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CORRESPONDENCE MEMORANDUM

DATE: May 18, 2010
TO: Wisconsin Retirement Board
FROM: Tom Korpady, Administrator
Division of Insurance Services
SUBJECT: Duty Disability Plan Actuarial Valuation

This memo is for informational purposes only. No Board action is required. The Employee Trust Funds Board will review this for approval at its June 24, 2010, meeting.

Deloitte recommends no change in premiums for the Duty Disability plan. A brief summary is found on page one of the attached "Duty Disability Plan Actuarial Review as of December 31, 2009."

Attachment: Duty Disability Plan Actuarial Valuation

Board	Item #
WR	1

The State of Wisconsin Employee Trust Funds Board



Section 40.65
Duty Disability Plan
Actuarial Review
As of December 31, 2009

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I. Overview

The purpose of this report is to summarize our review of the Section 40.65 Duty Disability Plan. Included is a brief review of the Plan's experience during 2009, an estimate of the State's liability as of December 31, 2009, and an analysis of current funding levels.

In preparing this report, we have relied on claim information provided by the Department of Employee Trust Funds ("ETF"). We have not audited this information, but have relied on it as submitted after making reasonableness checks as we deemed appropriate under the circumstances.

The results of this review indicate that the Duty Disability Plan has assets of \$392.6 million and estimated liabilities of \$406.5 million as of December 31, 2009. The accrued funding shortfall is \$13.9 million, which represents about 1.1% of the \$1,320 million in covered payroll. As a percentage of covered payroll, this is a 1.0% decrease compared to the shortfall from last year (i.e. last year the accrued funding shortfall was 2.1% of covered payroll). The asset balance does not include \$45.9 million in deferred market losses which will be recognized over the next four years.

If experience continues at recent levels, the present premium level will be sufficient to eliminate the accrued funding shortfall by the end of 2010. Therefore, no premium increase is recommended at this time.

The remainder of this report summarizes the review in more detail. A number of assumptions have been made in estimating the State's liability. Such assumptions are described throughout the report and summarized in Exhibit 2.

II. 2009 Experience Review

Fund Balance

During 2009, the fund balance increased from \$355,410,538 to \$392,608,377. Investment earnings (which, consistent with past ETF practice, reflect the deferral of recognition of actual earnings over a five year period) were \$15,388,095, with paid claims and administrative expenses totaling \$29,881,431. These components are shown in the following table along with figures for the prior ten years for comparison purposes.

Year	Contributions	Benefits		Admin Charge	Interest Credit (Charge)	Ending Balance	Average Contrib Rate
		Benefits Annual	% Increase				
1999	26,585,142	16,802,277	8.5%	612,691	7,020,204	66,102,416	3.36%
2000	32,188,231	18,337,714	9.1%	153,551	7,273,165	87,072,547	3.76%
2001	35,120,406	19,857,704	8.3%	290,919	10,127,493 ¹	112,171,824	3.84%
2002	36,662,252	21,592,121	8.7%	349,523	9,696,940 ²	136,589,372	3.83%
2003	39,308,775	22,984,246	6.4%	460,353	10,925,975 ³	163,379,523	3.87%
2004	40,776,886	23,176,779	0.8%	338,041	13,960,608 ⁴	194,602,196	3.84%
2005	42,076,545	24,185,758	4.4%	302,193	13,187,206 ⁵	225,377,997	3.86%
2006	44,573,058	26,091,024	7.9%	318,381	22,681,739 ⁶	266,223,389	3.87%
2007	47,765,354	26,198,090	0.4%	236,623	34,086,377 ⁷	321,640,407	3.94%
2008	50,574,350	27,125,051	3.5%	420,527	10,741,359 ⁸	355,410,538	3.94%
2009	51,555,562	29,440,572	8.5%	440,859	15,526,707 ⁹	392,608,377	3.91%

¹ Includes a \$5,601,954 adjustment for 1999 Wisconsin Act 11.

