Wisconsin Retirement System
Twenty-Second Annual Actuarial Valuation

as of December 31, 2002

Presented to the Wisconsin Department of Employee Trust Funds

Gabriel, Roeder, Smith & Company

Actuaries & Consultants

Outline of Contents

Report of Annual Actuarial Valuations
Wisconsin Department of Employee Trust Funds

June 4, 2003

Employee Trust Funds Board
Wisconsin Department of Employee
Trust Funds
801 West Badger Road
Madison, Wisconsin 53713

Ladies and Gentlemen:

The results of the **December 31, 2002 annual actuarial valuations of non-retired members covered by the Wisconsin Retirement System** are presented in this report. The valuations establish contribution rates for the 2004 calendar year in conformance with Chapter 40 of the Wisconsin Statutes.

The valuations are based upon all current plan provisions related to General, Executive and Elected, and Protective Occupation employment with and without Social Security. The provisions evaluated are summarized in Section One of this report. The valuation includes full recognition of 1999 Wisconsin Act 11.

The individual member statistical data required for the valuations was furnished by the Department of Employee Trust Funds, together with pertinent data on financial operations. The cooperation of DETF staff in furnishing these materials is acknowledged with appreciation.

The actuarial assumptions used in the valuations are summarized in Section III of this report. The assumptions are internally consistent and are based on the results of the Triennial Experience Study covering 1997-99 experience.

The valuations were completed by qualified actuaries in accordance with accepted actuarial procedures as prescribed by the Actuarial Standards Board. The qualified actuaries are members of the American Academy of Actuaries and are experienced in performing actuarial valuations of public employee retirement systems. To the best of our knowledge this report is complete and accurate and the actuarial methods and assumptions produced results that are reasonable. **It is our opinion that the Wisconsin Retirement System is in excellent financial condition in accordance with actuarial principles of level percent of payroll financing.**

Respectfully submitted,

GABRIEL, ROEDER, SMITH & COMPANY

Norman L. Jones, F.S.A. Brian B. Murphy, F.S.A.

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Section One

Actuarial Results

OVERVIEW

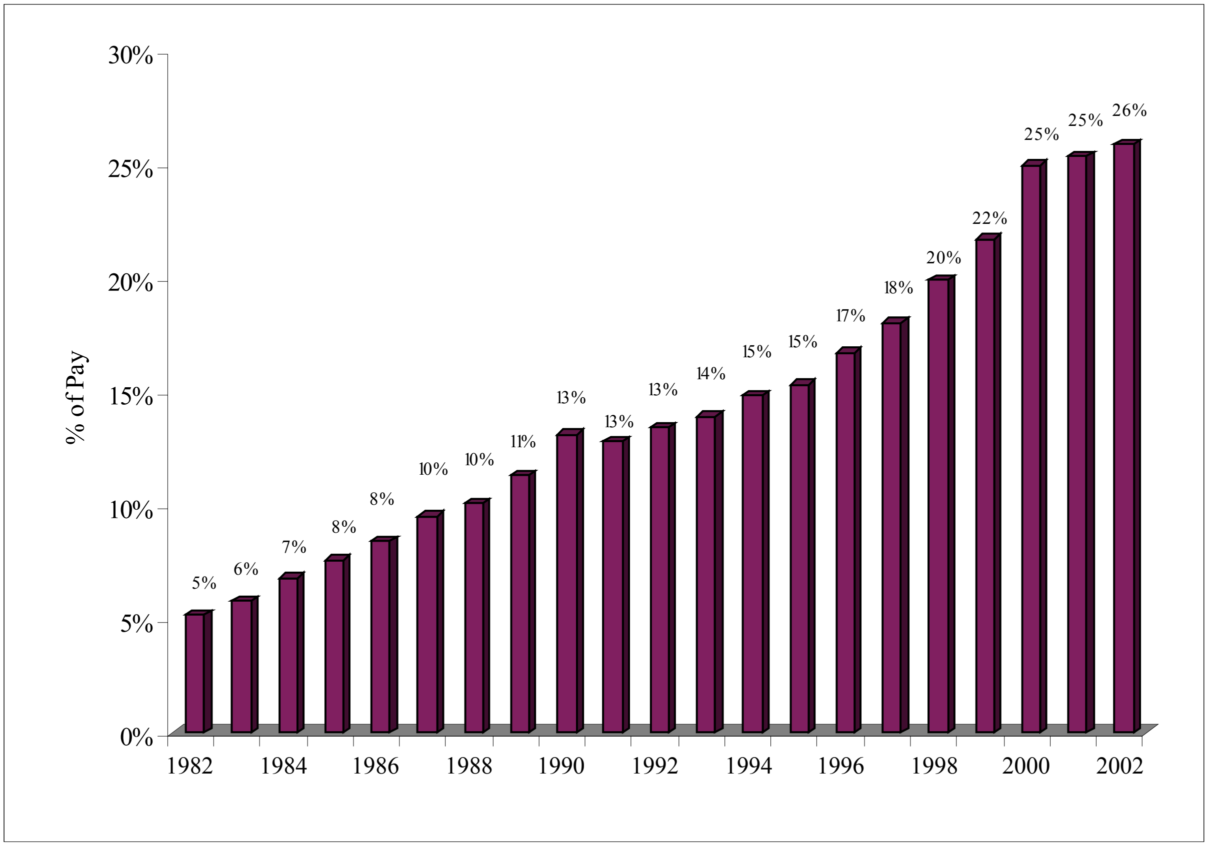
COMPARATIVE SUMMARY OF VALUATION RESULTS
CONTRIBUTION RATES FOR INDICATED YEARS
EXPRESSED AS A % OF PARTICIPANT PAYROLL

	General Participants		Executives & Elected Officials		Protective Occupation With Soc. Sec.		Protective Occupation Without Soc. Sec.	
	2004	2003	2004	2003	2004	2003	2004	2003
Employer Normal Cost	4.2%	4.0%	8.1%	8.1%	7.6%	7.1%	10.6%	9.8%
Benefit Adjustment Contribution	0.6%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Participant Normal Cost	5.0%	5.0%	2.6%	2.6%	4.5%	4.0%	3.2%	2.4%
Total Normal Cost	9.8%	9.4%	10.7%	10.7%	12.1%	11.1%	13.8%	12.2%
Unfunded Actuarial Accrued Liability (UAAL)	1.0%	1.2%	0.8%	1.0%	0.4%	0.6%	1.2%	1.5%
WRS Average Total	**10.8%**	**10.6%**	**11.5%**	**11.7%**	**12.5%**	**11.7%**	**15.0%**	**13.7%**

Under Section 40.05 of Wisconsin statutes, contribution rate changes are generally split evenly between the employer normal cost and the benefit adjustment contribution. If there is no benefit adjustment contribution and the rate change is a decrease, the participant normal cost is decreased. If there is no benefit adjustment contribution and the rate change is an increase *and* the participant normal cost is below the statutory rate, the participant normal cost is increased.

Rates shown for UAAL are weighted averages of rates that vary by employer units. In addition to the WRS rates shown above are contributions to support the Section 40.65 Duty Disability Program and the Accumulated Sick Leave Conversion Credit Program.

TOTAL ANNUITIES AS A % OF PAYROLL



Annuities are expected to continue to increase as a percent of payroll for several more decades. By pursuing the level percent of payroll objective, the future increase in the payout percent is expected to be paid from income generated by retirement system assets.

