Annual Actuarial Valuation
for
The State Income Continuation Insurance Plan

As of December 31, 2014

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May 1, 2015

Ms. Deb Roemer
Director of the Benefit Services Bureau
Division of Retirement Services
Wisconsin Department of Employee Trust Funds
Madison, WI 53707

RE: Actuarial Valuation of State Income Continuation Insurance Plan as of December 31, 2014

Dear Deb:

At your request, we have performed an actuarial valuation of the State Income Continuation Insurance (ICI) Plan as of December 31, 2014. Our findings are set forth in this report.

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 43 or 45, which govern the financial reporting of Other Post-Employment Benefits (OPEB's), 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 plans. 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, 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 claims data from Aetna 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 (such as the end of an amortization period); 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, 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.

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.

Sincerely,

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

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

Section I: Introduction and Executive Summary

This report contains the 12/31/2014 valuation for the State Income Continuation Insurance (ICI) Plan administered by the Wisconsin Department of Employee Trust Funds (ETF).

Summary of Actuarial Liabilities

The actuarial liabilities for the State ICI Plan as of 12/31/2014 are summarized below:

Table 1.1 Actuarial Liabilities for State ICI Plan as of 12/31/2014				
Liability Component	Standard Benefit	Supplemental Benefit	$75 Add-on	Total Liability Amount
Open Claims	$69,556,850	$2,056,359	$650,478	$72,263,687
IBNR Claims	$2,998,285	$88,640	$28,039	$3,114,965
Loss Adjustment Expense	$3,309,956	$97,855	$30,954	$3,438,764
Total	$75,865,091	$2,242,854	$709,471	$78,817,416

The liability for loss adjustment expenses is included for the first time in the 12/31/2014 valuation. Although this liability was not included in the 12/31/2014 valuation, performed by the plan's prior actuary, it is our view that it is required by the applicable accounting standards.

A further discussion of these actuarial liabilities, including a description of methods and assumptions, a comparison to prior year values, and an assessment of the adequacy of the liabilities, is included in the body of this report.

Summary of Funding Analysis

As shown in the following table, the State ICI plan was in a deficit as of 12/31/2014:

Table 1.2 State ICI Fund Balances			
	12/31/2012	12/31/2013	12/31/2014
Beginning Balance	$54,368,602	$46,907,891	$51,234,976
Closing Adjustments	($195,413)	$3,654,782	($185,567)
Adjusted Beginning Balance	$54,173,189	$50,562,673	$51,049,409
Plus: Premium Contributions	$14,338,544	$14,985,434	$15,746,565
Plus: Investment Earnings	$1,056,009	$5,382,623	$4,366,867
Less: Insurance Claims	$20,602,901	$17,865,831	$18,872,474
Less: Administrative Expenses	$2,056,951	$1,829,922	$1,727,102
Ending Balance	$46,907,891	$51,234,976	$50,563,266
Actuarial Liability	$76,526,919	$85,563,963	$78,817,416
Surplus / (Deficit)	($29,619,028)	($34,328,987)	($28,254,150)

According to our financial projections, which are consistent with the plan's valuation assumptions, the plan's deficit is expected to increase if the current premiums remain unchanged. We have developed various premium scenarios that are intended to improve the plan's financial position, according to our financial projections:

- Scenario 1: The current premiums (which we estimate by using a rate of 0.511% of covered payroll) are doubled in 2016 and remain level thereafter.

- Scenario 2: The current premiums are increased by 50% in 2016, then by another 50% in 2017, and then held level thereafter.

- Scenario 3: The current premiums are increased by 20% each year from 2016 through 2020, then held level thereafter.

- Scenario 4: The current premiums are increased by 10% each year

- Scenario 5: The current premiums are increased by 5% each year

Scenario 1 is projected to eliminate the deficit by 12/31/2022, Scenario 2 by 12/31/2021, and Scenario 3 by 12/31/2023. The significant rate increases to participants that are involved in each of these scenarios present implications for participation rates on this voluntary program, and for potential resulting adverse selection. Scenarios 4 and 5 involve more moderate rate actions, but even after nine years of annual rate increases of either 10% or 5%, respectively, the projection still does not illustrate a surplus for the plan for these scenarios. ETF may wish to perform a more in-depth study of the factors driving the experience on this plan and the potential for achieving savings through plan design modifications or other measures, possibly in combination with more modest rate actions.

