Actuarial Valuation of
The Local Income Continuation Insurance Plan

As of December 31, 2016

For the State of Wisconsin
Department of Employee Trust Funds

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April 21, 2017

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April 21, 2017

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 Local Income Continuation Insurance Plan as of 12/31/2016

Dear Deb:

At your request, we have performed an actuarial valuation of the Local Income Continuation Insurance (ICI) Plan as of December 31, 2016. Our findings are set forth in this report.

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 43 or 45, 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 plans. Ultimately it is the responsibility of ETF and its auditors to determine the applicable accounting standards for the plans.

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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 these assumptions. ETF is solely responsible for establishing these assumptions 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 financial projections in Section III of this report assume that the Local ICI plan will be modified effective 1/1/2020, although this motion has not yet been approved by the State of Wisconsin legislature. Failure to approve this motion could result in financial experience that is significantly different than the financial projections from our analysis.

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
Principal and Consulting Actuary
Milliman, Inc.

Section I: Introduction and Executive Summary

This report contains the 12/31/2016 valuation for the Local Income Continuation Insurance (ICI) Plan administered by the Wisconsin Department of Employee Trust Funds (ETF). The actuarial liabilities for the Local ICI Plan as of 12/31/2016 are summarized below:

Table 1.1
Actuarial Liabilities for the Local ICI Plan as of 12/31/2016

Liability Component	Standard Benefit	Supplemental Benefit	$75 Add-on	Total Liability Amount
Open Claims	$4,852,298	$97,970	$23,590	$4,973,858
IBNR Claims	$184,536	$3,726	$897	$189,159
Loss Adjustment Expense	$279,794	$5,649	$1,360	$286,803
Total	$5,316,627	$107,346	$25,847	$5,449,820

The values above include estimated liabilities for monthly ICI benefit payments (Standard Benefits and Supplemental Benefits) and for additional benefits of $75 per month to disabled employees whose disability lasts longer than 12 months, to help these employees with medical fees ($75 Add-on).

We have analyzed the funding status of the Local ICI plan as of 12/31/2016. As shown in the following table, the Local ICI plan had a significant surplus as of 12/31/2016:

Table 1.2
Local ICI Fund Balances

	12/31/2014	12/31/2015	12/31/2016
Beginning Balance	$33,542,573	$35,272,960	$36,300,190
Closing Adjustments	($113,013)	($128,421)	$8,045
Adjusted Beginning Balance	$33,429,560	$35,144,539	$36,308,236
Plus: Premium Contributions	$0	$0	$0
Plus: Investment Earnings	$2,866,369	$2,218,609	$2,725,838
Less: Insurance Claims	$859,391	$954,741	$1,339,006
Less: Administrative Expenses	$163,578	$108,217	$167,477
Ending Balance	$35,272,960	$36,300,190	$37,527,591
Actuarial Liability	$4,149,125	$4,681,797	$5,449,820
Surplus / (Deficit)	$31,123,835	$31,618,393	$32,077,771

Our projection of future funding levels, which takes into account the plan changes recently approved by the Group Insurance Board effective 1/1/2020, indicates that the Local ICI plan is expected to generate a significant level of surplus for the foreseeable future, with expected investment earnings on the existing fund exceeding the cost of expected new claims and expenses each year. It is therefore reasonable to continue waiving the premium contribution on this plan for the near term.

Section II: Actuarial Valuation

The actuarial liability for the Local 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 following table compares the 12/31/2015 and 12/31/2016 liabilities for the Local ICI plan:

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

Component	12/31/2015	12/31/2016
Open Claims	$4,306,295	$4,973,858
IBNR Claims	$171,433	$189,159
Loss Adjustment Expense	$204,069	$286,803
Total	$4,681,797	$5,449,820

Appendix C of this report provides the detailed valuation assumptions used to compute the 12/31/2016 liabilities for the Local ICI plan. A discussion of each of the liability components is provided below.

Open Claims

The estimated liability for open claims increased by approximately 16% since last year, from $4.3 million as of 12/31/2015 to $5.0 million as of 12/31/2016. The increase was driven by an increase in the number of disabled members and by differences in their benefit amounts. The number of open claims increased by 8% from 74 as of 12/31/2015 to 80 as of 12/31/2016, and the average monthly benefit amount increased by approximately 11% from $1,441 as of 12/31/2015 to $1,593.

The assumptions used to calculate Local ICI liabilities as of 12/31/2016 were very similar to last year's assumptions. The claim termination rate assumptions and interest rate assumptions are unchanged. This year, we took a different approach for determining the overpayment credit, based on the aggregate Local ICI overpayment balance reported as of 12/31/2016. In particular, we estimated that 75% of the overpayment balance would eventually be recovered, and we applied this amount as an offset to the total liability. This estimate was based on an analysis of historical overpayment balances reported by ETF from 12/31/2012 through 12/31/2016. The impact of our new method for determining the overpayment credit is a slight decrease in the 12/31/2016 liability of approximately $83 thousand (i.e., approximately 2%), as shown below.