COMPARATIVE STATEMENT OF COMPUTED CONTRIBUTION RATES

Valuation 12/31	Rate Effective 1/1	General				Executive and Elected			
		Participant	Benefit Adj. Contr.	Employer*	Total	Participant	Benefit Adj. Contr.	Employer*	Total
1981	1983	5.0 %		6.5 %	11.5 %	5.5 %		11.9 %	17.4 %
1982	1984	5.0 %		6.5 %	11.5 %	5.5 %		11.9 %	17.4 %
1983	1985	5.0 %		6.5 %#	11.5 %	5.5 %		11.9 %#	17.4 %
1984@	1986	5.0 %	1.0 %	6.5 %	12.5 %	5.5 %		11.6 %	17.1 %
1985	1987	5.0 %	1.0 %	6.1 %	12.1 %	5.5 %		11.3 %	16.8 %
1986	1988	5.0 %	1.0 %	6.0 %	12.0 %	5.5 %		11.9 %	17.4 %
1987	1989	5.0 %	1.0 %	6.0 %	12.0 %	5.5 %		11.9 %	17.4 %
1988	1990	5.0 %	1.0 %	6.0 %	12.0 %	5.5 %		11.9 %	17.4 %
1989@	1991	5.0 %	1.1 %	6.1 %	12.2 %	5.5 %	0.1 %	12.0 %	17.6 %
1990	1992	5.0 %	1.2 %	6.2 %	12.4 %	5.5 %	0.1 %	12.0 %	17.6 %
1991	1993	5.0 %	1.2 %	6.2 %	12.4 %	5.5 %	0.1 %	12.0 %	17.6 %
1992	1994	5.0 %	1.2 %	6.1 %	12.3 %	5.5 %	0.1 %	12.0 %	17.6 %
1993	1995	5.0 %	1.2 %	6.1 %	12.3 %	5.5 %	0.1 %	12.0 %	17.6 %
1994	1996	5.0 %	1.5 %	6.4 %	12.9 %	4.6 %	0.0 %	11.1 %	15.7 %
1995	1997	5.0 %	1.4 %	6.3 %	12.7 %	4.7 %	0.0 %	11.2 %	15.9 %
1996	1998	5.0 %	1.2 %	6.1 %	12.3 %	4.7 %	0.0 %	11.2 %	15.9 %
1997	1999	5.0 %	0.8 %	5.8 %	11.6 %	4.3 %	0.0 %	10.8 %	15.1 %
1998	2000	5.0 %	0.5 %	5.5 %	11.0 %	4.1 %	0.0 %	10.6 %	14.7 %
1999	2001	5.0 %	0.2 %	5.1 %	10.3 %	3.9 %	0.0 %	10.4 %	14.3 %
2000	2002	5.0 %	0.2 %	5.1 %	10.3 %	3.1 %	0.0 %	9.6 %	12.7 %
2001 @	2003	5.0 %	0.4 %	5.2 %	10.6 %	2.6 %	0.0 %	9.1 %	11.7 %
2002	2004	5.0 %	0.6 %	5.2 %	10.8 %	2.6 %	0.0 %	8.9 %	11.5 %

\# *By statute, 1984 rates determined by the 12/31/82 regular valuation continued through 1985. The actuarially computed 1985 rate was 6.3% for the general group.*

* *Employer normal cost plus weighted average of unfunded actuarial accrued liability contribution rates.*

@ *Benefit change. Act 11 of 1999 was implemented in 2001.*

Comparative Statement of Computed Contribution Rates

Valuation 12/31	Rate Effective 1/1	Protective With Social Security				Protective Without Social Security			
		Participant	Benefit Adj. Contr.	Employer*	Total	Participant	Benefit Adj. Contr.	Employer*	Total
1981	1983	6.0 %		12.1 %	18.1 %	8.0 %		19.8 %	27.8 %
1982	1984	6.0 %		12.1 %	18.1 %	8.0 %		19.8 %	27.8 %
1983	1985	6.0 %		12.1 %#	18.1 %	8.0 %		19.8 %#	27.8 %
1984@	1986	6.0 %	1.0 %	12.3 %	19.3 %	8.0 %		19.1 %	27.1 %
1985	1987	6.0 %	1.0 %	12.4 %	19.4 %	8.0 %		18.5 %	26.5 %
1986	1988	6.0 %	1.0 %	12.0 %	19.0 %	8.0 %		18.0 %	26.0 %
1987	1989	6.0 %	1.0 %	11.3 %	18.3 %	8.0 %		16.9 %	24.9 %
1988	1990	6.0 %	0.9 %	11.2 %	18.1 %	8.0 %		16.9 %	24.9 %
1989@	1991	6.0 %	0.7 %	10.9 %	17.6 %	7.5 %		16.4 %	23.9 %
1990	1992	6.0 %	0.7 %	10.9 %	17.6 %	7.5 %		16.4 %	23.9 %
1991	1993	6.0 %	0.6 %	10.7 %	17.3 %	7.5 %		16.4 %	23.9 %
1992	1994	6.0 %	0.6 %	10.7 %	17.3 %	7.5 %		16.3 %	23.8 %
1993	1995	6.0 %	0.5 %	10.6 %	17.1 %	7.2 %		16.0 %	23.2 %
1994	1996	6.0 %	0.1 %	10.2 %	16.3 %	6.8 %		15.7 %	22.5 %
1995	1997	5.8 %	0.0 %	9.8 %	15.6 %	6.2 %		15.1 %	21.3 %
1996	1998	5.4 %	0.0 %	9.4 %	14.8 %	5.8 %		14.6 %	20.4 %
1997	1999	4.9 %	0.0 %	8.9 %	13.8 %	5.4 %		14.3 %	19.7 %
1998	2000	4.1 %	0.0 %	8.0 %	12.1 %	4.4 %		13.3 %	17.7 %
1999	2001	3.8 %	0.0 %	7.6 %	11.4 %	3.3 %		12.2 %	15.5 %
2000	2002	4.0 %	0.0 %	7.8 %	11.8 %	3.0 %		11.9 %	14.9 %
2001 @	2003	4.0 %	0.0 %	7.7 %	11.7 %	2.4 %		11.3 %	13.7 %
2002	2004	4.5 %	0.0 %	8.0 %	12.5 %	3.2 %		11.8 %	15.0 %

\# *By statute, 1984 rates determined by the 12/31/82 regular valuation continued through 1985.*
* *Employer normal cost plus weighted average of unfunded actuarial accrued liability contribution rates.*
@ *Benefit change. Act 11 of 1999 was implemented in 2001.*

COMMENTS ON DECEMBER 31, 2002 RESULTS

Based upon this valuation, contribution rates for calendar year 2004 will increase for all groups except the Executive group, and Elected Officials, primarily as a result of the difficult investment markets in 2001 and 2002.

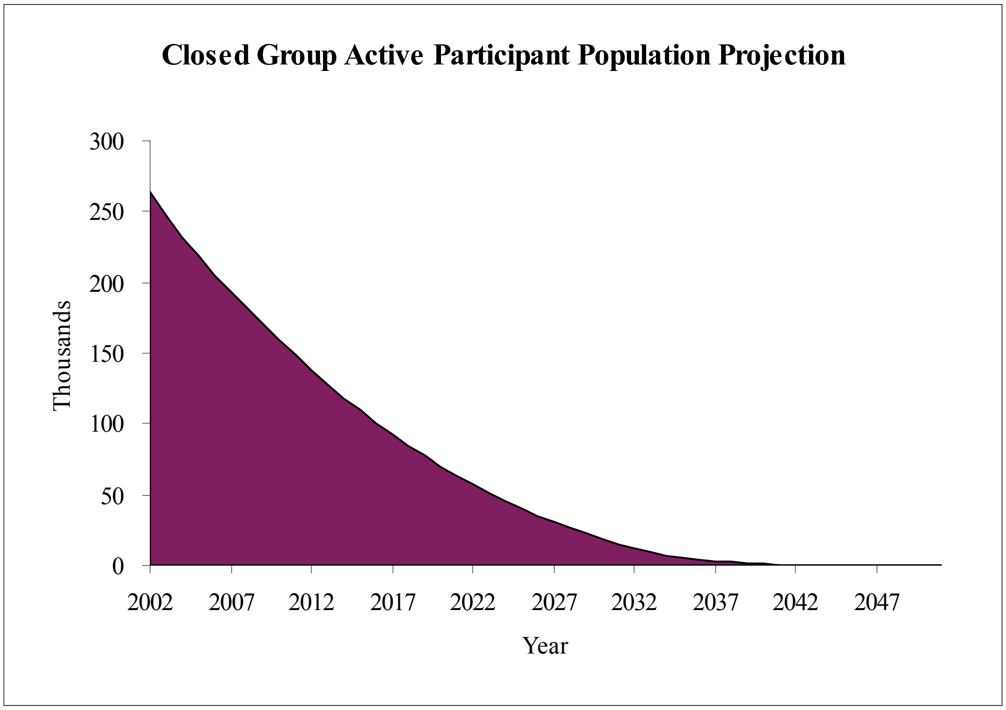
In total, during 2002, investment return was well below the assumed level of 8% on a market value basis (please see pages I-17 and III-3). The asset valuation method, when combined with the TAA distribution mandated by Act 11 of 1999, greatly reduced the amount of the loss that would otherwise have been shown. The end result is that the funding value of assets recognized in the valuation exceeds the market value for the second straight year. Detail concerning experience gains and losses in individual risk areas will be presented at a later date in the annual Gain Loss Analysis.