Section II: Actuarial Valuation

The actuarial liability for the State ICI Plan discussed in this report contains three components:

- Open Claims: The expected present value of future benefits payable to members disabled prior to the valuation date whose claims had been reported to ETF on or before that date

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

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

The 12/31/2013 valuation performed by the plan's prior actuary included the first two items, but not the liability for loss adjustment expense. It is our view that the applicable accounting standards explicitly require the calculation of a liability for loss adjustment expenses. Consequently, we have included it in our valuation.

The following table compares the 12/31/2013 and 12/31/2014 liabilities for the State ICI plan:

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

Component	12/31/2013	12/31/2014
Open Claims	$77,785,421	$72,263,687
IBNR Claims	$7,778,542	$3,114,965
Loss Adjustment Expense	N/A	$3,438,764
Total	$85,563,963	$78,817,416

Appendix C of this report provides the detailed valuation assumptions used to compute the 12/31/2014 liabilities for the State ICI plan. A discussion of the liability components is provided below:

Open Claims

The liability for open claims decreased by about 7% due to a combination of changes in the claim inventory and a change in assumptions. The change in assumptions involved the calculation of an estimated future offset for Social Security Disability Insurance (SSDI) benefit for those claimants that had been disabled less than five years and had not yet been approved for SSDI benefits. The inclusion of estimated offsets is the standard practice in the valuation of LTD plans, and we believe it is appropriate for the valuation of this plan as well, since a significant proportion of claimants are ultimately approved for SSDI benefits. The impact of including this offset for the 12/31/2014 liability calculation was a reduction of approximately $8.3 million in the liability for open claims.

In order to assess the adequacy of the liability for open claims, we performed a retrospective runoff test to determine whether the liabilities held at prior valuation dates had been sufficient to cover the emerging costs of ICI claims. The study used State and Local ICI claim experience combined (due to the small volume of Local ICI claims), from the period 1/1/2012 through 12/31/2013. The results shown represent two 12-month studies that were combined: (1) 1/2012 through 12/2012 and (2) 1/2013 through 12/2013. The results are shown below:

Table 2.2
Runout Study for ICI Plans

Duration at Beginning of Study	Margin % without Est. Offsets	Margin % with Est. Offsets
1 – 12 months	38.6%	26.6%
13 – 24 months	22.2%	7.6%
25 – 36 months	8.9%	4.1%
37 – 48 months	5.6%	4.0%
49 – 60 months	0.7%	(0.7%)
61 + months	(0.8%)	(0.8%)
Total	14.1%	6.7%

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. The cost of the claim runout is computed as the present value of paid claims during the study period, plus the present value of the liability for these claims at the end of the study period. For this type of plan, we typically target a positive overall margin of 1% to 5%, with reasonably consistent patterns by claim duration.

Prior to the inclusion of the estimated SSDI offsets, the total margin of 14.1% was well above our target of 1% to 5%, with particularly high values in early claim durations. The use of the estimated SSDI offsets lowered the total margin to 6.7%, with a more reasonable pattern by duration. The margin in the first year of disability remains high, even when estimated offsets are included, but we believe that is because this plan can be used to cover short term disabilities as well as long term disabilities, and that the valuation assumptions in the first year of disability may not fully reflect the high level of recoveries often experienced on short term disability claims. This is an issue we will explore in future valuations, along with the modest negative margins that occur in later claim durations.

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 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, with an additional assumption that only 70% of these claims would remain open beyond 12 months. The additional liability for these claims was estimated to be $650,478 as of 12/31/2014.

The additional liability as of 12/31/2014, including a pro rata allocation of the IBNR and loss adjustment expense liabilities, is shown below. This table also provides a split between the liabilities pertaining to standard benefits (which cover up to $64,000 of annual earnings) and supplemental benefits (which cover annual earnings from $64,000 to $120,000).