² Includes a \$3,838,988 adjustment for understated interest during 2002 (including Wisconsin Act 11).

³ Includes a \$215,444 adjustment for understated interest during 2003 (including Wisconsin Act 11).

⁴ Includes a \$63,179 adjustment for understated interest during 2004 (including Wisconsin Act 11).

⁵ Includes a \$31,517 adjustment for overstated interest during 2005 (including Wisconsin Act 11).

⁶ Includes a \$473,544 adjustment for overstated interest during 2006 (including Wisconsin Act 11).

⁷ Includes a \$351,103 adjustment for overstated interest during 2007 (including Wisconsin Act 11).

⁸ Includes a \$235,352 adjustment for understated interest during 2008 (including Wisconsin Act 11).

⁹ Includes a \$135,601 adjustment for understated interest during 2009 (including Wisconsin Act 11).

As of December 31, 2009, there were 938 claims in payment status with annual benefits totaling \$29,432,470. 884 of the claims were for disabled participants and 54 were for beneficiaries. The number of claims and total benefits being paid increased over last year from 925 and \$26,782,455 respectively. The following table shows annual benefits as a dollar amount and as a percentage of payroll by recipient type.

	Claims in Payment Status		
	No.	Annual \$	% of Payroll
Disabled Participants	884	\$28,518,334	2.16%
Survivor Beneficiaries	54	\$914,137	0.07%
Total	938	\$29,432,470	2.23%

III. Estimated Liability as of December 31, 2009

The liability for outstanding claims under the Duty Disability Plan was estimated in two parts - reported claims and incurred claims not yet in pay status. The following paragraphs summarize the methods used and results.

Reported Claims in Pay Status

Disabled life reserve factors were calculated using the Wisconsin Projected Experience Table – 93 mortality table. The mortality table is adjusted to be 98% of male mortality for disabled participants and 97% of female mortality for surviving beneficiaries. (In the event that a plan participant dies as a result of the injury or disease from which they are disabled, Duty disability death benefits may be payable to a surviving beneficiary.) Given the nature of Duty disability claims, no recoveries from disability are assumed.

In addition, the future annuity benefit streams are discounted at 4.8% (which approximates a 7.8% valuation rate with 3.0% annual benefit increases). The combined mortality and discount factors (“factors”) represent the present value of future payments, at 4.8% interest, to a disabled person with a monthly benefit of \$100. The Wisconsin Retirement System (“WRS”) valuation interest rate was reduced from 8% to 7.8% as of February 1, 2004, and has since remained at 7.8%. For consistency, and at the direction of ETF personnel, the valuation interest rate is tied to the WRS valuation rate; therefore a 7.8% valuation interest rate was used in the December 31, 2009, valuation. ETF provided a listing of all claims in payment status as of December 31, 2009, including the data required to select the appropriate factors. The factors are applied to the net benefit amount provided by ETF to determine the actuarial present value of each claim in payment status.

The total liability for claims in payment status as of December 31, 2009, \$372.6 million, is approximately \$26 million greater than the liability as of December 31, 2008.

Incurred Claims Not Yet in Pay Status

A review of recent claims data showed lags in the time between when claims are incurred and when they are reported and reach pay status. The incurred but not reported (IBNR) liability for December 31, 2009, \$33.9 million, was developed by relying on a historical claims database provided by the State. The current IBNR methodology reflects the distribution of the lag between the qualifying date and the subsequent approval date of past Duty claims. A projection of the count of claims incurred but not yet reported to the State as of December 31, 2009, was applied to an average liability per approved claim to determine the IBNR. Additionally, a 10% load for conservatism was added. The projected count of claims incurred but not yet reported to ETF included an additional claim which was approved in 2009, but, due to the timing of their qualifying date, data necessary to value their liability as a reported claim was unavailable. As a result, this approved claim was included in the IBNR liability.