Table 2.2
Impact of New Method for Determining Future Overpayment Recoveries

Overpayment Credit	12/31/2016 Liability
Prior Method	$5,532,405
New Method	$5,449,820
Difference	($82,585)

We performed a retrospective runoff test using State ICI claim experience from the period 12/31/2013 through 12/31/2016, because historical Local ICI experience has been volatile due to the small volume of open claims. The runoff studies are useful in determining whether the liabilities at prior valuation dates, calculated using current valuation assumptions, would have been sufficient to cover the emerging costs of ICI claims. We believe that the State ICI runoff analysis provides a reasonable basis for testing Local ICI valuation assumptions, because the Local and State ICI plans are similar. The results of the studies are shown below and represent three mutually distinct 12-month studies that were combined:

Table 2.3
Runout Study for the ICI Plans
Study Period: 12/31/2013 – 12/31/2016

Claim Duration	Average Annual Margin
1 – 12 months	5.6%
13 – 24 months	-0.3%
25 – 36 months	3.7%
37 – 48 months	3.8%
49 – 60 months	1.2%
61 + months	2.9%
Total	1.5%

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. The preceding table indicates that the State ICI plan meets that objective, and therefore we have assumed that the Local ICI plan will exhibit similar experience. We will continue to monitor the valuation assumptions closely.

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 $23,590 as of December 31, 2016.

The following table provides a split between liabilities corresponding to standard benefits (which cover up to $64,000 of annual earnings), supplemental benefits (which cover annual earnings from $64,000 to $120,000), and the $75 Add-on benefit. It also shows an allocation of the IBNR and loss adjustment expense liabilities to each of these three benefit components.

Table 2.4
Actuarial Liabilities for the Local ICI Plan as of 12/31/2016

Liability Component	Standard Benefit	Supplemental Benefit	$75 Add-on	Total Liability Amount
Open Claims	$4,852,298	$97,970	$23,590	$4,973,858
IBNR Claims	$184,536	$3,726	$897	$189,159
Loss Adjustment Expense	$279,794	$5,649	$1,360	$286,803
Total	$5,316,627	$107,346	$25,847	$5,449,820

IBNR Claims

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. For example, 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 2016 (based on recent trends) and by using historical claim data to determine the proportion of claims that were typically unreported at each year end.

The liability for IBNR claims increased by approximately 10% from 12/31/2015 to 12/31/2016. This was because the estimated annual incurred claims, which were calculated using historical Local ICI claim experience, increased from $1.14 million last year to $1.26 million this year. We continue to assume that the proportion of unreported annual claims is 15% in our IBNR liability calculations, which was derived from an analysis of historical reporting lag experience.

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

Table 2.5
Development of IBNR Liability for the Local ICI Plan

Estimated Incurred Claims	$1,261,057
Estimated Proportion of Unreported Claims	15.0%
IBNR Liability as of 12/31/2016	$189,159

Loss Adjustment Expense

The liability for loss adjustment expenses was computed by comparing the annual fees payable to Aetna, which are estimated to be $3,450,015 in 2017, to the expected annual incurred claims amount for all three plans that Aetna administers (LTDI, State ICI, and Local ICI). The annual fees are approximately equal to 5.7% of estimated annual incurred claims. The loss adjustment expense liability was then calculated as 7.0% of the IBNR liability and 5.5% of the open claim 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. The loss adjustment expense calculations for the Local ICI plan are summarized in the table below:

Table 2.6
Development of Loss Adjustment Expense Liability for the Local ICI Plan

Component	Liability	Expense Factor	Loss Adjustment Expenses
Open Claims	$4,973,858	5.5%	$273,562
IBNR	$189,159	7.0%	$13,241
Total	$5,163,017	5.6%	$286,803

Section III: Discussion of Local ICI Funding Levels

The 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

	12/31/2014	12/31/2015	12/31/2016
Beginning Balance	$33,542,573	$35,272,960	$36,300,190
Closing Adjustments	($113,013)	($128,421)	$8,045
Adjusted Beginning Balance	$33,429,560	$35,144,539	$36,308,236
Plus: Premium Contributions	$0	$0	$0
Plus: Investment Earnings	$2,866,369	$2,218,609	$2,725,838
Less: Insurance Claims	$859,391	$954,741	$1,339,006
Less: Administrative Expenses	$163,578	$108,217	$167,477
Ending Balance	$35,272,960	$36,300,190	$37,527,591
Actuarial Liability	$4,149,125	$4,681,797	$5,449,820
Surplus / (Deficit)	$31,123,835	$31,618,393	$32,077,771

The Local ICI plan has run a large surplus for many years, and premium contributions have been waived since 2012. In order to evaluate the potential long-term performance of this fund, we prepared a financial projection. The projection reflects actual results for 2016 and projected values in 2017 and beyond. It also takes into consideration the plan changes which will become effective in 2020, including a reduction in the benefit percent from 75% to 70% of earnings, and a reduction in the benefit period from retirement age to 18 months. 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: Since Local ICI covered 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 3.20% 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, but are assumed to be waived in the future given the plan's significant surplus.

