Wis. Stat. §40.03(6)(e) was the subject of a 2011 Wisconsin Attorney General Opinion. ETF requested that opinion to clarify whether non-statutory language in 2011 Wisconsin Act 13 (Act 13) that required the ETF Secretary to apportion $28 million for the state to reduce the cost of providing group health insurance coverage for state employers was inconsistent with Wis. Stat. §40.03(6)(e).

The Attorney General (A.G.) Opinion concluded the following:

- The exclusive mechanism for the treatment of the group insurance reserves is provided in Wis. Stat. §40.03(6)(e).
- Wis. Stat. §40.03(6)(e) limits the GIB to using the reserves to reduce premium payments in following contract years or to stabilize costs in subsequent years.
- Providing a reduction that only benefited employers would be inconsistent with Wis. Stat. §40.03(6)(e).
- That inconsistency may result in the taking of the accrued rights of plan participants under the Wisconsin and U.S. Constitutions. *See Wisconsin Professional Police Association, Inc. v. Lightbourn*, 2001 WI 59, ¶111, 243 Wis.2d 512, 627 N.W.2d 807.
- Under Wis. Stat. §40.19, participants have an accrued right to have amounts currently held in the group insurance reserves apportioned consistently with Wis. Stat. §40.03(6)(e).

Ultimately, the A.G. Opinion concluded that apportioning excess amounts in the health insurance reserves consistently with Wis. Stat. §40.03(6)(e) would require across-the-board premium reductions for employees, retirees, and employers, or require that the reserves be held to stabilize premium costs in the future.

Application of Wis. Stat. §40.03(6)(e) to the Local ICI Reserve. While the 2011 A.G. Opinion on Wis. Stat. §40.03(6)(e) was in reference to the health insurance reserves, the reasoning still applies. ICI is also a group insurance plan. The cost of premiums is shared by employees and employers and held in the Local ICI reserve as required under Wis. Stat. §§40.04(9) & 40.05(5), and Wis. Admin Code § ETF 50.10(3). Any action taken to reduce the balance of the reserve that would benefit only employers presents legal and actuarial risk.

Previous actions taken by the Board to implement a Local ICI premium holiday is the remedy intended in Wis. Stat. §40.03(6)(e).

Increase Employer Participation in the Local ICI Program. Participation in the Local ICI program is voluntary. A local unit of government can begin participation once the governing body of an employer adopts a resolution for coverage under the plan. The

Local ICI plan also has an initial minimum participation requirement of 65% of employees must apply for coverage. This requirement can be waived temporarily by the department if it is deemed appropriate and necessary.

Employer participation growth in the Local ICI program while the premium holiday is in effect will initially generate additional claims that will help decrease the fund balance to the established reserve target. Once the target has been achieved and premium rates are reestablished, the cost of those premiums can be spread among a larger risk pool, helping to keep premium rates at a minimum.

Participation in the Local ICI program is reported annually to the Board each February. Table 1 shows the local employer participation breakdown per municipality type from 2016-2020, compared to the total number of local employers participating in the WRS.

Local Employers	Total	2020	2019	2018	2017	2016
Cities	188	58	55	51	50	47
Villages	284	63	61	58	57	57
School Districts	421	0	0	0	0	0
Special Districts	226	92	91	84	82	81
Towns	297	35	34	31	30	26
Counties	71	14	12	12	11	10
CESA/VTAE	28	0	0	0	0	0
Total	**1515**	**262**	**253**	**236**	**230**	**221**

Table 1. Employer Enrollment in Local ICI Program

As the table shows, employer enrollment in the local program has been slowly increasing each year. There is still significant potential for adding new employers to the Local ICI program. Most striking is the lack of school districts participating in the program.

To illustrate the impact of adding more employers to the Local ICI program, Milliman developed financial projections to reflect the impact of annual payroll growth above the assumed rate of 3%. The projections were developed to reflect 10%, 25%, and 40% annual rates and were projected out to 2025. Table 2 shows the impact to the Local ICI fund balance, liabilities, surplus and reserve percent for each rate of payroll growth at the end of 2025.

Payroll Growth Impact to Local ICI Fund Balance - 2025				
Rate	Fund Balance	Liabilities	Surplus	Reserve %
Assumed (3%)	$43,450,863	$7,544,470	$35,906,393	576%
10%	$41,344,096	$8,576,908	$32,767,188	482%
25%	$34,768,276	$11,915,792	$22,852,484	292%
40%	$24,280,336	$17,486,839	$6,793,497	139%

Table 2. Payroll Growth Impact to Local ICI Fund Balance - 2025

These projections show that by adding more employers to the program, the fund balance can be drawn down more quickly and would eventually lead to the end of the premium holiday in order to maintain the reserve target level of 150% of fund liabilities. There do not appear to be any statutory issues if ETF were to contact local employers to remind them of the existence of the Local ICI plan and the current premium holiday. Due to the voluntary nature of the program, it would be up to individual governing bodies to determine if they wish to or are financially able to offer coverage to their employees. Others may be enrolled in plans that offer better benefits or they may be satisfied with their existing plans and do not care to make any changes, regardless of the financial incentive.

Organic Reduction in the Fund Balance. Recent history has shown that the Local ICI plan benefit payments have increased 72% since 2015 and, combined with the lack of premium revenue, net income has declined (Table 3). The Hartford's 2019 annual report noted a 48% increase in the number of Local ICI claims since 2015. Milliman's 2019 actuarial valuation report for the Local ICI plan shows the plan's surplus ratio begins to decline after 2021, as claims volume continues to rise.

Local ICI Claims and Net Income		
Year	Claims	Net Income
2019	$1,649,420	$693,249
2018	$1,427,926	-$46,583
2017	$1,333,948	$1,530,943
2016	$1,339,006	$1,219,356
2015	$954,741	$1,155,651

Table 3. Local ICI Claims and Net Income

Over time, the surplus ratio should reach its target. It remains to be seen how the economic situation in the first two quarters of 2020 will translate over the entire year, and the impact that would have on the Local ICI program's reserve balance if any potential investment losses would need to be smoothed in over the next five-year period. Allowing the natural decline in the fund balance has the advantage of being the most conservative approach and allows ETF ease into the reserve target using the expiration of the premium holiday to allow for as soft a "landing" as possible with minimal impact to enrollees and employers.

Another option would allow the funding ratio to reach its target organically, along with recruiting local employers to join the program. Such a dual approach could help accelerate the fund ratio to target timeline. ETF would need to carefully monitor the volume of new claims as well as market conditions as they affect the fund balance.

Local ICI Plan Rate Recommendation. The 2019 Local ICI valuation provided by Milliman developed financial projections for two scenarios:

- Baseline: Continuation of the local ICI premium holiday for plan year 2021
- Scenario 1: Continuation of the local ICI premium holiday for plan year 2021 and the fund earns (18%) interest in 2020. 7% assumed interest in 2021and beyond.

As portrayed on page 2 of this memo under Scenario 3 for the State ICI program, Scenario 1 is provided as an informational projection for illustrative purposes only..

ETF recommends the Board approve the baseline scenario that leaves the local ICI premium holiday in place.

ICI Redesign Update.

ETF and Milliman recommended design changes to the State ICI program that addressed declining enrollment, attempted to lower premiums, reduce the actuarial liability, and reduce the complexity and administrative burdens of the program. ETF was not able to achieve the necessary statute changes during this legislative session and is reviewing options for the introduction in the next session, potentially including the changes in ETF's biennial budget request, which will be prepared in the fall of 2020.

ETF prepared a package of administrative rule changes that would have removed obsolete language related to the closure of the Long-Term Disability Insurance program. Those changes are currently with the Governor's office for approval. Since the rule changes were had not approved prior to the legislature's scheduled date for adjournment they will not be promulgated during 2020. If the Governor approves the rule changes before the end of this year, ETF will be able to submit the rules for Legislative review in the next session beginning in January 2021.

Staff from ETF and Milliman will be at the Board meeting to answer any questions.

Attachment A: State ICI Actuarial Valuation
Attachment B: Local ICI Actuarial Valuation

Actuarial Valuation of
The State Income Continuation Insurance Plan

As of December 31, 2019

For The State of Wisconsin
Department of Employee Trust Funds

Prepared by: Paul L. Correia, FSA, MAAA
Principal and Consulting Actuary
Milliman, Inc.

Daniel D. Skwire, FSA, MAAA
Principal and Consulting Actuary
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April 15, 2020

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Appendices:

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April 15, 2020

Jim Guidry
Director
Benefit Services Bureau
Wisconsin Department of Employee Trust Funds
Madison, WI 53707

RE: Actuarial Valuation of State Income Continuation Insurance Plan as of December 31, 2019

Dear Jim:

Thank you for asking Milliman to perform an actuarial valuation of the State Income Continuation Insurance Plan (ICI) as of December 31, 2019. The valuation results are provided in this report, along with documentation of our calculation methods and assumptions.

