

WISCONSIN RETIREMENT SYSTEM 26TH ANNUAL ACTUARIAL VALUATION OF RETIRED LIVES DECEMBER 31, 2008



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March 3, 2009

Employee Trust Funds Board Madison, Wisconsin

Ladies and Gentlemen:

The results of the 26th annual actuarial valuation of core and variable annuities being paid from the Wisconsin Retirement System are presented in this report. The valuation was based upon data, furnished by the WRS staff, concerning Fund assets and individual annuitants and beneficiaries.

The date of this valuation was December 31, 2008. Actuarial assumptions used in the valuation are summarized in the Appendix.

The results of the valuation may be briefly summarized as follows (\$ millions).

	Core	Variable
Number of Annuitants	144,107	34,927
Annual Amount	\$ 3,399.3	\$ 427.0
Fund Balance	35,798.1	2,574.5
Actuarial Reserve	36,551.5	4,491.0
Ratio	0.979	0.573

Based upon these results, core annuities were decreased by 2.1% effective April, 2009 and variable annuities were decreased by 42%.

To the best of our knowledge, this report is complete and accurate and was made in accordance with standards of practice prescribed by the American Standards Board. All of the undersigned are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

The cooperation of the Secretary and his staff in gathering materials for this valuation is acknowledged with appreciation.

Respectfully submitted,

Brian B. Murphy, FSA, MAAA Norman L. Jones, FSA, MAAA

Mark Bri

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BBM/NLJ/MB:lr

SECTION A OPERATION OF THE SYSTEM

Each year, as of December 31, an actuarial valuation of the liability for retired persons receiving benefits from the Wisconsin Retirement System is conducted. The purpose of the valuation is to determine the actuarial present value of future benefit payments on behalf of current retired lives. This present value is the "actuarial reserve". Theoretically, if an amount of money equal to the actuarial present value were invested at a yield equal to the valuation interest rate, the initial amount plus the continuing investment income would provide exactly the right amount of money to pay the annuities of all current retired persons and their beneficiaries for the rest of their lives. The fund would decrease each year, and would become zero many decades in the future when the last annuitant dies.

The above is a "closed group" description of the operation of the annuity reserve fund. But the fund is really an "open group". The size of the fund does not actually decrease because each year more benefits are added to the rolls than are removed, and fresh money is transferred into the annuity reserve fund to finance the benefits of the new annuitants. (The actuary calculates the reserve transfers for new annuitants each year as a by-product of the actuarial valuation.)

According to theory, the fund will eventually reach a state when the number of people entering (retiring) each year is approximately equal to the number of people exiting (dying) each year. When this mature state is reached, the amount of money in the fund will remain approximately level in constant dollars from year to year. Each year, the reserve transfers for the new annuitants plus investment earnings on the whole fund (total money in) will be approximately equal to the benefit payments (total money out). The only source of growth in assets would be the result of the effects of inflation. The dollars in the fund would increase, but the "real" value of the fund would not change.

There are at least two factors that cause the actual operation to be different from the theoretical operation described above. The first is that annuitants may have longer or shorter lifetimes than expected. In recognition of this, the actuary monitors mortality experience of the retirement system and recommends a new mortality table when appropriate. The second factor is that actual investment earnings are rarely equal to the assumed rate. When investment earnings differ from the assumed rate, the difference, positive or negative, is recorded in a supplemental reserve.

The Wisconsin Retirement System maintains separate reserves for core and variable annuities. Each year, the actuary determines the actuarial reserve for core and variable annuities separately. WRS' practice with respect to the use of supplemental reserves is described below.

Core Annuity Division: If the supplemental reserve is positive and is at least 0.5% of core annuity liabilities, core annuity increases (dividends) may be granted. If the supplemental reserve is negative and is equal to or greater than 0.5% of core annuity liabilities in absolute value, prior core annuity dividends are reduced by an aggregate amount equal to the shortfall. Increases or decreases become effective in April following the December 31 valuation.

Variable Annuity Division: If the supplemental reserve is at least 2% of variable annuity liabilities, substantially all of the reserve (dropping fractions of a percent) is used to increase or decrease variable annuities for the ensuing year. Increases or decreases become effective in April following the December 31 valuation.

SECTION B CORE ANNUITIES

CORE ANNUITY DIVISION DEVELOPMENT OF ASSETS AND LIABILITIES

	\$ Mi	\$ Millions			
	Assets	Liabilities	Ratio		
Ending Balance December 31, 2007	\$35,050.1	\$32,877.5	1.066		
Closing Adjustments	2.3	0.0			
Variable Terminations	112.4	112.4			
2008 Dividend: 6.6%	0.0	2,021.0			
Beginning Balance January 1, 2008	35,164.8	35,010.9	1.004		
Increases					
Reserve Transfers	2,869.9	2,869.9			
Regular Interest	1,739.1	1,739.1			
Additional Earnings	(640.9)	0.0			
Addition to Contingency/Data Reserve	0.0	221.5			
Experience Study	0.0	0.0			
Other	0.0	44.9			
Total Increases	3,968.1	4,875.4			
Decreases					
Annuities & Lump Sums	3,331.8	3,331.8			
Credit Re-establishments	3.0	3.0			
Releases from Contingency/Data Reserve	0.0	0.0			
Experience Study	0.0	0.0			
Other	0.0	0.0			
Total Decreases	3,334.8	3,334.8			
Ending Balance December 31, 2008	\$35,798.1	\$36,551.5	0.979		

The ending liability balance includes data and mortality reserves of \$612 million.

Amounts to be transferred from the Employer Reserve and the Employee Reserve to the Annuity Reserve to cover liabilities for new annuities are computed as the first step in the annual actuarial valuation. The actuarial present value at time of retirement of core annuities reported as new since the last actuarial valuation is \$2,844,186,779. Adjustments to prior transfers, related to estimated annuities for which final computations have now been made, totaled \$25,714,186. Reserve transfers are distributed as follows:

Group	Regular Transfer	Adjustment to Prior Transfer	Total Transfer
General	\$2,555,333,534	\$25,926,403	\$2,581,259,937
Protective with Social Security	200,419,428	(309,068)	200,110,360
Protective without Social Security	66,695,198	230,440	66,925,638
Executive & Elected	21,738,619	(133,589)	21,605,030
Totals	\$2,844,186,779	\$25,714,186	\$2,869,900,965

Accordingly, we recommend that \$2,869,900,965 be transferred to the Core Annuity Reserve. The results in this report assume that this transfer has been made.

The Core Annuity Fund Balance, \$35,798.1 million, was less than the actuarial present value of core annuities and reserves, \$36,551.5 million, by \$753.4 million or (2.1)% of the actuarial present value (APV) of core annuity payments. The primary sources of the (2.1)% are:

	% of APV
1. SWIB published investment return	(26.20)%
2. MRA adjustment	29.50%
3. Published effective earnings rate	3.30%
4. Adjustment to relate earnings to average fixed annuity balance	(0.16)%
5. Earnings rate based on average balance	3.14%
 Expected dividend before adjustments: 1.0314/1.05-1 	(1.77)%
7. Adjustment to relate average asset to ending liability	0.02%
8. Carryover from last year due to timing of dividend accounting adjustments and rounding	0.42%
9. Adjustments to contingency reserve and data reserve	(0.61)%
10. Experience Study	0.00%
11. Experience and other effects	(0.12)%
12. Statutory adjustment to round to nearest one-tenth percent	(0.04)%
13. Computed dividend rate: (6)+(7)+(8)+(9)+(10)+(11)+(12)	(2.1)%

In accordance with the Administrative Code, ETF 20.25 and Section 40.27(2) Wisconsin Statutes (see page 27), the (2.1)% was effective April, 2009.