- 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 12/31/2016, and of payments on expected future claims incurred after 12/31/2016. Future incurred claims are based on assumed claims experience of 0.67% of covered payroll in 2016, adjusted for expected aging in subsequent years. In 2020, future incurred claims are assumed to be a lower percentage of payroll due to the expected plan design changes.

- Administrative Expenses: Administrative expenses are modeled as a constant percentage of paid insurance claims, based on actual values in 2016.

- 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 12/31/2016, and of the increasing liability for claims incurred after 12/31/2016.

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

Our Baseline projection, which is shown on the following page, indicates that the Local ICI plan is expected to generate a significant level of surplus for the foreseeable future, with expected investment earnings on the existing fund exceeding the cost of expected new claims and expenses each year. It is therefore reasonable to continue waiving the premium contribution on this plan for the near term.

We have modeled an alternate scenario (Scenario 1) in which we have not assumed the redesign plan changes will become effective in 2020. These projections are also shown below, under the Baseline projections. In Scenario 1 we have assumed that Local ICI premiums would be waived for the near term, similar to the Baseline scenario.

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.

Baseline Scenario: Redesigned ICI program effective in 2020 and beyond

Local ICI Program - Funding Analysis as of December 31, 2016

Premium contributions waived indefinitely beginning 2012

Calendar Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
BOY Fund Balance	$36,308,236	$37,527,591	$38,708,974	$39,961,295	$41,289,661	$42,575,045	$43,824,054	$45,230,064	$46,858,595	$48,671,310
Premium Contributions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Investment Income	$2,725,838	$2,701,987	$2,787,046	$2,877,213	$2,972,856	$3,065,403	$3,155,332	$3,256,565	$3,373,819	$3,504,334
Total Revenues	$2,725,838	$2,701,987	$2,787,046	$2,877,213	$2,972,856	$3,065,403	$3,155,332	$3,256,565	$3,373,819	$3,504,334
Insurance Claims	$1,339,006	$1,351,557	$1,364,109	$1,376,660	$1,499,874	$1,614,464	$1,554,848	$1,447,044	$1,387,555	$1,326,808
Carrier Administrative Expenses	$68,113	$68,751	$69,390	$70,028	$76,296	$82,125	$79,092	$73,608	$70,582	$67,492
Administrative Expense	$99,364	$100,295	$101,227	$102,158	$111,302	$119,805	$115,381	$107,381	$102,967	$98,459
Total Operating Expenses	$1,506,482	$1,520,604	$1,534,725	$1,548,847	$1,687,472	$1,816,394	$1,749,322	$1,628,034	$1,561,105	$1,492,759
Net Change in Fund Balance	$1,219,356	$1,181,383	$1,252,321	$1,328,367	$1,285,384	$1,249,009	$1,406,010	$1,628,531	$1,812,714	$2,011,575
EOY Fund Balance	$37,527,591	$38,708,974	$39,961,295	$41,289,661	$42,575,045	$43,824,054	$45,230,064	$46,858,595	$48,671,310	$50,682,885
Incurred Claim Liability	$5,449,820	$6,155,148	$6,757,202	$7,311,555	$6,843,298	$6,128,676	$5,480,935	$4,948,161	$4,469,563	$4,055,656
Surplus / (Deficit)	$32,077,771	$32,553,826	$33,204,093	$33,978,106	$35,731,748	$37,695,378	$39,749,129	$41,910,435	$44,201,747	$46,627,228

