# Deloitte & Touche

# **DRAFT**

# THE STATE OF WISCONSIN



STATE INCOME CONTINUATION
INSURANCE PLAN
ACTUARIAL REVIEW
AS OF DECEMBER 31, 2002

PREPARED BY:

JAMES H. SCEARCY, FSA, MAAA
DELOITTE & TOUCHE LLP

# **Table of Contents**

	Page
I.	Overview1
II.	2002 Experience Review2
III.	Estimated Liability as of December 31, 20024
IV.	Analysis of Funding Levels6
Exhibit Exhibit	•

## **Overview**

The purpose of this report is to summarize our review of the State Income Continuation Insurance Plan. Included is a brief review of the Plan's experience during 2002, an estimate of the State's liability as of December 31, 2002, and an analysis of current funding levels.

In preparing this report, we have relied on claim information provided by CORE, Inc. and the Department of Employee Trust Funds. We have not audited this information, but have relied on it as submitted after making reasonableness checks and corrections as we deemed appropriate under the circumstances. The reasonableness checks warranted additional review on a significant number of cases. These cases were reviewed, and any errors were corrected.

The results of this review indicate that the State Income Continuation Insurance program has assets of \$62.7 million and estimated liabilities of \$55.6 million as of December 31, 2002. The net fund balance is \$7.1 million. This net fund balance represents approximately 13% of liabilities. Traditionally, a long-term objective of maintaining a net fund balance of 15% to 25% of estimated liabilities has been considered reasonable.

Premiums were reinstated for this plan on August 1, 1996. These premiums were expected to stabilize the funded status of the plan. They have basically accomplished this. During 2002 the funded status decreased from 15% of estimated liabilities in January to 13% in December. This slight drop is attributable to poor investment market performance during 2002. We recommend no premium increase this year in anticipation of improved investment performance in 2003.

The remainder of this report summarizes the review in more detail. A number of assumptions have been made in estimating the State's liability, which are described throughout the report and summarized in Exhibit 1.

## 2002 Experience Review

#### **Fund Balance**

During 2002, the fund balance decreased from \$62,727,574 to \$62,699,536; Investment earnings were \$3,073,851 with paid claims and administrative expenses totaling \$12,867,217. These components are shown in the following table along with figures for the previous two years for comparison purposes.

	2002	2001	2000
Beginning Balance	\$62,727,574	\$58,443,292	\$54,195,613
Closing Adjustments	600,797	5,763,070	0
Adjusted Beginning Balance	\$63,328,371	\$64,179,362	\$54,195,613
Revenues			
Contributions	\$9,164,530	\$8,722,247	\$8,122,371
Investment Earnings	3,073,851	4,525,539	5,323,052
Total	\$12,238,382	\$13,297,786	\$13,445,423
Expenses			
Paid Claims	\$11,313,665	\$12,882,720	\$8,432,003
Administrative Expenses	1,553,552	1,866,855	765,741
Total	\$12,867,217	\$14,749,575	\$9,197,744
Ending Balance	\$62,699,536	\$62,727,574	\$58,443,292
Investment Earnings/Mean Balance	5.0%	7.4%	9.9%

As of December 31, 2002 there were 895 open claims. During 2002, 1,086 claims were closed. Total reported claims incurred during 2002 was 1,981. The following table shows the number of open and closed claims by year incurred and the average net monthly benefit.

	Open Claims		Closed Claims		All Claims	
Year Incurred	Number	Average Benefit	Number	Average Benefit	Number	Average Benefit
2002	276	874	566	829	842	845
2001	153	1,486	364	993	517	1,139
2000	91	1,282	56	1,032	147	1,187
1999	52	1,346	23	723	75	1,155
1998	41	2,282	14	2,689	55	2,386
1997	36	643	12	2,607	48	1,134
1996	39	523	11	3,225	50	1,118
1995	40	574	11	2,497	51	989
1994	34	700	5	514	39	676
1993	23	516	5	2,391	28	851
1992	20	730	2	2,482	22	890
1991	17	863	2	681	19	844
1990	14	1,356	5	3,898	19	2,025
1989	17	506	1	891	18	527
1988	10	892	2	9,009	12	2,245
1987 & Prior	32	495	7	307	39	461
Total	895	1,042	1,086	1,012	1,981	1,025

The number of open claims for 2002 decreased compared to last year. The average benefit amount for these open claims also decreased. The number of closed claims in 2002 increased; while the average benefit amount for these closed claims decreased. The following table shows this comparison for the last nine years.