The State of Wisconsin Department of Employee Trust Funds (ETF) has determined that the State ICI Plan is not subject to the provisions of GASB 74, which govern the financial reporting of Other Post-Employment Benefits (OPEBs), and which require the use of pension accounting methods, including the calculation of a liability for active lives. We have therefore performed this valuation according to the requirements of GASB 10 ("Accounting and Reporting for Risk Financing and Related Insurance Issues"), which does not require the calculation of a liability for active lives. This approach is consistent with prior valuation work performed on the State ICI Plan. Ultimately it is the responsibility of ETF and its auditors to determine the applicable accounting standards for the plans.

This report is prepared solely for the internal business use of ETF. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a release agreement, subject to the following exceptions:

a) ETF may provide a copy of Milliman's work, in its entirety, to ETF's professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work for any purpose other than to benefit ETF.

b) ETF may provide a copy of Milliman's work, in its entirety, to other governmental entities, as required by law.

No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by ETF, including historical claim and expense data from The Hartford and ETF. While Milliman has not audited this data, we have reviewed it for reasonableness and it is, in our opinion, sufficient and reliable for the purposes of our calculations. If any of this information as summarized in this report is inaccurate or incomplete, the results shown could be materially affected and this report may need to be revised.

The discount rate used for this valuation was prescribed by ETF and is specified in this report. We have performed no independent assessment of the reasonableness of this assumption. ETF is solely responsible for establishing the assumption and communicating any changes to Milliman for the purpose of this valuation.

This analysis is only an estimate of the Plan's financial condition as of a single date. It can neither predict the Plan's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of Plan benefits, only the timing of employer contributions. While this report is based on the assumptions documented here, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct. Determining results using alternative assumptions is outside the scope of our engagement.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements. ETF has the final decision regarding the appropriateness of the assumptions and actuarial cost methods.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices.

I, Paul L. Correia, FSA, MAAA, am a consulting actuary for Milliman, Inc. I am a member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I, Daniel D. Skwire, FSA, MAAA, am a consulting actuary for Milliman, Inc. I am a member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sincerely,

Paul L. Correia, FSA, MAAA
Principal and Consulting Actuary
Milliman, Inc.

Daniel D. Skwire, FSA, MAAA
Principal and Consulting Actuary
Milliman, Inc.

Section I: Introduction and Executive Summary

The actuarial liabilities for the State ICI plan as of December 31, 2019 are summarized in Table 1.1 below:

Table 1.1 Actuarial Liabilities for the State ICI Plan as of December 31, 2019				
Liability Component	Standard Benefit	Supplemental Benefit	$75 Add-on	Total Liability Amount
Open Claims	$78,956,941	$1,977,183	$246,449	$81,180,573
IBNR Claims	$4,699,884	$117,691	$14,670	$4,832,244
Loss Adjustment Expense	$3,967,407	$99,349	$12,384	$4,079,139
Total	**$87,624,231**	**$2,194,223**	**$273,503**	**$90,091,957**

The values shown above include estimated liabilities for monthly ICI benefit payments (Standard Benefits and Supplemental Benefits), and for additional benefits of $75 per month to disabled members whose disability lasts longer than 12 months, to help these members with medical expenses ($75 Add-on). Please note that the liability for the $75 Add-on benefit only reflects the cost for disabled members who had not yet received the benefit as of December 31, 2019. For members who had already received the $75 Add-on benefit, the liability is reflected in the Standard Benefit.

We have analyzed the funding status of the State ICI plan as of December 31, 2019. The plan had been in deficit for many years, and the Board approved a series of annual rate increases to address the funding issues. These rate increases have helped return the State ICI plan to a positive funding position. The State ICI fund balance now contains a modest level of surplus as of December 31, 2019, as shown below:

Table 1.2 State ICI Fund Balances			
Balance Sheet Component	Valuation Date		
	December 31, 2017	December 31, 2018	December 31, 2019
Beginning Balance	$51,443,795	$60,974,320	$71,493,483
Closing Adjustments	695,028	51,615	99,718
Adjusted Beginning Balance	52,138,823	61,025,935	71,593,200
Plus: Premium Contributions	24,320,814	28,393,397	33,198,198
Plus: Investment Earnings (Smoothed)	4,387,218	3,172,205	5,888,157
Less: Insurance Claims	18,175,830	18,387,227	17,771,251
Less: Administrative Expenses	1,696,706	2,710,827	2,583,677
Ending Balance	60,974,319	71,493,483	90,324,627
Actuarial Liability	87,020,256	90,549,241	90,091,957
Surplus / (Deficit)	($26,045,936)	($19,055,758)	$232,670

State ICI fund levels are discussed in greater detail in Section III of this report.

Section II: Actuarial Valuation

The actuarial liabilities for the State ICI Plan consist of three components:

- Liability for Open Claims: The present value of expected future benefits payable to members disabled prior to December 31, 2019, whose claims had been reported to ETF on or before that date.

- Liability for Incurred but not Reported (IBNR) Claims: The present value of expected future benefits payable to members disabled prior to December 31, 2019, but whose claims had not yet been reported to ETF as of that date.

- Liability for Loss Adjustment Expenses: The present value of expected future expenses related to the ongoing management and payment of open and IBNR disability claims.

The following table compares the liabilities for the State ICI plan as of December 31, 2018 and December 31, 2019:

Table 2.1 Current Year and Prior Year Liabilities for the State ICI Plan		
Component	December 31, 2018	December 31, 2019
Open Claims	$81,523,030	$81,180,573
IBNR Claims	$4,937,750	$4,832,244
Loss Adjustment Expense	$4,088,460	$4,079,139
Total	**$90,549,241**	**$90,091,957**

The December 31, 2019 liability components are discussed in greater detail below, and Appendix D of this report includes documentation of the assumptions that were used in our liability calculations.

Open Claims

An audit of State ICI valuation methods and assumptions was performed by an independent consulting firm in 2019. The outcome from this audit included a recommendation to update the claim termination and estimated offset assumptions used to project future benefits for open claims. Therefore, we have performed experience studies and have developed new assumptions for computing the December 31, 2019 liability for the State ICI program (documentation of these experience studies and corresponding results were provided in a separate report).

We now use the most recent industry table of claim termination rates (the 2012 Group Long-Term Disability Valuation Table) as the base table, and we apply adjustment factors to these rates to project future claim terminations. The adjustment factors were developed from experience studies using ICI claim experience from 2014 through 2019. We have also updated the estimated offset assumption based on results from a recent study of Social Security Disability Income approval rates and benefit amounts for the State ICI plan from 2016 through 2019.

The impact of calculating the open claim liability using these new assumptions is a 0.1% decrease in the estimated liability for open claims as of December 31, 2019, with all else equal. Table 2.2 below compares the estimated liability for open claims as of December 31, 2019 based on last year's valuation assumptions to the estimated liability based on this year's valuation assumptions. The claim inventory is the same in both cases, and the liabilities were both calculated using a 7.0% interest rate assumption.

Table 2.2 Estimated Liability for Open Claims As of December 31, 2019 Prior Assumptions versus Current Assumptions	
Prior Assumptions	$81,247,115
Current Assumptions	$81,180,573
Difference (Amount)	$66,542
Difference (Percentage)	0.1%

Aside from differences in the valuation assumptions, there are differences in the demographic mix of claims and the disabling conditions for claims that were open on December 31, 2018 versus December 31, 2019. Taken together, the differences in valuation assumptions and claim characteristics result in an overall reduction of 0.4% to the open claim liability from December 31, 2018 to December 31, 2019.

We validated the new assumptions by performing retrospective runoff studies using State ICI claim experience from 2015 through 2019. In performing these studies, we calculated liabilities for claims that were open on prior valuation dates using the new valuation assumptions, then we determined whether those liabilities would have provided sufficient funding for the emerging claim costs. The emerging claim costs were calculated as the present value of benefit payments made during the study period, plus the present value of remaining liabilities for claims still open at the end of the study period. The results from the runoff studies are provided below, and are shown as the combined result from five mutually distinct 12-month studies using ICI experience from 2015 through 2019.

Table 2.3 Runout Study for the ICI Plans Study Period: 2015 – 2019	
Claim Duration	Average Annual Margin
1 – 12 months	3.9%
13 – 24 months	9.1%
25 – 36 months	2.4%
37 – 48 months	2.2%
49 – 60 months	-1.1%
61 + months	1.1%
Total	2.6%

In the preceding table, a positive margin indicates the liability would have been adequate to cover the runout of open claims during the study period, while a negative margin indicates a deficiency. For this type of plan, we typically target a positive overall margin of 1% to 5%, with reasonably consistent patterns by claim duration. The preceding table indicates that the State ICI plan meets that overall objective, although there is a fair amount of variation by claim duration. We will continue to monitor the new valuation assumptions closely, and adjust the assumptions as needed.

