

**WISCONSIN RETIREMENT SYSTEM**  
**25<sup>TH</sup> ANNUAL ACTUARIAL VALUATION OF RETIRED LIVES**  
**DECEMBER 31, 2007**

# TABLE OF CONTENTS

## DECEMBER 31, 2007

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<u>Page</u>	
1	<b>Introduction</b>
2-3	<b>Section A - Operation of the System</b>
	<b>Section B – Core Annuities</b>
4	Development of Assets and Liabilities
5	Reserve Transfer Recommendation
6	Discussion of Dividend
7	Transfers to Annuity Reserve
8-9	Core Annuities Being Paid - Type and Option
10-11	Core Annuities Being Paid - Attained Ages
12	Projection of Future Core Annuity Payments
	<b>Section C - Variable Annuities</b>
13	Development of Assets and Liabilities
14	Reserve Transfer Recommendation
15	Discussion of Variable Annuity Change
16	Transfers to Annuity Reserve
17-18	Variable Annuities Being Paid - Type and Option
19	Variable Annuities Being Paid - Attained Ages
	<b>Section D - Comparative Statements</b>
20-22	Annuities by Valuation Year
23	Annuities by Type
24	Annuities by Year of Retirement
25	Actual vs. Expected Deaths
	<b>Section E - Appendix</b>
26	Single Life Retirement Values
27	Statutory Provisions
28-29	Narrative Regarding the Development of Dividend and Variable Annuity Changes

February 27, 2008

Employee Trust Funds Board  
Madison, Wisconsin

Ladies and Gentlemen:

The results of the **25th 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, 2007**. Actuarial assumptions used in the valuation are summarized in the Appendix.

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

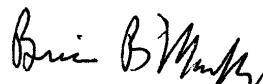
	<b>Core</b>	<b>Variable</b>
Number of Annuitants	142,906	33,880
Annual Amount	\$ 3,075.3	\$ 432.6
Fund Balance	35,050.1	4,625.0
Actuarial Reserve	32,877.5	4,563.7
<b>Ratio</b>	<b>1.066</b>	<b>1.013</b>

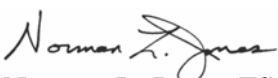
Based upon these results, core annuities were increased by 6.6% effective April, 2008 and variable annuities were unchanged.


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 (M.A.A.A.) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion 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

  
Norman L. Jones, FSA

  
Mark Buis, FSA

BBM/NLJ/MB:lr

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**SECTION A**  
**OPERATION OF THE SYSTEM**

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## OPERATION OF THE RETIREMENT SYSTEM

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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.

## OPERATION OF THE RETIREMENT SYSTEM

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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.

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**SECTION B**  
**CORE ANNUITIES**

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**CORE ANNUITY DIVISION**  
**DEVELOPMENT OF ASSETS AND LIABILITIES**

	\$ Millions		Ratio
	Assets	Liabilities	
<b>Ending Balance December 31, 2006</b>	\$31,180.6	\$30,273.9	1.030
Closing Adjustments	(1.3)	0.0	
Variable Terminations	80.4	80.4	
2007 Dividend: 3%	0.0	850.5	
<b>Beginning Balance January 1, 2007</b>	31,259.7	31,204.8	1.002
<b>Increases</b>			
Reserve Transfers	2,916.8	2,916.8	
Regular Interest	1,557.6	1,557.6	
Additional Earnings	2,341.0	0.0	
Addition to Contingency/Data Reserve	0.0	179.8	
Experience Study	0.0	0.0	
Other	0.0	43.5	
<b>Total Increases</b>	6,815.4	4,697.7	
<b>Decreases</b>			
Annuities & Lump Sums	3,022.0	3,022.0	
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	
<b>Total Decreases</b>	3,025.0	3,025.0	
<b>Ending Balance December 31, 2007</b>	<b>\$35,050.1</b>	<b>\$32,877.5</b>	<b>1.066</b>

The ending liability balance includes data and mortality reserves of \$390.5 million.



**RESERVE TRANSFER RECOMMENDATION**  
**DECEMBER 31, 2007**

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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 \$2,782,981,191. Adjustments to prior transfers, relating to estimated annuities for which final computations have now been made, totaled \$133,864,783. Reserve transfers are distributed as follows:

Group	Regular Transfer	Adjustment to Prior Transfer	Total Transfer
General	\$2,525,457,392	\$115,061,094	\$2,640,518,486
Protective with Social Security	169,942,797	10,713,618	180,656,415
Protective without Social Security	51,523,442	6,865,085	58,388,527
Executive & Elected	36,057,560	1,224,986	37,282,546
<b>Totals</b>	<b>\$2,782,981,191</b>	<b>\$133,864,783</b>	<b>\$2,916,845,974</b>

Accordingly, we recommend that \$2,916,845,974 be transferred to the Core Annuity Reserve. The results in this report assume that this transfer has been made.

## DISCUSSION OF DIVIDEND DECEMBER 31, 2007

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The Core Annuity Fund Balance, \$35,050.1 million, exceeded the actuarial present value of core annuities and reserves, \$32,877.5 million, by \$2,172.6 million or 6.6% of the actuarial present value (APV) of core annuity payments. The primary sources of the 6.6% are:

	<u>% of APV</u>
1. Published earnings rate	13.10%
2. Adjustment to relate earnings to average fixed annuity balance	<u>(0.61)%</u>
3. Earnings rate based on average balance	12.49%
4. Expected dividend before adjustments: 1.1249/1.05-1	7.13%
5. Adjustment to relate average asset to ending liability	(0.01)%
6. Carryover from last year due to timing of dividend accounting adjustments and rounding	0.17%
7. Adjustments to contingency reserve and data reserve	(0.55)%
8. Experience Study	0.00%
9. Experience and other effects	(0.13)%
10. Statutory adjustment to round to nearest one-tenth percent	<u>(0.01)%</u>
<b>11. Computed dividend rate: (4) + (5) + (6) + (7) + (8) + (9) + (10)</b>	<b>6.6%</b>

In accordance with the Administrative Code, ETF 20.25 and Section 40.27(2) Wisconsin Statutes (see page 27), the 6.6% was allocated to a dividend effective April, 2008.