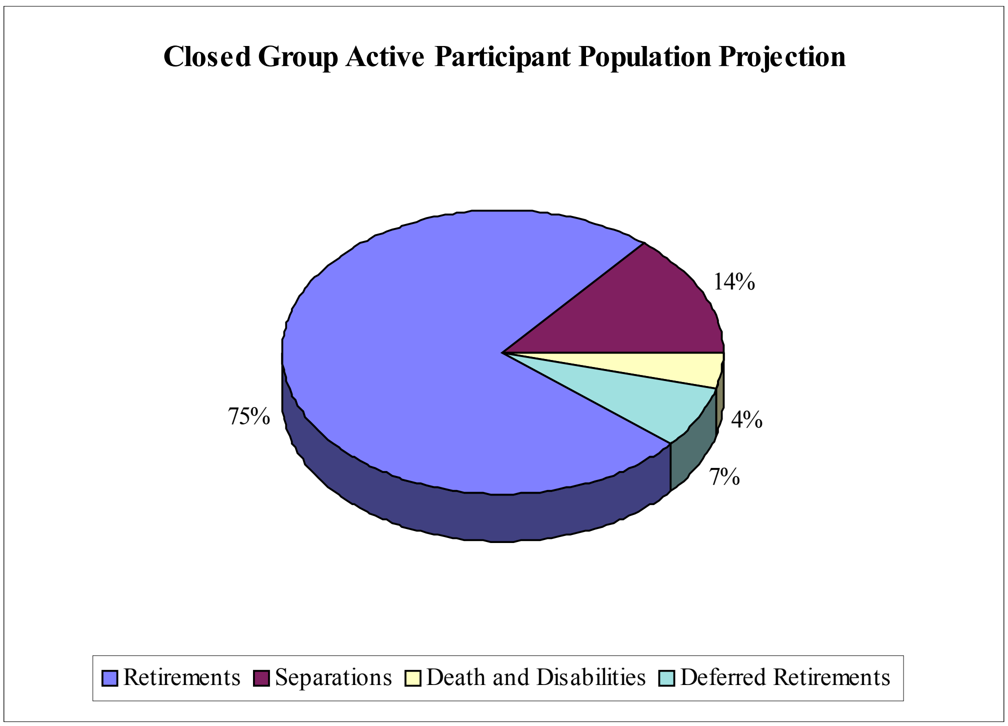
The statutory allocation of the rate change among Participant Normal Cost, Employer Normal Cost, and Benefit Adjustment Contribution is shown on page I-23. The Participant Normal Cost contributions are, in most cases, paid by the employers rather than by the participants. This means the reductions in the Participant Normal Cost that occurred over the last several years in the Executive and Protective groups will directly reduce death and other separation benefits, as well as money purchase benefits, but will not actually increase the take home pay of participants. (The current year was an exception to this longer term trend.) The original intent of the statutory allocation of the rate changes was most likely to permit participants to share in good and bad investment and other experiences. The actual result however, seems to be that, for some members, good experience causes benefits to be decreased, and bad experience causes benefits to be increased. *The actuary recommends that the appropriate legislative bodies reconsider the contribution rate allocation statute.*

This valuation includes liabilities for future claims under the Long Term Disability Insurance (LTDI) program that became operational late in 1992. Inter-fund transfers between WRS and the LTDI program to support claims currently payable are addressed in a separate report to the Group Insurance and Employee Trust Funds Boards.

Conclusion. Based upon the results of the December 31, 2002 regular annual actuarial valuation, it is our opinion that ***the Wisconsin Retirement System continues to be in excellent financial condition in accordance with actuarial principles of level percent of payroll financing.***

EXPECTED DEVELOPMENT OF PRESENT POPULATION
DECEMBER 31, 2002





The charts show the expected future development of the present population in simplified terms. The retirement system presently covers 263,500 active members. Eventually, 14% of the population is expected to terminate covered employment prior to retirement and forfeit eligibility for an employer provided benefit. Nearly 82% of the present population is expected to receive monthly retirement benefits either by retiring directly from active service, or by retiring from vested deferred status. 4% of the present population is expected to become eligible for death-in-service or disability benefits. **Within 11 years, over half of the covered membership is expected to consist of new hires.**

Benefit Provisions

Normal Retirement Eligibility

The age a participant becomes eligible for an unreduced age and service annuity is:

General		Protective		Executive & Elected	
Age	**Service**	**Age**	**Service**	**Age**	**Service**
65	Any*	54	Any*	62	Any*
57	30	53	25	57	30

* *Participants first employed after 1989 and terminated before April 24, 1998 must have creditable service in 5 calendar years.*

Normal Retirement Annuity

The age and service annuity payable at Normal Retirement Age is based on Final Average Earnings (FAE) and Creditable Service (CS) as follows:

Multiplier for Service Rendered		
After 1999	**Before 2000**	**Group**
2.0%	2.165%	Executive group, elected officials and protective occupation participants covered by Social Security
2.5%	2.665%	Protective occupation participants not covered by Social Security
1.6%	1.765%	All other participants

FAE is generally the average of the 3 highest years of earnings (July 1 - June 30 for teachers, educational support staff, and judges; calendar year for others) preceding retirement. These years do not have to be consecutive. For legislators and state constitutional officers who are ineligible to receive pay increases during their term, FAE is the statutory rate of earnings at termination.

Maximum formula annuity is 85% of FAE for protective occupation participants not covered by Social Security, 65% of FAE for protectives covered by Social Security, and 70% for all other participants. If greater than the formula amount, an annuity equal to the actuarial equivalent of two times the required accumulated contributions is paid in lieu of the formula amount.

Early Retirement. Any participant who has attained age 55 and any protective occupation participant who has attained age 50 may apply for an early retirement annuity. The benefit is reduced 0.4% for each month that the annuity effective date precedes the Normal Retirement Age. For non-protective participants terminating after 6/30/90, the 0.4% is reduced for months after the attainment of age 57 and before the annuity effective date by .001111% for each month of creditable service.

Voluntary Termination Before Immediate Benefit Eligibility. Participant may either (i) receive a refund of accumulated contributions, or (ii) leave contributions on deposit and apply for a retirement annuity on or after the minimum retirement age based upon age and accrued service at time of termination.

Post-Retirement Adjustments. Annuities are increased annually if the investment income credited to retired life funds is in excess of the assumed rate (presently 5%), other plan experiences are within projected ranges, and the resulting adjustment would be at least 2%.

Disability Annuity. Eligibility: generally total and permanent incapacity to engage in gainful employment. Participant must have completed at least 6 months of creditable service in each of at least 5 out of the last 7 calendar years preceding application for disability. Service requirement is waived if disability is from service-related causes.

Disability Amounts. Amounts payable in case of disability depend upon the plan from which payment is made and are described below.

	Pre-10/16/92 WRS Plan	Post-10/15/92 LTDI Plan
Participants covered	Participants hired before 10/16/92 who do not elect LTDI coverage.	Participants entering after 10/15/92 and participants on 10/15/92 who elect LTDI coverage.
Benefit to age 65*	WRS formula benefit based on service projected to normal retirement age.	40% of FAE for participants covered by Social Security; 50% of FAE for non-covered participants who cannot qualify for Social Security disability benefits.
Benefit at age 65*	Continuation of pre-65 amount.	WRS benefit accrued to date of disability plus 7% of FAE money purchase benefit during disability period, both of which are adjusted in accordance with dividend rate.

* *Conversion age is later for participants becoming disabled after age 61.*

Death In Service. (a) Prior to age 50 for protective participants, age 55 for others, the benefit is the equivalent of twice the accumulated employee required and all additional contributions and employer amounts contributed prior to 1974 for teachers, or 1966 for others.

(b) After age 50 for protective participants, age 55 for others, the benefit is the amount that would have been paid if participant had retired and elected 100% survivor option. Benefit is payable to any natural living person.

Interest Credits. For years after 1999, and for people with some active service after 1999, participant accounts are credited with interest at the full (fixed) effective rate. For others, accounts are credited with interest as follows:

	Rate Credited For Purpose of	
Date of Participation	**Money Purchase Minimum**	**Refunds**
Prior to 1982	Actual	Actual
January 1, 1982 & Later	5%	3%

Contribution Rates. The financial objective of WRS is to establish and receive contributions that will remain level from year to year and decade to decade.

Statutory required participant contributions are as follows:

General	5.0%
Executives & Elected Officials	5.5
Protectives	
- With Social Security	6.0
- Without Social Security	8.0

Non-refundable benefit adjustment contributions are also required by statute and may be paid by the employer or by the employee depending upon the employer's compensation plan. The employers contribute the remaining amounts necessary to fund the retirement system on an actuarially sound basis. As differences between actual and assumed experience emerge, adjustments are made to contributions to maintain financial balance as follows:

- One-half of the increase or decrease is reflected in the employer normal cost rate.
- One-half of the increase or decrease is reflected in the participant-paid portion of the benefit adjustment contribution. If a decrease would reduce a benefit adjustment contribution to less than zero, participant normal contributions are reduced.

Non-Retired Participant Data

ACTIVE PARTICIPANTS INCLUDED IN VALUATIONS
DECEMBER 31, 2002

Active participants included in the valuations totaled 263,500 with an annual payroll totaling $10,046.2 million, as follows:

Valuation Group	Number	Annual Earnings ($Millions)	Group Averages			
			Earnings	Age	Years of Service	Contribs.
General	240,990	$9,007.5	$37,377	44.8	11.2	$46,227
Executive Group & Elected Officials	1,476	86.9	58,865	53.5	12.6	75,909
Protective Occupation with Social Security	18,325	803.9	43,871	38.4	10.8	46,992
Protective Occupation without Social Security	2,709	147.9	54,603	39.8	13.2	84,104
Total Active Participants	**263,500**	**$10,046.2**	**$38,126**	**44.4**	**11.2**	**$46,836**
Prior Year	261,126	9,745.0	37,319	44.1	11.1	47,115

Group averages are not used in the valuation, but are shown here for their general interest.