Table 2.3
Actuarial Liabilities for State ICI Plan as of 12/31/2014

Liability Component	Standard Benefit	Supplemental Benefit	$75 Add-on	Total Liability Amount
Open Claims	$69,556,850	$2,056,359	$650,478	$72,263,687
IBNR Claims	$2,998,285	$88,640	$28,039	$3,114,965
Loss Adjustment Expense	$3,309,956	$97,855	$30,954	$3,438,764
Total	$75,865,091	$2,242,854	$709,471	$78,817,416

IBNR Claims

The liability for IBNR claims decreased by about 60% due to the change in valuation methodology. In prior valuations, this liability was computed as a percentage of the plan's open claim reserve, which we do not feel is the best index, since the IBNR liability relates to annual claim activity while the open claim liability reflects the cumulative liability from all prior plan years.

The liability for IBNR claims reflects the expected portion of the total cost of claims incurred in a given year that is attributable to those claims that had not been reported as of the end of the year. If, on average, claims are reported 6 months after the date of disability, then the IBNR liability would likely be approximately 50% of the expected total cost of new claims for the year. We therefore computed the IBNR liability by estimating the total cost of incurred claims for 2014 (based on recent trends) and by using historical claim data to determine the proportion of claims that were typically unreported at each year end.

Our IBNR calculation for the State ICI plan is summarized below:

Table 2.4
Development of IBNR Liability for State ICI Plan

Estimated Incurred Claims	$20,766,432
Estimated Proportion of Unreported Claims	15.0%
IBNR Liability as of 12/31/2014	$3,114,965

Due to the relatively short period of time before benefits begin for the ICI plans, the estimated proportion of unreported claims is 15%.

Loss Adjustment Expense

The liability for loss adjustment expenses was computed by comparing the annual fees payable to Aetna, which are estimated to be $3,402,338 in 2015, to the expected annual incurred claims amount for all three plans combined. The fees as a percentage of expected annual incurred claims are approximately 4.6%. The loss adjustment expense liability was then calculated as 4.5% of the open claim liability and 6.0% of the IBNR liability. The factor is lower for open claims than for IBNR claims because the expenses related to initial claim investigation have already been incurred and do not need to be included in the liability.

Our loss adjustment expense calculation for the State ICI plan is summarized below:

Table 2.5
Development of Loss Adjustment Expense Liability for State ICI Plan

Component	Liability	Expense Factor	Loss Adjustment Expenses
Open Claims	$72,263,687	4.5%	$3,251,866
IBNR	$3,114,965	6.0%	$186,898
Total	$75,378,652	4.6%	$3,438,764

Section III: Discussion of State ICI Funding Levels

The actuarial valuation of the State 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 (the 2012 and 2013 values were taken from prior valuation reports):

Table 3.1
State ICI Fund Balances

	12/31/2012	12/31/2013	12/31/2014
Beginning Balance	$54,368,602	$46,907,891	$51,234,976
Closing Adjustments	($195,413)	$3,654,782	($185,567)
Adjusted Beginning Balance	$54,173,189	$50,562,673	$51,049,409
Plus: Premium Contributions	$14,338,544	$14,985,434	$15,746,565
Plus: Investment Earnings	$1,056,009	$5,382,623	$4,366,867
Less: Insurance Claims	$20,602,901	$17,865,831	$18,872,474
Less: Administrative Expenses	$2,056,951	$1,829,922	$1,727,102
Ending Balance	$46,907,891	$51,234,976	$50,563,266
Actuarial Liability	$76,526,919	$85,563,963	$78,817,416
Surplus / (Deficit)	($29,619,028)	($34,328,987)	($28,254,150)

The State ICI plan has run a large deficit for many years. In order to evaluate the potential long-term performance of this fund, we prepared a financial projection. The projection reflects actual results for 2014 and projected values in 2015 and beyond. The key elements of this projection include the following:

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

- Covered Payroll: The current covered payroll was provided to us by ETF. Future covered payroll is assumed to increase 3.20% per year, which is consistent with the assumptions used by ETF for retirement fund projections.

- Premium Contributions: Premiums are modeled as a percentage of covered payroll. The rate for 2014 and 2015 is 0.511% based on recent experience.

- Investment Income: Investment income is projected using the valuation assumption of 7.2%.

- Insurance Claims: Annual paid insurance claims are the sum of projected payments on existing claims as of 12/31/2014, and of payments on expected future claims incurred after 12/31/2014. Future incurred claims are based on historical experience of 0.67% of covered payroll in 2014, adjusted for expected aging in subsequent years.