**TRANSFERS TO ANNUITY RESERVE  
TO FINANCE CORE ANNUITIES APPROVED IN 2007  
TABULATED BY TYPE OF ANNUITY AND OPTION**

<b>Code</b>	<b>Type of Benefit</b>	<b>Number</b>	<b>Annual Amount</b>	<b>Transfer</b>
<b>REGULAR RETIREMENT</b>				
1	Straight Life	1,045	\$ 20,221,105	\$ 275,096,904
2	5-Year Certain & Life	899	17,688,488	241,406,723
4	15-Year Certain & Life	1,694	29,942,915	429,800,527
7	Joint and 75%	851	20,752,355	315,067,284
9	Joint and 75% on First Death	412	10,671,168	155,352,531
11	Joint and 100%	751	15,051,630	232,091,294
12	Joint and 100% & 15-Year Certain	2,514	54,956,994	867,152,894
13	Temporary to Age 62	0	50,835,027	199,714,713
21	Certain Only	0	369,974	2,398,629
40	Mandatory & 15-Year Certain	20	126,404	1,490,806
41	Mandatory & Certain for Life Expectancy	0	0	0
42	Voluntary & Certain for Life Expectancy	0	0	0
Total Regular		8,186	220,616,060	2,719,572,305
Average Age at Retirement		59.7 Years		
<b>DISABILITY RETIREMENT</b>				
1	Straight Life	0	\$ 0	\$ 0
2	5-Year Certain & Life	0	0	0
4	15-Year Certain & Life	0	0	0
7	Joint and 75%	0	0	0
9	Joint and 75% on First Death	0	0	0
11	Joint and 100%	0	0	0
12	Joint and 100% & 15-Year Certain	53	1,216,921	19,791,977
17	5-Years Certain & Life or Survivor	19	405,438	5,337,174
21	Certain Only	0	0	0
24	Straight Life	16	414,045	5,636,277
25	15-Year Certain & Life	37	844,478	11,998,767
26	Joint & 75 %	9	133,213	1,972,451
27	Joint & 100%	20	456,694	7,077,453
28	Joint & 75% on First Death	3	95,178	1,271,784
Total Disability		157	3,565,967	53,085,883
Average Age at Retirement		53.9 Years		
<b>DEATH-IN-SERVICE BENEFITS</b>				
1	Straight Life	6	\$ 50,644	\$ 671,522
2	5-Year Certain & Life	2	47,185	631,424
4	15-Year Certain & Life	39	568,853	8,296,629
13	Temporary to Age 62	0	121,118	723,428
21	Certain Only	0	0	0
42	Voluntary & Certain for Life Expectancy	0	0	0
Total Death-in-Service		47	787,800	10,323,003
Average Age at Retirement		55.5 Years		
<b>GRAND TOTAL</b>		<b>8,390</b>	<b>\$224,969,827</b>	<b>\$2,782,981,191</b>

*In cases where an individual is receiving more than one annuity, the person only appears once in the above number counts, but the corresponding annual amounts can show up in several different places, depending on the option elected for the different annuities. This can result in, for example, a number count of zero (or a very low number count) combined with a significant annual dollar amount in the above table.*

**CORE ANNUITIES BEING PAID DECEMBER 31, 2007**  
**TABULATED BY TYPE OF ANNUITY AND OPTION**

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Code	Type of Benefit	Number	Annual Amount	Present Value
<b>REGULAR RETIREMENT</b>				
1	Straight Life	17,943	\$ 317,208,845	\$ 3,233,423,569
2	5-Year Certain & Life	18,499	321,307,800	3,103,636,587
3	10-Year Certain & Life	448	6,856,405	26,594,862
4	15-Year Certain & Life	30,263	527,422,725	5,344,458,799
5	Joint and 50%	153	2,725,932	12,065,128
6	Joint and 50% and 15-Year Certain	23	190,376	839,834
7	Joint and 75%	16,664	384,861,977	4,606,384,367
8	Joint and 75% Integrated	125	2,518,553	17,214,649
9	Joint and 75% on First Death	12,637	341,322,448	3,588,066,804
10	Joint and 75% & 10-Year Certain	21	319,209	1,077,663
11	Joint and 100%	11,463	224,060,142	2,709,235,878
12	Joint and 100% & 15-Year Certain	25,654	541,689,677	7,465,270,509
13	Temporary to Age 62	0	235,485,862	603,534,636
14	5-Year Certain & Life Integrated	322	2,290,761	10,487,423
15	15-Year Certain & Life Integrated	221	4,812,108	23,434,525
20	Cash Refund Annuity	0	0	0
21	Certain Only	8	3,756,786	16,613,097
22	Joint and \$600	0	0	0
25	15-Year Certain & Life & Survivor	0	0	0
40	Mandatory and Certain for 15 Years	137	923,723	9,420,865
41	Mandatory & Certain for Life Expectancy	12	177,470	1,060,868
42	Voluntary & Certain for Life Expectancy	117	1,714,999	10,388,096
99	Joint and 66-2/3% Original Amount	316	2,376,942	12,510,939
99	Joint and 66-2/3% Dividends	0	7,365,812	37,792,274
Total Regular		135,026	\$2,929,388,552	\$30,833,511,372

*In cases where an individual is receiving more than one annuity, the person only appears once in the above number counts, but the corresponding annual amounts can show up in several different places, depending on the option elected for the different annuities. This can result in, for example, a number count of zero (or a very low number count) combined with a significant annual dollar amount in the above table.*

**CORE ANNUITIES BEING PAID DECEMBER 31, 2007**  
**TABULATED BY TYPE OF ANNUITY AND OPTION**

Code	Type of Benefit	Number	Annual Amount	Present Value
<b>DISABILITY RETIREMENT</b>				
1	Straight Life	7	\$ 77,113	\$ 606,378
2	5-Year Certain & Life	0	6,563	57,382
3	10-Year Certain & Life	0	0	0
4	15-Year Certain & Life	0	9,407	88,114
7	Joint and 75%	0	11,451	140,177
9	Joint and 100%	0	0	0
11	Joint and 100%	0	10,824	64,102
12	Joint and 100% & 15-Year Certain	1,637	32,146,227	447,452,308
17	5-Year Certain & Life or Survivor	696	15,117,063	132,602,153
18	Cash Refund Annuity	90	1,534,845	7,540,934
21	Certain Only	0	10,676	28,008
23	Joint and \$600	3	2,088	7,710
24	Straight Life	686	15,895,715	165,507,070
25	15-Year Certain & Life or Survivor	1,285	27,565,974	295,654,504
26	Straight Life & Joint & 75%	536	10,922,838	126,141,119
27	Straight Life & Joint & 100%	1,319	23,705,328	289,758,126
28	Joint & 75% on First Death	258	5,176,189	46,743,271
99	Joint & 66-2/3% Original Amount	41	154,816	881,948
99	Joint & 66-2/3% Dividends	0	564,756	3,209,330
Total Disability		6,558	132,911,873	1,516,482,634
<b>DEATH-IN-SERVICE BENEFITS</b>				
1	Straight Life	270	2,408,277	24,821,909
2	5-Year Certain & Life	131	1,665,706	17,182,163
4	15-Year Certain & Life	762	7,299,881	87,495,470
7	Joint and 75%	0	0	0
12	Joint and 100% & 15-Year Certain	3	11,416	190,800
13	Temporary to Age 62	0	1,006,689	4,313,537
14	5-Year Certain & Life Integrated	125	137,536	666,421
15	15-Year Certain & Life Integrated	2	49,941	283,793
17	5-Year Certain & Life or Survivor	0	0	0
21	Certain Only	6	83,090	349,266
22	Joint and \$600	0	0	0
23	Joint and \$600	0	0	0
42	Voluntary & Certain for Life Expectancy	20	221,674	1,095,877
99	Joint & 66-2/3% Original Amount	3	25,059	179,288
99	Joint & 66-2/3% Dividends	0	67,837	477,122
Total Death-in-Service		1,322	\$ 12,977,106	\$ 137,055,646
<b>GRAND TOTAL</b>		<b>142,906</b>	<b>\$3,075,277,531</b>	<b>\$32,487,049,652</b>