	Open Claims		Closed Claims		All Claims	
Valuation Year	Number	Average Benefit	Number	Average Benefit	Number	Average Benefit
2002	895	\$1,042	1,086	\$1,012	1,981	\$1,025
2001	1,084	1,132	662	2,044	1,746	1,478
2000	809	1,078	1,246	1,465	2,055	1,313
1999	757	998	1,323	1,381	2,080	1,242
1998	855	1,040	1,501	1,339	2,356	1,231
1997	859	1,004	1,068	1,364	1,927	1,203
1996	839	1,036	1,283	1,281	2,122	1,184
1995	872	933	1,094	1,309	1,966	1,142
1994	893	932	1,097	1,241	1,990	1,102

## Estimated Liability as of December 31, 2002

The State's liability for outstanding claims under the State Income Continuation Insurance program was estimated in two parts - reported claims and incurred but unreported claims. The following paragraphs summarize the method used and results.

## **Reported Claims**

Disabled life reserve factors were calculated using the 1987 Commissioner's Group Basic Disability table adjusted for the State's own termination experience. These factors represent the present value of future payments, at 8% interest, to a disabled person with a monthly benefit of \$100. An 8% interest assumption was used to be consistent with WRS valuations. The factors are indexed by age at disablement, duration of disablement, and duration to the end of the benefit period.

CORE, Inc. provided a listing of those persons known to be disabled as of December 31, 2002. The age at disablement, duration of disability, and duration to expiration was calculated for each individual. The appropriate factors were then multiplied by the amount of benefit for each disabled person. The results were summarized by year incurred and in total.

Disabled individuals with claims that last over six months are eligible for a Social Security benefit, which offsets the monthly benefit from the Income Continuation Insurance program. A review of data revealed a reporting lag between the time individuals should begin receiving the offset and the time when the benefit is reported in the data. The liability was adjusted by incurral year to reflect a reasonable anticipated offset amount in the aggregate.

For disabilities that last over one year, a supplement of \$75 per month is included in the normal benefit amount for the purpose of defraying medical costs. A liability was added for those claims incurring in 2002 representing the probability that claims will continue beyond the first year and the present value of the additional benefit. The liability for the \$75 supplement is already included in the liability for claims over one year in duration.

#### **Incurred But Unreported Claims**

In addition to those claims reported as of December 31, there presumably are other claims incurred prior to that date but which are not as yet reported. The State's liability for long-term disability claims begins on the date an employee is disabled, even though the employee is not eligible for payments during the waiting period or has not yet filed a claim. Thus, it is necessary to estimate the additional liability for claims incurred but not reported as of the valuation date.

Besides the waiting period, delays in the reporting and processing of claims normally occur. From the State's own experience, we observed that 25% of claims open and closed during the previous twelve months are unreported as of year end. Thus, the State's liability for claims incurred but not yet reported was calculated as the estimated number of incurred but not yet reported claims times an average benefit amount times an average disabled life reserve factor.

#### Results

The total estimated liability as of December 31, 2002 for the State Income Continuation Insurance program is \$55,636,837, developed as follows:

Reported Claim Liability	\$48,701,450
\$75 Supplement	408,452
Total Reported Liability	\$49,109,902
Incurred But Not Reported Liability	6,526,935
Total Liability	\$55,636,837

This total liability is 2.3% higher than the liability determined as of December 31, 2001 due to changes in the number and the characteristics of the open claims.

# **Analysis of Funding Levels**

The State Income Continuation Insurance program has assets of \$62.7 million and estimated liabilities of \$55.6 million, producing a net fund balance of \$7.1 million. Investment earnings covered 24% of paid claims and administrative expenses. The reinstated premiums cover 71%. Premiums plus earnings combined covered 95% of the paid claims and administrative expenses. Thus, cash flow in the trust was negative this year.