The State ICI Plan provides an additional benefit of $75 per month to disabled employees whose disability lasts longer than 12 months, to help these employees with medical costs. The $75 monthly benefit is already included in the reported benefit amounts of employees disabled for 12 months or longer as of the valuation date. Therefore, the additional liability for these claims is already included in the open claim liability estimate. For employees who were disabled for fewer than 12 months as of the valuation date, the additional liability was determined using the same methods and assumptions described above. We estimated a liability equal to $246,449 as of December 31, 2019 for these claims.

IBNR Claims

The liability for IBNR claims represents the expected cost of claims incurred prior to December 31, 2019 that had not been reported as of that date. For example, if, on average, claims are reported 6 months after the date of disability, then the IBNR liability would be approximately 50% of the expected total cost of new claims for the year.

We calculated the proportion of ICI claims that were unreported at each year-end from an analysis of ICI claim experience from 2016 through 2019. The following table shows the percentage of claims incurred in a given year that were unreported at each year-end from 2016 through 2019:

Table 2.4 Proportion of ICI Claims Unreported at Year-End			
Valuation Date	Incurral Year		
	2016	2017	2018
December 31, 2016	23.0%		
December 31, 2017	0.3%	24.5%	
December 31, 2018	0.1%	1.0%	27.1%
December 31, 2019	0.0%	0.1%	1.0%

Based on this analysis, we assumed that 25% of claims incurred in 2019 were unreported as of December 31, 2019. We also assumed that the total cost of claims incurred in 2019 is $19.3 million, based on an analysis of historical incurred claim costs from 2011 through 2018. The December 31, 2019 liability for IBNR claims was then determined by calculating 25% of $19.3 million, as shown below:

Table 2.5 IBNR Liability Calculation As of December 31, 2019	
A. Estimated Incurred Claims in 2019	$19,328,978
B. Assumed Proportion of Unreported Claims	25.0%
C. IBNR Liability as of December 31, 2019 (A x B)	$4,832,244

Note that the assumption that 25% of claims were unreported as of year-end is the same assumption that was used to calculate last year's liability for IBNR claims.

Loss Adjustment Expense

The December 31, 2019 loss adjustment expense liability was calculated from an analysis of historical fees paid by ETF to The Hartford for administering ICI claims. The annual fees decreased from $2.6 million in 2018 to $2.3 million in 2019. A breakdown of these fees by program and year is provided below:

Table 2.6 ICI Claim Administration Fees 2018 and 2019		
Program	2018	2019
State	$2,245,566	$1,920,405
Local	$396,276	$338,895
Total	$2,641,842	$2,259,300

A breakdown of the fees is not available between new claims and claims in payment status, because ETF pays The Hartford a lump-sum annual retainer fee for administering State ICI claims. Therefore, for estimating the loss adjustment expense liability, we have assumed a fee structure that resembles typical Administrative Services Only (ASO) fees used by third party vendors for administering group disability insurance claims. These ASO fees typically vary by claim duration. Fees for adjudicating new claims often include one-time set-up fees. Ongoing fees tend to be higher for administering claims in early durations (within first 2-3 years disability) due to certain claim practices such as Social Security advocacy, and verifying disability requirements for claims transitioning from short-term disability to long term disability (following 12 months of disability for ICI claims). The fees we assumed for calculating the loss adjustment expense liability are provided below. For validation, we applied these fees to ICI claim experience from 2019, which resulted in an estimate of 2019 fees that was within 2.5% of actual fees paid in 2019. We have included last year's assumption in Table 2.7 for comparison.

Table 2.7
Assumed Claim Administration Fees

Component	12/31/2018 Assumption	12/31/2019 Assumption
One-time new claim fee	$800 per new claim	$600 per new claim
Monthly fee, first year	$160 per month	$145 per month
Monthly fee, second year	$140 per month	$125 per month
Monthly fee, years 3 – 5	$75 per month	$50 per month
Monthly fee, years 6 +	$50 per month	$50 per month

We calculated a loss adjustment expense liability for open claims as the present value of expected future claim administration fees using the same claim termination rate assumptions that we used to calculate the open claim liability. We performed a similar calculation for IBNR claims by assuming there were 309 claims incurred but not reported as of December 31, 2019 (based on the analysis of historical claim reporting patterns described above), for which we assumed the one-time new claim fee applies and had not yet been paid as of the valuation date. The following table provides details of the liability calculation for loss adjustment expenses as of December 31, 2019.

Table 2.8
Liability for Loss Adjustment Expenses

Claim Type	Estimated Liability
Open claims	$3,507,453
IBNR claims	$571,686
Total	$4,079,139

This approach is similar to the approach we used last year for computing the loss adjustment expense liability, but we adjusted the fee schedule to reflect the level of fees paid by ETF to The Hartford in 2019.

Section III: Discussion of State ICI Funding Levels

The December 31, 2019 actuarial valuation of the State ICI plan includes an analysis of current and future funding levels. The following table shows the fund balances as of the three most recent fiscal year-ends:

Table 3.1
State ICI Fund Balances

Balance Sheet Component	Valuation Date		
	December 31, 2017	December 31, 2018	December 31, 2019
Beginning Balance	$51,443,795	$60,974,320	$71,493,483
Closing Adjustments	$695,028	51,615	99,718
Adjusted Beginning Balance	$52,138,823	61,025,935	71,593,200
Plus: Premium Contributions	$24,320,814	28,393,397	33,198,198
Plus: Investment Earnings	$4,387,218	3,172,205	5,888,157
Less: Insurance Claims	$18,175,830	18,387,227	17,771,251
Less: Administrative Expenses	$1,696,706	2,710,827	2,583,677
Ending Balance	$60,974,319	71,493,483	90,324,627
Actuarial Liability	$87,020,256	90,549,241	90,091,957
Surplus / (Deficit)	($26,045,936)	($19,055,758)	$232,670

Although the State ICI plan has run a large deficit for many years, the December 31, 2019 fund balance contains a modest level of surplus, as shown above.

To address historical funding issues, the Board approved a series of 20% annual rate increases beginning in 2015. Based on the financial condition of the plan as of December 31, 2019, future rate increases may not be necessary.

We have prepared financial projections to demonstrate the long-term performance of the State ICI fund under different contribution schedules. The projections are provided in Appendix A of this report. The projections reflect actual results for 2019 and expected values in 2020 and beyond. The key elements of these projections include the following:

- Beginning Balance: The projected beginning balance for each year is equal to the prior year's ending balance.

- Payroll: 2019 payroll was provided by ETF. Future payroll is assumed to increase at a rate of 3.0% per year, which is consistent with the assumptions used by ETF for retirement fund projections.

- Premium Contributions: Premiums are modeled as a percentage of payroll. In the Baseline Scenario, the premium rate for 2020 and beyond is 1.09% of payroll.

- Investment Income: Investment income in the Baseline Scenario and in Scenarios 1 and 2 is calculated using an interest rate assumption of 7.0% throughout the projection period. In Scenario 3, we assume an 18.0% decrease in the State ICI fund balance in 2020, followed by positive earnings equal to 7.0% of starting fund balances in years 2021 and beyond. These assumptions were specified by ETF.

- Insurance Claims: Annual insurance claims are the sum of projected payments on existing claims as of December 31, 2019, and payments on expected future claims incurred after December 31, 2019. Insurance claims for 2020 and beyond are based on historical experience of 0.63% of payroll, adjusted for expected aging in future years. Paid claims for these new claims are then computed using runout patterns generated from our valuation assumptions, which in turn are based on recent plan experience.

- Administrative Expenses: Administrative expenses are modeled as a constant percentage of paid insurance claims, based on actual values in 2019.

- Ending Balance: The ending balance equals the starting balance, plus premiums, plus investment earnings, less claims, and less expenses.

- Actuarial Liability: The actuarial liability is modeled in a similar fashion to the insurance claims. It represents the sum of the decreasing liability on claims that existed as of December 31, 2019 and of the increasing liability for claims incurred after December 31, 2019.

- Surplus or Deficit: The projected surplus or deficit equals the ending balance less the actuarial liability.

Financial projections were developed for the following different scenarios.

- The **Baseline** scenario assumes that current contribution rates are held level in all years. State ICI fund balances are assumed to earn 7.0% interest every year.

- The projection corresponding to **Scenario 1** assumes a 10% rate increase in 2020, then rates are held level in future years. State ICI fund balances are assumed to earn 7.0% interest every year.

- The projection corresponding to **Scenario 2** assumes a 20% rate increase in 2020, then rates are held level in future years. State ICI fund balances are assumed to earn 7.0% interest every year.

- The projection corresponding to **Scenario 3** assumes that current contribution rates are held level in all years, and that the State ICI fund decreases by 18% in 2020, then earns 7.0% interest in 2021 and beyond.

In 2019, the Board approved a fund reserve target of 135% of the actuarial liability for the State ICI plan. Based on our financial projections, the fund is expected to reach this target by the end of 2022 in the Baseline Scenario and Scenario 1, by the end of 2021 in Scenario 2, and by the end of 2025 in Scenario 3.