TRANSFERS TO ANNUITY RESERVE TO FINANCE CORE ANNUITIES APPROVED IN 2008 TABULATED BY TYPE OF ANNUITY AND OPTION

Alpha Code	Type of Benefit	Number	Annual Amount	Present Value
	REGULAR RETIREMENT			
SL	Straight Life	1.146	\$ 23,153,526	\$ 313,165,975
SL	Straight Life (accelerated)	0	4,773,407	16,910,986
A60	Life Annuity with 60 payments guaranteed	852	17,341,205	234,048,823
A60	Life Annuity with 60 payments guaranteed (accelerated)	0002	3,988,745	13,459,259
A180	Life Annuity with 180 payments guaranteed	1,692	32,039,398	458,641,791
A180	Life Annuity with 180 payments guaranteed (accelerated)	1,052	9,374,336	36,841,858
A180F	Life Annuity with 180 payments guaranteed (forced)	39	216,310	2,615,654
JOINT	Joint and 75% Survivor	846	20,446,476	308,330,832
JOINT	Joint and 75% Survivor (accelerated)	0	5,887,890	22,858,943
R25	Reduced 25% on First Death	409	11,119,692	159,097,999
R25	Reduced 25% on First Death (accelerated)	0	1,941,296	7,588,737
C100	100% Continued to Named Survivor	687	13,919,891	212,268,014
C100	100% Continued to Named Survivor (accelerated)	0	3,361,244	12,352,472
C180	100% Continued to Named Survivor (accelerated)	2,476	56,511,087	887,814,157
C180	100% Continued to Named Survivor with 180 payments guaranteed (accelerated)	2,170	17,672,429	70,000,670
AC24	Annuity Certain with 24 Payments	1	14,692	30,212
AC60	Annuity Certain with 60 Payments	1	27,353	121,357
AC120	Annuity Certain with 120 Payments	3	46,838	373,152
AC120	Annuity Certain between 24 and 180 Payments	11	613,798	5,042,755
SLNSD	Straight Life - Named Survivor Deceased	2	76,225	968,072
SLINSD	Total Regular	8,165	\$222,525,838	\$2,762,531,718
	Average Age at Retirement	60.1 Years	φ222,525,656	φ <i>2</i> ,702,331,710
	DISABILITY RETIREMENT			
SL	Straight Life	21	\$ 522,954	\$ 7,064,629
A60	Life Annuity with 60 payments guaranteed	12	308,344	4,137,029
A180	Life Annuity with 180 payments guaranteed	41	913,851	12,400,665
JOINT	Joint and 75% Survivor	6	174,151	2,553,216
R25	Reduced 25% on First Death	4	151,243	2,336,944
C100	100% Continued to Named Survivor	27	648,668	9,732,184
C180	100% Continued to Named Survivor with 180 payments guaranteed	63	1,551,452	25,141,276
	Total Disability	174	\$ 4,270,663	\$ 63,365,943
	Average Age at Retirement	54.3 Years	. , ,	. , ,
	DEATH-IN-SERVICE BENEFITS			
SL	Straight Life	6	\$ 182,214	\$ 2,489,777
A60	Life Annuity with 60 payments guaranteed	5	187,362	2,102,369
A60	Life Annuity with 60 payments guaranteed (accelerated)	0	6,444	30,745
A180	Life Annuity with 180 payments guaranteed	49	851,019	12,658,654
A180	Life Annuity with 180 payments guaranteed (accelerated)	0	191,928	1,003,785
AC180	Annuity Certain between 24 and 180 Payments	1	2,079	3,793
	Total Death-in-Service	61	\$ 1,421,046	\$ 18,289,123
	Average Age at Retirement	52.8 Years	, ,- ·	. , . ,
	GRAND TOTAL	8,400	\$228,217,547	\$2,844,186,784

CORE ANNUITIES BEING PAID DECEMBER 31, 2008 TABULATED BY TYPE OF ANNUITY AND OPTION

Alpha Code	Type of Benefit	Number	Annual Amount	Present Value
67	REGULAR RETIREMENT	15 000	* ***	
SL	Straight Life	17,833	\$ 343,308,958	\$ 3,492,463,713
SL	Straight Life (accelerated)	0	21,009,984	51,010,058
A60	Life Annuity with 60 payments guaranteed	18,250	348,897,158	3,366,521,302
A60	Life Annuity with 60 payments guaranteed (accelerated)	0	21,047,539	44,576,368
A120	Life Annuity with 120 payments guaranteed	370	6,245,484	22,995,665
A180	Life Annuity with 180 payments guaranteed	30,207	578,581,269	5,879,070,549
A180	Life Annuity with 180 payments guaranteed (accelerated)	0	49,436,902	125,565,578
A180F	Life Annuity with 180 payments guaranteed (forced)	170	1,186,791	11,914,959
JOINT	Joint and 75% Survivor	16,716	426,695,391	5,059,366,230
JOINT	Joint and 75% Survivor (accelerated)	0	33,534,675	77,564,696
R25	Reduced 25% on First Death	12,434	369,464,754	3,826,442,730
R25	Reduced 25% on First Death (accelerated)	0	12,748,958	29,344,905
C100	100% Continued to Named Survivor	11,685	249,993,221	2,993,224,178
C100	100% Continued to Named Survivor (accelerated)	0	19,097,325	45,612,721
C180	100% Continued to Named Survivor with 180 payments guaranteed	27,159	633,497,903	8,664,084,811
C180	100% Continued to Named Survivor with 180 payments guaranteed (accelerated)	0	88,155,109	224,951,485
LOL	Life with Optional Length Guaranteed	108	1,750,099	9,587,635
LOLF	Life with Optional Length Guaranteed (Forced)	10	179,889	998,407
AC24	Annuity Certain with 24 Payments	1	14,692	27,654
AC60	Annuity Certain with 60 Payments	1	27,353	107,553
AC120	Annuity Certain with 120 Payments	3	46,838	356,875
AC180	Annuity Certain between 24 and 180 Payments	112	4,018,305	19,338,687
C50	50% Continued to One Beneficiary	118	2,448,488	10,447,680
C50W180	50% Continued to One Beneficiary with 180 Months guaranteed	17	169,161	707,434
C75WSS	75% Continued to One Beneficiary and Social Security Integrated	111	2,498,260	16,437,575
R25W120	Reduced 25% on Death of Annuitant or Named Survivor with 120 Months guaranteed	15	322,288	1,038,494
A60WSS	Life with 60 Months Guaranteed and Social Security Integrated	286	2,203,328	9,459,325
A180WSS	Life with 180 Months Guaranteed and Social Security Integrated	201	4,667,611	21,637,357
PF6213	Police and Firemen s.62.13	244	9,248,561	45,720,684
SLNSD	Straight Life - Named Survivor Deceased	451	12,790,831	127,305,433