Scenario 1: No redesigned ICI program

Local ICI Program - Funding Analysis as of December 31, 2016

Premium contributions waived indefinitely beginning 2012

Calendar Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
BOY Fund Balance	$36,308,236	$37,527,591	$38,708,974	$39,961,295	$41,289,661	$42,570,925	$43,819,965	$45,034,192	$46,241,566	$47,418,685
Premium Contributions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Investment Income	$2,725,838	$2,701,987	$2,787,046	$2,877,213	$2,972,856	$3,065,107	$3,155,037	$3,242,462	$3,329,393	$3,414,145
Total Revenues	$2,725,838	$2,701,987	$2,787,046	$2,877,213	$2,972,856	$3,065,107	$3,155,037	$3,242,462	$3,329,393	$3,414,145
Insurance Claims	$1,339,006	$1,351,557	$1,364,109	$1,376,660	$1,503,537	$1,614,173	$1,725,049	$1,808,845	$1,913,005	$2,002,599
Carrier Administrative Expenses	$68,113	$68,751	$69,390	$70,028	$76,482	$82,110	$87,750	$92,013	$97,311	$101,869
Administrative Expense	$99,364	$100,295	$101,227	$102,158	$111,573	$119,783	$128,011	$134,230	$141,959	$148,607
Total Operating Expenses	$1,506,482	$1,520,604	$1,534,725	$1,548,847	$1,691,592	$1,816,067	$1,940,810	$2,035,087	$2,152,275	$2,253,075
Net Change in Fund Balance	$1,219,356	$1,181,383	$1,252,321	$1,328,367	$1,281,263	$1,249,040	$1,214,227	$1,207,375	$1,177,118	$1,161,071
EOY Fund Balance	$37,527,591	$38,708,974	$39,961,295	$41,289,661	$42,570,925	$43,819,965	$45,034,192	$46,241,566	$47,418,685	$48,579,755
Incurred Claim Liability	$5,449,820	$6,155,148	$6,757,202	$7,311,555	$7,821,439	$8,307,301	$8,769,581	$9,244,104	$9,710,894	$10,185,539
Surplus / (Deficit)	$32,077,771	$32,553,826	$33,204,093	$33,978,106	$34,749,486	$35,512,664	$36,264,611	$36,997,463	$37,707,790	$38,394,216

Appendix A: 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 (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

The following tables show the distribution of open claims as of 12/31/2016 by year of disability and gender, and by age at disability and gender.

Number of Open Local ICI Claims as of 12/31/2016 By Year of Disability and Gender			
Disability Year	Male	Female	Total
2001 and earlier	1	2	3
2002	1	1	2
2003	2	0	2
2004	1	2	3
2005	3	3	6
2006	1	1	2
2007	0	0	0
2008	0	0	0
2009	3	2	5
2010	5	0	5
2011	2	0	2
2012	3	1	4
2013	2	1	3
2014	2	4	6
2015	9	10	19
2016	11	7	18
Total	46	34	80

Number of Open Local ICI Claims as of 12/31/2016 By Age at Disability and Gender			
Age at Disability	Male	Female	Total
< 20	0	0	0
20-24	0	0	0
25-29	2	0	2
30-34	4	5	9
35-39	6	2	8
40-44	4	5	9
45-49	10	6	16
50-54	9	9	18
55-59	8	6	14
60-64	3	1	4
65+	0	0	0
Total	46	34	80

The following tables show the distribution of net monthly benefit amounts as of 12/31/2016 by year of disability and gender, and by age at disability and gender.

Local ICI Net Monthly Benefit Amounts as of 12/31/2016 By Year of Disability and Gender			
Disability Year	Male	Female	Total
2001 and earlier	$366	$1,604	$1,970
2002	$1,122	$1,018	$2,140
2003	$3,437	$0	$3,437
2004	$556	$1,703	$2,259
2005	$586	$1,421	$2,007
2006	$857	$192	$1,049
2007	$0	$0	$0
2008	$0	$0	$0
2009	$368	$1,453	$1,821
2010	$10,247	$0	$10,247
2011	$3,893	$0	$3,893
2012	$895	$544	$1,439
2013	$427	$1,275	$1,703
2014	$1,177	$8,774	$9,951
2015	$16,841	$15,220	$32,061
2016	$34,147	$19,319	$53,465
Total	$74,919	$52,522	$127,441

Local ICI Net Monthly Benefit Amounts as of 12/31/2016 By Age at Disability and Gender			
Age at Disability	Male	Female	Total
< 20	$0	$0	$0
20-24	$0	$0	$0
25-29	$5,815	$0	$5,815
30-34	$10,238	$6,088	$16,326
35-39	$10,569	$4,253	$14,822
40-44	$5,339	$6,656	$11,995
45-49	$12,956	$11,089	$24,045
50-54	$10,869	$15,787	$26,656
55-59	$13,985	$7,356	$21,341
60-64	$5,148	$1,294	$6,441
65+	$0	$0	$0
Total	$74,919	$52,522	$127,441

Appendix C: Actuarial Methods and Assumptions

- Valuation Date: 12/31/2016

- 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 ICI claims experience.

- Loss Adjustment Expenses: 5.5% of the liability for open claims plus 7.0% of the liability for IBNR claims

- Overpayment Credit: 75% of the overpayment balance reported by ETF as of 12/31/2016

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