*In cases where an individual is receiving more than one annuity, the person only appears once in the above number counts, but the corresponding annual amounts can show up in several different places, depending on the option elected for the different annuities. This can result in, for example, a number count of zero (or a very low number count) combined with a significant annual dollar amount in the above table.*

**CORE ANNUITIES BEING PAID DECEMBER 31, 2007**  
**TABULATED BY ATTAINED AGES**

Attained Ages	Regular		Disability		Death-in-Service		Totals	
	No.	Annual Amount	No.	Annual Amount	No.	Annual Amount	No.	Annual Amount
Under 20	0	\$ 0	4	\$ 17,098	8	\$ 45,740	12	\$ 62,838
20-24	0	0	6	38,101	8	66,021	14	104,122
25-29	0	0	9	69,109	17	110,967	26	180,076
30-34	1	5,505	14	134,946	10	57,415	25	197,866
35-39	6	41,132	34	445,253	16	91,268	56	577,653
40-44	17	189,720	111	1,938,668	22	160,542	150	2,288,930
45-49	95	972,829	247	4,694,940	43	397,446	385	6,065,215
50-54	1,084	28,174,986	683	14,861,445	66	740,795	1,833	43,777,226
55-59	15,643	447,261,762	1,121	25,080,630	122	1,819,833	16,886	474,162,225
60-64	26,865	644,340,415	1,185	25,939,825	186	2,408,426	28,236	672,688,666
65-69	25,739	518,893,560	995	20,287,321	152	1,737,385	26,886	540,918,266
70-74	21,331	434,493,398	836	17,404,071	144	1,359,359	22,311	453,256,828
75-79	17,708	372,212,521	664	11,913,896	141	1,365,615	18,513	385,492,032
80-84	13,049	263,698,230	404	6,742,440	150	1,218,539	13,603	271,659,209
85-89	8,128	144,084,581	176	2,585,192	109	650,805	8,413	147,320,578
90-94	3,337	47,143,337	57	673,781	70	281,022	3,464	48,098,140
95& Up	994	10,856,688	12	74,430	28	172,611	1,034	11,103,729
Certain Only*	1,029	17,019,888	0	10,727	30	293,317	1,059	17,323,932
<b>Totals</b>	<b>135,026</b>	<b>\$2,929,388,552</b>	<b>6,558</b>	<b>\$132,911,873</b>	<b>1,322</b>	<b>\$12,977,106</b>	<b>142,906</b>	<b>\$3,075,277,531</b>

Averages in Years

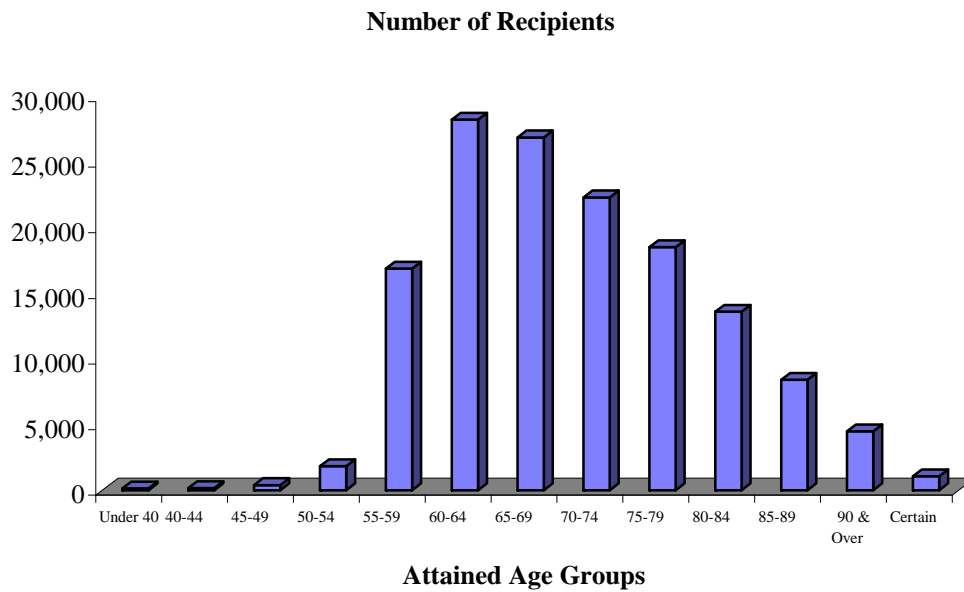
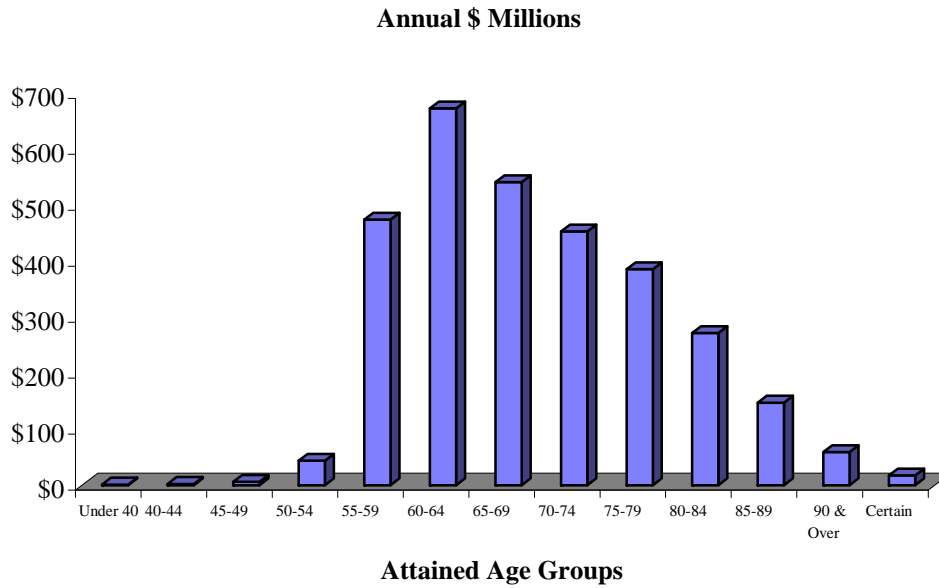
Age at retirement	60.0	52.1	50.6	59.6
Attained age	70.5	64.8	69.4	70.3
Service at retirement	23.2	18.3	21.0	23.0

\* *Certain Only* category consists of continuations of 5, 10 and 15-year certain and life annuities to beneficiaries of deceased annuitants and all option 21 annuities.