Total Regular

136,502 \$3,243,287,125 \$34,177,880,741

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CORE ANNUITIES BEING PAID DECEMBER 31, 2008 TABULATED BY TYPE OF ANNUITY AND OPTION

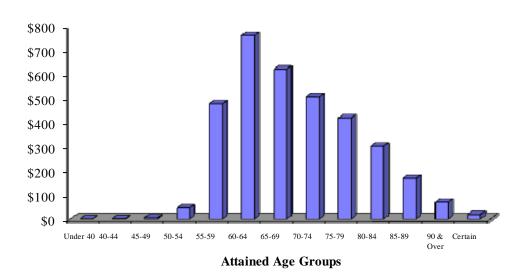
Alpha Code	Type of Benefit			Annual Amount		Present Value
	DISABILITY RETIREMENT					
SL	Straight Life	873	\$	21,254,746	\$	190,599,950
A60	Life Annuity with 60 payments guaranteed	477	φ	11,782,227	φ	115,940,244
A180	Life Annuity with 180 payments guaranteed	1,226		28,817,910		305,612,465
JOINT	Joint and 75% Survivor	516		11,638,074		131,785,745
R25	Reduced 25% on First Death	247		5,472,235		59,966,840
C100	100% Continued to Named Survivor	1,306		25,411,105		305,688,692
C100 C180	100% Continued to Named Survivor with 180 payments guaranteed	1,675		35,174,106		483,278,008
AC180	Annuity Certain between 24 and 180 Payments	1,075		11,380		483,278,008
	Disability with Spouse or Minor/Dependent Child	36		838,868		7,383,601
	Disability with Spouse of Minor/Dependent Child	5		838,808 115,673		1,167,202
CWD	Conservation Warden - Disability	1		1,535		5,402
PF6213	Police and Firemen s.62.13	28		626,366		3,366,770
SLNSD	Straight Life - Named Survivor Deceased	28 5		81,351		5,300,770
SERGE	Straight Life - Maned Sur Wor Deceased			01,551		572,229
	Total Disability	6,397	\$	141,225,576	\$	1,605,386,910
	DEATH-IN-SERVICE BENEFITS					
SL	Straight Life	197	\$	2,706,523	\$	27,826,961
SL	Straight Life (accelerated)	0		135,612		225,265
A60	Life Annuity with 60 payments guaranteed	120		1,944,785		19,639,410
A60	Life Annuity with 60 payments guaranteed (accelerated)	0		56,181		246,863
A180	Life Annuity with 180 payments guaranteed	704		8,444,572		101,459,863
A180	Life Annuity with 180 payments guaranteed (accelerated)	0		971,509		4,119,432
C180	100% Continued to Named Survivor with 180 payments guaranteed	3		12,169		201,297
LOL	Life with Optional Length Guaranteed	15		160,808		853,477
AC180	Annuity Certain between 24 and 180 Payments	8		90,653		303,185
A60WSS	Life with 60 Months Guaranteed and Social Security Integrated	83		126,312		598,725
	Life with 180 Months Guaranteed and Social Security Integrated	1		12,720		76,079
	Police and Firemen s.62.13	3		99,027		663,174
	Total Death-in-Service	1,134	\$	14,760,871	\$	156,213,731
	GRAND TOTAL	144,033	\$3	3,399,273,572	\$3	5,939,481,382

CORE ANNUITIES BEING PAID DECEMBER 31, 2008 TABULATED BY ATTAINED AGES

	R	Regular		Disability	Death	i-in-Service		Totals
Attained		Annual		Annual		Annual		Annual
Ages	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Under 20	0	\$ 0	0	\$ 0	6	\$ 37,915	6	\$ 37,915
20-24	0	0	5	46,114	9	68,226	14	114,340
25-29	0	0	5	35,322	12	87,519	17	122,841
30-34	1	5,869	13	135,631	16	94,737	30	236,237
35-39	6	43,847	30	469,156	21	123,068	57	636,071
40-44	17	194,991	91	1,694,172	22	180,500	130	2,069,663
45-49	75	803,847	218	4,423,812	34	296,182	327	5,523,841
50-54	1,125	30,446,247	627	14,088,629	75	968,201	1,827	45,503,077
55-59	14,792	448,140,962	1,120	27,276,451	116	2,227,186	16,028	477,644,599
60-64	26,800	731,527,043	1,172	27,185,349	144	2,569,864	28,116	761,282,256
65-69	27,375	595,630,758	1,010	22,998,492	142	2,330,034	28,527	620,959,284
70-74	22,187	487,352,540	817	18,413,285	107	1,512,971	23,111	507,278,796
75-79	17,611	404,592,825	641	12,981,733	112	1,245,388	18,364	418,819,946
80-84	13,214	293,598,718	404	7,462,371	128	1,453,470	13,746	302,514,559
85-89	8,057	164,771,473	179	3,054,945	83	759,132	8,319	168,585,550
90-94	3,412	55,530,722	56	861,372	52	329,372	3,520	56,721,466
95& Up	923	12,639,666	8	87,390	16	110,698	947	12,837,754
Certain Only*	907	18,007,617	10	11,352	104	366,408	1,021	18,385,377
Totals	136,502	\$3,243,287,125	6,406	\$141,225,576	1,199	\$14,760,871	144,107	\$3,399,273,572
Averages in Yea	ars							
Age at retire		60.0		52.0		50.9		59.6
Attained age		70.6		64.9	67.7			70.3

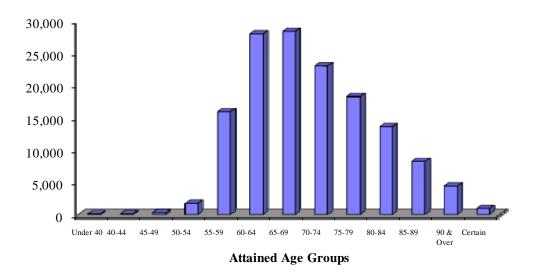
* Certain Only category consists of continuations of 5, 10 and 15-year certain and life annuities to beneficiaries of deceased annuitants.

CORE ANNUITIES BEING PAID BY ATTAINED AGE* DECEMBER 31, 2008



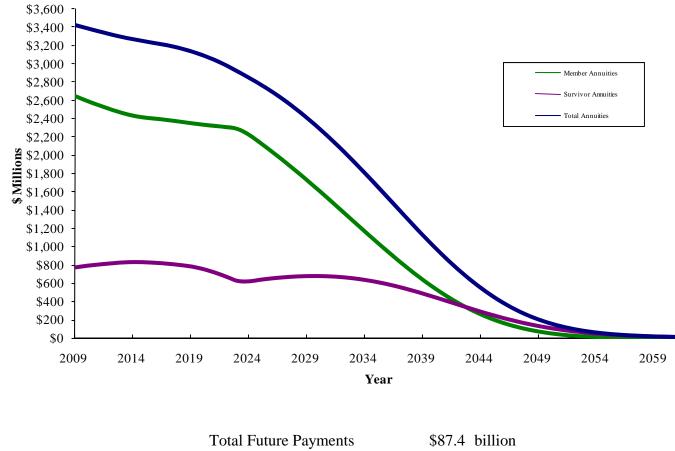
Annual \$ Millions

Number of Recipients



* Includes regular and disability retirees and survivor beneficiaries. The "certain" category includes annuities paid for a fixed period which is not dependent upon the age of the recipient.