INACTIVE PARTICIPANTS INCLUDED IN VALUATIONS
DECEMBER 31, 2002

Inactive participants included in the valuations totaled 116,847 as follows:

Valuation Group	Number	Group Averages		
		Age	Service	Money Purchase Balance
General	113,170	44.7	3.1	$13,306
Executive Group & Elected Officials	547	52.5	5.2	34,652
Protective Occupation with Social Security	2,966	38.3	3.8	17,812
Protective Occupation without Social Security	164	42.1	8.1	66,941
Total Inactive Participants	**116,847**	**44.6**	**3.1**	**$13,596**
Prior Year	107,332	44.4	3.2	12,317

The valuations also included 3,247 QDRO cases whose average age was 48.5 years. These accounts for divorced spouses of WRS participants have been established in accordance with Wisconsin Domestic Relations Law.

GENERAL PARTICIPANTS AS OF DECEMBER 31, 2002
BY ATTAINED AGE AND YEARS OF SERVICE

Attained Ages	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
15-19	331							331	$ 4,973,810
20-24	5,720	21						5,741	119,431,295
25-29	16,055	1,777	9					17,841	515,740,038
30-34	11,965	9,266	1,620	20				22,871	764,798,173
35-39	11,297	7,230	7,863	1,346	13			27,749	986,681,124
40-44	12,721	7,253	7,312	6,022	1,971	75		35,354	1,267,386,756
45-49	10,805	7,495	7,238	5,987	6,739	2,795	23	41,082	1,578,812,315
50-54	7,560	6,344	7,230	5,923	6,173	8,649	3,172	45,051	1,929,377,309
55	1,129	923	1,230	1,188	1,006	1,240	1,780	8,496	377,033,637
56	1,103	897	1,184	1,140	922	1,046	1,475	7,767	345,328,566
57	754	632	741	687	627	560	980	4,981	216,824,495
58	684	568	731	681	561	503	723	4,451	188,995,537
59	650	458	638	590	528	398	582	3,844	158,644,541
60	599	492	575	553	479	360	482	3,540	143,853,378
61	469	366	461	409	360	258	350	2,673	105,781,204
62	420	289	303	315	271	198	280	2,076	79,238,109
63	319	227	279	225	169	145	189	1,553	57,767,014
64	236	180	231	177	162	100	164	1,250	45,405,937
65	230	137	150	129	93	82	118	939	33,365,746
66	226	84	96	78	75	43	56	658	20,655,615
67	205	93	64	53	45	31	65	556	16,978,750
68	176	67	52	40	30	30	40	435	11,931,924
69	151	59	51	33	24	9	32	359	9,588,866
70	118	36	29	22	11	15	19	250	6,143,473
71	105	44	27	14	11	6	19	226	4,565,292
72	89	35	19	11	10	8	14	186	4,561,088
73	88	23	21	7	5	4	13	161	3,447,344
74	69	31	13	9	6	1	7	136	2,264,019
75 & Up	238	78	42	26	12	9	28	433	7,916,935
Totals	**84,512**	**45,105**	**38,209**	**25,685**	**20,303**	**16,565**	**10,611**	**240,990**	**$9,007,492,290**

EXECUTIVE GROUP AND ELECTED OFFICIALS AS OF DECEMBER 31, 2002 BY ATTAINED AGE AND YEARS OF SERVICE

Attained Ages	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	1							1	$ 26,006
25-29	5	1						6	257,453
30-34	20	10	1					31	1,292,881
35-39	28	21	18	6				73	3,808,532
40-44	50	28	36	24	7			145	7,609,389
45-49	62	33	37	29	36	10	1	208	12,029,271
50-54	81	32	50	59	56	39	10	327	22,023,663
55	21	12	10	12	8	14	8	85	5,264,873
56	18	7	5	13	10	12	9	74	5,996,815
57	10	7	11	11	6	9	6	60	4,583,498
58	12	9	12	8	5	6	3	55	3,478,143
59	16	9	11	9	5	8	1	59	3,815,525
60	19	5	6	10	4	7	3	54	3,276,234
61	7	5	4	4	3	4	2	29	2,012,648
62	10	4	5	4	4	5	5	37	2,574,711
63	7	7	7	1	1	2	2	27	1,016,074
64	12	3	4	7	2	6	4	38	1,970,096
65	3	5	2	3	3	6	3	25	1,440,637
66	10	2	2	1	2	1	2	20	929,852
67	7	3	3	1	1		2	17	725,724
68	7	2	3	2	2	1		17	558,520
69	11						1	12	237,240
70	5	2	2			2		11	383,102
71	8	1	1	1			1	12	366,982
72	4	2			1			7	101,409
73	5	1	2	2		2	1	13	508,512
74	4	1		1				6	84,126
75 & Up	13	8	3	1			2	27	513,046
Totals	**456**	**220**	**235**	**209**	**156**	**134**	**66**	**1,476**	**$86,884,962**

Protective Occupation Participants With Social Security
as of December 31, 2002
by Attained Age and Years of Service

Attained Ages	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
15-19	8							8	$ 172,515
20-24	906	11						917	26,855,629
25-29	2,048	588	3					2,639	96,669,934
30-34	1,158	1,918	480					3,556	147,964,166
35-39	595	865	1,318	332	2			3,112	140,684,016
40-44	398	438	703	894	358	6		2,797	131,512,409
45-49	260	222	412	557	911	352	5	2,719	133,741,104
50	43	40	54	78	103	133	12	463	22,918,189
51	33	34	45	77	87	137	22	435	21,863,768
52	29	20	32	58	66	105	33	343	17,374,200
53	22	18	38	41	46	105	34	304	15,382,457
54	27	21	27	38	57	54	35	259	12,599,453
55	25	17	30	22	41	37	35	207	10,080,395
56	20	17	27	29	28	20	28	169	8,046,017
57	11	17	16	12	20	21	18	115	5,481,281
58	14	5	2	10	11	17	11	70	3,317,971
59	4	6	11	5	5	6	10	47	2,156,031
60	6	3	8	11	9	4	5	46	2,141,043
61	11	2	11	6	4	4	8	46	1,962,333
62	1	5	7	4	4	1	5	27	1,372,418
63	3	1	3	2	1	1	1	12	458,978
64	1	1	2	1	1	2	2	10	461,834
65	2	2	1	3		1		9	328,602
66	1	1			1		1	4	114,804
67	1	1	1			1		4	162,396
68	1							1	20,904
69				1				1	53,434
70 & Up	4		1					5	48,122
Totals	**5,632**	**4,253**	**3,232**	**2,181**	**1,755**	**1,007**	**265**	**18,325**	**$803,944,403**

PROTECTIVE OCCUPATION PARTICIPANTS WITHOUT SOCIAL SECURITY AS OF DECEMBER 31, 2002 BY ATTAINED AGE AND YEARS OF SERVICE

Attained Ages	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	56							56	$ 2,005,112
25-29	232	64						296	13,099,249
30-34	175	232	75					482	24,025,596
35-39	68	149	199	48	2			466	24,874,258
40-44	21	63	159	203	69	1		516	29,571,856
45-49	3	20	89	135	189	56	2	494	29,364,543
50		1	8	13	37	29	1	89	5,318,686
51		2	6	12	30	40	2	92	5,840,286
52	2	1	2	8	20	29	5	67	4,329,584
53	1		3	6	11	25	8	54	3,420,153
54			1	4	8	10	7	30	1,858,336
55		1		4	7	10	11	33	2,108,398
56	1	1		2	2	4	6	16	1,028,922
57				1		1	1	3	175,077
58	1				1	1	2	5	264,006
59				1	1		2	4	251,801
60				1		1		2	102,106
61		1						1	66,275
62							2	2	159,530
63							1	1	55,967
Totals	**560**	**535**	**542**	**438**	**377**	**207**	**50**	**2,709**	**$147,919,741**