# CORE ANNUITIES BEING PAID BY ATTAINED AGE\*

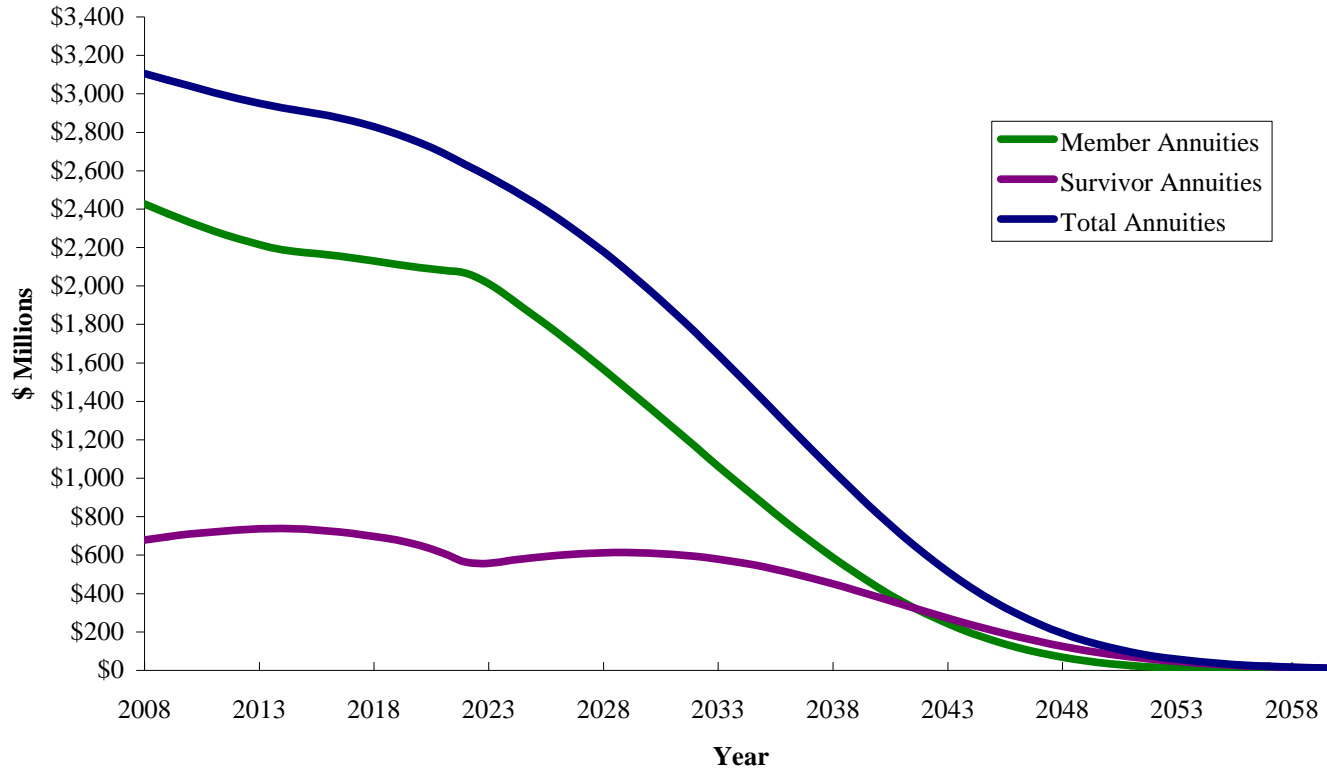
## DECEMBER 31, 2007

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\* 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**



Total Future Payments	\$79.3 billion
From Present Assets	35.1
From Investment Return	44.2



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**SECTION C**  
**VARIABLE ANNUITIES**

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**VARIABLE ANNUITY DIVISION**  
**DEVELOPMENT OF ASSETS AND LIABILITIES**

	\$ Millions		Ratio
	Assets	Liabilities	
<b>Ending Balance December 31, 2006</b>	\$4,594.2	\$4,145.2	1.108
Closing Adjustments	0.6	0.0	
Variable Terminations	(80.4)	(80.4)	
2007 Adjustment: 10%	0.0	407.0	
Beginning Balance January 1, 2007	4,514.4	4,471.8	1.010
<b>Increases</b>			
Reserve Transfers	273.6	273.6	
Regular Interest	219.9	219.9	
Additional Earnings	41.9	0.0	
Addition to Contingency/Data Reserve	0.0	24.6	
Experience Study	0.0	0.0	
Other	0.0	0.0	
<b>Total Increases</b>	535.4	518.1	
<b>Decreases</b>			
Annuities & Lump Sums	423.8	423.8	
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	1.4	
<b>Total Decreases</b>	424.8	426.2	
<b>Ending Balance December 31, 2007</b>	<b>\$4,625.0</b>	<b>\$4,563.7</b>	<b>1.013</b>

The ending liability balance includes mortality reserves of \$45.2 million.

**RESERVE TRANSFER RECOMMENDATION**  
**DECEMBER 31, 2007**

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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 \$268,925,513. Adjustments to prior transfers, relating to estimated annuities for which final computations have now been made, totaled \$4,720,534. Reserve transfers were distributed as follows:

<b>Group</b>	<b>Regular Transfer</b>	<b>Adjustment to Prior Transfer</b>	<b>Total Transfer</b>
General	\$254,283,573	\$3,880,712	\$258,164,285
Protective with Social Security	8,639,391	577,059	9,216,450
Protective without Social Security	2,594,109	48,566	2,642,675
Executive & Elected	3,408,440	214,197	3,622,637
<b>Totals</b>	<b>\$268,925,513</b>	<b>\$4,720,534</b>	<b>\$273,646,047</b>

Accordingly, we recommend that \$273,646,047 be transferred to the Variable Annuity Reserve. The results in this report assume that this transfer has been made.