PROJECTED FUTURE CORE ANNUITY PAYMENTS ON BEHALF OF PRESENT RETIRED LIVES INCLUDING FUTURE DIVIDENDS



From Present Assets	35.8
From Investment Return	51.6

SECTION C VARIABLE ANNUITIES

VARIABLE ANNUITY DIVISION DEVELOPMENT OF ASSETS AND LIABILITIES

	\$ Mi		
	Assets	Liabilities	Ratio
Ending Balance December 31, 2007	\$4,625.0	\$4,563.7	1.013
Closing Adjustments	(11.1)	0.0	
Variable Terminations	(112.4)	(112.4)	
2008 Adjustment: 0%	0.0	0.0	
Beginning Balance January 1, 2008	4,501.5	4,451.3	1.011
Increases			
Reserve Transfers	218.2	218.2	
Regular Interest	217.4	217.4	
Additional Earnings	(1,933.8)	0.0	
Addition to Contingency/Data Reserve	0.0	21.2	
Experience Study	0.0	0.0	
Other	0.0	11.7	
Total Increases	(1,498.2)	468.5	
Decreases			
Annuities & Lump Sums	427.8	427.8	
Credit Re-establishments	1.0	1.0	
Release from Contingency/Data Reserve	0.0	0.0	
Experience Study	0.0	0.0	
Other	0.0	0.0	
Total Decreases	428.8	428.8	
Ending Balance December 31, 2008	\$2,574.5	\$4,491.0	0.573

The ending liability balance includes data and mortality reserves of \$66.4 million.

Amounts to be transferred from the Employer Reserve and the Employee Reserve to the Annuity Reserve to cover liabilities for new annuities are computed as the first step in the annual actuarial valuation. The actuarial present value at time of retirement of variable annuities reported as new since the last actuarial valuation is \$217,078,097. Adjustments to prior transfers, relating to estimated annuities for which final computations have now been made, totaled \$1,165,986. Reserve transfers were distributed as follows:

Group	Regular Transfer	Adjustment to Prior Transfer	Total Transfer
General	\$203,049,718	\$834,122	\$203,883,840
Protective with Social Security	7,985,173	308,474	8,293,647
Protective without Social Security	2,052,600	17,816	2,070,416
Executive & Elected	3,990,606	5,574	3,996,180
Totals	\$217,078,097	\$1,165,986	\$218,244,083

Accordingly, we recommend that \$218,244,083 be transferred to the Variable Annuity Reserve. The results in this report assume that this transfer has been made.

Variable Annuity Reserves, \$2,574.5 million, were less than the actuarial present value of variable annuities, \$4,491.0 million, by \$1,941.5 million as of December 31, 2008 or (42)% of the actuarial present value (APV) of variable annuity payments. In accordance with Section 40.28(2) of the Wisconsin statutes (see page 27), variable annuities will be decreased by (42)% effective April 1, 2009. The primary sources of the (42)% are as follows:

	% of APV
1. SWIB published investment return	(39.0)%
2. Adjustment to published effective rate	(1.0)%
3. Published effective earnings rate	(40.0)%
4. Adjustment to relate earnings to average variable annuity fund balance	1.0%
5. Earnings rate based on average balance	(39.0)%
 Expected change before adjustments: 0.61/1.05-1 	(41.9)%
7. Adjustment to relate average asset to ending liability	(1.2)%
8. Carryover from last year due to timing of distribution, accounting adjustments and truncation	1.1%
9. Adjustments to contingency reserve	(0.5)%
10. Experience Study	0.0%
11. Experience and other effects	(0.2)%
12. Statutory adjustment (truncate to whole percent or adjust to zero if reserve is less than 2%)	0.7%
13. Variable annuity change: (6)+(7)+(8)+(9)+(10)+(11)+(12)	(42.0)%

TRANSFERS TO ANNUITY RESERVE TO FINANCE VARIABLE ANNUITIES APPROVED IN 2008 TABULATED BY TYPE OF ANNUITY AND OPTION

Alpha			Annual	Present
Code	Type of Benefit	Number	Amount	Value
	REGULAR RETIREMENT			
SL	Straight Life	285	\$ 1,838,689	\$ 24,716,803
SL	Straight Life (accelerated)	0	320,592	989,341
A60	Life Annuity with 60 payments guaranteed	225	1,544,461	20,394,318
A60	Life Annuity with 60 payments guaranteed (accelerated)	0	303,171	1,139,227
A180	Life Annuity with 180 payments guaranteed	404	2,707,185	38,793,004
A180	Life Annuity with 180 payments guaranteed (accelerated)	0	656,403	2,423,535
A180F	Life Annuity with 180 payments guaranteed (forced)	2	3,788	46,825
JOINT	Joint and 75% Survivor	227	1,745,467	25,441,215
JOINT	Joint and 75% Survivor (accelerated)	0	356,914	1,323,241
R25	Reduced 25% on First Death	100	1,024,905	14,258,758
R25	Reduced 25% on First Death (accelerated)	0	75,846	252,199
C100	100% Continued to Named Survivor	163	1,127,581	16,637,609
C100	100% Continued to Named Survivor (accelerated)	0	186,818	693,069
C180	100% Continued to Named Survivor with 180 payments guaranteed	669	3,985,412	62,028,323
C180	100% Continued to Named Survivor with 180 payments guaranteed (accelerated)	0	997,400	3,495,719
AC120	Annuity Certain with 120 Payments	0	228	1.790
AC180	Annuity Certain between 24 and 180 Payments	0	80,976	644,000
neroo	Total Regular	2,075	\$16,955,836	\$213,278,976
	Average Age at Retirement	59.4 Years	<i>\</i>	\$213,270,270
CT.	DISABILITY RETIREMENT	2	¢ 22.420	¢ 201.000
SL	Straight Life	3	\$ 22,420	\$ 301,233
A60	Life Annuity with 60 payments guaranteed	5	10,218	137,086
A180	Life Annuity with 180 payments guaranteed	13	15,073	208,914
JOINT	Joint and 75% Survivor	3	4,603	65,529
R25	Reduced 25% on First Death	3	5,045	78,179
C100	100% Continued to Named Survivor	8	39,940	628,578
C180	100% Continued to Named Survivor with 180 payments guaranteed	17	30,421	495,744
	Total Disability	52	\$ 127,720	\$ 1,915,263
	Average Age at Retirement	52.8 Years		
	DEATH-IN-SERVICE BENEFITS			
SL	Straight Life	2	\$ 62,464	\$ 744,375
A60	Life Annuity with 60 payments guaranteed	1	17,189	240.096
A60	Life Annuity with 60 payments guaranteed (accelerated)	0	7,356	35,091
A180	Life Annuity with 180 payments guaranteed	14	56,285	838,403
A180	Life Annuity with 180 payments guaranteed (accelerated)	0	4,931	25,893
11100	Total Death-in-Service	17	\$ 148,225	\$ 1,883,858
	Average Age at Retirement	40.8 Years	\$ 110,220	φ 1,005,050
	GRAND TOTAL	2,144	\$17,231,781	\$217,078,097