- Administrative Expenses: Administrative expense are modeled as a constant percentage of paid insurance claims, based on actual values in 2014.

- Ending Balance: The projecting 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 12/31/2014, and of the increasing liability for claims incurred after 12/31/2014.

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

The current premiums for the plan, which equate to 0.511% of covered payroll, fall well short of the expected annual cost of new disability claims and related administrative expenses. This fact, coupled with the fact that the plan was in a deficit as of 12/31/2014, means that if future premiums remain at the current level, the deficit is expected to increase each year.

The magnitude of the current deficit, coupled with the mismatch between the current premiums and the annual cost of new disabilities, means that significant premium actions are required to return the plan to a fully funded status. We have modeled several scenarios:

- Baseline: Current premiums remain unchanged.

- Scenario 1: The current premiums (which we estimate by using a rate of 0.511% of covered payroll) are doubled in 2016 and remain level thereafter.

- Scenario 2: The current premiums are increased by 50% in 2016, then by another 50% in 2017, and then held level thereafter.

- Scenario 3: The current premiums are increased by 20% each year from 2016 through 2020, then held level thereafter.

- Scenario 4: The current premiums are increased by 10% each year.

- Scenario 5: The current premiums are increased by 5% each year.

Scenario 1 is projected to eliminate the deficit by 12/31/2022, Scenario 2 by 12/31/2021, and Scenario 3 by 12/31/2023. Scenarios 4 and 5 involve more moderate rate actions, but even after nine years of annual rate increases of either 10% or 5%, respectively, the projection still does not illustrate a surplus for the plan for these scenarios.

The significant rate increases to participants that are involved in Scenarios 1, 2, and 3 in order to restore the plan's surplus present implications for participation rates on this voluntary program, and for potential resulting adverse selection. It is likely that the long-term solution for improving the financial performance of this plan will involve items beyond just premium increases. ETF may wish to perform a more in-depth study of the factors driving the experience on this plan and the potential for achieving savings through plan design modifications or other measures, possibly in combination with more modest rate actions.

The detailed output from our baseline (no change) scenario and Scenarios 1 through 5 is provided on the following pages. 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.

State ICI Fund Balance Analysis as of December 31, 2014

Baseline: Current Contribution Rate

Calendar Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
BOY Fund Balance	51,049,409	50,563,266	49,047,953	47,136,805	44,817,960	40,446,941	34,134,123	25,829,327	15,472,485	2,901,226	(11,821,048)
Premium Contributions	15,746,565	16,250,456	16,770,470	17,307,125	17,860,953	18,432,504	19,022,344	19,631,059	20,259,253	20,907,549	21,576,590
Investment Income	4,366,867	3,640,555	3,531,453	3,393,850	3,226,893	2,912,180	2,457,657	1,859,712	1,114,019	208,888	(851,115)
Total Revenues	20,113,433	19,891,011	20,301,923	20,700,975	21,087,846	21,344,683	21,480,001	21,490,770	21,373,272	21,116,437	20,725,475
Insurance Claims	18,872,474	19,611,583	20,350,692	21,089,801	23,324,353	25,338,652	27,287,592	29,177,456	31,098,567	32,833,935	34,606,390
Carrier Administrative Expenses	1,305,626	1,356,758	1,407,891	1,459,024	1,613,613	1,752,965	1,887,796	2,018,540	2,151,445	2,271,500	2,394,121
Administrative Expense	421,476	437,982	454,489	470,995	520,899	565,884	609,410	651,616	694,519	733,275	772,859
Total Operating Expenses	20,599,576	21,406,324	22,213,071	23,019,819	25,458,865	27,657,502	29,784,797	31,847,611	33,944,531	35,838,710	37,773,370
Net Change in Fund Balance	(486,143)	(1,515,313)	(1,911,149)	(2,318,844)	(4,371,019)	(6,312,818)	(8,304,797)	(10,356,841)	(12,571,260)	(14,722,273)	(17,047,896)
EOY Fund Balance	50,563,266	49,047,953	47,136,805	44,817,960	40,446,941	34,134,123	25,829,327	15,472,485	2,901,226	(11,821,048)	(28,868,943)
Incurred Claim Liability	78,817,416	92,059,069	103,695,084	114,301,926	124,172,966	133,547,030	142,512,383	151,205,977	159,710,937	168,112,802	176,546,665
Surplus / (Deficit)	(28,254,150)	(43,011,115)	(56,558,279)	(69,483,966)	(83,726,025)	(99,412,907)	(116,683,057)	(135,733,492)	(156,809,712)	(179,933,849)	(205,415,608)