Please note that these projections depend on a variety of actuarial assumptions about future experience, including but not limited to investment earnings, payroll growth, and disability claim experience. It is nearly certain that actual experience will vary from these assumptions, meaning that the plan's actual surplus or deficit will be higher or lower than the illustrated values.

Appendix A: Financial Projections

Baseline Scenario: No change in contribution rates throughout the projection, and investment income equals 7.0% of starting fund balances in every year.

Scenario 1: Increase contribution rates by 10% in 2020, and investment income equals 7.0% of starting fund balances in every year.

Scenario 2: Increase contribution rates by 20% in 2020, and investment income equals 7.0% of starting fund balances in every year.

Scenario 3: No change in contribution rates throughout the projection. State ICI fund balance decreases by 18.0% in 2020, then earns 7.0% annual income in years 2021 and beyond.

State ICI Funding Analysis as of December 31, 2019
Baseline Scenario
No change in contribution rates throughout the projection
Investment income equals 7.0% of starting fund balances in every year

Calendar Year	2019	2020	2021	2022	2023	2024	2025
BOY Fund Balance	$71,593,200	$90,324,627	$109,827,979	$131,063,803	$152,705,885	$175,103,048	$198,361,593
Premium Contributions	$33,198,198	$34,194,144	$35,219,968	$36,276,567	$37,364,864	$38,485,810	$39,640,385
Investment Income	$5,888,157	$6,322,724	$7,687,959	$9,174,466	$10,689,412	$12,257,213	$13,885,312
Total Revenues	$39,086,355	$40,516,868	$42,907,927	$45,451,034	$48,054,276	$50,743,024	$53,525,696
Insurance Claims	$17,771,251	$18,346,243	$18,921,235	$20,786,851	$22,400,423	$23,995,839	$25,454,176
Carrier Administrative Expenses	$1,920,405	$1,982,540	$2,044,675	$2,246,278	$2,420,645	$2,593,049	$2,750,641
Administrative Expense	$663,272	$684,732	$706,193	$775,822	$836,045	$895,591	$950,020
Total Operating Expenses	$20,354,928	$21,013,515	$21,672,103	$23,808,952	$25,657,113	$27,484,479	$29,154,837
Net Change in Fund Balance	$18,731,427	$19,503,352	$21,235,824	$21,642,082	$22,397,163	$23,258,545	$24,370,859
EOY Fund Balance	$90,324,627	$109,827,979	$131,063,803	$152,705,885	$175,103,048	$198,361,593	$222,732,452
Actuarial Liability	$90,091,957	$97,122,158	$105,281,868	$112,755,964	$120,007,553	$127,068,491	$134,125,822
Surplus / (Deficit)	$232,670	$12,705,821	$25,781,935	$39,949,921	$55,095,495	$71,293,103	$88,606,630
Ratio of EOY Fund Balance to Liability	100%	113%	124%	135%	146%	156%	166%

State ICI Funding Analysis as of December 31, 2019
Scenario 1
Increase contribution rates by 10% in 2020
Investment income equals 7.0% of starting fund balances in every year.

Calendar Year	2019	2020	2021	2022	2023	2024	2025
BOY Fund Balance	$71,593,200	$90,324,627	$113,247,394	$138,244,574	$164,016,966	$190,942,391	$219,158,271
Premium Contributions	$33,198,198	$37,613,558	$38,741,965	$39,904,224	$41,101,351	$42,334,391	$43,604,423
Investment Income	$5,888,157	$6,322,724	$7,927,318	$9,677,120	$11,481,188	$13,365,967	$15,341,079
Total Revenues	$39,086,355	$43,936,282	$46,669,283	$49,581,344	$52,582,538	$55,700,359	$58,945,502
Insurance Claims	$17,771,251	$18,346,243	$18,921,235	$20,786,851	$22,400,423	$23,995,839	$25,454,176
Carrier Administrative Expenses	$1,920,405	$1,982,540	$2,044,675	$2,246,278	$2,420,645	$2,593,049	$2,750,641
Administrative Expense	$663,272	$684,732	$706,193	$775,822	$836,045	$895,591	$950,020
Total Operating Expenses	$20,354,928	$21,013,515	$21,672,103	$23,808,952	$25,657,113	$27,484,479	$29,154,837
Net Change in Fund Balance	$18,731,427	$22,922,767	$24,997,180	$25,772,393	$26,925,425	$28,215,880	$29,790,665
EOY Fund Balance	$90,324,627	$113,247,394	$138,244,574	$164,016,966	$190,942,391	$219,158,271	$248,948,936
Actuarial Liability	$90,091,957	$97,122,158	$105,281,868	$112,755,964	$120,007,553	$127,068,491	$134,125,822
Surplus / (Deficit)	$232,670	$16,125,236	$32,962,705	$51,261,002	$70,934,838	$92,089,781	$114,823,114
Ratio of EOY Fund Balance to Liability	100%	117%	131%	145%	159%	172%	186%

State ICI Funding Analysis as of December 31, 2019
Scenario 2

Increase contribution rates by 20% in 2020

Investment income equals 7.0% of starting fund balances in every year

Calendar Year	2019	2020	2021	2022	2023	2024	2025
BOY Fund Balance	$71,593,200	$90,324,627	$116,666,808	$145,425,344	$175,328,047	$206,781,734	$239,954,949
Premium Contributions	$33,198,198	$41,032,973	$42,263,962	$43,531,881	$44,837,837	$46,182,972	$47,568,461
Investment Income	$5,888,157	$6,322,724	$8,166,677	$10,179,774	$12,272,963	$14,474,721	$16,796,846
Total Revenues	$39,086,355	$47,355,697	$50,430,638	$53,711,655	$57,110,800	$60,657,694	$64,365,308
Insurance Claims	$17,771,251	$18,346,243	$18,921,235	$20,786,851	$22,400,423	$23,995,839	$25,454,176
Carrier Administrative Expenses	$1,920,405	$1,982,540	$2,044,675	$2,246,278	$2,420,645	$2,593,049	$2,750,641
Administrative Expense	$663,272	$684,732	$706,193	$775,822	$836,045	$895,591	$950,020
Total Operating Expenses	$20,354,928	$21,013,515	$21,672,103	$23,808,952	$25,657,113	$27,484,479	$29,154,837
Net Change in Fund Balance	$18,731,427	$26,342,181	$28,758,536	$29,902,703	$31,453,687	$33,173,215	$35,210,471
EOY Fund Balance	$90,324,627	$116,666,808	$145,425,344	$175,328,047	$206,781,734	$239,954,949	$275,165,420
Actuarial Liability	$90,091,957	$97,122,158	$105,281,868	$112,755,964	$120,007,553	$127,068,491	$134,125,822
Surplus / (Deficit)	$232,670	$19,544,650	$40,143,476	$62,572,083	$86,774,181	$112,886,459	$141,039,598
Ratio of EOY Fund Balance to Liability	100%	120%	138%	155%	172%	189%	205%

State ICI Funding Analysis as of December 31, 2019
Scenario 3

No change in contribution rates throughout the projection

State ICI fund balance decreases by 18.0% in 2020, then earns 7.0% annual income in years 2021 and beyond

Calendar Year	2019	2020	2021	2022	2023	2024	2025
BOY Fund Balance	$71,593,200	$90,324,627	$87,246,823	$106,901,966	$126,852,719	$147,440,160	$168,762,303
Premium Contributions	$33,198,198	$34,194,144	$35,219,968	$36,276,567	$37,364,864	$38,485,810	$39,640,385
Investment Income	$5,888,157	($16,258,433)	$6,107,278	$7,483,138	$8,879,690	$10,320,811	$11,813,361
Total Revenues	$39,086,355	$17,935,711	$41,327,246	$43,759,705	$46,244,555	$48,806,621	$51,453,746
Insurance Claims	$17,771,251	$18,346,243	$18,921,235	$20,786,851	$22,400,423	$23,995,839	$25,454,176
Carrier Administrative Expenses	$1,920,405	$1,982,540	$2,044,675	$2,246,278	$2,420,645	$2,593,049	$2,750,641
Administrative Expense	$663,272	$684,732	$706,193	$775,822	$836,045	$895,591	$950,020
Total Operating Expenses	$20,354,928	$21,013,515	$21,672,103	$23,808,952	$25,657,113	$27,484,479	$29,154,837
Net Change in Fund Balance	$18,731,427	($3,077,804)	$19,655,143	$19,950,753	$20,587,441	$21,322,143	$22,298,909
EOY Fund Balance	$90,324,627	$87,246,823	$106,901,966	$126,852,719	$147,440,160	$168,762,303	$191,061,212
Actuarial Liability	$90,091,957	$97,122,158	$105,281,868	$112,755,964	$120,007,553	$127,068,491	$134,125,822
Surplus / (Deficit)	$232,670	($9,875,336)	$1,620,097	$14,096,755	$27,432,607	$41,693,812	$56,935,389
Ratio of EOY Fund Balance to Liability	100%	90%	102%	113%	123%	133%	142%

Appendix B: Plan Description

The State ICI Plan provides short and long term disability benefits as summarized below:

- Elimination Period: University of Wisconsin employees select their elimination period up to 180 days. All other state employees have a 30-day elimination period. State ICI participants must use sick leave time up to a maximum of 130 working days before benefits begin.