VARIABLE ANNUITIES BEING PAID DECEMBER 31, 2008 TABULATED BY TYPE OF ANNUITY AND OPTION

Alpha Code	Type of Benefit	Number	Annual Amount	Present Value
	REGULAR RETIREMENT			
SL	Straight Life	3,904	\$ 43,049,517	\$ 409,578,527
SL	Straight Life (accelerated)	0	1,720,683	3,416,259
A60	Life Annuity with 60 payments guaranteed	3,887	39,457,608	364,120,311
A60	Life Annuity with 60 payments guaranteed (accelerated)	0	1,858,459	3,919,384
A120	Life Annuity with 120 payments guaranteed	97	785,811	2,826,406
A180	Life Annuity with 180 payments guaranteed	6,695	67,868,341	677,138,055
A180	Life Annuity with 180 payments guaranteed (accelerated)	0	4,207,161	8,551,519
A180F	Life Annuity with 180 payments guaranteed (forced)	18	174,729	1,642,501
JOINT	Joint and 75% Survivor	4,413	56,891,384	654,801,335
JOINT	Joint and 75% Survivor (accelerated)	0	2,795,256	5,812,823
R25	Reduced 25% on First Death	3,946	64,931,733	646,110,806
R25	Reduced 25% on First Death (accelerated)	0	1,071,411	2,154,083
C100	100% Continued to Named Survivor	2,904	34,487,545	386,818,955
C100	100% Continued to Named Survivor (accelerated)	0	1,398,253	2,910,924
C180	100% Continued to Named Survivor with 180 payments guaranteed	7,047	83,905,116	1,103,539,093
C180	100% Continued to Named Survivor with 180 payments guaranteed (accelerated)	0	7,131,745	15,267,368
LOL	Life with Optional Length Guaranteed	12	224,304	1,128,867
LOLF	Life with Optional Length Guaranteed (Forced)	1	10,014	60,035
AC120	Annuity Certain with 120 Payments	0	228	1,778
AC180	Annuity Certain between 24 and 180 Payments	0	1,269,466	5,307,426
C50	50% Continued to One Beneficiary	77	715,027	2,986,109
C50W180	50% Continued to One Beneficiary with 180 Months guaranteed	17	120,522	521,824
C75WSS	75% Continued to One Beneficiary and Social Security Integrated	41	279,330	1,834,760
R25W120	Reduced 25% on Death of Annuitant or Named Survivor with 120 Months guaranteed	12	125,443	406,736
A60WSS	Life with 60 Months Guaranteed and Social Security Integrated	90	307,404	1,320,426
A180WSS	S Life with 180 Months Guaranteed and Social Security Integrated	47	300,395	1,366,508
SLNSD	Straight Life - Named Survivor Deceased	95	1,516,308	14,172,169
	Total Regular	33,303	\$416,603,193	\$4,317,714,987

(concluded on next page)

VARIABLE ANNUITIES BEING PAID DECEMBER 31, 2008 TABULATED BY TYPE OF ANNUITY AND OPTION

Alpha Code	Tune of Deposit	Number	Annual	Present Value		
Code	Type of Benefit	Number	Amount	value		
	DISABILITY RETIREMENT					
SL	Straight Life	176	\$ 906,941	\$ 6,576,407		
A60	Life Annuity with 60 payments guaranteed	82	601,541	5,712,790		
A180	Life Annuity with 180 payments guaranteed	229	1,424,909	13,965,660		
JOINT	Joint and 75% Survivor	123	982,101	10,166,095		
R25	Reduced 25% on First Death	64	441,980	4,562,168		
C100	100% Continued to Named Survivor	259	1,597,964	17,593,406		
C180	100% Continued to Named Survivor with 180 payments guaranteed	335	2,141,738	27,247,805		
DWSMC	Disability with Spouse or Minor/Dependent Child	5	20,377	89,424		
DWOSMO	Disability without Spouse or Minor/Dependent Child	1	4,701	41,822		
SLNSD	Straight Life - Named Survivor Deceased	1	13,247	100,938		
	Total Disability	1,275	\$ 8,135,499	\$ 86,056,515		
	DEATH-IN-SERVICE BENEFITS					
SL	Straight Life	53	\$ 440,767	\$ 4,009,669		
SL	Straight Life (accelerated)	0	15,508	12,138		
A60	Life Annuity with 60 payments guaranteed	34	307,891	2,878,057		
A60	Life Annuity with 60 payments guaranteed (accelerated)	0	14,542	41,596		
A180	Life Annuity with 180 payments guaranteed	228	1,332,991	13,276,495		
A180	Life Annuity with 180 payments guaranteed (accelerated)	0	71,308	303,684		
LOL	Life with Optional Length Guaranteed	3	21,632	109,520		
AC180	Annuity Certain between 24 and 180 Payments	0	12,398	60,488		
A60WSS	Life with 60 Months Guaranteed and Social Security Integrated	31	33,823	156,007		
	Total Death-in-Service	349	\$ 2,250,860	\$ 20,847,654		
	GRAND TOTAL	34,927	\$426,989,552	\$4,424,619,156		

VARIABLE ANNUITIES BEING PAID DECEMBER 31, 2008 TABULATED BY ATTAINED AGES

	I	Regular	Di	sability	Death	-in-Service	I	Totals
Attained		Annual		Annual		Annual		Annual
Ages	No.	Amount	No.	Amount	No.	Amount	No.	Amount
25-29	0	\$ 0	1	\$ 1,213	2	\$ 185	3	\$ 1,398
30-34	0	0	0	0	3	5,391	3	5,391
35-39	2	15,849	11	56,638	9	14,606	22	87,093
40-44	6	51,589	15	19,230	6	5,918	27	76,737
45-49	14	39,880	44	69,389	10	9,041	68	118,310
50-54	304	1,406,206	125	285,593	23	123,470	452	1,815,269
55-59	3,917	34,995,353	208	918,044	32	151,737	4,157	36,065,134
60-64	7,432	88,779,056	228	1,762,368	40	245,014	7,700	90,786,438
65-69	5,789	77,548,952	183	1,716,320	45	502,543	6,017	79,767,815
70-74	4,660	69,627,052	157	1,285,733	28	208,203	4,845	71,120,988
75-79	4,227	59,968,641	154	1,094,407	29	228,661	4,410	61,291,709
80-84	3,425	45,625,008	87	568,004	45	205,319	3,557	46,398,331
85-89	2,148	24,341,152	44	268,070	32	276,331	2,224	24,885,553
90-94	939	9,078,926	16	82,858	24	129,649	979	9,291,433
95& Up	251	2,293,006	2	2,544	7	33,264	260	2,328,814
Certain Only*	189	2,832,523	0	5,088	14	111,528	203	2,949,139
Totals	33,303	\$416,603,193	1,275	\$8,135,499	349	\$2,250,860	34,927	\$426,989,552
Averages in Yes	ars							
Age at retire		59.5		52.6		51.2		59.2
Attained age		70.3		65.6		69.5		70.2

* Certain only category consists of continuations of 5, 10 and 15-year certain and life annuities to beneficiaries of deceased annuitants.