State ICI Fund Balance Analysis as of December 31, 2014

Scenario 1: Double contribution rate to 1.022% in 2016 and hold level at that rate

Calendar Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
BOY Fund Balance	51,049,409	50,563,266	49,047,953	63,907,275	80,103,030	96,133,489	112,262,606	128,605,403	145,279,499	162,313,597	179,976,563
Premium Contributions	15,746,565	16,250,456	33,540,940	34,614,250	35,721,906	36,865,007	38,044,688	39,262,118	40,518,505	41,815,098	43,153,181
Investment Income	4,366,867	3,640,555	3,531,453	4,601,324	5,767,418	6,921,611	8,082,908	9,259,589	10,460,124	11,686,579	12,958,313
Total Revenues	20,113,433	19,891,011	37,072,393	39,215,574	41,489,324	43,786,619	46,127,595	48,521,707	50,978,629	53,501,677	56,111,493
Insurance Claims	18,872,474	19,611,583	20,350,692	21,089,801	23,324,353	25,338,652	27,287,592	29,177,456	31,098,567	32,833,935	34,606,390
Carrier Administrative Expenses	1,305,626	1,356,758	1,407,891	1,459,024	1,613,613	1,752,965	1,887,796	2,018,540	2,151,445	2,271,500	2,394,121
Administrative Expense	421,476	437,982	454,489	470,995	520,899	565,884	609,410	651,616	694,519	733,275	772,859
Total Operating Expenses	20,599,576	21,406,324	22,213,071	23,019,819	25,458,865	27,657,502	29,784,797	31,847,611	33,944,531	35,838,710	37,773,370
Net Change in Fund Balance	(486,143)	(1,515,313)	14,859,321	16,195,755	16,030,459	16,129,117	16,342,798	16,674,095	17,034,098	17,662,966	18,338,123
EOY Fund Balance	50,563,266	49,047,953	63,907,275	80,103,030	96,133,489	112,262,606	128,605,403	145,279,499	162,313,597	179,976,563	198,314,686
Incurred Claim Liability	78,817,416	92,059,069	103,695,084	114,301,926	124,172,966	133,547,030	142,512,383	151,205,977	159,710,937	168,112,802	176,546,665
Surplus / (Deficit)	(28,254,150)	(43,011,115)	(39,787,809)	(34,198,897)	(28,039,477)	(21,284,425)	(13,906,980)	(5,926,478)	2,602,659	11,863,761	21,768,020

State ICI Fund Balance Analysis as of December 31, 2014

Scenario 2: Increase contribution rate by 50% in 2016 and 2017, then hold level at 1.150%

Calendar Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
BOY Fund Balance	51,049,409	50,563,266	49,047,953	55,522,040	75,440,839	95,600,858	116,299,752	137,688,810	159,924,676	183,078,040	207,462,933
Premium Contributions	15,746,565	16,250,456	25,155,705	38,941,032	40,187,145	41,473,133	42,800,274	44,169,882	45,583,319	47,041,985	48,547,328
Investment Income	4,366,867	3,640,555	3,531,453	3,997,587	5,431,740	6,883,262	8,373,582	9,913,594	11,514,577	13,181,619	14,937,331
Total Revenues	20,113,433	19,891,011	28,687,158	42,938,619	45,618,885	48,356,395	51,173,856	54,083,477	57,097,895	60,223,604	63,484,659
Insurance Claims	18,872,474	19,611,583	20,350,692	21,089,801	23,324,353	25,338,652	27,287,592	29,177,456	31,098,567	32,833,935	34,606,390
Carrier Administrative Expenses	1,305,626	1,356,758	1,407,891	1,459,024	1,613,613	1,752,965	1,887,796	2,018,540	2,151,445	2,271,500	2,394,121
Administrative Expense	421,476	437,982	454,489	470,995	520,899	565,884	609,410	651,616	694,519	733,275	772,859
Total Operating Expenses	20,599,576	21,406,324	22,213,071	23,019,819	25,458,865	27,657,502	29,784,797	31,847,611	33,944,531	35,838,710	37,773,370
Net Change in Fund Balance	(486,143)	(1,515,313)	6,474,086	19,918,799	20,160,020	20,698,894	21,389,058	22,235,865	23,153,364	24,384,893	25,711,289
EOY Fund Balance	50,563,266	49,047,953	55,522,040	75,440,839	95,600,858	116,299,752	137,688,810	159,924,676	183,078,040	207,462,933	233,174,222
Incurred Claim Liability	78,817,416	92,059,069	103,695,084	114,301,926	124,172,966	133,547,030	142,512,383	151,205,977	159,710,937	168,112,802	176,546,665
Surplus / (Deficit)	(28,254,150)	(43,011,115)	(48,173,044)	(38,861,087)	(28,572,107)	(17,247,278)	(4,823,573)	8,718,699	23,367,102	39,350,131	56,627,556