Considerable year-to-year fluctuations can occur under disability income programs, even for a program as large as the State of Wisconsin Plan. Thus, it is prudent to maintain a fund balance in excess of estimated liabilities. A reasonable long-term objective has been to maintain a net fund balance of 15% to 25% of estimated liabilities as a hedge against future adverse experience. The current positive balance represents 13% of liabilities as compared to 15% last year. This decrease moves the fund slightly below the targeted range.

This performance is the combination of two factors. The plan had favorable claims experience during 2002. Investment experience was not favorable during 2002. This suboptimal investment experience was a product of the overall market performance.

We recommend that the premium rates not be changed this year. It is our belief that improved investment performance will probably increase the funded ratio by next year and alleviate the need for a premium change. We will monitor this experience closely to evaluate the need for an increase next year.

## Exhibit 1

**Elimination Period -** 90 days average. Actual waiting period varies with accumulated sick leave and for University faculty, the elimination period selected.

Benefit Period - The maximum duration of benefits for disabled insured employees is:

Age at Disablement	Maximum Duration of Benefits in Years
61 or Younger	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	1.00 years

In no event are benefits payable beyond the 70th birthday.

**Termination Rates -** Percentage of the 1987 Commissioner's Basic Disability Table three month elimination period termination rates based on the State's own experience, as shown below:

Duration of Disablement	Termination Rate Adjustment
First Year	280%
Second Year	260%
Third Year	240%
Fourth Year	220%
Fifth Year	200%
Sixth Year	180%
Seventh Year	160%
Eighth Year	140%
Ninth Year	120%
Tenth Year & Later	100%

**Interest** - 8.0% per year.

**Contingency Margins - None.** 

## Reported Claim Liability by Year of Disability

Open Claims as of December 31, 2002						
Year of		Gross	Offset		Average	Estimated
Disability	Number	Benefit	Amount	Net Benefit	Benefit	Liability*
2002	276	280,129	38,927	241,202	874	5,303,465
2001	153	295,524	68,137	227,387	1,486	9,617,838
2000	91	214,850	98,202	116,647	1,282	8,018,449
1999	52	127,680	57,678	70,002	1,346	5,512,334
1998	41	245,863	152,288	93,575	2,282	6,847,848
1997	36	76,948	53,786	23,162	643	1,704,949
1996	39	74,063	53,622	20,415	523	1,525,566
1995	40	78,521	55,569	22,952	574	1,750,492
1994	34	71,886	48,084	23,802	700	1,977,128
1993	23	37,533	25,656	11,877	516	868,767
1992	20	30,026	15,418	14,608	730	1,268,456
1991	17	28,573	13,896	14,677	863	1,255,132
1990	14	36,621	17,631	18,990	1,356	675,190
1989	17	23,310	14,707	8,603	506	641,093
1988	10	16,843	7,926	8,917	892	687,360
1987	10	12,304	6,836	5,468	547	393,361
1986	2	1,974	677	1,297	649	100,119
1985	3	4,659	2,882	1,777	592	59,524
1984	5	4,774	2,916	1,858	372	160,256
1983	2	2,078	720	1,358	679	123,611
1982	3	2,946	1,573	1,373	458	76,782
1981	0	0	0	0	0	0
1980	3	2,620	1,555	1,064	355	51,006
1979	3	2,524	1,359	1,165	388	57,864
1978	0	0	0	0	0	0
1977	0	0	0	0	0	0
1976	0	0	0	0	0	0
1975	0	0	0	0	0	0
1974	0	0	0	0	0	0
1973	0	0	0	0	0	0
1972	1	474	0	474	474	24,860
Total	895	1,672,693	740,043	932,650	1,042	48,701,450

 $<sup>{\</sup>color{red}^*} \textbf{Includes adjustment for assumed Social Security Offset for 2001 incurrals and for 2002 incurrals before 7/1/02.}$