## DISCUSSION OF VARIABLE ANNUITY CHANGE DECEMBER 31, 2007

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Variable Annuity Reserves, \$4,625.0 million, exceeded the actuarial present value of variable annuities, \$4,563.7 million, by \$61.3 million as of December 31, 2007 or 1.3% 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 unchanged this year. The primary sources of the 0% are as follows:

	<b>% of APV</b>
1. Published earnings rate based on beginning of year balances	6.0%
2. Adjustment to relate earnings to average variable annuity fund balance	(0.1)%
3. Earnings rate based on average balance	5.9%
4. Expected change before adjustments: 1.059/1.05-1	0.9%
5. Adjustment to relate average asset to ending liability	0.0%
6. Carryover from last year due to timing of distribution, accounting adjustments and truncation	0.9%
7. Adjustments to contingency reserve	(0.5)%
8. Experience Study	0.0%
9. Experience and other effects	0.0%
10. Statutory adjustment (truncate to whole percent or adjust to zero if reserve is less than 2%)	(1.3)%
<b>11. Variable annuity change: (4)+(5)+(6)+(7)+(8)+(9)+(10)</b>	<b>0.0%</b>

**TRANSFERS TO ANNUITY RESERVE  
TO FINANCE VARIABLE ANNUITIES APPROVED IN 2007  
TABULATED BY TYPE OF ANNUITY AND OPTION**

Code	Type of Benefit	Number	Annual Amount	Transfer
<b>REGULAR RETIREMENT</b>				
1	Straight Life	235	\$ 1,773,528	\$ 24,093,613
2	5-Year Certain & Life	230	1,799,075	23,949,951
4	15-Year Certain & Life	445	2,820,591	40,671,333
7	Joint and 75%	260	2,224,775	33,291,521
9	Joint and 75% on First Death	115	934,944	13,586,627
11	Joint and 100%	197	1,658,461	24,686,524
12	Joint and 100% & 15-Year Certain	746	5,693,712	88,839,191
13	Temporary to Age 62	0	3,879,607	14,529,610
21	Certain Only	0	170,951	980,473
40	Mandatory & Certain for Life Expectancy	3	11,700	144,845
41	Mandatory & Certain for Life Expectancy	0	0	0
42	Voluntary & Certain for Life Expectancy	0	0	0
Total Regular		2,231	20,967,344	264,773,688
Average Age at Retirement		59.1 Years		
<b>DISABILITY RETIREMENT</b>				
11	Joint and 100%	0	0	0
12	Joint and 100% & 15-Year Certain	14	38,662	580,330
17	5-Year Certain & Life or Survivor	4	27,277	347,081
21	Certain Only	0	0	0
24	Straight Life	1	1,172	16,635
25	15-Year Certain & Life	15	70,634	965,688
26	Joint & 75 %	3	50,042	736,903
27	Joint & 100%	4	4,278	70,952
28	Joint & 75% on First Death	0	0	0
Total Disability		41	192,065	2,717,589
Average Age at Retirement		53.6 Years		
<b>DEATH-IN-SERVICE BENEFITS</b>				
1	Straight Life	0	0	0
2	5-Year Certain & Life	0	0	0
4	15-Year Certain & Life	8	98,893	1,373,242
13	Temporary to Age 62	0	9,742	60,994
21	Certain Only	0	0	0
42	Voluntary & Certain for Life Expectancy	0	0	0
Total Death-in-Service		8	108,635	1,434,236
Average Age at Retirement		58.1 Years		
<b>GRAND TOTAL</b>		<b>2,280</b>	<b>\$21,268,044</b>	<b>\$268,925,513</b>

*In cases where an individual is receiving more than one annuity, the person only appears once in the above number counts, but the corresponding annual amounts can show up in several different places, depending on the option elected for the different annuities. This can result in, for example, a number count of zero (or a very low number count) combined with a significant annual dollar amount in the above table.*

**VARIABLE ANNUITIES BEING PAID DECEMBER 31, 2007**  
**TABULATED BY TYPE OF ANNUITY AND OPTION**

---

Code	Type of Benefit	Number	Annual Amount	Present Value
<b>REGULAR RETIREMENT</b>				
1	Straight Life	3,793	\$ 44,118,871	\$ 423,232,086
2	5-Year Certain & Life	3,820	39,746,524	370,027,893
3	10-Year Certain & Life	118	993,945	3,707,654
4	15-Year Certain & Life	6,540	68,613,218	688,269,700
5	Joint and 50%	86	819,756	3,608,223
6	Joint and 50% and 15-Year Certain	19	135,044	637,589
7	Joint and 75%	4,312	57,194,716	670,583,721
8	Joint and 75% Integrated	40	282,791	1,953,579
9	Joint and 75% on First Death	3,958	66,559,683	679,016,366
10	Joint and 75% & 10-Year Certain	13	127,848	443,011
11	Joint and 100%	2,808	34,124,689	389,439,160
12	Joint and 100% & 15-Year Certain	6,585	83,141,544	1,112,640,486
13	Temporary to Age 62	0	23,919,051	53,697,046
14	5-Year Certain & Life Integrated	99	346,053	1,539,790
15	15-Year Certain & Life Integrated	54	341,499	1,624,675
21	Certain Only	6	1,228,465	5,670,322
25	15-Year Certain & Life or Survivor	0	0	0
40	Mandatory & Certain for 15 years	18	176,687	1,730,915
41	Mandatory & Certain for Life Expectancy	3	21,144	128,678
42	Voluntary & Certain for Life Expectancy	13	231,765	1,298,112
Total Regular		32,285	\$422,123,293	\$4,409,249,006

*In cases where an individual is receiving more than one annuity, the person only appears once in the above number counts, but the corresponding annual amounts can show up in several different places, depending on the option elected for the different annuities. This can result in, for example, a number count of zero (or a very low number count) combined with a significant annual dollar amount in the above table.*