State ICI Fund Balance Analysis as of December 31, 2014

Scenario 3: Increase contribution rate by 20% each year until 2020, then hold level at 1.272%

Calendar Year	2014	2015	2016	2017	2018	2019
BOY Fund Balance	51,049,409	50,563,266	49,047,953	50,490,899	56,028,684	65,467,611
Premium Contributions	15,746,565	16,250,456	20,124,564	24,922,260	30,863,727	38,221,640
Investment Income	4,366,867	3,640,555	3,531,453	3,635,345	4,034,065	4,713,668
Total Revenues	20,113,433	19,891,011	23,656,017	28,557,605	34,897,792	42,935,308
Insurance Claims	18,872,474	19,611,583	20,350,692	21,089,801	23,324,353	25,338,652
Carrier Administrative Expenses	1,305,626	1,356,758	1,407,891	1,459,024	1,613,613	1,752,965
Administrative Expense	421,476	437,982	454,489	470,995	520,899	565,884
Total Operating Expenses	20,599,576	21,406,324	22,213,071	23,019,819	25,458,865	27,657,502
Net Change in Fund Balance	(486,143)	(1,515,313)	1,442,945	5,537,786	9,438,927	15,277,806
EOY Fund Balance	50,563,266	49,047,953	50,490,899	56,028,684	65,467,611	80,745,417
Incurred Claim Liability	78,817,416	92,059,069	103,695,084	114,301,926	124,172,966	133,547,030
Surplus / (Deficit)	(28,254,150)	(43,011,115)	(53,204,185)	(58,273,242)	(58,705,355)	(52,801,613)

Calendar Year	2020	2021	2022	2023	2024
BOY Fund Balance	80,745,417	104,107,969	128,604,487	154,330,983	181,628,775
Premium Contributions	47,333,679	48,848,356	50,411,504	52,024,672	53,689,461
Investment Income	5,813,670	7,495,774	9,259,523	11,111,831	13,077,272
Total Revenues	53,147,349	56,344,130	59,671,027	63,136,502	66,766,733
Insurance Claims	27,287,592	29,177,456	31,098,567	32,833,935	34,606,390
Carrier Administrative Expenses	1,887,796	2,018,540	2,151,445	2,271,500	2,394,121
Administrative Expense	609,410	651,616	694,519	733,275	772,859
Total Operating Expenses	29,784,797	31,847,611	33,944,531	35,838,710	37,773,370
Net Change in Fund Balance	23,362,551	24,496,519	25,726,495	27,297,792	28,993,363
EOY Fund Balance	104,107,969	128,604,487	154,330,983	181,628,775	210,622,137
Incurred Claim Liability	142,512,383	151,205,977	159,710,937	168,112,802	176,546,665
Surplus / (Deficit)	(38,404,415)	(22,601,490)	(5,379,955)	13,515,973	34,075,472