SECTION D COMPARATIVE STATEMENTS

CORE ANNUITIES COMPARATIVE STATEMENT 1983 THROUGH 2008

Valuation		Annual	Fund	Actuarial		Chang	ge in
Date	Number	Annuities	Balance	Reserve	Ratio	Annuities	CPI*
1983	57,770	\$ 177.7	\$ 1,830.3	\$ 1,738.3	1.053	5.0 %	3.8 %
1984	60,302	214.3	2,255.5	2,120.3	1.064	6.0 %	4.0 %
1985	62,953	257.6	2,758.2	2,561.0	1.077	7.2 %	3.8 %
1986	65,425	303.5	3,256.9	3,021.2	1.078	7.6 %	1.1 %
1987	67,688	366.9	3,833.7	3,594.6	1.067	6.7 %	4.4 %
1988	70,017	420.6	4,319.6	4,150.9	1.041	4.1 %	4.4 %
1989	73,232	488.7	5,487.4	4,928.1	1.113	11.3 %	4.6 %
1990	77,666	611.3	6,443.8	6,219.1	1.036	3.6 %	6.2 %
1991	79,465	660.4	7,137.8	6,711.3	1.063	6.3 %	3.0 %
1992	81,508	732.3	7,782.4	7,456.6	1.044	4.4 %	3.0 %
1993	83,836	801.7	8,608.2	8,205.3	1.049	4.9 %	2.7 %
1994	86,214	882.2	9,286.2	9,029.6	1.028	2.8 %	2.7 %
1995	88,998	955.8	10,351.7	9,804.1	1.056	5.6 %	2.6 %
1996	92,198	1,065.8	11,699.8	10,977.1	1.066	6.6 %	3.3 %
1997	95,128	1,188.4	13,185.1	12,240.4	1.077	7.7 %	1.7 %
1998	99,112	1,349.5	14,951.8	13,943.0	1.072	7.2 %	1.6 %
1999	102,817	1,513.8	16,857.8	15,687.2	1.075	17.1 % **	2.7 %
2000	107,425	1,867.0	20,517.8	19,405.3	1.057	5.7 %	3.4 %
2001	112,142	2,048.6	21,979.7	21,283.6	1.033	3.3 %	1.6 %
2002	116,289	2,226.6	23,142.4	23,202.9	0.997	0.0 %	2.4 %
2003	121,582	2,364.7	25,071.9	24,724.0	1.014	1.4 %	1.9 %
2004	126,211	2,500.3	26,920.0	26,232.2	1.026	2.6 %	3.3 %
2005	131,674	2,691.4	28,575.3	28,359.7	1.008	0.8 %	3.4 %
2006	137,117	2,843.6	31,180.5	30,273.9	1.030	3.0 %	2.6 %
2007	142,906	3,075.3	35,050.1	32,877.5	1.066	6.6 %	4.1 %
2008	144,033	3,399.3	35,798.1	36,551.5	0.979	(2.1)%	0.1 %
Year Aver	age					5.1 %	3.0 %
Year Aver						3.7 %	2.5 %

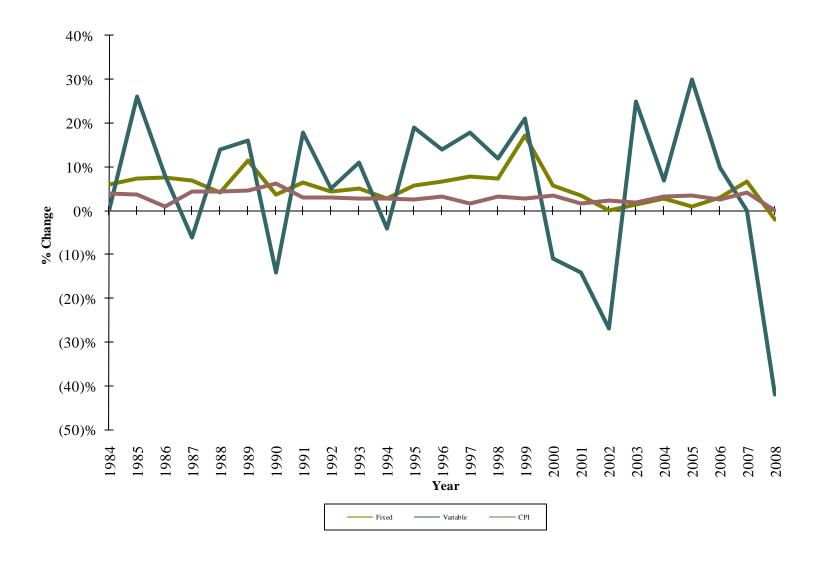
* CPI percentage increase determined by ratio of current year CPI-U67 December index over prior year December index.

** Including 10.6% Act 11 transfer.

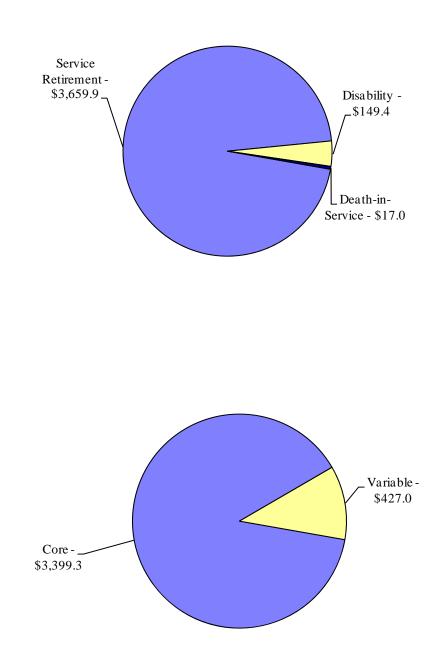
VARIABLE ANNUITIES COMPARATIVE STATEMENT 1983 THROUGH 2008

Valuation		Annual	<u>\$ Millions</u> Fund	Actuarial		Chan	ge in
Date	Number	Annuities	Balance	Reserve	Ratio	Annuities	CPI*
1983	13,598	\$ 25.9	\$ 289.4	\$ 245.0	1.181	18.0 %	3.8 %
1984	14,520	34.2	329.2	327.5	1.005	0.0 %	4.0 %
1985	15,529	38.0	463.1	366.6	1.263	26.0 %	3.8 %
1986	16,276	51.8	538.7	498.6	1.080	8.0 %	1.1 %
1987	17,084	60.4	548.8	584.2	0.939	(6.0)%	4.4 %
1988	17,779	61.4	682.6	594.0	1.149	14.0 %	4.4 %
1989	18,502	75.9	878.1	756.5	1.161	16.0 %	4.6 %
1990	19,922	101.0	868.6	1,013.4	0.857	(14.0)%	6.2 %
1991	20,538	91.5	1,101.3	929.7	1.184	18.0 %	3.0 %
1992	20,968	112.6	1,208.6	1,147.4	1.053	5.0 %	3.0 %
1993	21,623	123.7	1,407.9	1,268.6	1.110	11.0 %	2.7 %
1994	22,248	144.6	1,418.0	1,487.0	0.954	(4.0)%	2.7 %
1995	22,978	150.2	1,854.2	1,556.0	1.192	19.0 %	2.6 %
1996	23,725	189.8	2,264.9	1,976.7	1.146	14.0 %	3.3 %
1997	24,462	228.2	2,800.0	2,371.5	1.181	18.0 %	1.7 %
1998	25,424	289.5	3,400.5	3,035.5	1.120	12.0 %	1.6 %
1999	26,257	345.8	4,432.9	3,659.1	1.212	21.0 %	2.7 %
2000	27,321	445.3	4,211.4	4,749.3	0.887	(11.0)%	3.4 %
2001	28,314	424.4	3,901.8	4,547.4	0.858	(14.0)%	1.6 %
2002	28,662	374.0	2,899.3	3,999.1	0.726	(27.0)%	2.4 %
2003	29,496	273.3	3,635.9	2,892.2	1.257	25.0 %	1.9 %
2004	30,270	346.0	3,909.9	3,654.5	1.070	7.0 %	3.3 %
2005	31,499	376.5	4,092.7	3,970.7	1.031	3.0 %	3.4 %
2006	32,683	391.8	4,594.2	4,145.2	1.108	10.0 %	2.6 %
2007	33,880	432.6	4,625.0	4,563.7	1.013	0.0 %	4.1 %
2008	34,927	427.0	2,574.5	4,491.0	0.573	(42.0)%	0.1 %
-Year Aver	age					3.4 %	3.0 %
)-Year Aver	age					(5.1)%	2.5 %