ACTIVE PARTICIPANTS
AS OF DECEMBER 31, 2002
BY YEARS OF SERVICE AND GENDER

Completed Years of Service	Males	Females	Totals	Valuation Payroll Total	Valuation Payroll Average
0	6,748	15,407	22,155	$ 431,066,831	$ 19,457
1	7,163	13,843	21,006	536,678,906	25,549
2	6,462	12,116	18,578	534,433,881	28,767
3	5,388	9,987	15,375	474,665,757	30,873
4	5,069	8,977	14,046	455,140,926	32,404
5	4,385	7,750	12,135	407,466,447	33,578
6	3,653	6,755	10,408	362,892,106	34,867
7	3,522	6,184	9,706	347,549,715	35,808
8	3,430	5,928	9,358	352,575,494	37,676
9	3,062	5,444	8,506	326,629,289	38,400
10	3,069	5,611	8,680	344,317,870	39,668
11	3,144	5,368	8,512	349,197,038	41,024
12	3,834	5,676	9,510	412,734,219	43,400
13	3,264	5,096	8,360	365,133,285	43,676
14	2,791	4,365	7,156	321,133,773	44,876
15 & Up	36,915	43,094	80,009	4,024,625,857	50,302
Totals	**101,899**	**161,601**	**263,500**	**$10,046,241,394**	**$38,126**

	Males	Females	Totals
Average			
Age	44.5	44.3	44.4
Service	12.6	10.3	11.2

Comparative Statement of Active Participants in Valuations

Valuation	General				Executive and Elected			
		Earnings				Earnings		
12/31	No.	$ Millions	Average	% Incr.	No.	$ Millions	Average	% Incr.
1981	169,389	$2,746	$16,213		1,280	$27	$21,320	
1982	169,415	2,948	17,400	7.3%	1,277	28	22,276	4.5%
1983	171,928	3,200	18,612	7.0%	1,314	30	22,510	1.0%
1984	174,193	3,339	19,167	3.0%	1,329	32	24,418	8.5%
1985	176,220	3,522	19,987	4.3%	1,449	39	26,721	9.4%
1986	178,895	3,812	21,309	6.6%	1,444	41	28,371	6.2%
1987	180,041	4,109	22,821	7.1%	1,491	46	30,664	8.1%
1988	183,498	4,362	23,770	4.2%	1,491	48	31,916	4.1%
1989	187,925	4,579	24,365	2.5%	1,492	50	33,450	4.8%
1990	196,101	4,948	25,234	3.6%	1,502	63	35,193	5.2%
1991	202,048	5,357	26,517	5.1%	1,496	56	37,535	6.7%
1992	207,882	5,747	27,643	4.2%	1,463	58	39,598	5.5%
1993	210,627	6,084	28,886	4.5%	1,452	60	41,476	4.7%
1994	214,280	6,342	29,595	2.5%	1,450	63	43,528	4.9%
1995	216,434	6,597	30,479	3.0%	1,475	67	45,135	3.7%
1996	219,265	6,832	31,160	2.2%	1,459	67	45,967	1.8%
1997	222,888	7,128	31,980	2.6%	1,455	71	48,881	6.3%
1998	227,017	7,457	32,847	2.7%	1,450	73	50,664	3.6%
1999*	229,657	7,704	34,445	4.9%	1,468	77	53,263	5.1%
2000	234,076	8,335	35,610	3.4%	1,486	83	55,582	4.4%
2001	238,944	8,746	36,605	2.8%	1,486	85	57,060	2.7%
2002	240,990	9,007	37,377	5.0%	1,476	87	58,865	5.9%

* After change in method of calculating average pay.

COMPARATIVE STATEMENT OF ACTIVE PARTICIPANTS IN VALUATIONS

Valuation	Protective With Social Security				Protective Without Social Security			
		Earnings				Earnings		
12/31	No.	$ Millions	Average	% Incr.	No.	$ Millions	Average	% Incr.
1981	8,945	$178	$19,871		2,573	$56	$21,822	
1982	9,029	195	21,573	8.6%	2,572	61	23,703	8.6%
1983	9,084	208	22,866	5.7%	2,556	65	25,257	6.6%
1984	9,226	217	23,551	3.0%	2,535	67	26,414	4.6%
1985	9,607	236	24,596	4.4%	2,641	72	27,388	3.7%
1986	9,852	255	25,875	5.2%	2,612	76	29,072	6.2%
1987	10,220	274	26,845	3.7%	2,585	79	30,503	4.9%
1988	10,392	286	27,560	2.7%	2,607	83	31,671	3.8%
1989	10,551	300	28,414	3.1%	2,582	83	32,267	1.9%
1990	11,167	332	29,738	4.7%	2,603	88	33,806	4.8%
1991	11,666	357	30,606	2.9%	2,585	92	35,650	5.5%
1992	12,160	390	32,049	4.7%	2,622	100	38,007	6.6%
1993	12,388	408	32,928	2.7%	2,611	103	39,371	3.6%
1994	12,825	436	34,005	3.3%	2,612	106	40,633	3.2%
1995	13,434	467	34,747	2.2%	2,630	112	42,478	4.5%
1996	13,820	495	35,807	3.1%	2,625	116	44,063	3.7%
1997	14,232	536	37,625	5.1%	2,654	121	45,568	3.4%
1998	14,810	570	38,509	2.3%	2,658	127	47,733	4.8%
1999*	16,483	649	39,864	3.5%	2,691	131	48,947	2.5%
2000	16,970	717	42,263	6.0%	2,685	135	50,423	3.0%
2001	17,981	772	42,914	1.5%	2,715	142	52,339	3.8%
2002	18,325	804	43,871	2.2%	2,709	148	54,603	4.3%

* *After change in method of calculating average pay.*

Financial Data

Development of Participant and Employer Reserves During the Year

	Participant Accumulation			Employer Accumulation			
	Fixed	**Variable**	**Total**	**Fixed**	**Variable**	**Total**	**Grand Total**
er 31, 2001	$12,930,621,784	$1,186,748,596	$14,117,370,380	$16,481,557,630	$1,191,276,042	$17,672,833,671	$31,790,204,051
	(20,742)	142,024	121,283	31,181,327	(4,385,421)	26,795,906	26,917,189
ary 1, 2002	12,930,601,042	1,186,890,621	14,117,491,662	16,512,738,957	1,186,890,621	17,699,629,578	31,817,121,240
ons	-	-	-	850,020,529	77,630,434	927,650,962	927,650,962
ions	423,254,170	79,548,547	502,802,717	-	-	-	502,802,717
	423,254,170	79,548,547	502,802,717	850,020,529	77,630,434	927,650,962	1,430,453,679
	23,636,524	510,453	24,146,977	-	-	-	24,146,977
ns	7,178,203	172,339	7,350,543	8,621,971	144,252	8,766,223	16,116,766
	8,626,225	1,664,200	10,290,425	15,969,676	992,110	16,961,786	27,252,211
	-	-	-	-	-	-	-
	39,440,953	2,346,992	41,787,944	24,591,647	1,136,361	25,728,009	67,515,953
	627,118,583	(228,042,257)	399,076,327	721,327,604	(228,158,726)	1,187,678,123	892,245,204
	(948,034,988)	(149,071,972)	(1,097,106,960)	(1,329,945,126)	(163,418,813)	(1,082,444,061)	(2,590,470,899)
	4,094,495	524,047	4,618,542	1,881,517	175,757	2,384,855	6,675,816
	9,998,427	(9,998,427)	-	(5,520,655)	5,520,655	-	-
	(306,823,482)	(386,588,609)	(693,412,091)	(612,256,660)	(385,881,127)	107,618,916	(1,691,549,879)
2002	**$13,007,590,778**	**$877,503,566**	**$13,885,094,344**	**$16,725,911,178**	**$877,503,565**	**$18,709,171,447**	**$31,488,509,087**
	5.0%	(19.9)%	2.9%	4.4%	(19.9)%	6.7%	2.9%

RESERVES FOR NON-RETIRED PARTICIPANTS
BALANCES BY VALUATION GROUP

	Reserve for Year Ended			
	December 31, 2002			December 31, 2001
	Participant	Employer	Total	(Total in $ Millions)
General	$12,547,771,218	$15,424,531,821	$27,972,303,039	$28,268.4
Executives & Elected	118,259,600	144,315,907	262,575,507	260.3
Protective with Soc. Sec.	914,294,001	1,606,931,411	2,521,225,412	2,528.5
Protective w/o Soc. Sec.	304,769,527	427,635,606	732,405,133	733.0
Total	**$13,885,094,346**	**$17,603,414,745**	**$31,488,509,091**	**$31,790.2**

The above schedule shows the distribution of Participant and Employer reserves among the valuation groups according to WRS accounting records. This separation of assets is needed because the valuation groups are separately experience rated. The assets are pooled for investment purposes.