State ICI Fund Balance Analysis as of December 31, 2014

Scenario 4: Increase contribution rate by 10% each year

Calendar Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
BOY Fund Balance	51,049,409	50,563,266	49,047,953	48,813,852	50,250,251	52,182,332	55,268,987	60,099,232	67,356,384	77,741,064	92,316,898
Premium Contributions	15,746,565	16,250,456	18,447,517	20,941,621	23,772,929	26,987,029	30,635,675	34,777,618	39,479,552	44,817,188	50,876,471
Investment Income	4,366,867	3,640,555	3,531,453	3,514,597	3,618,018	3,757,128	3,979,367	4,327,145	4,849,660	5,597,357	6,646,817
Total Revenues	20,113,433	19,891,011	21,978,970	24,456,219	27,390,947	30,744,157	34,615,042	39,104,763	44,329,212	50,414,544	57,523,288
Insurance Claims	18,872,474	19,611,583	20,350,692	21,089,801	23,324,353	25,338,652	27,287,592	29,177,456	31,098,567	32,833,935	34,606,390
Carrier Administrative Expenses	1,305,626	1,356,758	1,407,891	1,459,024	1,613,613	1,752,965	1,887,796	2,018,540	2,151,445	2,271,500	2,394,121
Administrative Expense	421,476	437,982	454,489	470,995	520,899	565,884	609,410	651,616	694,519	733,275	772,859
Total Operating Expenses	20,599,576	21,406,324	22,213,071	23,019,819	25,458,865	27,657,502	29,784,797	31,847,611	33,944,531	35,838,710	37,773,370
Net Change in Fund Balance	(486,143)	(1,515,313)	(234,102)	1,436,399	1,932,081	3,086,655	4,830,245	7,257,152	10,384,680	14,575,834	19,749,918
EOY Fund Balance	50,563,266	49,047,953	48,813,852	50,250,251	52,182,332	55,268,987	60,099,232	67,356,384	77,741,064	92,316,898	112,066,815
Incurred Claim Liability	78,817,416	92,059,069	103,695,084	114,301,926	124,172,966	133,547,030	142,512,383	151,205,977	159,710,937	168,112,802	176,546,665
Surplus / (Deficit)	(28,254,150)	(43,011,115)	(54,881,232)	(64,051,675)	(71,990,634)	(78,278,043)	(82,413,151)	(83,849,593)	(81,969,873)	(75,795,904)	(64,479,850)

State ICI Fund Balance Analysis as of December 31, 2014

Scenario 5: Increase contribution rate by 5% each year

Calendar Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
BOY Fund Balance	51,049,409	50,563,266	49,047,953	47,975,328	47,490,838	46,127,599	44,196,108	41,871,297	39,345,915	36,741,093	34,437,713
Premium Contributions	15,746,565	16,250,456	17,608,994	19,081,106	20,676,286	22,404,823	24,277,867	26,307,496	28,506,803	30,889,972	33,472,373
Investment Income	4,366,867	3,640,555	3,531,453	3,454,224	3,419,340	3,321,187	3,182,120	3,014,733	2,832,906	2,645,359	2,479,515
Total Revenues	20,113,433	19,891,011	21,140,446	22,535,329	24,095,626	25,726,011	27,459,986	29,322,230	31,339,709	33,535,330	35,951,889
Insurance Claims	18,872,474	19,611,583	20,350,692	21,089,801	23,324,353	25,338,652	27,287,592	29,177,456	31,098,567	32,833,935	34,606,390
Carrier Administrative Expenses	1,305,626	1,356,758	1,407,891	1,459,024	1,613,613	1,752,965	1,887,796	2,018,540	2,151,445	2,271,500	2,394,121
Administrative Expense	421,476	437,982	454,489	470,995	520,899	565,884	609,410	651,616	694,519	733,275	772,859
Total Operating Expenses	20,599,576	21,406,324	22,213,071	23,019,819	25,458,865	27,657,502	29,784,797	31,847,611	33,944,531	35,838,710	37,773,370
Net Change in Fund Balance	(486,143)	(1,515,313)	(1,072,625)	(484,490)	(1,363,239)	(1,931,491)	(2,324,811)	(2,525,382)	(2,604,822)	(2,303,380)	(1,821,482)
EOY Fund Balance	50,563,266	49,047,953	47,975,328	47,490,838	46,127,599	44,196,108	41,871,297	39,345,915	36,741,093	34,437,713	32,616,231
Incurred Claim Liability	78,817,416	92,059,069	103,695,084	114,301,926	124,172,966	133,547,030	142,512,383	151,205,977	159,710,937	168,112,802	176,546,665
Surplus / (Deficit)	(28,254,150)	(43,011,115)	(55,719,755)	(66,811,088)	(78,045,367)	(89,350,923)	(100,641,086)	(111,860,062)	(122,969,845)	(133,675,089)	(143,930,434)