**VARIABLE ANNUITIES BEING PAID DECEMBER 31, 2007**  
**TABULATED BY TYPE OF ANNUITY AND OPTION**

---

Code	Type of Benefit	Number	Annual Amount	Present Value
<b>DISABILITY RETIREMENT</b>				
1	Straight Life	2	\$ 5,828	\$ 27,193
2	5-Year Certain & Life	0	0	0
4	15-Year Certain & Life	0	0	0
7	Joint and 75%	0	124	1,578
11	Joint and 100%	0	12,315	72,930
12	Joint and 100% & 15-Year Certain	315	2,175,940	28,183,663
17	5-Year Certain & Life or Survivor	134	821,371	6,614,488
18	Cash Refund Annuity	22	77,821	240,651
21	Certain Only	0	0	0
24	Straight Life	115	706,135	6,228,250
25	15-Year Certain & Life or Survivor	230	1,479,214	14,933,347
26	Straight Life & Joint & 75%	119	995,437	10,623,608
27	Straight Life & Joint & 100%	245	1,596,703	18,081,899
28	Joint & 75% on First Death	65	485,752	4,077,722
Total Disability		1,247	\$ 8,356,640	\$ 89,085,329
<b>DEATH-IN-SERVICE BENEFITS</b>				
1	Straight Life	54	\$ 383,486	\$ 3,434,005
2	5-Year Certain & Life	34	296,566	2,763,481
4	15-Year Certain & Life	221	1,307,259	13,256,872
13	Temporary to Age 62	0	90,695	377,786
14	5-Year Certain & Life Integrated	32	33,708	164,771
21	Certain Only	3	12,398	69,668
42	Voluntary & Certain for Life Expectancy	4	31,488	151,080
Total Death-in-Service		348	\$ 2,155,600	\$ 20,217,663
<b>GRAND TOTAL</b>		<b>33,880</b>	<b>\$432,635,533</b>	<b>\$4,518,551,998</b>

*In cases where an individual is receiving more than one annuity, the person only appears once in the above number counts, but the corresponding annual amounts can show up in several different places, depending on the option elected for the different annuities. This can result in, for example, a number count of zero (or a very low number count) combined with a significant annual dollar amount in the above table.*

**VARIABLE ANNUITIES BEING PAID DECEMBER 31, 2007**  
**TABULATED BY ATTAINED AGES**

Attained Ages	Regular		Disability		Death-in-Service		Totals	
	No.	Annual Amount	No.	Annual Amount	No.	Annual Amount	No.	Annual Amount
25-29	0	\$ 0	3	\$ 5,735	2	\$ 3,111	5	\$ 8,846
30-34	0	0	0	0	4	5,343	4	5,343
35-39	2	15,849	13	67,685	5	10,886	20	94,420
40-44	8	58,865	19	18,062	6	5,352	33	82,279
45-49	16	60,919	48	78,428	10	7,562	74	146,909
50-54	276	1,823,667	132	349,411	23	109,432	431	2,282,510
55-59	4,201	44,530,407	184	1,024,793	28	151,547	4,413	45,706,747
60-64	6,914	91,922,048	228	1,971,952	46	297,303	7,188	94,191,303
65-69	5,352	75,903,735	182	1,700,775	38	385,842	5,572	77,990,352
70-74	4,585	68,566,356	158	1,286,160	27	193,759	4,770	70,046,275
75-79	4,224	59,961,834	135	976,687	32	233,664	4,391	61,172,185
80-84	3,291	42,705,392	85	530,621	49	265,724	3,425	43,501,737
85-89	2,109	23,188,682	47	290,559	34	241,810	2,190	23,721,051
90-94	861	8,306,064	11	49,486	22	116,972	894	8,472,522
95& Up	240	2,070,502	1	1,195	6	31,200	247	2,102,897
Certain Only*	206	3,008,973	1	5,091	16	96,093	223	3,110,157
<b>Totals</b>	<b>32,285</b>	<b>\$422,123,293</b>	<b>1,247</b>	<b>\$8,356,640</b>	<b>348</b>	<b>\$2,155,600</b>	<b>33,880</b>	<b>\$432,635,533</b>

Averages in Years

Age at retirement	59.5	52.7	51.5	59.3
Attained age	70.3	65.5	70.1	70.1
Service at retirement	25.3	20.9	22.7	25.2

\* Certain only category consists of continuations of 5, 10 and 15-year certain and life annuities to beneficiaries of deceased annuitants and all option 21 annuities.



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**SECTION D**  
**COMPARATIVE STATEMENTS**

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**CORE ANNUITIES  
COMPARATIVE STATEMENT  
1983 THROUGH 2006**

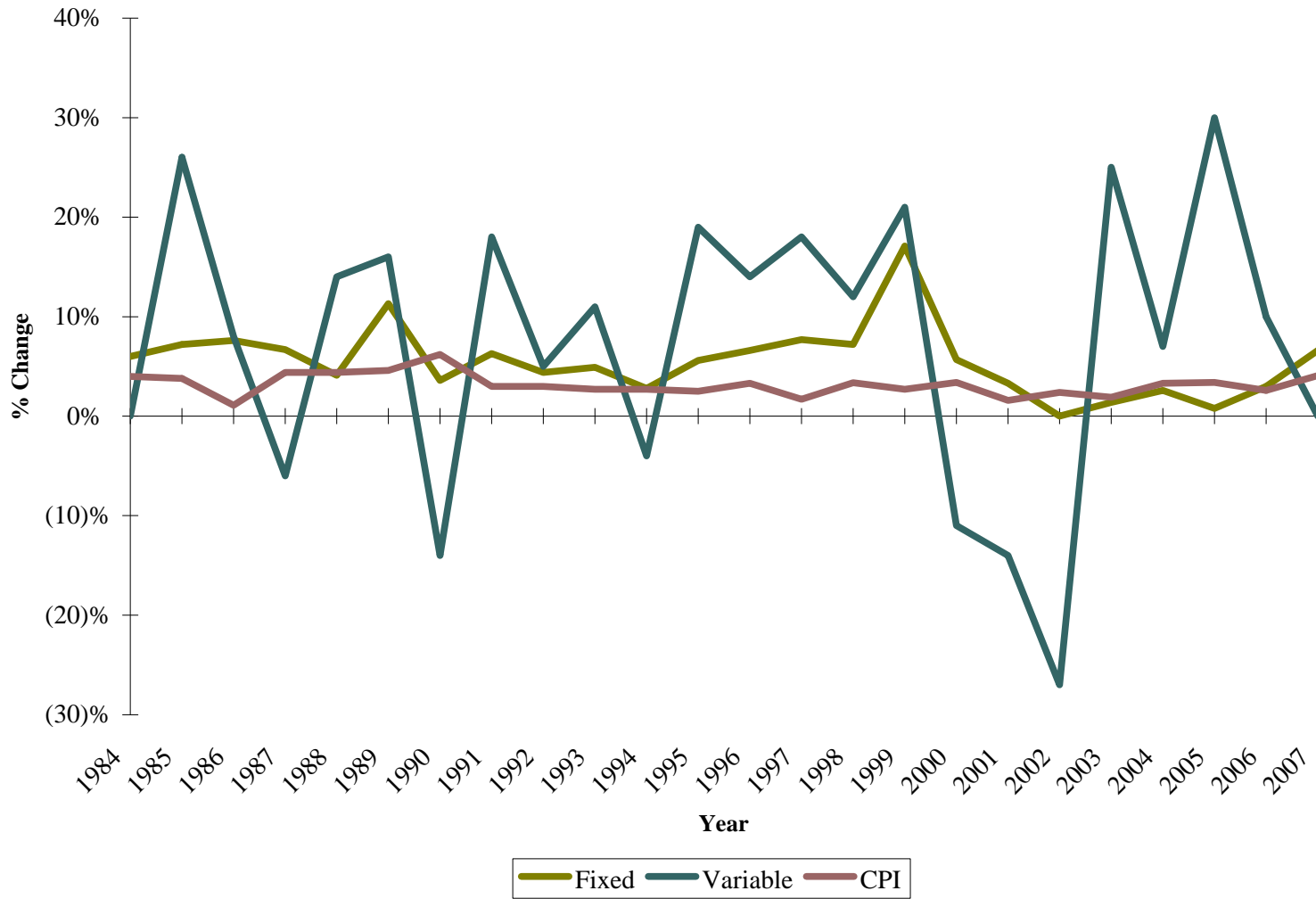
Valuation Date	Number	\$ Millions			Ratio	Change in	
		Annual Annuities	Fund Balance	Actuarial Reserve		Annuities	CPI
1983	57,770	\$ 177.7	\$ 1,830.3	\$ 1,738.3	1.053	5.0 %	3.8 %
1984	60,302	214.3	2,255.5	2,120.3	1.064	6.0 %	4.0 %
1985	62,953	257.6	2,758.2	2,561.0	1.077	7.2 %	3.8 %
1986	65,425	303.5	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 %
<b>25-Year Average</b>						<b>5.4 %</b>	<b>3.1 %</b>
<b>10-Year Average</b>						<b>4.7 %</b>	<b>2.7 %</b>