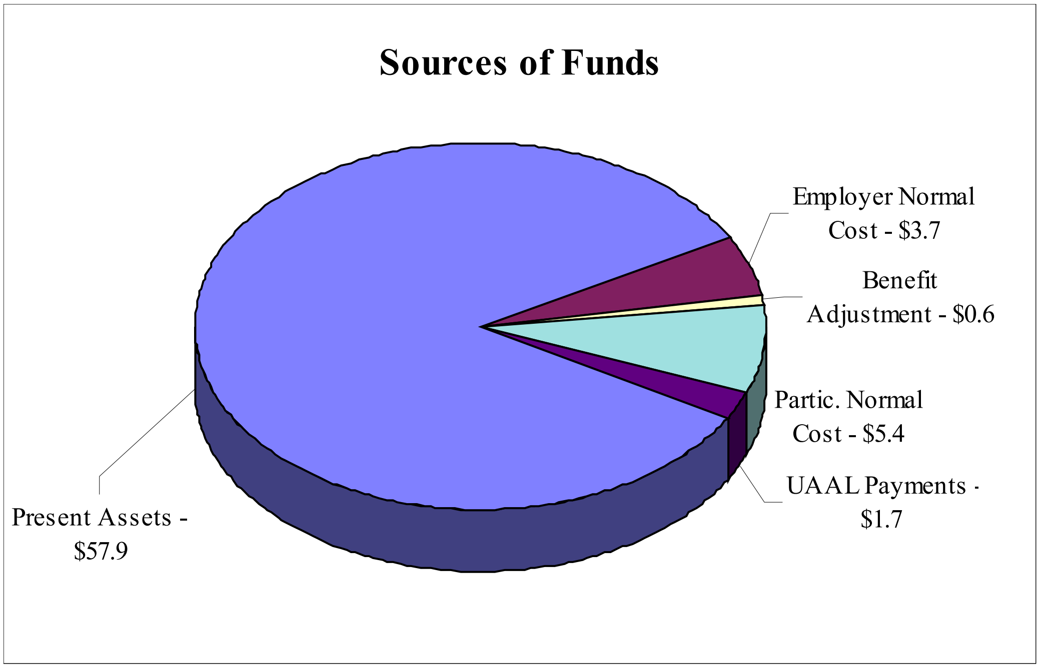
UNFUNDED ACTUARIAL ACCRUED LIABILITY
DECEMBER 31, 2002

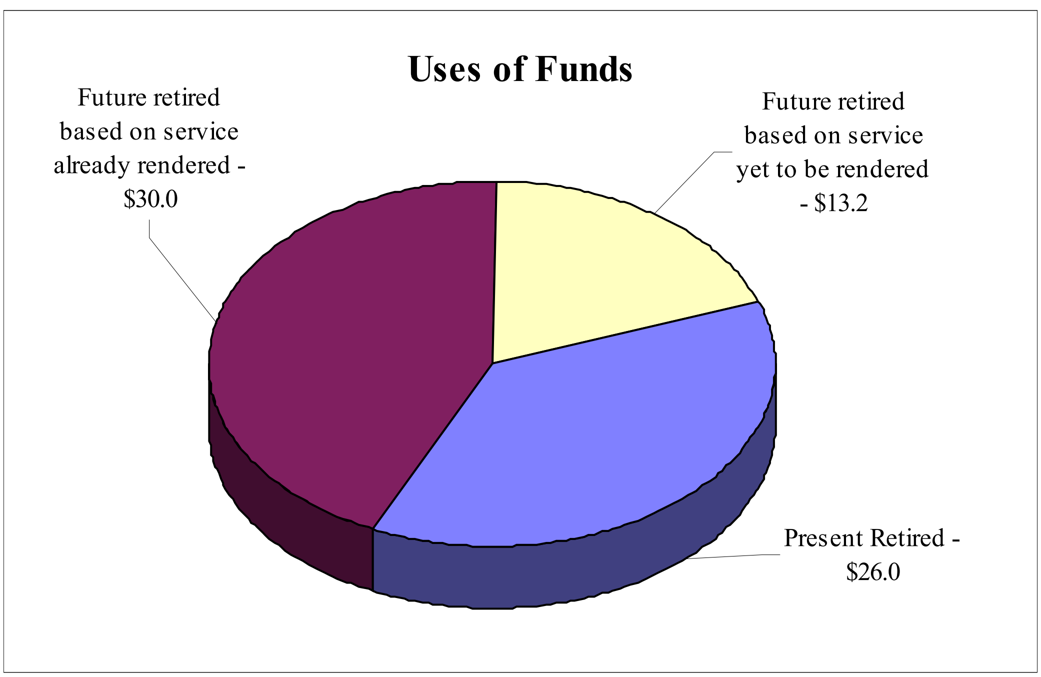
		Executives &	Protective Occupation		
	General	Elected Officials	With Soc. Sec	Without Soc. Sec	Totals
Balance January 1, 2002	$1,943,858,586	$14,856,395	$81,791,166	$38,405,128	$2,078,911,275
Plus: New Employers	4,042,645	3,383	0	0	4,046,028
Less: Adjustments	3,366	(12,163)	12	8,780	(5)
Less: Payments	(445,854,624)	(3,236,325)	(25,316,048)	(8,899,204)	(483,306,201)
Plus: Interest	120,163,998	928,903	4,518,010	2,361,176	127,972,087
Balance December 31, 2002	**$1,622,213,971**	**$12,540,193**	**$60,993,140**	**$31,875,880**	**$1,727,623,184**

The UAAL is affected year to year by new employers entering the Wisconsin Retirement System, amortization payments, interest assessments, and statutory changes in benefits provided by the Retirement System. The UAAL is being amortized as a level percent of payroll. Since the payroll is assumed to increase with inflation, UAAL payments will also increase. During the first several years of such an amortization program, the payments are less than the interest assessment and the UAAL balance expressed in terms of nominal dollars increases from year to year. However, it increases at a lower rate than the payroll. After several years the payments exceed the interest assessment and the outstanding dollar balance will begin to decline.

Valuation Results

FINANCING 69.3 BILLION* OF BENEFIT PROMISES FOR PRESENT ACTIVE AND RETIRED PARTICIPANTS DECEMBER 31, 2002





* *Present value of future benefits; all divisions combined.*

DEVELOPMENT OF ACTUARIAL PRESENT VALUES
DECEMBER 31, 2002
($ MILLIONS)

Present Value of Future Benefits for	General	Executives & Elected Officials	Protectives With Soc. Sec.	Protectives Without Soc. Sec.	Total
Active Participants					
Service Retirement	$31,488.7	$259.0	$3,344.1	$860.0	$35,951.8
Withdrawal	1,807.1	8.3	123.4	17.2	1,956.0
Death in Service	514.1	8.4	45.3	10.6	578.4
Disability	776.6	4.2	75.3	25.8	881.9
Variable Excess	(203.5)	(3.3)	(10.7)	(2.9)	(220.4)
Total Active	34,383.0	276.6	3,577.4	910.7	39,147.7
Inactive Participants	3,650.4	61.7	209.3	33.8	3,955.2
Total Active and Inactive	38,033.4	338.3	3,786.7	944.5	43,102.9
Additional Contributions					137.8
Present Retired					26,041.7
Actuarial Present Value of Future Benefits					**$69,282.4**

Computing the actuarial present value of future benefits is the first step in the actuarial valuation process. If the WRS had assets equal to that value, and if future experience were exactly in accordance with assumptions, then the present assets together with future investment income on those assets would be sufficient to pay promised benefits to all present participants, retirants and beneficiaries. *There is no need for the Retirement System to have* $69,282.4 *million immediately. What is needed, however, is a plan for obtaining the money in an orderly fashion. That is the purpose of the remainder of the actuarial valuation.*

EXPERIENCE AMORTIZATION RESERVE

Actuarial gains or losses arising from the difference between actual and assumed experience are reflected in the determination of the normal cost. The computed normal cost is made up of two parts: (i) the pure entry-age normal cost (EANC) determined without regard to past gains or losses, and (ii) an experience amortization component. Section 40.04(1) of the Wisconsin Statutes provides authority to maintain accounts and reserves determined to be "useful in achieving the funds' purposes..." A fundamental WRS objective is stable contribution rates. Accordingly, the experience portion of the normal cost is separately calculated each year and the amortization period is varied upward or downward in order to minimize short-term rate fluctuations. A positive EAR indicates amortization of gains. A negative EAR indicates amortization of losses.