Appendix A: 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 (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 B: Data for Valuation

Number of Active State ICI Claims by Year of Disability
as of December 31, 2014

Year of Disability	Male	Female	Total
2001 and earlier	46	101	147
2002	8	20	28
2003	5	25	30
2004	12	31	43
2005	11	39	50
2006	18	34	52
2007	24	31	55
2008	23	31	54
2009	22	41	63
2010	23	47	70
2011	19	62	81
2012	43	70	113
2013	53	105	158
2014	86	191	277
Total	393	828	1,221

Total Net Monthly Benefit by Year of Disability
as of December 31, 2014

Year of Disability	Male	Female	Total
2001 and earlier	33,748	76,202	109,950
2002	6,464	11,986	18,450
2003	1,514	17,437	18,951
2004	9,682	24,437	34,119
2005	6,975	36,056	43,031
2006	16,209	25,113	41,322
2007	18,389	34,613	53,003
2008	16,587	22,844	39,430
2009	16,885	45,307	62,192
2010	24,057	46,924	70,981
2011	17,210	54,285	71,494
2012	50,506	87,372	137,878
2013	78,890	164,162	243,017
2014	159,953	439,031	598,985
Total	457,069	1,085,733	1,542,802

Number of Active State ICI Claims by Age at Disability
as of December 31, 2014

Age at Disability	Male	Female	Total
< 20	-	-	-
20-24	7	13	20
25-29	9	34	43
30-34	24	60	84
35-39	45	126	171
40-44	59	140	199
45-49	80	137	217
50-54	80	154	234
55-59	61	120	181
60-64	24	42	66
65+	4	2	6
Total	393	828	1,221

Total Net Monthly Benefit by Age at Disability
as of December 31, 2014

Age at Disability	Male	Female	Total
< 20	-	-	-
20-24	9,853	15,042	24,895
25-29	11,933	45,208	57,141
30-34	31,386	85,343	116,729
35-39	57,899	171,824	229,723
40-44	63,999	173,256	237,256
45-49	88,217	196,453	284,671
50-54	84,025	176,464	260,490
55-59	63,829	157,639	221,464
60-64	39,686	63,201	102,887
65+	6,241	1,307	7,548
Total	457,069	1,085,733	1,542,802

Appendix C: Actuarial Methods and Assumptions

- Valuation Date: 12/31/2014

- Discount Rate: 7.20%, specified by ETF

- Claim Termination Rates: Claim termination rate assumptions were derived from 1987 CGDT rates using the following adjustment factors:

Disability Duration	Termination Rate Adjustment Factor
1 – 24 months	2.50
25 – 36 months	2.40
37 – 48 months	2.20
49 – 60 months	2.00
61 – 72 months	1.80
73 – 84 months	1.60
85 – 96 months	1.40
97 – 108 months	1.20
109 + months	1.00

- Future Offset Approval Rates: Estimated Social Security offset assumptions are shown below. No future offsets are assumed on claimants disabled more than five years.

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

Claim Duration	Probability
1 – 12 months	69%
13 – 24 months	45%
25 – 36 months	17%
37 – 48 months	8%
49 – 60 months	5%
61 + months	0%

  Future Social Security offset amount as percentage of gross benefit amount: 44%.

- Incurred But Not Reported Claims: 15% of the estimated incurred claims for the current year, as determined from analyses of historical State ICI claims experience.

- Loss Adjustment Expenses: 4.5% of the liability for open claims plus 6.0% of the liability for IBNR claims.

Appendix D: Reliance Items

In performing the valuation, we relied, without audit, on certain data and information provided by ETF and Aetna. 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 Aetna
- Asset balances, premium contributions, plan expenses, covered payroll, and other financial information provided by ETF
- Plan descriptions provided by ETF
- Discussions with ETF and Aetna personnel