

Actuarial Valuation of the Long Term Disability Insurance Plan As of December 31, 2017

**State of Wisconsin Employee Trust Funds
Board Meeting
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Paul L. Correia, FSA, MAAA
Milliman, Inc.

Actuarial Valuation of Long Term Disability Insurance Plan

Limitations of Analysis

- We relied on information provided by ETF and Aetna. If it is inaccurate or incomplete, our results may be affected.
- The valuation uses actuarial assumptions that are individually reasonable and which, in combination, offer our best estimate of anticipated experience.
- To the extent that actual experience varies from the assumptions, the emerging costs of the plan will vary from the projections we have prepared.
- The calculations in this presentation are consistent with our understanding of ETF funding requirements and goals. Additional determinations may be needed for other purposes.
- Milliman's work product was prepared exclusively for ETF for a specific and limited purpose. It is not for the use or benefit of any third party for any purpose.
- I, Paul Correia, am a Consulting Actuary with Milliman. I am a member of the American Academy of Actuaries, and I meet it's Qualification Standards to render the actuarial opinion contained herein.

Agenda

Long Term Disability Insurance Valuation

- Summary of benefits
- Valuation methods
- Valuation results
- Funding analysis
- Conclusion

Long Term Disability Insurance

Summary of Benefits

Member Benefits: Basic Benefit: 40% of salary (50% for members who are not eligible for a Social Security benefits)

Supplemental Retirement Contribution Benefit: An additional 7% of salary contributed to the member's WRS retirement account.

Benefit Offsets: WRS retirement benefits

Benefit Increases: Annual increases based on WRS core annuity index

Long Term Disability Insurance

Liabilities as of December 31, 2017

| Liability Component | Basic Benefit | Retirement Contribution | Total Liability Amount |
|-------------------------|----------------------|-------------------------|------------------------|
| Open Claims | \$265,810,352 | \$45,319,538 | \$311,129,891 |
| IBNR Claims | \$21,189,595 | \$3,612,736 | \$24,802,331 |
| Loss Adjustment Expense | \$16,102,841 | \$0 | \$16,102,841 |
| Total | \$303,102,788 | \$48,932,274 | \$352,035,063 |

- Basic Benefits: Monthly LTDI benefit payments to disabled members
- Retirement Contribution: Supplemental benefit equal to 7% of final average salary, contributed by WRS into the member's retirement account

Long Term Disability Insurance

Comparison to Prior Year

| Liability Component | 12/31/2016 | 12/31/2017 |
|-------------------------|----------------------|----------------------|
| Open Claims | \$302,245,402 | \$311,129,891 |
| IBNR Claims | \$25,132,138 | \$24,802,331 |
| Loss Adjustment Expense | \$15,701,882 | \$16,102,841 |
| Total | \$343,079,422 | \$352,035,063 |

- The total liability increased by approximately 3% from \$343 million to \$352 million
- The number of open claims increased by approximately 1% from 2,378 to 2,400
- The average monthly benefit amount increased by approximately 2% from \$1,409 to \$1,439

Long Term Disability Insurance

Retrospective Adequacy Study

| Claim Duration | Average Annual Margin |
|----------------|-----------------------|
| 1 – 12 months | -0.8% |
| 13 – 24 months | 1.6% |
| 25 – 36 months | 1.8% |
| 37 – 48 months | 1.3% |
| 49 – 60 months | 1.4% |
| 61 + months | 1.4% |
| Total | 1.3% |

- Study period: 2015 through 2017
- Positive overall margin (1.3%) indicates the liability was adequate to cover the runout of open disability claims during the study period

Long Term Disability Insurance

Historical Fund Balances (Basic Benefits only)

| | 12/31/2015 | 12/31/2016 | 12/31/2017 |
|---------------------|----------------|----------------|---------------|
| Asset Balance | \$239,167,803 | \$273,128,794 | \$303,745,241 |
| Actuarial Liability | \$277,673,599 | \$295,336,018 | \$303,102,788 |
| Surplus / (Deficit) | (\$38,505,795) | (\$22,207,224) | \$642,452 |

- The LTDI plan was closed to new claims effective 1/1/2018
- If all valuation assumptions are realized, including the 7.2% rate of return on investments, then the plan is expected to remain in a surplus position
- The surplus is sensitive to the investment income
 - If the rate of return is 4.0% instead of 7.2%, the plan is expected to return to a deficit position by the end of 2019

Long Term Disability Insurance

Conclusions

- The liability is expected to decrease in future years, because LTDI was closed to new claims effective 1/1/2018
- The plan is expected to remain in a surplus position under best-estimate valuation assumptions (including the 7.2% investment income assumption)