DEVELOPMENT OF EAR AS OF DECEMBER 31, 2002

		Executives	Protective Occupation		
		& Elected	With	Without	
	General	Officials	Soc. Sec	Soc. Sec.	Total
	$ Millions				
1. Present Value of Future Benefits for non-retired	$38,033.4	$338.3	$3,786.7	$944.5	$43,102.9
2. Present Value of Future Entry Age Normal Costs	11,183.8	88.2	1,593.3	332.8	13,198.1
3. Entry Age Accrued Liability: (1)-(2)	26,849.6	250.1	2,193.4	611.7	29,904.8
4. Non-Retired Assets-WRS	27,972.3	262.6	2,521.2	732.4	31,488.5
-LTDI	193.8	1.7	24.1	3.6	223.2
-Total	28,166.1	264.3	2,545.3	736.0	31,711.7
5. Entry Age Unfunded Accrued Liability:(3)-(4)	(1,316.5)	(14.2)	(351.9)	(124.3)	(1,806.9)
6. WRS Frozen Unfunded Accrued Liability	1,622.2	12.5	61.0	31.9	1,727.6
7. EAR:(6)-(5)	**$2,938.7**	**$26.7**	**$412.9**	**$156.2**	**$3,534.5**

DEVELOPMENT OF CONTRIBUTION RATES FOR CALENDAR YEAR 2004

	General	Executive & Elected Officials	Protective Occupation With Soc. Sec	Protective Occupation Without Soc. Sec.	Total
	$ Millions				
Total Reported Earnings	$ 9,007.5	$ 86.9	$ 803.9	$ 147.9	$ 10,046.2
Present Value of Future Earnings	92,961.6	694.5	9,721.3	1,598.6	104,976.0
Present Value of Future Benefits	38,033.4	338.3	3,786.7	944.5	43,102.9
Non-Retired Assets	28,166.1	264.3	2,545.3	736.0	31,711.7
Unfunded Liability	1,622.2	12.5	61.0	31.9	1,727.6
Present Value of Future Normal Costs					
Future Service Portion	11,183.8	88.2	1,593.3	332.8	13,198.1
Exp. Amort. Res. Portion	(2,938.7)	(26.7)	(412.9)	(156.2)	(3,534.5)
Total	8,245.1	61.5	1,180.4	176.6	9,663.6
Normal Cost Amortization Years					
Future Service Portion	13.0	9.5	15.9	13.7	13.2
Exp. Amort. Res. Portion	21.0	20.0	15.2	20.0	
Unfunded Liability Amortization Years	26.0	26.0	26.0	26.0	26.0
	% 's of Active Member Payroll				
Normal Cost					
Future Service Portion	12.0 %	12.7 %	16.4 %	20.8 %	12.6 %
Exp. Amort. Res. Portion	(2.2)%	(2.1)%	(4.2)%	(7.1)%	(2.4)%
Total	9.8 %	10.6 %	12.2 %	13.7 %	10.2 %
2003 Total Normal Cost Rates	9.4 %	10.7 %	11.1 %	12.2 %	9.6 %
Change from 2003 (current)	0.4 %	(0.1)%	1.1 %	1.5 %	0.6 %
Allocation of Change					
Employer Normal Cost	0.2 %	0.0 %	0.5 %	0.8 %	0.2 %
Benefit Adjustment	0.2 %	0.0 %	0.0 %	0.0 %	0.2 %
Participant Normal Cost	0.0 %	0.0 %	0.5 %	0.8 %	0.1 %
Total Allocated Change	0.4 %	0.0 %	1.0 %	1.6 %	0.5 %
Unallocated Change *	0.0 %	(0.1)%	0.1 %	(0.1)%	0.1 %
2004 Normal Cost Rates					
Employer Normal Cost	**4.2 %**	**8.1 %**	**7.6 %**	**10.6 %**	**4.6 %**
Benefit Adjustment	**0.6 %**	**0.0 %**	**0.0 %**	**0.0 %**	**0.5 %**
Participant Normal Cost	**5.0 %**	**2.6 %**	**4.5 %**	**3.2 %**	**4.9 %**
Total Normal Cost	**9.8 %**	**10.7 %**	**12.1 %**	**13.8 %**	**10.0 %**
Average Unfunded Liability Amortization	1.0 %	0.8 %	0.4 %	1.2 %	1.0 %
Average Total Rate	**10.8 %**	**11.5 %**	**12.5 %**	**15.0 %**	**11.0 %**

* *Rate changes that do not round to an even 0.2% are not immediately allocated.*

SUMMARY STATEMENT OF PRESENT AND FUTURE RESOURCES
($ MILLIONS)

Present Resources and Expected Future Resources	December 31 2002	December 31 2001
A. Book Value of Present System Assets		
Annuity Reserves		
Fixed	$23,142.4	$21,979.7
Variable	2,899.3	3,901.8
Total Annuity Reserves	26,041.7	25,881.5
Non-Retired Participant Reserves		
Participant Contribution Balance	13,885.1	14,117.4
Additional Contributions	137.8	157.9
Employer Accumulation Balance	17,603.4	17,672.8
Adjustment for 62.13 Contributions	(29.3)	(31.5)
LTDI Reserve for Future Claims	223.2	226.2
Total Non-Retired Reserves	31,820.2	32,142.8
Total System Assets Used in Valuation	57,861.9	58,024.3
B. Actuarial Present Value of Future Participant Contributions	5,397.4	5,276.6
C. Actuarial Present Value of Future Benefit Adjustment Contributions	557.8	364.0
D. Actuarial Present Value of Future Employer Contributions for		
Unfunded Accrued Liabilities	1,727.6	2,078.9
Section 62.13	29.3	31.5
Normal Costs	3,708.4	3,119.0
Total	5,465.3	5,229.4
E. Total Present and Expected Future Resources	**$69,282.4**	**$68,894.3**

SUMMARY STATEMENT OF RETIREMENT SYSTEM OBLIGATIONS
($ MILLIONS)

Retirement System Obligations	December 31 2002	December 31 2001
A. To Annuitants and Beneficiaries Receiving Benefits		
Fixed Annuities		
Reported at Year End	$23,202.9	$21,283.6
Dividend Adjustment and Reserve	(60.5)	696.1
Total Fixed Annuities	23,142.4	21,979.7
Variable Annuities		
Reported at Year End	3,993.1	4,547.4
Distribution and Reserve	(1,093.8)	(645.6)
Total Variable Annuities	2,899.3	3,901.8
Total for Benefits in Pay Status	26,041.7	25,881.5
B. To Active and Inactive Participants For Benefits Based on		
Participant Contributions Made		
In the Past	13,885.1	14,117.4
In the Future	5,397.4	5,276.6
Additional Contributions Made in the Past	137.8	157.9
Benefit Adjustment Contributions Made in the Future	557.8	364.0
Employer Contributions	23,262.6	23,096.9
Total for Benefits Not Yet in Pay Status	43,240.7	43,012.8
C. Total Actuarial Value of Expected Future Benefits	**$69,282.4**	**$68,894.3**

SECTION TWO

Financial Reporting

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Valaution Date	December 31, 2002
Actuarial Cost Method	Frozen Entry Age
Amortization Method	Level Percent -- Closed Period
Remaining Period	26 years (completion in 2029)
Asset Valuation Method	5-Year Smoothed Market (Closed)
Actuarial Assumptions	
Investment Rate of Return	8.0%
Projected Salary Increases*	4.5% to 10.5%
Payroll Growth Rate	4.5%
Population Growth Rate	0.0%
Cost of Living Adjustments#	2.86%

* *Includes merit and seniority increases that vary by age plus wage inflation of 4.5%/year.*

\# *Non-guaranteed. Actual increases are based on recognized investment return in excess of 5%.*

STATEMENT OF NET PLAN ASSETS

	2002	2001
Assets		
Equity in Pooled Cash & Cash Equivalents	$ 951,976	$ 1,014,292
Securities Lending Collateral	2,189,877	2,933,732
Prepaid Expenses	1,868	2,162
Total Short Term Assets	3,143,721	3,950,186
Receivables		
Contributions	356,716	54,392
Prior Service Contributions	1,727,317	2,076,696
Benefits Overpayment	1,901	1,631
Due from other Trust Funds	1,165	906
Due from other State Agencies	0	0
Due from the Federal Government	0	0
Miscellaneous	146	154
Interest and dividends	200,276	197,609
Investment Sales	55,636	295,127
Total receivables	2,343,157	2,626,515
Investments at Fair Value		
Bonds	10,556,120	11,153,212
Private Placements	3,397,058	3,867,712
Stocks	32,144,057	38,165,042
Limited Partnerships	2,624,447	2,712,836
Mortgages	696,266	690,206
Real Estate	429,426	505,557
Other	0	4,733
Total investments	49,847,374	57,099,298
Capital Assets	99	0
Total Assets	**55,334,351**	**63,675,999**
Liabilities:		
Fixed Investment due Other Programs	1,014,076	1,147,304
VariableInvestment Due other Programs	12,666	11,449
Securities lending collateral	2,189,877	2,933,732
Annuities payable	188,140	203,122
Advance Contributions	352	352
Due to Other State Agencies	1,199	2,913
Miscellaneous Payables	69,291	52,009
Investment Payables	117,624	92,019
Total Liabilities	**3,593,225**	**4,442,900**
Net Assets in Trust for Pension Benefits	**$51,741,126**	**$59,233,099**

Statement of Changes in Assets ($ Thousands)