\* Including 10.6% Act 11 transfer.

**VARIABLE ANNUITIES  
COMPARATIVE STATEMENT  
1983 THROUGH 2006**

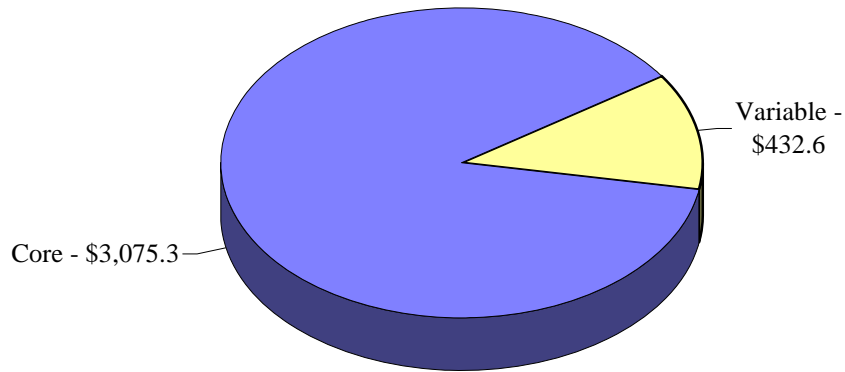
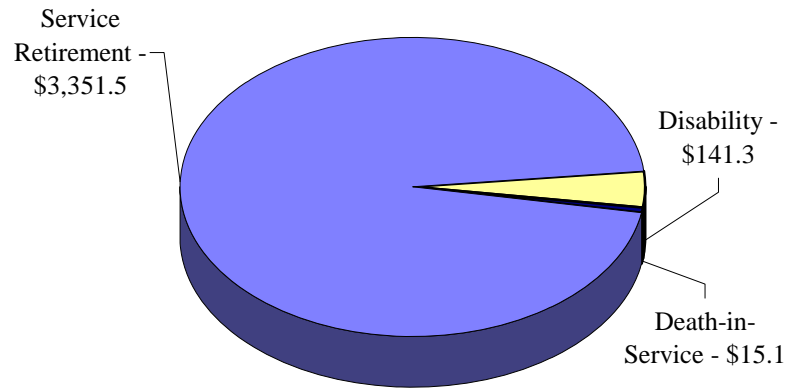
Valuation Date	Number	\$ Millions			Ratio	Change in	
		Annual Annuities	Fund Balance	Actuarial Reserve		Annuities	CPI
1983	13,598	\$ 25.9	\$ 289.4	\$ 245.0	1.181	18.0 %	3.8 %
1984	14,520	34.2	329.2	327.5	1.005	0.0 %	4.0 %
1985	15,529	38.0	463.1	366.6	1.263	26.0 %	3.8 %
1986	16,276	51.8	538.7	498.6	1.080	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 %
<b>25-Year Average</b>						<b>5.9 %</b>	<b>3.1 %</b>
<b>10-Year Average</b>						<b>1.4 %</b>	<b>2.7 %</b>

## HISTORY OF % CHANGES IN ANNUITIES AND CPI



**ANNUITIES BEING PAID BY TYPE**  
**DECEMBER 31, 2007**  
**\$ MILLIONS**

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**ANNUITIES BEING PAID DECEMBER 31, 2007**  
**TABULATED BY YEAR OF RETIREMENT**  
**(\$1,000S ANNUALLY)**

