

# State of Wisconsin



## State Income Continuation Insurance Plan Actuarial Review as of December 31, 2011

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# I. Overview

The purpose of this report is to summarize our review of the State Income Continuation Insurance Plan. Included are a brief review of the Plan's experience during 2011, an estimate of the State's liability as of December 31, 2011, and an analysis of current funding levels.

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

The results of this review indicate that the State Income Continuation Insurance Plan (including supplemental benefits) has assets of \$54.4 million and estimated liabilities of \$83.3 million as of December 31, 2011. The asset balance does not include \$3.7 million in deferred market losses which will be smoothed in over the next four years. We note that the deferred market losses listed here and as used in our financial projections are draft amounts provided by ETF due to the timing of our reports and the finalization of the deferred amounts. The net fund balance is \$(28.9) million. This net fund balance represents approximately (34.7)% 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 stabilized the funded status of the plan from 2000 through 2004. Since 2005, the net fund balance has been negative. Despite 7% increases in premium revenue that took effect February 1, 2007, January 1, 2010 and January 1, 2012, the funded status of the plan has continued to deteriorate. The funded status of the plan has not been in the targeted range since 2004.

In 2011, plan assets decreased by 8.2% while estimated liabilities increased 18.8%. This resulted in continued erosion of the plan's annual net fund balance, as it declined from (15.5)% of liabilities in 2010 to (34.7)% of liabilities in 2011. In 2010 we anticipated that additional 7% premium rate increases would be needed in 2014 and 2016 to return the net fund balance to target levels. However, as a result of the worsening funded status of the plan in 2011, we now anticipate the need to implement a 9% increase to plan premium in 2014 and 2016. As a result of the 2012 premium rate increase, we do not recommend any change in premium rates for 2013. Additional future premium increases may be needed in order to offset the continued deterioration of the net fund balance. We will continue to monitor the plan's net funding balance and need for further rate increases.

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.

## II. 2011 Experience Review

### Fund Balance

During 2011, the fund balance decreased from \$59,219,088 to \$54,368,602. Total revenues were \$14,592,776 with paid claims and administrative expenses totaling \$19,388,207. As shown below, contributions and investment earnings decreased by approximately \$0.4 and \$1.9 million, respectively, resulting in a 14% decrease in total revenue. The components of the cash flows are shown in the following table along with figures for the previous three years for comparison purposes. The Net Ending Balance does not include \$3.7 million in deferred market losses which will be smoothed in over the next four years.

	2011	2010	2009	2008
<b>Beginning Balance</b>	59,219,088	59,367,041	60,358,843	62,022,782
Closing Adjustments	(105,055)	(24,781)	(14,813)	719,743
<b>Adjusted Beginning Balance</b>	<b>59,114,033</b>	<b>59,342,260</b>	<b>60,344,030</b>	<b>62,742,525</b>
<b>Revenues</b>				
Contributions	13,687,699	14,081,359	13,028,086	12,327,669
Investment Earnings	905,077	2,839,973	2,537,632	1,838,355
<b>Total</b>	<b>14,592,776</b>	<b>16,921,332</b>	<b>15,565,718</b>	<b>14,166,024</b>
<b>Expenses</b>				
Paid Claims	17,517,513	15,180,515	14,853,486	14,335,283
Administrative Expenses	1,820,694	1,863,988	1,689,220	2,214,424
<b>Total</b>	<b>19,338,207</b>	<b>17,044,504</b>	<b>16,542,707</b>	<b>16,549,706</b>
<b>Net Income</b>	<b>(4,745,431)</b>	<b>(123,172)</b>	<b>(976,989)</b>	<b>(2,383,682)</b>
<b>Ending Balance</b>	<b>54,368,602</b>	<b>59,219,088</b>	<b>59,367,041</b>	<b>60,358,843</b>
<b>Estimated Liability</b>	<b>83,256,262</b>	<b>70,099,863</b>	<b>68,936,151</b>	<b>72,801,768</b>
<b>Net Fund Balance</b>	<b>(28,887,659)</b>	<b>(10,880,775)</b>	<b>(9,569,110)</b>	<b>(12,442,925)</b>
<b>Investment Earnings/Mean Ending Balance</b>	<b>1.6%</b>	<b>4.9%</b>	<b>4.3%</b>	<b>3.0%</b>

As of December 31, 2011, there were 1,170 open claims. During 2011, 1,381 claims were closed. Total reported claims incurred during 2011 were 2,551. The following table shows the number of open and closed claims by year incurred and the average net monthly benefit.

