

Actuarial Valuation of the Duty Disability Plan As of December 31, 2017

**State of Wisconsin Employee Trust Funds
Board Meeting
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Actuarial Valuation of Duty Disability 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

Duty Disability Valuation

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

Duty Disability

Summary of Benefits

Member Benefits: 80% of salary (75% for local employees who are not eligible for a Social Security disability benefits and not eligible for a WRS disability benefit or LTDI)

Benefit Offsets: Social Security benefits
Unemployment compensation
Workers' Compensation
WRS retirement, separation, or disability benefits
Earnings from employer where the disability occurred
Earnings from other employment

Benefit Increases: Annual increases based on either Social Security salary index or WRS core annuity index, depending on the member's age and retirement status

Survivor Benefits: Survivor benefits are payable if the disabled member dies from the same condition that triggered Duty Disability benefits

Survivor benefit amounts vary depending on disability date and disabling condition (cancer versus all other conditions)

Duty Disability

Valuation Methods

- In prior years, valuation was performed under GASB 43
 - Governs financial reporting for Other Post-Employment Benefits (OPEBs)
 - Requires a calculation of the liability for active lives
- GASB 74 replaced GASB 43 for fiscal years beginning after June 15, 2016
 - Different accounting standards
 - Wisconsin ETF and auditors determined that Duty Disability not subject to GASB 74
- December 31, 2017 valuation performed under GASB 10
 - Determined by ETF and auditors
 - Consistent with valuation approach for other disability plans administered by ETF
 - Does not require the calculation of a liability for active lives

Duty Disability

Liabilities as of December 31, 2017

Liability Component	Estimated Liability
Open Claims	\$403,395,912
Future Survivors	\$35,412,819
IBNR Claims	\$16,766,364
Loss Adjustment Expense	\$9,205,578
Total	\$464,780,673

- Open Claims: Liability reflects 954 disabled members and 57 survivors (i.e. spouses and domestic partners) who were receiving benefits as of December 31, 2017
- Future Survivors: Liability reflects future benefits payable to survivors of currently disabled members
- Incurred but not Reported (IBNR) Claims: Liability reflects expected future benefit payments to members and survivors whose claims were incurred but had not been reported as of December 31, 2017
- Loss Adjustment Expenses: Liability for future expenses related to ongoing management and payment of Duty Disability claims

Duty Disability

Comparison to Prior Year

Liability Component	12/31/2016 GASB 43	12/31/2017 GASB 10
Active Lives	\$104,884,541	\$0
Open Claims	\$403,959,057	\$403,395,912
Future Survivors	\$34,724,572	\$35,412,819
IBNR Claims	\$8,704,812	\$16,766,364
Loss Adjustment Expense	\$6,059,386	\$9,205,578
Total	\$558,332,368	\$464,780,673

- No liability for active lives under GASB 10
- Liability for open claims decreased slightly, and the liability for future survivors increased slightly
 - Due to differences in the demographic mix of disabled members and survivors
- Liability for IBNR claims increased due to change in valuation methods:
 - As of 12/31/2017: 3-year lookback period
 - As of 12/31/2016: 2-year lookback period
- The liability for loss adjustment expenses increased due to change in valuation methods:
 - Based on analysis of historical administrative expenses

Duty Disability

Retrospective Adequacy Study

Experience Period	Average Annual Margin	
	Disabled Members	Survivors
2012	0.17%	2.04%
2013	0.61%	0.56%
2014	0.05%	1.19%
2015	0.52%	3.34%
2016	0.55%	3.37%
2017	0.52%	1.75%
Total	0.40%	2.05%

- Experience: Claims from disabled members and survivors within the period 2012 - 2017
- Positive overall margins (i.e., 0.40% and 2.05%) indicate the liabilities were adequate to cover the runout of open claims during the study period

Duty Disability

Fund Balance and Surplus Position

Balance Sheet Component	2017
Beginning of Year Balance	\$592,825,203
+ Investment Income	\$91,835,116
+ Premium Contributions and Miscellaneous Income	\$8,665,020
+ Insurance Claims	\$35,025,113
<u>– Administrative Expenses</u>	<u>\$1,365,226</u>
End of Year Balance	\$656,935,000
<u>Actuarial Liability as of December 31, 2017</u>	<u>\$464,780,673</u>
Surplus	\$192,154,327

- **The plan was in a surplus position of \$192.2 million as of December 31, 2017**

Duty Disability Funding Analysis

Modeled Scenario	Assumptions			Expected Surplus as of 12/31/2026 (\$ Million)
	Investment Income	Incurred Claims*	Contribution Rate	
Baseline	7.2%	0.69%	Current rates	\$345
Scenario 1	7.2%	0.82%	Current rates	\$316
Scenario 2	7.2%	0.82%	80% of current rates	\$295
Scenario 3	3.5%	0.69%	Current rates	\$63
Scenario 4	3.5%	0.82%	80% of current rates	\$17

* Incurred claims shown as percentage of payroll

- Fund and surplus projections take into consideration potential future claims of active employees (even though estimated liability does not under GASB10)
- 20% reduction to rates in 2019 maintains positive surplus throughout the projection period

Duty Disability

Conclusions

- Change in valuation method from GASB 43 to GASB 10 results in lower liability estimate, primarily because GASB 10 does not require an estimate of the liability for active members
- This results in a higher level of surplus
- A reduction to the contribution rates in 2019 is expected to provide sufficient funding, even if claims experience is unfavorable and investment income is lower than expected