Year Ret'd	Fixed Annuities				Variable Annuities				Avg. Total Annuity
	No.	Initial	Increases	Total	No.	Initial	Increases	Total	
2007	8,353	\$ 222,542	\$ 0	\$ 222,542	2,266	\$ 21,108	\$ 0	\$ 21,108	\$29,169
2006	8,424	211,578	3,466	215,044	1,999	18,435	1,845	20,280	27,935
2005	8,449	202,818	6,965	209,783	2,064	19,750	2,629	22,379	27,478
2004	7,644	171,205	9,006	180,211	1,878	17,869	3,793	21,662	26,409
2003	7,779	172,025	12,588	184,613	1,740	14,661	7,556	22,217	26,588
2002	7,340	147,282	11,726	159,008	1,573	19,389	2,067	21,456	24,586
2001	7,474	139,857	13,758	153,615	1,686	28,088	(1,359)	26,729	24,129
2000	7,537	129,565	19,426	148,991	1,535	30,952	(4,744)	26,208	23,245
1999	6,472	95,130	31,891	127,021	1,314	21,800	533	22,333	23,077
1998	6,426	88,484	37,714	126,198	1,328	19,263	2,839	22,102	23,078
1997	5,481	73,062	38,990	112,052	1,161	14,104	5,010	19,114	23,931
1996	5,545	71,320	45,761	117,081	1,190	12,584	6,819	19,403	24,614
1995	5,100	62,682	46,146	108,828	1,111	9,545	7,967	17,512	24,772
1994	4,631	54,358	43,652	98,010	1,087	9,286	7,095	16,381	24,701
1993	4,359	47,412	41,669	89,081	1,039	7,273	6,956	14,229	23,700
1992	3,678	38,666	37,139	75,805	867	5,866	6,190	12,056	23,888
1991	3,424	33,718	35,980	69,698	842	4,687	6,637	11,324	23,663
1990	5,494	57,484	66,991	124,475	1,461	9,278	10,074	19,352	26,179
1989	4,272	43,896	58,122	102,018	1,032	5,621	7,981	13,602	27,065
1988	3,420	28,200	42,230	70,430	879	3,862	6,788	10,650	23,707
1987	3,096	23,388	39,157	62,545	829	3,443	5,488	8,931	23,087
1986	2,871	20,873	39,478	60,351	768	2,987	5,374	8,361	23,933
1985	2,685	20,079	42,339	62,418	704	2,066	5,219	7,285	25,960
1984	2,184	15,086	34,438	49,524	627	1,794	4,536	6,330	25,575
1983	1,953	10,208	25,098	35,306	542	1,297	4,092	5,389	20,837
1982	1,549	6,667	18,262	24,929	425	797	2,994	3,791	18,541
1981	1,419	5,222	15,436	20,658	370	619	2,326	2,945	16,634
1980	1,093	3,518	10,761	14,279	310	417	1,997	2,414	15,273
1979	842	2,744	8,942	11,686	226	228	1,230	1,458	15,611
1978	738	2,095	7,008	9,103	223	202	1,176	1,378	14,202
1977	683	1,834	6,236	8,070	214	221	1,218	1,439	13,924
1976	556	1,381	4,857	6,238	159	116	661	777	12,619
1975	442	1,046	3,718	4,764	125	90	618	708	12,377
1974	340	754	2,710	3,464	94	67	417	484	11,612
1973	273	563	1,992	2,555	68	50	275	325	10,551
1972	191	314	1,170	1,484	39	27	135	162	8,617
1971	111	154	582	736	27	18	98	116	7,685
1970	107	144	503	647	20	9	58	67	6,677
1969	84	113	417	530	17	8	39	47	6,859
1968	63	72	275	347	11	11	53	64	6,508
Prior	324	229	911	1,140	30	10	58	68	3,520
<b>Total</b>	<b>142,906</b>	<b>\$2,207,768</b>	<b>\$867,510</b>	<b>\$3,075,278</b>	<b>33,880</b>	<b>\$307,898</b>	<b>\$124,738</b>	<b>\$432,636</b>	<b>\$24,547</b>

**COMPARISON OF ACTUAL TO EXPECTED DEATHS AMONG RETIRED LIVES  
(NORMAL RETIREMENT ONLY)  
DURING 2007**

Age	Male Deaths			Female Deaths			Total Deaths		
	Actual	Expected	Exposure	Actual	Expected	Exposure	Actual	Expected	Exposure
30-34						1			1
35-39						6			6
40-44						19			19
45-49			15			95			110
50-54	3	2	810			457	3	2	1,267
55-59	35	43	7,413	22	31	8,414	57	74	15,827
60-64	77	97	12,524	61	70	13,678	138	167	26,202
65-69	149	152	11,571	104	103	13,195	253	255	24,766
70-74	215	225	9,795	117	154	11,281	332	379	21,076
75-79	288	343	8,023	222	235	9,726	510	578	17,749
80-84	350	408	5,528	313	340	7,696	663	748	13,224
85-89	301	343	2,765	450	451	5,467	751	794	8,232
90-94	167	195	967	387	374	2,591	554	569	3,558
95-99	47	49	179	206	183	815	253	232	994
100&Up	10	7	20	53	49	136	63	56	156
<b>Totals</b>	<b>1,642</b>	<b>1,864</b>	<b>59,610</b>	<b>1,935</b>	<b>1,990</b>	<b>73,577</b>	<b>3,577</b>	<b>3,854</b>	<b>133,187</b>
Average Ages	79.4	79.4	69.5	84.4	83.6	71.2	82.1	81.6	70.4

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**SECTION E**  
**APPENDIX**

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## ACTUARIAL ASSUMPTIONS USED IN THE RETIRED LIFE ACTUARIAL VALUATION

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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 1.0%.

### SINGLE LIFE RETIREMENT VALUES

#### Wisconsin Projected Experience Table - 2005 with 5% Interest

Sample Attained Ages	Present Value of \$1 Monthly for Life		Future Life Expectancy (years)	
	Males	Females	Males	Females
40	\$205.69	\$213.54	40.9	45.3
45	196.14	205.53	36.2	40.5
50	184.61	195.62	31.5	35.7
55	171.16	183.60	27.0	30.9
60	155.69	169.88	22.7	26.4
65	137.31	153.66	18.5	22.0
70	116.87	134.71	14.5	17.8
75	95.20	113.77	11.0	13.9
80	74.62	91.62	8.1	10.4
85	55.95	69.69	5.7	7.4

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

Sample Attained Ages	Present Value of \$1 Monthly for Life		Future Life Expectancy (years)	
	Males	Females	Males	Females
40	\$188.17	\$200.45	33.0	38.1
45	175.49	189.75	28.5	33.4
50	160.60	176.73	24.1	28.7
55	144.08	161.35	20.0	24.2
60	126.15	144.83	16.2	20.1
65	105.47	126.05	12.5	16.1
70	83.80	104.95	9.3	12.4
75	62.40	83.07	6.5	9.1
80	44.25	61.62	4.3	6.3
85	29.47	42.01	2.8	4.1

## **POST-RETIREMENT ADJUSTMENTS**

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### **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 variance between the balance of the variable annuity reserve and the present value of variable annuities to less than one percent.”

## **NARRATIVE REGARDING THE DEVELOPMENT OF DIVIDEND AND VARIABLE ANNUITY CHANGES SHOWN ON PAGES 6 AND 15**

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**1. 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.

**2. Adjustment to Relate Earnings to Averaged Core Annuity Balance**

Item 3 below minus Item 1 above.

**3. 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.

**4. Expected Dividend (Variable Change) before Adjustments**

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

**5. 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 3 and 4 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.

**6. 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.

**7. 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.

## **NARRATIVE REGARDING THE DEVELOPMENT OF DIVIDEND AND VARIABLE ANNUITY CHANGES SHOWN ON PAGES 6 AND 15**

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### **8. 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.

### **9. 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.

### **10. 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.

### **11. 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 1) by making the adjustments in Items 4 through 10.



February 27, 2008

Mr. David Stella  
Wisconsin Department of Employee Trust Funds  
P.O. Box 7931  
Madison, Wisconsin 53707

**Re: Retired Life Actuarial Valuation**

Dear Dave:

Enclosed are 75 copies of the report of the December 31, 2007 Retired Lives Actuarial Valuation.

Sincerely,

Mark Buis

MB:lr  
Enclosures