Results

The total estimated liability as of December 31, 2009, for the Duty Disability plan is \$406,510,050, and is developed as follows:

Annual Benefits Before Offsets	\$ 47,758,200
Offsets	
Social Security	4,539,996
Unemployment Compensation	0
Worker's Compensation	613,258
WRS Benefits	
- Separation	955,983
- Disability	5,284,199
- Normal Retirement	6,821,467
Earnings	813,212
Total Offsets*	19,028,114
Adjustment for Offsets Greater than Base Benefit	702,385
Net Offsets*	18,325,730
Annual benefits after offsets (ABAO)*	29,432,470
Present value of ABAO being paid	372,595,050
Reserve for incurred but not paid claims	33,915,000
Total	\$ 406,510,050

*Subtotals may not tie to the sum of items due to rounding.

Total net offsets are 38.4% of gross benefits before offsets.

IV. Analysis of Funding Levels

Financial Progress

As of December 31, 2009, the payout rate from this plan increased to 2.26% of covered payroll (slightly up from 2.15% a year ago). Pertinent elements of the present financial picture include:

- During 2009 benefit reserves to pay claims increased from \$355.4 million to \$392.6 million.
- The contribution rate schedule in effect (see Exhibit 4) will generate approximately 3.90% of covered payroll. This rate appears to be sufficient to achieve a fully reserved status by the end of 2010. These calculations assume that the group size stabilizes at about its current level, as follows:

Provision for annual incurred claims*	2.26%
Amortization of accrued shortfall	<u>1.64%</u>
Total	3.90%

* Includes (Benefit Payments + Expenses) as a % of covered payroll as indicated in ETF Trust Statement.

Recent funding practice has been to limit the period of amortization of the shortfall to approximately 30 years. A projection of plan experience suggests that the current rate schedule will fund the existing shortfall in a shorter period of time. In 1998, the Board approved a rate increase of approximately .22% of payroll. It still appears that the new contribution level is sufficient for at least one more year. Therefore, we do not recommend a contribution increase at this time.

Exhibit 1: Section 40.65 Duty Disability Benefit Summary

Section 40.65 Duty Disability benefits for protective occupation participants were added in 1982. Benefits are summarized below:

Eligibility. Duty-related injury or disease that is likely to be permanent, which causes a protective occupation participant to retire, accept reduced pay or light duty assignment, or in some cases, that impairs promotional opportunities.

Amount. 80% of salary (75% if partially disabled and not a State Employee), less the following offsets:

- Social Security
- Unemployment Compensation
- Worker's Compensation
- Any other WRS benefit
- All earnings from the employer under which the disability occurred
- A percent of other earnings as follows:
 - 1/3 of earnings less than 40% of monthly salary
 - 1/2 of earnings between 40% and 80% of monthly salary
 - 2/3 of earnings over 80% of monthly salary

Annual Increases.

- To age 60: In accordance with WRS salary index.
- After age 60: In accordance with WRS dividend increases (as long as the claimant is not also receiving a disability retirement benefit.)

Survivor Benefits.

- All survivor benefits are offset by any Chapter 102 death benefits
- Pre-5/3/88:
 - 1/3 of the participant's monthly salary at time of death to surviving spouse, plus
 - \$15/month to each unmarried child under the age of 18
 - Not to exceed 65% of participant's monthly salary at time of death
 - State employees are included
 - No annual increase
- Post-5/3/88:
 - 1/2 of the participants monthly salary at time of death to surviving spouse or domestic partner, less other income sources that are based on the participant's earnings record
 - 1/10 of the participant's monthly salary at time of death to each unmarried child under the age of 18
 - Not to exceed 70% of participant's monthly salary at time of death
 - State employees are not included (with the exception of cancer presumptive)
 - Increase in accordance with WRS salary index
- Cancer Presumptive Law:
 - 70% of the participant's monthly salary at time of death to surviving spouse or domestic partner, less other income sources that are based on the participant's earnings record
 - 1/10 of the participant's monthly salary at time of death to the guardian of any minor child, as long as there is no surviving spouse or domestic partner
 - There is no maximum
 - Increase in accordance with WRS salary index

Contributions. Vary by experience.