- Maximum Benefit Period: The following table shows the maximum duration of benefits:

Age at Disablement	Maximum Benefit Period
Before age 62	To Age 65
62	3.50 years
63	3.00 years
64	2.50 years
65	2.00 years
66	1.75 years
67	1.50 years
68	1.25 years
69	To Age 70

- Benefit Amount: The Standard benefit provides up to 75% of a participant's average monthly earnings, capped at $4,000 per month. Supplemental Coverage is available to employees whose annual salary exceeds $64,000, and provides an additional benefit up to $3,500 per month.

- Benefit Increases: None

- Benefit Offsets: The ICI plan benefit is offset by income received from other sources including, but not limited to: Social Security benefits (regular or disability), unemployment compensation, Worker's Compensation (except permanent disability awards), WRS benefits (retirement, disability retirement, Long-Term Disability Insurance, or separation), work earnings, and Duty Disability benefits.

- Definition of Disability: During the first 12 months of disability, the participant is disabled if unable to perform his or her job and under the care of a physician. After the first 12 months of disability, the participant is disabled if unable to engage in any substantial gainful activity for which he or she is reasonably qualified.

- Premium Contributions: Premiums for Standard Coverage are paid by the employer and the employee. Premiums for Supplemental Coverage are paid entirely by the employee.

Appendix C: Data for Valuation

The following tables show a distribution of open claims as of December 31, 2019 by year of disability and gender, and by age at disability and gender.

Number of Open State ICI Claims as of December 31, 2019 By Year of Disability and Gender			
Disability Year	Male	Female	Total
2001 and earlier	22	58	80
2002	3	11	14
2003	3	21	24
2004	8	21	29
2005	8	25	33
2006	16	21	37
2007	14	21	35
2008	13	25	38
2009	12	29	41
2010	13	34	47
2011	13	32	45
2012	24	39	63
2013	26	46	72
2014	21	36	57
2015	16	46	62
2016	25	43	68
2017	26	62	88
2018	33	80	113
2019	57	137	194
Total	353	787	1,140

Number of Open State ICI Claims as of December 31, 2019 By Age at Disability and Gender			
Age at Disability	Male	Female	Total
< 20	0	0	0
20-24	6	17	23
25-29	10	41	51
30-34	26	57	83
35-39	44	118	162
40-44	56	149	205
45-49	75	138	213
50-54	69	135	204
55-59	41	100	141
60-64	24	30	54
65+	2	2	4
Total	353	787	1,140

The following tables show a distribution of net monthly benefit amounts as of December 31, 2019 by year of disability and gender, and by age at disability and gender.

State ICI Net Monthly Benefit Amounts as of December 31, 2019 By Year of Disability and Gender			
Disability Year	Male	Female	Total
2001 and earlier	16,660	40,352	57,012
2002	2,775	9,940	12,715
2003	511	16,371	16,882
2004	5,316	19,944	25,260
2005	6,805	23,467	30,272
2006	14,710	14,018	28,728
2007	11,225	19,306	30,531
2008	10,004	20,196	30,200
2009	8,946	31,744	40,690
2010	15,163	40,147	55,310
2011	14,373	24,321	38,694
2012	21,805	43,671	65,476
2013	34,534	50,093	84,627
2014	16,431	47,312	63,743
2015	16,965	53,749	70,714
2016	29,121	62,560	91,680
2017	36,354	100,493	136,847
2018	63,581	145,734	209,315
2019	153,099	376,448	529,547
Total	$478,377	$1,139,864	$1,618,241

State ICI Net Monthly Benefit Amounts as of December 31, 2019 By Age at Disability and Gender			
Age at Disability	Male	Female	Total
< 20	$0	$0	$0
20-24	7,583	23,049	30,632
25-29	16,097	76,214	92,311
30-34	45,646	93,279	138,925
35-39	67,542	165,645	233,187
40-44	77,644	209,267	286,911
45-49	89,167	207,304	296,471
50-54	81,058	159,351	240,408
55-59	57,302	144,974	202,276
60-64	34,447	56,529	90,976
65+	1,891	4,253	6,144
Total	$478,377	$1,139,864	$1,618,241

Appendix D: Actuarial Methods and Assumptions

- Valuation Date: December 31, 2019

- Discount Rate: 7.0%, specified by ETF. This assumption represents a long-term investment return for the State ICI fund.

- Claim Termination Rates: Claim termination rate assumptions were derived from State ICI plan experience relative to the 2012 Group Long-Term Disability Valuation Table, as shown below:

Disability Duration	2012 GLTD Termination Rate Adjustment Factor
1 – 9 months	1.25
10 – 12 months	2.50
13 – 24 months	1.25
25 – 60 months	0.98
61 + months	0.96

- Future Offset Approval Rates: Estimated Social Security offset assumptions were derived from State ICI plan experience as shown below.

  Probability of being approved for Social Security benefits (if not already approved):

Claim Duration	Probability
1 – 12 months	67%
13 – 24 months	58%
25 – 36 months	45%
37 – 48 months	35%
49 – 60 months	9%
61 + months	0%

  No future offsets are assumed on claimants disabled more than five years.

  Future Social Security offset amount as percentage of gross benefit amount: 45%.

- Incurred But Not Reported Claims: 25% of the estimated incurred claims for the current year, as determined from analyses of historical State ICI claims experience.

- Overpayment Credit: 75% of the overpayment balance reported by ETF as of December 31, 2019. We assume that 75% of the December 31, 2019 overpayment balance will eventually be recovered, and we applied this amount as an offset to the total liability. This assumption was based on an analysis of historical overpayment balances and recoveries from December 31, 2012 through December 31, 2016.

- Loss Adjustment Expenses: Assumed claim administration fees are provided below:

Assumed Claim Administration Fees	
Component	Fee
New Claim Fee	$600 per new claim
Monthly fee, first year	$145 per month
Monthly fee, second year	$125 per month
Monthly fee, years 3+	$50 per month

Appendix E: Reliance Items

In performing the valuation, we relied, without audit, on certain data and information provided by ETF and The Hartford. To the extent any of the data or other items was incomplete or inaccurate, the results of our work may be materially affected.

The principal items on which we relied included the following:

- Lists of active disability claims and related information provided by The Hartford
- Asset balances, premium contributions, plan expenses, covered payroll, and other financial information provided by ETF
- Plan descriptions provided by ETF
- Discussions with ETF and personnel at The Hartford

Actuarial Valuation of
The Local Income Continuation Insurance Plan

As of December 31, 2019

For The State of Wisconsin
Department of Employee Trust Funds

Prepared by: Paul L. Correia, FSA, MAAA
Principal and Consulting Actuary
Milliman, Inc.

Daniel D. Skwire, FSA, MAAA
Principal and Consulting Actuary
Milliman, Inc.

April 15, 2020

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Appendices:

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April 15, 2020

Jim Guidry
Director
Benefit Services Bureau
Wisconsin Department of Employee Trust Funds
Madison, WI 53707

RE: Actuarial Valuation of Local Income Continuation Insurance Plan as of December 31, 2019

Dear Jim:

Thank you for asking Milliman to perform an actuarial valuation of the Local Income Continuation Insurance Plan (ICI) as of December 31, 2019. The valuation results are provided in this report, along with detailed documentation of our valuation methods and assumptions.

The State of Wisconsin Department of Employee Trust Funds (ETF) has determined that the Local ICI Plan is not subject to the provisions of GASB 74, which govern the financial reporting of Other Post-Employment Benefits (OPEBs), and which require the use of pension accounting methods, including the calculation of a liability for active lives. We have therefore performed this valuation according to the requirements of GASB 10 ("Accounting and Reporting for Risk Financing and Related Insurance Issues"), which does not require the calculation of a liability for active lives. This approach is consistent with prior valuation work performed on the Local ICI Plan. Ultimately it is the responsibility of ETF and its auditors to determine the applicable accounting standards for the plans.

This report is prepared solely for the internal business use of ETF. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a release agreement, subject to the following exceptions:

a) ETF may provide a copy of Milliman's work, in its entirety, to ETF's professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work for any purpose other than to benefit ETF.

b) ETF may provide a copy of Milliman's work, in its entirety, to other governmental entities, as required by law.

No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by ETF, including historical claim data from The Hartford and ETF. While Milliman has not audited this data, we have reviewed it for reasonableness and it is, in our opinion, sufficient and reliable for the purposes of our calculations. If any of this information as summarized in this report is inaccurate or incomplete, the results shown could be materially affected and this report may need to be revised.