* CPI percentage increase determined by ratio of current year CPI-U67 December index over prior year December index.



ANNUITIES BEING PAID BY TYPE DECEMBER 31, 2008 \$ MILLIONS



ANNUITIES BEING PAID DECEMBER 31, 2008 TABULATED BY YEAR OF RETIREMENT (\$1,000s ANNUALLY)

Year		Core A	nnuities			Variable	Annuities		Avg. Total
Ret'd	No.	Initial	Increases	Total	No.	Initial	Increases	Total	Annuity
2008	7,965	\$ 219,104	\$ 0	\$ 219,105	2,045	\$ 16,647	\$ 0	\$ 16,647	\$29,598
2007	8,469	228,651	8,173	236,824	2,190	18,594	0	18,594	30,159
2006	8,250	206,709	17,231	223,940	1,997	17,770	1,777	19,547	29,514
2005	8,244	197,446	20,216	217,662	2,052	18,930	2,520	21,450	29,004
2004	7,397	165,148	20,116	185,264	1,864	16,995	3,607	20,602	27,831
2003	7,446	163,615	23,530	187,145	1,730	13,694	7,058	20,752	27,921
2002	7,015	140,705	21,149	161,854	1,552	17,969	1,917	19,886	25,907
2001	7,070	132,601	22,612	155,213	1,662	26,035	(1,260)	24,775	25,458
2000	7,385	129,145	28,975	158,120	1,497	29,913	(4,584)	25,329	24,841
1999	6,304	94,724	39,805	134,529	1,280	20,955	512	21,467	24,746
1998	6,260	87,868	45,462	133,330	1,302	18,719	2,759	21,478	24,730
1997	5,344	72,508	45,804	118,312	1,138	13,708	4,863	18,571	25,614
1996	5,390	70,930	52,880	123,810	1,169	12,214	6,618	18,832	26,464
1995	4,927	62,454	52,808	115,262	1,082	9,246	7,718	16,964	26,837
1994	4,455	53,721	49,387	103,108	1,063	9,041	6,907	15,948	26,724
1993	4,045	45,867	45,799	91,666	980	6,913	6,611	13,524	26,005
1992	3,500	38,020	41,323	79,343	846	5,726	6,041	11,767	26,032
1991	3,277	33,328	39,944	73,272	825	4,545	6,440	10,985	25,712
1990	5,227	56,561	73,651	130,212	1,409	8,907	9,672	18,579	28,466
1989	4,038	42,867	63,223	106,090	1,001	5,444	7,730	13,174	29,535
1988	3,226	27,084	44,978	72,062	848	3,708	6,516	10,224	25,507
1987	2,859	22,337	41,145	63,482	795	3,271	5,214	8,485	25,172
1986	2,618	19,761	41,058	60,819	734	2,836	5,103	7,939	26,264
1985	2,440	18,791	43,352	62,143	689	1,916	4,838	6,754	28,237
1984	1,961	14,016	34,994	49,010	600	1,659	4,193	5,852	27,976
1983	1,744	9,394	25,205	34,599	505	1,161	3,661	4,822	22,604
1982	1,368	6,039	18,046	24,085	386	718	2,706	3,424	20,109
1981	1,250	4,733	15,225	19,958	350	578	2,173	2,751	18,167
1980	958	3,133	10,372	13,505	272	354	1,695	2,049	16,235
1979	716	2,375	8,402	10,777	194	191	1,032	1,223	16,759
1978	613	1,720	6,328	8,048	188	160	935	1,095	14,914
1977	569	1,601	5,756	7,357	182	177	969	1,146	14,942
1976	467	1,181	4,496	5,677	129	86	521	607	13,458
1975	384	909	3,497	4,406	117	84	574	658	13,190
1974	214	628	2,439	3,067	75	51	314	365	16,039
1973	154	444	1,693	2,137	59	45	246	291	15,760
1972	109	241	966	1,207	31	21	105	126	12,234
1971	57	109	441	550	24	15	84	99	11,383
1970	50	102	418	520	16	8	47	55	11,494
1969	50	85	342	427	13	6	31	37	9,284
Prior	218	262	1,115	1,377	36	18	99	117	4,818
Total	144,033	\$2,376,917	\$1,022,356	\$3,399,274	34,927	\$309,028	\$117,962	\$426,990	\$26,565

COMPARISON OF ACTUAL TO EXPECTED DEATHS AMONG RETIRED LIVES (NORMAL RETIREMENT ONLY) DURING 2008

		Male Deaths	6]	Female Deatl	15		Total Deaths	5
Age	Actual	Expected	Exposure	Actual	Expected	Exposure	Actual	Expected	Exposure
30-34						1			1
35-39						6			6
40-44						19			19
45-49			13			76			89
50-54	2	2	825	3		464	5	2	1,289
55-59	24	40	6,877	20	30	8,264	44	70	15,141
60-64	96	100	12,913	60	75	14,674	156	175	27,587
65-69	125	163	12,516	118	110	14,171	243	273	26,687
70-74	174	229	9,976	160	159	11,644	334	388	21,620
75-79	290	349	8,175	223	231	9,590	513	580	17,765
80-84	394	416	5,653	315	340	7,734	709	756	13,387
85-89	376	373	3,022	469	449	5,443	845	822	8,465
90-94	198	211	1,045	408	390	2,707	606	601	3,752
95-99	66	61	220	241	188	835	307	249	1,055
100&Up	9	6	17	39	50	139	48	56	156
Totals	1,754	1,950	61,252	2,056	2,022	75,767	3,810	3,972	137,019
Average									
Ages	80.5	79.7	69.6	84.1	83.6	71.1	82.4	81.7	70.4

SECTION E APPENDIX

The interest rate used in the valuation was 5.0% a year, compounded yearly, as provided in Section 40.02 of the Wisconsin Statutes. The mortality table used in the valuation was the Wisconsin Projected Experience Mortality Table-2005, as adopted by the Board in connection with the 2002-2005 Experience Study. In addition, retired life liabilities in the valuations contain a reserve for mortality improvement. The reserve level used in this valuation was 1.5%.