Exhibit 2: Valuation Assumptions

Mortality: Wisconsin Projected Experience Table - 93; 98% of male mortality and 97% of female mortality.

Set Forward: 3 years for males only.

Recovery: None.

Sex: Based on the plan participant and beneficiary gender in ETF data.

Benefit Form: Life annuity for unmarried disabled recipients and all beneficiaries; 50% joint and survivor annuity for married disabled recipients.

Interest: 4.8% (which approximates a 7.8% valuation rate with 3.0% annual benefit increases). The valuation rate was changed for the December 31, 2004, valuation to match the WRS interest rate. The WRS interest rate was reduced from 8.0% to 7.8% as of February 1, 2004.

IBNR Loading: 10% margin for conservatism

Exhibit 3: Liability Summary by Year of Incurral

Benefits Being Paid and Reported Claim Liability by Year of Incurral

Year Incurred	Number Valued	No Benefit Payable	Total	Annual Benefit	% of Payroll	Actuarial Liabilities
2009	3	1	4	\$ 102,341	0.01%	\$ 1,638,768
2008	14	3	17	491,245	0.04%	7,172,735
2007	27	2	29	949,507	0.07%	14,867,806
2006	22	2	24	600,028	0.05%	8,659,221
2005	33	1	34	1,087,213	0.08%	16,714,971
2004	33	2	35	1,221,063	0.09%	18,024,428
2003	26	1	27	816,397	0.06%	12,279,940
2002	35	1	36	1,207,826	0.09%	17,383,083
2001	26	0	26	930,100	0.07%	13,671,786
2000	21	2	23	614,114	0.05%	8,791,822
1999	30	1	31	1,109,744	0.08%	16,171,634
1998	39	2	41	1,336,585	0.10%	18,213,299
1997	26	1	27	853,828	0.06%	11,907,636
1996	19	1	20	674,797	0.05%	9,163,446
1995	30	3	33	985,829	0.07%	12,942,409
1994	30	2	32	1,130,739	0.09%	14,370,391
1993	46	6	52	1,397,862	0.11%	17,892,071
1992	55	2	57	1,642,304	0.12%	20,542,298
1991	44	7	51	1,182,855	0.09%	14,035,848
1990	38	7	45	1,046,161	0.08%	12,778,792
1989	56	5	61	1,661,273	0.13%	18,676,294
1988	55	0	55	1,799,130	0.14%	20,039,948
1987	39	2	41	1,344,590	0.10%	14,499,536
1986	40	2	42	1,642,214	0.12%	16,624,727
1985	41	1	42	1,502,850	0.11%	15,018,201
1984	28	0	28	1,096,584	0.08%	11,320,518
1983	15	0	15	575,256	0.04%	5,019,025
1982	9	0	9	392,215	0.03%	3,693,005
1981	0	0	0	-	0.00%	-
1980	0	0	0	-	0.00%	-
1979	1	0	1	37,822	0.00%	481,414
Total	881	57	938	\$ 29,432,470	2.23%	\$ 372,595,050

Exhibit 4: Rate Schedule – Present and Proposed

December 31, 2009 Valuation

% of Covered Payroll	Applicable To
1.9	Groups with claims payout during the prior year of less than or equal to 0.5% of payroll.
2.4	Groups with one claim in which the payout during the prior year exceeded 0.5% of payroll, and groups with two or more claims in which the payout was more than 0.5% but less than 1.0% of payroll.
3.6	Groups with two or more claims in which the payout during the prior year was more than 1.0% but less than 2.0% of payroll.
5.4	Groups with two or more claims in which the payout during the prior year was more than 2.0% and less than 3.0% of payroll.
6.6	Groups with two or more claims in which the payout exceeded 3.0% but was less than 6.6% of payroll during the prior year.
6.6 + ½ of claims over 6.6%	Groups with two or more claims in which the payout exceeded 6.6% of payroll during the prior year.



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