The discount rate used for this valuation was prescribed by ETF and is specified in this report. We have performed no independent assessment of the reasonableness of this assumption. ETF is solely responsible for establishing the assumption and communicating any changes to Milliman for the purpose of this valuation.

This analysis is only an estimate of the Plan's financial condition as of a single date. It can neither predict the Plan's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of Plan benefits, only the timing of employer contributions. While this report is based on the assumptions documented here, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct. Determining results using alternative assumptions is outside the scope of our engagement.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements. ETF has the final decision regarding the appropriateness of the assumptions and actuarial cost methods.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices.

I, Paul L. Correia, FSA, MAAA, am a consulting actuary for Milliman, Inc. I am a member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I, Daniel D. Skwire, FSA, MAAA, am a consulting actuary for Milliman, Inc. I am a member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sincerely,

Paul L. Correia, FSA, MAAA
Principal and Consulting Actuary
Milliman, Inc.

Daniel D. Skwire, FSA, MAAA
Principal and Consulting Actuary
Milliman, Inc.

Section I: Introduction and Executive Summary

The actuarial liabilities for the Local ICI plan as of December 31, 2019 are summarized in Table 1.1 below:

Table 1.1 Actuarial Liabilities for Local ICI Plan As of December 31, 2019				
Liability Component	Standard Benefit	Supplemental Benefit	$75 Add-on	Total Liability Amount
Open Claims	$5,143,700	$142,205	$27,043	$5,312,948
IBNR Claims	$302,692	$8,368	$1,591	$312,651
Loss Adjustment Expense	$334,117	$9,237	$1,757	$345,111
Total	**$5,780,509**	**$159,810**	**$30,391**	**$5,970,710**

The values shown above include estimated liabilities for monthly ICI benefit payments (Standard Benefits and Supplemental Benefits), and for additional benefits of $75 per month to disabled members whose disability lasts longer than 12 months, to help these members with medical expenses ($75 Add-on). Please note that the liability for the $75 Add-on benefit only reflects the cost for disabled members who had not yet received the benefit as of December 31, 2019. For members who had already received the $75 Add-on benefit, the liability is reflected in the Standard Benefit.

We have analyzed the funding status of the Local ICI plan as of December 31, 2019. The Local ICI plan has run a significant surplus for several years, as shown in Table 1.2 below:

Table 1.2 Local ICI Fund Balances			
Balance Sheet Component	Valuation Date		
	December 31, 2017	December 31, 2018	December 31, 2019
Beginning Balance	$37,527,592	$38,951,707	$38,914,553
Closing Adjustments	(106,828)	9,429	(4,151)
Adjusted Beginning Balance	37,420,764	38,961,136	38,910,402
Plus: Premium Contributions	0	0	0
Plus: Investment Earnings	3,019,818	1,854,114	2,804,346
Less: Insurance Claims	1,333,948	1,427,926	1,649,419
Less: Administrative Expenses	154,927	472,772	461,677
Ending Balance	38,951,707	38,914,553	39,603,652
Actuarial Liability	5,659,211	5,966,337	5,970,710
Surplus / (Deficit)	$33,292,495	$32,948,215	$33,632,942

Our projection of future funding levels indicates that the Local ICI plan is expected to maintain a significant level of surplus for the foreseeable future. It is therefore reasonable to continue waiving the premium contribution on this plan for the near term.

Section II: Actuarial Valuation

The actuarial liabilities for the Local ICI Plan consist of three components:

- Liability for Open Claims: The present value of expected future benefits payable to members disabled prior to December 31, 2019, whose claims had been reported to ETF on or before that date.

- Liability for Incurred but not Reported (IBNR) Claims: The present value of expected future benefits payable to members disabled prior to December 31, 2019, but whose claims had not yet been reported to ETF as of that date.

- Liability for Loss Adjustment Expenses: The present value of expected future expenses related to the ongoing management and payment of open and IBNR disability claims.

The following table compares the liabilities for the Local ICI plan as of December 31, 2018 and December 31, 2019:

Table 2.1
Current Year and Prior Year Liabilities for the Local ICI Plan

Component	December 31, 2018	December 31, 2019
Open Claims	$5,369,502	$5,312,948
IBNR Claims	$303,645	$312,651
Loss Adjustment Expense	$293,190	$345,111
Total	$5,966,337	$5,970,710

A discussion of the December 31, 2019 liability components is provided below, and Appendix D of this report provides additional documentation of the valuation assumptions used to compute the liabilities.

Open Claims

An audit of Local ICI valuation methods and assumptions was performed by an independent consulting firm in 2019. The outcome from this audit included a recommendation to update the claim termination and estimated offset assumptions used to project future benefits for open claims. Therefore, we have performed experience studies and have developed new assumptions for computing the December 31, 2019 liability for the Local ICI program (documentation of these experience studies and corresponding results were provided in a separate report).

We now use the most recent industry table of claim termination rates (the 2012 Group Long-Term Disability Valuation Table) as the base table, and we apply adjustment factors to these rates to project future claim terminations. The adjustment factors were developed from experience studies using ICI claim experience from 2014 through 2019. We have also updated the estimated offset assumption based on results from a recent study of Social Security Disability Income approval rates and benefit amounts using ICI claim data from 2016 through 2019.

The impact of calculating the open claim liability using these new assumptions is a 0.9% decrease in the estimated liability for open claims as of December 31, 2019, with all else equal. Table 2.2 below compares the estimated liability for open claims as of December 31, 2019 based on last year's valuation assumptions to the estimated liability based on this year's valuation assumptions. The claim inventory is the same in both cases, and the liabilities were both calculated using a 7.0% interest rate assumption.

Table 2.2
Estimated Liability for Open Claims
As of December 31, 2019
Prior Assumptions versus Current Assumptions

Prior Assumptions	$5,362,092
Current Assumptions	$5,312,948
Difference (Amount)	$49,144
Difference (Percentage)	0.9%

Aside from differences in the valuation assumptions, there are differences in the demographic mix of claims and the disabling conditions for claims that were open on December 31, 2018 versus December 31, 2019. Taken together, the differences in valuation assumptions and claim characteristics result in an overall reduction of 1.1% to the open claim liability from December 31, 2018 to December 31, 2019.

To validate the new assumptions, we performed retrospective runoff tests using State ICI claim experience from 2015 through 2019, because historical Local ICI experience has been volatile due to the small volume of open claims, and is not considered credible for evaluating the assumptions. We believe that the State ICI runoff analysis provides a reasonable basis for testing the new assumptions for Local ICI, because the Local and State ICI plans have similar plan designs and both are administered by The Hartford, so presumably claim practices are the same.

In performing the runoff studies, we calculated liabilities for claims that were open on prior valuation dates using the new valuation assumptions, then we determined whether those liabilities would have provided sufficient funding for the emerging claim costs. The emerging claim costs were calculated as the present value of benefit payments made during the study period, plus the present value of remaining liabilities for claims still open at the end of the study period. The results from the runoff studies are provided below, and are shown as the combined result from five mutually distinct 12-month studies using ICI experience from 2015 through 2019.

Table 2.3 Runout Study for the ICI Plans Study Period: 2015 – 2019	
Claim Duration	Average Annual Margin
1 – 12 months	3.9%
13 – 24 months	9.1%
25 – 36 months	2.4%
37 – 48 months	2.2%
49 – 60 months	-1.1%
61 + months	1.1%
Total	2.6%

In the preceding table, a positive margin indicates the liability was adequate to cover the runout of open disability claims during the study period, while a negative margin indicates a deficiency. For this type of plan, we typically target a positive overall margin of 1% to 5%, with reasonably consistent patterns by claim duration. The preceding table indicates that the State ICI plan meets that overall objective, despite some variation by claim duration, and we have assumed that Local ICI experience is similar. We will continue to monitor the valuation assumptions closely, and adjust the valuation assumptions as needed.

The Local ICI Plan provides an additional benefit of $75 per month to disabled employees whose disability lasts longer than 12 months, to help these employees with medical fees. The $75 monthly benefit is already included in the reported benefit amounts of employees disabled for 12 months or more as of the valuation date. Therefore, the additional liability for these claims was included as part of the open claim liability calculation. For employees that were disabled for fewer than 12 months as of the valuation date, the additional liability was determined using the same methods used in the open claim liability calculations. The additional liability for these claims was estimated to be $27,043 as of December 31, 2019.

IBNR Claims

The liability for IBNR claims reflects the expected cost of claims incurred prior to December 31, 2019 that had not been reported as of that date. For example, if, on average, claims are reported 6 months after the date of disability, then the IBNR liability would be approximately 50% of the expected total cost of new claims for the year.