### Claims By Year of Incurral

Year Incurred	Open Claims		Closed Claims		All Claims	
	Number	Average Net Benefit	Number	Average Net Benefit	Number	Average Net Benefit
2011	357	\$ 2,303	798	\$ 2,601	1,155	\$ 2,509
2010	135	1,661	493	2,124	628	2,025
2009	95	994	27	1,160	122	1,030
2008	74	789	11	933	85	808
2007	66	880	6	619	72	859
2006	62	707	6	538	68	692
2005	66	850	4	1,165	70	868
2004	50	641	8	693	58	648
2003	34	589	1	425	35	584
2002	40	773	4	717	44	768
2001	25	738	2	657	27	732
2000	26	569	2	556	28	568
1999	23	796	2	309	25	757
1998	19	592	3	791	22	619
1997	11	685	3	772	14	703
1996	19	679	2	298	21	643
1995	9	933	3	586	12	846
1994	11	686	2	146	13	603
1993 & Prior	48	829	4	1,028	52	845
<b>Total</b>	<b>1,170</b>	<b>\$ 1,350</b>	<b>1,381</b>	<b>\$ 2,317</b>	<b>2,551</b>	<b>\$ 1,873</b>

The number of open claims and their respective average net benefit amounts in 2011 increased compared to last year. The number of closed claims and their respective average net benefit amounts in 2011 increased compared to last year. The following table shows this comparison for the last ten years.

### Claims By Valuation Date

Plan Year	Open Claims		Closed Claims		All Claims	
	Number	Average Net Benefit	Number	Average Net Benefit	Number	Average Net Benefit
2011	1,170	\$ 1,350	1,381	\$ 2,317	2,551	\$ 1,873
2010	1,067	1,231	1,372	2,237	2,439	1,797
2009	1,124	1,264	1,189	2,306	2,313	1,799
2008	1,130	1,325	1,440	2,160	2,570	1,793
2007	1,064	1,128	1,412	997	2,476	1,065
2006	1,123	1,146	1,295	881	2,418	1,004
2005	1,054	1,211	1,215	1,009	2,269	1,103
2004	972	1,168	1,205	1,042	2,177	1,098
2003	876	1,255	1,148	1,261	2,024	1,258
2002	895	1,042	1,086	1,012	1,981	1,025

# III. Estimated Liability as of December 31, 2011

The State's liability for outstanding claims under the State Income Continuation Insurance Plan 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 of Wisconsin's own termination experience. These factors represent the present value of future payments, at 7.2% interest, to a disabled person with a monthly benefit of \$1.00. In 2010, the Employee Trust Funds Board reduced the investment return assumption relied upon by the Wisconsin Retirement System ("WRS") from 7.8% to 7.2%, which has since remained at 7.2%. For consistency and per the direction of ETF personnel, the valuation interest rate is tied to the WRS valuation rate; therefore a 7.2% discount rate was used for the December 31, 2011, valuation. The factors are indexed by age at disablement, duration of disablement, and duration to the end of the benefit period.

Aetna provided a listing of those persons known to be disabled as of December 31, 2011. The age at disablement, duration of disability and benefit end date, based on the maximum allowable duration of benefits under the plan, 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.

For disabilities that last over one year, an additional \$75 per month is included in the normal benefit amount for the purpose of defraying medical costs. This supplemental benefit was effective January 1, 2002, for all claims in pay status. A liability was added for those claims incurred in 2011 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, 2011, there presumably are other claims incurred prior to that date but which are not 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, an estimate of the additional liability for claims incurred but not reported as of the valuation date is necessary.