SINGLE LIFE RETIREMENT VALUES

Sample Attained	Present Value of \$1 Monthly for Life Males Females			re Life cy (years)	Probability of Death Next Year		
Ages			Males	Females	Males	Females	
40	\$205.69	\$213.54	40.9	45.3	0.109%	0.057%	
45	196.14	205.53	36.2	40.5	0.161%	0.089%	
50	184.61	195.62	31.5	35.7	0.263%	0.123%	
55	171.16	183.60	27.0	30.9	0.463%	0.256%	
60	155.69	169.88	22.7	26.4	0.675%	0.435%	
65	137.31	153.66	18.5	22.0	1.036%	0.665%	
70	116.87	134.71	14.5	17.8	1.816%	1.065%	
75	95.20	113.77	11.0	13.9	3.340%	1.950%	
80	74.62	91.62	8.1	10.4	6.031%	3.387%	
85	55.95	69.69	5.7	7.4	10.268%	6.512%	

Wisconsin Projected Experience Table - 2005 with 5% Interest

The values shown above are for non-disabled participants. Sample values for disabled participants are as follows:

Sample	ple Present Value of \$1		Futur	e Life	Probabilit	y of Death	
Attained	Monthly for Life		Expectan	cy (years)	Next Year		
Ages	Males	Females	Males	Females	Males	Females	
40	\$188.17	\$200.45	33.0	38.1	0.262%	0.131%	
45	175.49	189.75	28.5	33.4	0.386%	0.205%	
50	160.60	176.73	24.1	28.7	0.631%	0.282%	
55	144.08	144.08 161.35		24.2	1.112%	0.589%	
60	126.15	144.83	16.2	20.1	1.620%	1.000%	
65	105.47	126.05	12.5	16.1	2.485%	1.529%	
70	83.80	104.95	9.3	12.4	4.358%	2.450%	
75	62.40	83.07	6.5	9.1	8.016%	4.485%	
80	44.25	61.62	4.3	6.3	14.473%	7.789%	
85	29.47	42.01	2.8	4.1	24.643%	14.977%	

CORE ANNUITIES - 40.27(2)

"CORE ANNUITY RESERVE SURPLUS DISTRIBUTIONS. Surpluses in the core annuity reserve established under s. 40.04(6) and (7) shall be distributed by the board if the distribution will result in at least a 0.5% increase in the amount of annuities in force, on recommendation of the actuary, as follows:

(a) The distributions shall be expressed as percentage increases in the amount of the monthly annuity in force, including prior distributions of surpluses but not including any amount paid from funds other than the core annuity reserve fund, preceding the effective date of the distribution. For purposes of this subsection, annuities in force include any disability annuity suspended because the earnings limitation had been exceeded by that annuitant in that year.

(b) Prorated percentages based on the annuity effective date may be applied to annuities with effective dates during the calendar year preceding the effective date of the distribution, as provided by rule, but no other distinction may be made among the various types of annuities payable from the core annuity reserve.

(c) The distributions shall not be offset against any other benefit being received but shall be paid in full, nor shall any other benefit being received be reduced by the distributions. The annuity reserve surplus distributions authorized under this subsection may be revoked by the board in part or in total as to future payments upon recommendation of the actuary if a deficit occurs in the core annuity reserves."

VARIABLE ANNUITIES - 40.28(2)

"Whenever the balance in the variable annuity reserve, as of December 31 of any year, exceeds or is less than the then present value of all variable annuities in force, determined in accordance with the rate of interest and approved actuarial tables then in effect, by at least 2% of the present value of all variable annuities in force, the amount of each variable annuity payment shall be proportionately increased or decreased, disregarding fractional percentages, and effective on a date determined by rule, so as to reduce the variable annuities to less than one percent."

1. SWIB Published Investment Return

The earnings rate published by State of Wisconsin Investment Board on the Core/Variable Fund.

2. Adjustment to Relate Earnings to Averaged Core/Variable Annuity Balance

Item 3 below minus Item1 above. For core annuities, this is the MRA adjustment which takes into account five-year smoothing of gains and losses. For variable annuities, it converts a figure based on an average balance to a figure based on a beginning year balance.

3. Published Earnings Rate

The earnings rate published by DETF is funds' earnings credits expressed as a percentage of the beginning year balance adjusted for benefit payments and reserve transfers.

4. Adjustment to Relate Earnings to Averaged Core Annuity Balance

Item 5 below minus Item 3 above.

5. Earnings Rate Based on Average Balance

This is similar to the published earnings rate except that the rate is determined as a percentage of the average balance during the year instead of the adjusted beginning of year balance.

6. Expected Dividend (Variable Change) before Adjustments

The relative difference in fund growth based on actual versus the 5% assumed earnings rates.

7. Adjustment to Relate Average Asset to Ending Liability

The final dividend/variable change is calculated based on the end of year assets divided by the end of year liabilities. Since the calculations in Items 5 and 6 are based on average (approximately mid-year) balances, this adjustment is needed so that the final rate will be based on the end of year liabilities.

8. Carryover from Last Year Due to Timing of Distribution and Accounting Adjustments (and Truncation for Variable Annuity)

The dividend or variable rate changes are made effective April 1 of each year. This adjustment takes into account the fact that the prior year dividend/variable increase was in effect for less than a full year as well as any accounting adjustments made to the asset value at the beginning of the year. This adjustment also carries over any truncated or rounded amounts from the prior year.

9. Adjustments to Contingency Reserve and Data Reserve

Currently there is a reserve for incomplete data for the dividend calculation of 0.2% and a mortality improvement reserve for both the dividend and variable calculations that starts at 0.5% and grades to 1.5% over a 3-year experience period. The adjustment is equal to the amount held in reserve for the current year less the amount held in reserve for the prior year expressed as a percent of the end of year liability. This reserve is accumulated to reflect the fact that over time, mortality rates tend to improve. By increasing reserves gradually each year, instead of all at once every three years, the effect on dividends and variable increases will also be more gradual.

10. Experience Study

A study is conducted for WRS every three years to analyze the assumptions that are made in the valuation versus the experience that actually occurred. If the results of the study show material changes in experience, WRS generally adopts a new set of assumptions. When assumptions are changed, this item displays the effect of the change on the dividend/variable rate calculation.

11. Experience and Other Effects

After making all other known adjustments, this is the remainder of all other experience. Changes here are primarily attributable to mortality experience and, generally to a lesser extent, on any data adjustments.

12. Statutory Adjustment to Round/Truncate

By statute, the dividend rate is calculated to the nearest one-tenth of a percent. For the variable annuity change, the rate is truncated to a whole percent. This is the adjustment made from the calculated dividend/variable annuity rate change without rounding/truncation to the statutory rate.

13. Computed Dividend Rate/Variable Annuity Change.

This is the end of year asset value divided by the end of year liability. It is reconciled to the published earnings rate (Item 3) by making the adjustments in Items 6 through 12.



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March 3, 2009

Mr. David Stella Wisconsin Department of Employee Trust Funds 801 W. Badger Road Madison, Wisconsin 53713-2526

Re: Retired Life Actuarial Valuation

Dear Dave:

Enclosed are 40 copies of the report of the December 31, 2008 Retired Lives Actuarial Valuation with the remaining 35 copies to follow under separate cover tomorrow.

Sincerely,

Ward Bri

Mark Buis

MB:lr Enclosures