We calculated the proportion of ICI claims that were unreported at each year-end from an analysis of ICI claim experience from 2016 through 2019. The following table shows the percentage of claims incurred in a given year that were unreported at each year-end from 2016 through 2019:

Table 2.4 Proportion of ICI Claims Unreported at Year-End			
Valuation Date	Incurral Year		
	2016	2017	2018
December 31, 2016	17.9%		
December 31, 2017	0.8%	24.0%	
December 31, 2018	0.0%	1.9%	28.3%
December 31, 2019	0.0%	0.0%	1.9%

Based on this analysis, we assumed that 25% of claims incurred in 2019 were unreported as of December 31, 2019. We also assumed that the total cost of claims incurred in 2019 is $1.25 million, based on historical incurred claims experience for the Local ICI program. The following table provides details of the liability calculation for IBNR claims:

Table 2.5 IBNR Liability for the Local ICI Plan as of December 31, 2019	
A. Estimated Incurred Claims	$1,250,606
B. Estimated Proportion of Unreported Claims	25.0%
C. IBNR Liability as of December 31, 2019 (A x B)	$312,651

Note that the assumption that 25% of claims were unreported as of year-end is the same assumption that was used to calculate last year's liability for IBNR claims.

Loss Adjustment Expense

The December 31, 2019 loss adjustment expense liability was calculated from an analysis of historical fees paid by ETF to The Hartford for administering ICI claims. The annual fees decreased from $2.6 million in 2018 to $2.3 million in 2019. A breakdown of these fees by program and year is provided below:

Table 2.6 ICI Claim Administration Fees 2018 and 2019		
Program	2018	2019
State	$2,245,566	$1,920,405
Local	$396,276	$338,895
Total	$2,641,842	$2,259,300

A breakdown of the fees is not available between new claims and claims in payment status, because ETF pays The Hartford a lump-sum annual retainer fee for administering Local ICI claims. Therefore, for estimating the loss adjustment expense liability, we have assumed a fee structure that resembles typical Administrative Services Only (ASO) fees used by third party vendors for administering group disability insurance claims. These ASO fees typically vary by claim duration. Fees for adjudicating new claims often include one-time set-up fees. Ongoing fees tend to be higher for administering claims in early durations (within first 2-3 years disability) due to certain claim practices such as Social Security advocacy, and verifying disability requirements for claims transitioning from short-term disability to long term disability (following 12 months of disability for ICI claims). The fees we assumed for calculating the loss adjustment expense liability are provided below. For validation, we applied these fees to ICI claim experience from 2019, which resulted in an estimate of 2019 fees that was within 2.5% of actual fees paid in 2019. We have included last year's assumption in Table 2.7 for comparison.

Table 2.7 Assumed Claim Administration Fees		
Component	12/31/2018 Assumption	12/31/2019 Assumption
One-time new claim fee	$800 per new claim	$600 per new claim
Monthly fee, first year	$160 per month	$145 per month
Monthly fee, second year	$140 per month	$125 per month
Monthly fee, years 3 – 5	$75 per month	$50 per month
Monthly fee, years 6 +	$50 per month	$50 per month

We calculated a loss adjustment expense liability for open claims as the present value of expected future claim administration fees using the same claim termination rate assumptions that we used to calculate the open claim liability. We performed a similar calculation for IBNR claims by assuming there were 62 claims incurred but not reported as of December 31, 2019 (based on the analysis of historical claim reporting patterns described above), for which we assumed the one-time new claim fee applies and had not yet been paid as of the valuation date. The following table provides details of the liability calculation for loss adjustment expenses as of December 31, 2019.

Table 2.8 Liability for Loss Adjustment Expenses	
Claim Type	Estimated Liability
Open claims	$236,827
IBNR claims	$108,283
Total	$345,111

This approach is similar to the approach we used last year for computing the loss adjustment expense liability, except that the assumed fee schedule has been adjusted to reflect fee levels in 2019.

Section III: Discussion of Local ICI Funding Levels

The December 31, 2019 actuarial valuation of the Local ICI plan included an analysis of current and future funding levels. The following table shows the fund balances as of the three most recent fiscal year-ends:

Table 3.1
Local ICI Fund Balances

Balance Sheet Component	Valuation Date		
	December 31, 2017	December 31, 2018	December 31, 2019
Beginning Balance	$37,527,592	$38,951,707	$38,914,553
Closing Adjustments	(106,828)	9,429	(4,151)
Adjusted Beginning Balance	37,420,764	38,961,136	38,910,402
Plus: Premium Contributions	0	0	0
Plus: Investment Earnings	3,019,818	1,854,114	2,804,346
Less: Insurance Claims	1,333,948	1,427,926	1,649,419
Less: Administrative Expenses	154,927	472,772	461,677
Ending Balance	38,951,707	38,914,553	39,603,652
Actuarial Liability	5,659,211	5,966,337	5,970,710
Surplus / (Deficit)	$33,292,495	$32,948,215	$33,632,942

We have prepared financial projections to evaluate the long-term performance of the Local ICI fund. The projections are provided in Appendix A and reflect actual results for 2019 and projected values in 2020 and beyond. The key elements of our financial projections include the following:

- Beginning Balance: The projected beginning balance for each year is equal to the prior year's ending balance.

- Payroll: Since Local ICI payroll was not available, we estimated current payroll based on data for the State ICI plan and historical annual incurred claims experience. Future covered payroll is assumed to increase 3.0% per year, which is consistent with the assumptions used by ETF for retirement fund projections.

- Premium Contributions: Premiums are assumed to be waived in all future years given the plan's significant surplus.

- Investment Income: Investment income in the Baseline Scenario is projected using the valuation assumption of 7.0% throughout the projection period. In Scenario 1, we assume the Local ICI fund earns (18.0%) in 2020, followed by positive earnings equal to 7.0% of starting fund balances in years 2021 and beyond. These assumptions were specified by ETF.

- Insurance Claims: Annual paid insurance claims are the sum of projected payments on existing claims as of December 31, 2019, and of payments on expected future claims incurred after December 31, 2019. Insurance claims for the current program are based on 0.63% of payroll, adjusted for expected aging in future years.

- Administrative Expenses: Administrative expenses are modeled as a constant percentage of paid insurance claims, based on actual values in 2019.

- Ending Balance: The ending balance equals the starting balance, plus premiums, plus investment earnings, less claims, and less expenses.

- Actuarial Liability: The actuarial liability is modeled in a similar fashion to the insurance claims. It represents the sum of the decreasing liability on claims that existed as of December 31, 2019 and of the increasing liability for claims incurred after December 31, 2019.

- Surplus or Deficit: The projected surplus or deficit equals the ending balance less the actuarial liability.

Our projections indicate that the Local ICI plan is expected to maintain a significant level of surplus for the foreseeable future. In the Baseline Scenario, expected investment earnings on the existing fund exceed the cost of expected new claims and expenses each year. In Scenario 1, although investment losses in 2020 result in a sharp reduction in the Local ICI fund in that year, projected balances maintain significant levels of surplus in future years. It is therefore reasonable to continue waiving the premium contribution on this plan for the near term.

In 2019, the Board approved a fund reserve target of 150% of the actuarial liability for the Local ICI plan. Based on our financial projections, the fund balances are expected to exceed this target in both scenarios in all projection years.

Please note that these projections depend on a variety of actuarial assumptions about future experience, including but not limited to investment earnings, payroll growth, and disability claim experience. It is nearly certain that actual experience will vary from these assumptions, meaning that the plan's actual surplus or deficit will be higher or lower than the illustrated values.

Appendix A: Financial Projections

Baseline Scenario: Premium contributions waived throughout the projection period, and investment income equals 7.0% of starting fund balances in every year.

Scenario 1: Premium contributions waived throughout the projection period. Local ICI fund earns (18.0%) interest in 2020, then earns 7.0% annual income in years 2021 and beyond.

Local ICI Funding Analysis as of December 31, 2019
Baseline Scenario
Premium contributions waived throughout the projection period
Investment income equal to 7.0% of starting fund balance in every year.

Calendar Year	2019	2020	2021	2022	2023	2024	2025
BOY Fund Balance	$38,910,402	$39,603,652	$40,227,474	$40,857,625	$41,494,548	$42,138,718	$42,790,642
Premium Contributions	$0	$0	$0	$0	$0	$0	$0
Investment Income	$2,804,346	$2,772,256	$2,815,923	$2,860,034	$2,904,618	$2,949,710	$2,995,345
Total Revenues	$2,804,346	$2,772,256	$2,815,923	$2,860,034	$2,904,618	$2,949,710	$2,995,345
Insurance Claims	$1,649,419	$1,678,592	$1,707,764	$1,736,937	$1,766,109	$1,795,282	$1,824,454
Carrier Administrative Expenses	$338,895	$344,889	$350,883	$356,877	$362,871	$368,864	$374,858
Administrative Expense	$122,782	$124,954	$127,125	$129,297	$131,468	$133,640	$135,812
Total Operating Expenses	$2,111,096	$2,148,434	$2,185,772	$2,223,110	$2,260,448	$2,297,786	$2,335,124
Net Change in Fund Balance	$693,250	$623,822	$630,151	$636,924	$644,170	$651,924	$660,221
EOY Fund Balance	$39,603,652	$40,227,474	$40,857,625	$41,494,548	$42,138,718	$42,790,642	$43,450,863
Actuarial Liability	$5,970,710	$5,988,923	$6,182,603	$6,452,949	$6,771,689	$7,139,592	$7,544,470
Surplus / (Deficit)	$33,632,942	$34,238,551	$34,675,022	$35,041,599	$35,367,029	$35,651,050	$35,906,393
Ratio EOY Fund Balance to Liability	663%	672%	661%	643%	622%	599%	576%

Local ICI Funding Analysis as of December 31, 2019
Scenario 1
Premium contributions waived throughout the projection period.
Local ICI fund earns (18.0%) interest in 2020, then earns 7.0% annual income in years 2021 and beyond.