Besides the waiting period, delays in the reporting and processing of claims normally occur. From the State's own experience, we observed that on average approximately 14% 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, 2011, for the State Income Continuation Insurance Plan is \$83,256,262, developed as follows:

Reported Claim Liability	\$71,632,393
<u>\$75 Supplement</u>	<u>615,770</u>
Total Reported Liability	72,248,163
<u>Incurred But Not Reported Liability</u>	<u>11,008,099</u>
Total Liability	\$83,256,262

When compared to their respective liabilities as of December 31, 2010, the December 31, 2011 total reported claim liability increased 19.3%, while the incurred but not reported liability increased 15.5%. The increase in the reported liability is due to the combined effect of a 9.7% increase in the count of open claims and a change in the composition and characteristics of the average claimant in the open claim cohort. The increase in the incurred but not reported liability is primarily due to an increase in the number of new claims incurred during the valuation year. As a result, the total liability is 18.8% more than the liability determined as of December 31, 2010.

Exhibit 2 contains a breakdown of the \$72,248,163 reported liability by year of disability.

## IV. Analysis of Funding Levels

The State Income Continuation Insurance Plan has assets of \$54.4 million and estimated liabilities of \$83.3 million, producing a net fund balance of \$(28.9) million. The collected premiums covered just less than 71% of paid claims and administrative expenses, while investment earnings covered just less than 5% of the paid claims and administrative expense balance. Thus, cash flow in the trust was negative this year. Cumulative cash flows for plan years 2007 through 2011 are \$(6,882,152).

Considerable year-to-year fluctuations can occur under disability income plans, even for a plan as large as that of the State. Thus, maintaining a fund balance in excess of estimated liabilities is prudent. A reasonable long-term objective has been to maintain an asset balance of 115% to 125% of estimated liabilities as a hedge against future adverse experience. The current asset balance covers 65.3% of liabilities (as compared to 84.5% last year). The net fund balance is not in the targeted range for the sixth consecutive year. The annual net fund balances (as a percentage of liabilities) were (1.5)% in 2005, (9.4)% in 2006, (4.3)% in 2007, (17.1)% in 2008, (13.9)% in 2009, and (15.5)% in 2010.

Despite an increase in premium revenue of approximately 7% that took effect February 1, 2007, the funded status of the plan has deteriorated over time. Although the premium increase led to a slight improvement in the net fund balance from 2006 to 2007, the net fund balance decreased in 2008 due to a 12% increase in liabilities and poor asset yield experience. As a result of the worsening funded status of the plan in 2008, a 7% premium increase was implemented for plan year 2010. Additionally, we projected that additional future 7% premium increases would likely be necessary to return the net fund balance to target levels over the longer term. In 2010, plan assets saw a decrease, while estimated liabilities of the plan grew, leading to a decline in the plan's annual net fund balance. As a result of the worsening funded status of the plan in 2010, a 7% premium increase was implemented for plan year 2012.

In 2011, plan assets decreased by 8.2% while estimated liabilities increased 18.8%. This resulted in continued erosion of the plan's annual net fund balance, as it declined from (15.5)% of liabilities in 2010 to (34.7)% of liabilities in 2011. In 2010 we anticipated that additional 7% premium rate increases would be needed in 2014 and 2016 to return the net fund balance to target levels. However, as a result of the worsening funded status of the plan in 2011, we now anticipate the need to implement a 9% increase to plan premium in 2014 and 2016. As a result of the 2012 premium rate increase, we do not recommend any change in premium rates for 2013. For consistency with prior premium increases and per the direction of ETF personnel, we are following a bi-annual premium rate increase schedule.

Since 2005, the cash flow in the trust has been negative for all years except 2007, implying the total paid claims and administrative expense balance has exceeded the collected premiums and investment earnings of the plan. Relative to their respective 2010 levels, investment earnings decreased 68% and collected premium decreased 3%, resulting in total revenues decreasing just less than 14% in 2011. ETF amortizes investment gains and losses over a 5 year period. The decrease in investment earnings in 2011 is the result of recognition of large prior years' losses and the portion of the 2011 loss amortized in 2011. Relative to their respective 2011 levels, paid claims increased 15% and administrative expenses decreased 2%, resulting in total expenses increasing approximately 13% in 2011. The increase in paid claims is due to an increase both in the number of open claims as well as the average net benefit per open claim relative to 2010 levels.

If actual investment earnings continue to come in below projections and actual paid claims continue to come in above projections, continued increases to premiums will be necessary to achieve a positive net fund balance. Based on current financial projections, we anticipate that additional 9% premium increases for future plan years will likely be necessary in order to return the net fund balance to target levels over the longer term. As future asset and liability experience emerges, we will continue to evaluate the need for the future additional premium increases.

## Exhibit 1– Summary of Actuarial Assumptions

**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** — Deloitte Consulting completed a claim termination rate experience study using WRS disability program claims experience for claims incurred 5/13/2006 – 12/31/2010. The results of the claim termination rate study supported a reduction in the termination rate adjustment factor for the first and second year of disablement (from 280% and 260%, respectively). The percentage of the 1987 Commissioner’s Basic Disability Table three month elimination period termination rates based on the State of Wisconsin’s own experience are shown below:

Duration of Disablement	Termination Rate Adjustment
First Year	250%
Second Year	250%
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** — 7.2% per year.

**Contingency Margins** — None.

## Exhibit 2: Reported Claim Liability by Year of Disability

### Open Claims as of December 31, 2011

Year of Disability	Count	Gross Benefit \$	Offset Amount \$	Net Benefit \$	Estimated Liability \$	75 Supp \$	Ave. Ben \$	Est'd Liability \$
2011	357	\$960,107	\$137,821	\$822,287	\$22,218,584	\$615,770	\$2,303	\$22,834,354
2010	135	392,711	168,484	224,227	11,180,320	0	1,661	11,180,320
2009	95	284,386	190,002	94,384	6,020,135	0	994	6,020,135
2008	74	228,863	170,449	58,414	4,025,685	0	789	4,025,685
2007	66	181,595	123,495	58,100	4,593,645	0	880	4,593,645
2006	62	155,650	111,818	43,832	3,808,773	0	707	3,808,773
2005	66	161,686	105,617	56,070	4,443,219	0	850	4,443,219
2004	50	111,249	79,200	32,050	2,750,219	0	641	2,750,219
2003	34	75,000	54,990	20,010	1,787,383	0	589	1,787,383
2002	40	88,551	57,629	30,922	1,972,676	0	773	1,972,676
2001	25	52,004	33,553	18,451	1,442,934	0	738	1,442,934
2000	26	49,311	34,506	14,805	794,825	0	569	794,825
1999	23	54,356	36,048	18,308	1,292,085	0	796	1,292,085
1998	19	41,630	30,376	11,254	579,390	0	592	579,390
1997	11	20,314	12,784	7,531	475,398	0	685	475,398
1996	19	32,563	19,661	12,902	845,714	0	679	845,714
1995	9	14,395	5,994	8,401	480,410	0	933	480,410
1994	11	18,930	11,383	7,547	468,120	0	686	468,120
1993	7	12,572	7,957	4,615	300,046	0	659	300,046
1992	6	8,955	3,769	5,186	327,870	0	864	327,870
1991	7	11,645	2,804	8,841	626,736	0	1,263	626,736
1990	7	9,096	4,037	5,059	266,298	0	723	266,298
1989	6	8,019	3,691	4,328	212,479	0	721	212,479
1988	6	9,975	3,630	6,344	372,026	0	1,057	372,026
1987	2	2,212	935	1,277	77,155	0	638	77,155
1986	1	1,161	527	634	29,977	0	634	29,977
1984	2	2,023	1,046	977	77,869	0	488	77,869
1983	2	2,153	431	1,722	106,054	0	861	106,054
1982	1	825	416	409	33,992	0	409	33,992
1980	1	727	308	419	22,373	0	419	22,373
<b>Total</b>	<b>1,170</b>	<b>\$2,992,664</b>	<b>\$1,413,362</b>	<b>\$1,579,302</b>	<b>\$71,632,393</b>	<b>\$615,770</b>	<b>\$1,350</b>	<b>\$72,248,163</b>



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