Calendar Year	2019	2020	2021	2022	2023	2024	2025
BOY Fund Balance	$38,910,402	$39,603,652	$30,326,561	$30,263,648	$30,158,993	$30,009,674	$29,812,565
Premium Contributions	$0	$0	$0	$0	$0	$0	$0
Investment Income	$2,804,346	($7,128,657)	$2,122,859	$2,118,455	$2,111,129	$2,100,677	$2,086,880
Total Revenues	$2,804,346	($7,128,657)	$2,122,859	$2,118,455	$2,111,129	$2,100,677	$2,086,880
Insurance Claims	$1,649,419	$1,678,592	$1,707,764	$1,736,937	$1,766,109	$1,795,282	$1,824,454
Carrier Administrative Expenses	$338,895	$344,889	$350,883	$356,877	$362,871	$368,864	$374,858
Administrative Expense	$122,782	$124,954	$127,125	$129,297	$131,468	$133,640	$135,812
Total Operating Expenses	$2,111,096	$2,148,434	$2,185,772	$2,223,110	$2,260,448	$2,297,786	$2,335,124
Net Change in Fund Balance	$693,250	($9,277,091)	($62,913)	($104,655)	($149,319)	($197,109)	($248,245)
EOY Fund Balance	$39,603,652	$30,326,561	$30,263,648	$30,158,993	$30,009,674	$29,812,565	$29,564,320
Actuarial Liability	$5,970,710	$5,988,923	$6,182,603	$6,452,949	$6,771,689	$7,139,592	$7,544,470
Surplus / (Deficit)	$33,632,942	$24,337,638	$24,081,045	$23,706,044	$23,237,985	$22,672,973	$22,019,850
Ratio EOY Fund Balance to Liability	663%	506%	489%	467%	443%	418%	392%

Appendix B: Plan Description

The Local ICI Plan provides short and long term disability benefits as summarized below:

- Elimination Period: Participating employees select an elimination period up to 180 days. Benefits are reduced for any vacation, sick leave, holiday or compensation pay received after the elimination period.

- Maximum Benefit Period: The following table shows the maximum duration of benefits:

Age at Disablement	Maximum Benefit Period
Before age 62	To Age 65
62	3.50 years
63	3.00 years
64	2.50 years
65	2.00 years
66	1.75 years
67	1.50 years
68	1.25 years
69	To Age 70

- Benefit Amount: The Standard benefit provides up to 75% of a participant's average monthly earnings, capped at $4,000 per month. Supplemental Coverage is available to employees whose annual salary exceeds $64,000, and provides an additional benefit up to $3,500 per month. For disabilities lasting longer than 12 months, a supplement of $75 per month is added to the normal benefit amount.

- Benefit Increases: None

- Benefit Offsets: The ICI plan benefit is offset by income received from other sources including, but not limited to: Social Security benefits (regular or disability), unemployment compensation, Worker's Compensation (except permanent disability awards), WRS benefits (retirement, disability retirement, Long-Term Disability Insurance, or separation), work earnings, and Duty Disability benefits.

- Definition of Disability: During the first 12 months of disability, the participant is disabled if unable to perform his or her job and under the care of a physician. After the first 12 months of disability, the participant is disabled if unable to engage in any substantial gainful activity for which he or she is reasonably qualified.

- Premium Contributions: Premiums for Standard Coverage are paid by the employer and the employee. Premiums for Supplemental Coverage are paid entirely by the employee.

Appendix C: Data for Valuation

The following tables show a distribution of open claims as of December 31, 2019 by year of disability and gender, and by age at disability and gender.

Number of Open Local ICI Claims as of December 31, 2019 By Year of Disability and Gender			
Disability Year	Male	Female	Total
2001 and earlier	1	2	3
2002	1	0	1
2003	2	0	2
2004	1	2	3
2005	1	2	3
2006	1	1	2
2007	0	0	0
2008	0	0	0
2009	2	2	4
2010	4	0	4
2011	2	0	2
2012	1	0	1
2013	1	1	2
2014	2	3	5
2015	5	6	11
2016	7	0	7
2017	2	2	4
2018	6	3	9
2019	8	19	27
Total	47	43	90

Number of Open Local ICI Claims as of December 31, 2019 By Age at Disability and Gender			
Age at Disability	Male	Female	Total
< 20	0	0	0
20-24	1	0	1
25-29	2	1	3
30-34	4	5	9
35-39	6	2	8
40-44	9	6	15
45-49	8	4	12
50-54	3	8	11
55-59	10	11	21
60-64	4	5	9
65+	0	1	1
Total	47	43	90

The following tables show a distribution of net monthly benefit amounts as of December 31, 2019 by year of disability and gender, and by age at disability and gender.

Local ICI Net Monthly Benefit Amounts as of December 31, 2019 By Year of Disability and Gender			
Disability Year	Male	Female	Total
2001 and earlier	$366	$1,604	$1,970
2002	1,122	0	1,122
2003	3,375	0	3,375
2004	556	1,703	2,259
2005	137	265	402
2006	857	192	1,049
2007	0	0	0
2008	0	0	0
2009	215	1,486	1,701
2010	8,938	0	8,938
2011	3,727	0	3,727
2012	140	0	140
2013	268	67	335
2014	1,177	4,166	5,343
2015	5,299	3,802	9,101
2016	12,962	0	12,962
2017	2,510	2,521	5,031
2018	9,697	5,563	15,260
2019	22,940	54,375	77,315
Total	$74,285	$75,746	$150,031

Local ICI Net Monthly Benefit Amounts as of December 31, 2019 By Age at Disability and Gender			
Age at Disability	Male	Female	Total
< 20	$0	$0	$0
20-24	3,037	0	3,037
25-29	5,013	4,000	9,013
30-34	11,051	5,848	16,899
35-39	12,069	7,000	19,069
40-44	17,337	6,218	23,555
45-49	5,100	6,336	11,435
50-54	2,345	16,072	18,418
55-59	9,409	15,471	24,880
60-64	8,924	10,801	19,725
65+	0	4,000	4,000
Total	$74,285	$75,746	$150,031

Appendix D: Actuarial Methods and Assumptions

- Valuation Date: December 31, 2019

- Discount Rate: 7.0%, specified by ETF. This assumption represents a long-term investment return for the Local ICI fund.

- Claim Termination Rates: Claim termination rate assumptions were derived from ICI plan experience relative to the 2012 Group Long-Term Disability Valuation Table, as shown below:

Disability Duration	2012 GLTD Termination Rate Adjustment Factor
1 – 9 months	1.25
10 – 12 months	2.50
13 – 24 months	1.25
25 – 60 months	0.98
61 + months	0.96

- Future Offset Approval Rates: Estimated Social Security offset assumptions were derived from historical ICI experience and are shown below.

  Probability of being approved for Social Security benefits (if not already approved):

Claim Duration	Probability
1 – 12 months	67%
13 – 24 months	58%
25 – 36 months	45%
37 – 48 months	35%
49 – 60 months	9%
61 + months	0%

  No future offsets are assumed on claimants disabled more than five years.

  Future Social Security offset amount as percentage of gross benefit amount: 45%.

- Incurred But Not Reported Claims: 25% of the estimated incurred claims for the current year, as determined from analyses of historical ICI claim experience.

- Overpayment Credit: 75% of the overpayment balance reported by ETF as of December 31, 2019. We assume that 75% of the December 31, 2019 overpayment balance will eventually be recovered, and we applied this amount as an offset to the total liability. This assumption was based on an analysis of historical overpayment balances and recoveries from December 31, 2012 through December 31, 2016.

- Loss Adjustment Expenses: Assumed claim administration fees are provided below:

Assumed Claim Administration Fees	
Component	Fee
New Claim Fee	$600 per new claim
Monthly fee, first year	$145 per month
Monthly fee, second year	$125 per month
Monthly fee, years 3+	$50 per month

Appendix E: Reliance Items

In performing the valuation, we relied, without audit, on certain data and information provided by ETF and The Hartford. To the extent any of the data or other items were incomplete or inaccurate, the results of our work may be materially affected.

The principal items on which we relied included the following:

- Lists of active disability claims and related information provided by The Hartford
- Asset balances, premium contributions, plan expenses, and other financial information provided by ETF
- Plan descriptions provided by ETF
- Discussions with ETF and personnel at The Hartford