	Activity During Year	
	2002	2001
Additions:		
Contributions:		
Employer Contributions	$ 437,192	$ 418,319
Employe Contributions	526,149	506,712
Total Contributions	963,341	925,031
Investment Income:		
Net Appreciation (Depreciation)		
in Fair Value of Investments	(6,949,780)	(3,367,457)
Interest	726,766	1,030,654
Dividends	243,884	353,034
Securities Lending Income	52,167	160,319
Other	117,879	104,454
Less		
Current Income Distributed	(114,042)	(33,883)
SWIB Investment Expense	144,153	161,853
Investment Income Distributed to		
Securities Lending Rebates and Fees	41,404	138,997
Net Investment Income	(5,880,599)	(1,985,963)
Interest on Prior Service Receivable	127,972	153,991
Miscellaneous Income	4,082	211
Total Additions	(4,785,204)	(906,730)
Deductions:		
Benefits and Refunds:		
Retirement, Disability,		
and Beneficiary	2,650,778	2,489,998
Separation Benefits	38,470	40,740
Total Benefits and Refunds	2,689,248	2,530,738
Unusual Writeoff of receiveable	(33)	(784)
Administrative Expense	19,651	16,419
Total Deductions	2,708,866	2,546,373
Net Increase (Decrease)	(7,494,070)	(3,453,103)
Net Assets Held in Trust:		
Beginning of Year	$59,235,196 *	$62,686,199
End of Year	**$51,741,126**	**$59,233,099**

* *Beginning year value was adjusted from prior year ending value.*

SCHEDULE OF FUNDING PROGRESS
$ MILLIONS

Valuation Date 31-Dec	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Frozen Entry Age (b)	Unfunded AAL (UAAL) (b) - (a)	Funded Ratio (a)/(b)	Covered Payroll (c)	UAAL as a Percent of Covered Payroll [(b) - (a)] / (c)
1992	$22,943.2	$24,984.7	$2,041.5	91.8 %	$6,448.6	31.7 %
1993	25,436.5	27,533.0	2,096.5	92.4 %	6,834.9	28.1 %
1994	26,954.3	29,012.1	2,057.8	92.9 %	7,135.6	28.8 %
1995	30,246.2	32,348.9	2,102.7	93.5 %	7,454.3	28.2 %
1996	33,962.6	36,097.0	2,134.4	94.1 %	7,721.6	27.6 %
1997	38,584.6	40,762.0	2,177.4	94.7 %	8,084.6	26.9 %
1998	43,390.5	45,617.1	2,226.6	95.1 %	8,481.1	26.3 %
1999	49,403.7	51,549.5	2,145.8	95.8 %	8,826.0	24.3 %
2000	51,824.6	53,993.6	2,169.0	96.0 %	9,322.5	23.3 %
2001	58,024.3	60,134.7	2,110.4	96.5 %	9,917.7	21.3 %
2002	57,861.9	59,618.8	1,756.9	97.1 %	10,126.6	17.4 %

SOLVENCY TEST

Valuation Date 31-Dec	Valuation Assets	Accrued Liability For				Percent Funded For			
		Annuitants and Beneficiaries	Member Contribs.	Active & Inactive Members	Total	Annuitants and Beneficiaries	Participant Contributions	Active & Inactive Members	Total
1992	$22,943.2	$ 8,991.0	$ 7,026.3	$ 8,967.4	$24,984.7	100.0%	100.0%	77.2%	91.8%
1993	25,436.5	10,016.1	7,800.2	9,716.7	27,533.0	100.0%	100.0%	78.4%	92.4%
1994	26,954.3	10,704.2	8,197.6	10,110.3	29,012.1	100.0%	100.0%	79.6%	92.9%
1995	30,246.2	12,205.9	9,022.5	11,120.5	32,348.9	100.0%	100.0%	81.1%	93.5%
1996	33,962.6	13,964.6	9,865.1	12,267.3	36,097.0	100.0%	100.0%	82.6%	94.1%
1997	38,584.6	15,985.1	11,072.5	13,705.3	40,762.9	100.0%	100.0%	84.1%	94.7%
1998	43,390.5	18,352.3	11,710.3	15,554.5	45,617.1	100.0%	100.0%	85.7%	95.1%
1999	49,403.7	21,290.7	12,769.6	17,489.2	51,549.5	100.0%	100.0%	87.7%	95.8%
2000	51,824.6	22,918.0	12,869.7	18,205.9	53,993.6	100.0%	100.0%	88.1%	96.0%
2001	58,024.3	25,881.5	14,275.3	19,977.9	60,134.7	100.0%	100.0%	89.4%	96.5%
2002	57,861.9	26,041.7	14,022.9	19,554.2	59,618.8	100.0%	100.0%	91.0%	97.1%

CONTRIBUTIONS REQUIRED AND CONTRIBUTIONS MADE

Year Ended December 31	Annual Required Contribution	Percent Contributed
1992	350.0	100.0%
1993	370.1	100.0%
1994	385.9	100.0%
1995	402.6	100.0%
1996	435.3	100.0%
1997	445.9	100.0%
1998	449.6	100.0%
1999	435.2	100.0%
2000	422.1	96.3%
2001	412.9	99.6%
2002	426.9	99.8%

Employers did not make the full actuarially required contribution for 2000 and 2001 in accordance with the provisions of Act 11 of 1999.

SECTION THREE

Actuarial Methods and Assumptions

ACTUARIAL VALUATION METHOD

The actuarial funding method prescribed in the statute for WRS is the **Frozen Initial Liability Method**. Under this method, the amount of remaining unfunded accrued actuarial liabilities at any valuation date is affected only by the monthly amortization payments, compound interest, the added liability created by new employer units, and any added liabilities caused by changes in benefit provisions.

Actuarial gains or losses arising from the difference between actual and assumed experience are reflected in the determination of the normal cost. In this manner, experience gains or losses in any year are amortized (spread) over the average future working lifetime of the active participant group - a period of approximately 13 years. Hence, the computed normal cost is made up of two parts:

- The pure entry-age normal cost (EANC) determined without regard to past gains or losses, and

- an experience amortization component.

Section 40.04(1) of the Wisconsin Statutes provides authority to maintain accounts and reserves determined to be "useful in achieving the funds' purposes - - -". A fundamental WRS objective is stable contribution rates. Accordingly, based on the authority granted under Section 40.04, the experience portion of the normal cost is separately calculated each year and the amortization period is varied upward or downward in order to minimize short-term rate fluctuations.

ASSET VALUATION METHOD

An essential step in the valuation process is comparing valuation assets with computed liabilities. Computed liabilities result from actuarial calculations involving the covered population, the benefits, and actuarial assumptions. Valuation assets are those assets that are recognized and available to fund the System's liabilities. WRS assets are invested in the Fixed Investment Trust, and in the Variable Investment Trust, both of which are managed by the State of Wisconsin Investment Board (SWIB). Assets in the Variable Investment Trust are marked to market each year. Assets in the Fixed Investment Trust (most of the assets) are valued (or recognized) using an "asset valuation method."

Asset valuation methods are distinguished by the timing of the recognition of investment return. Total investment return is the sum of ordinary income and capital value changes. Under a book value approach, ordinary income is recognized immediately and capital gains (or losses) are recognized only when securities are sold. Book value investment return is directly affected by the timing of sales activity and underlying experience may be distorted. Under a pure market value approach, ordinary investment income and all capital value changes are recognized immediately. Because of market volatility, use of pure market values in retirement funding can result in volatile contribution rates and unstable financial ratios, contrary to WRS objectives.

The asset valuation method used for WRS valuations is statutory, and is referred to as the "Market Recognition Account" or MRA. Act 11 of 1999 closed the former Transaction Amortization Account (TAA) and created the Market Recognition Account. The MRA recognizes assumed return fully each year. Differences between actual and assumed return are phased in over a closed 5-year period. Through 2004, the amount recognized will include an additional gain of $1.9 billion per year related to the close out of the TAA. The objective is to give recognition to long-term changes in asset values while the minimizing effect of short-term fluctuations in the capital markets. In accordance with its smoothing objective, the MRA will tend to exceed the market value when the markets are doing poorly, and will fall short of the market value when markets are doing well. Some retirement systems set limits on the amount by which the recognized value of assets can differ from the market value.

The development of the Market Recognition Account is shown on the following page. The Fixed Investment Trust includes assets for other programs, such as Sick Leave, that are not related to the funding of the Wisconsin Retirement System, and does not include assets related to the Variable Investment Trust. Consequently, the asset value developed on the next page will not balance to the total system assets shown on page I-24. ETF Staff maintains the breakdown of the separate asset accounts.

	For the Year Ended December 31					
	2001	**2002**	**2003**	**2004**	**2005**	**2006**
Beginning of year						
a. Funding Value	$49,874,777,351	$52,808,943,798	$54,333,387,787	$52,659,137,685	$50,984,887,583	$48,153,347,214
b. Market value	54,503,938,418	52,012,351,144	46,388,922,709	46,388,922,709	46,388,922,709	46,388,922,709
End of year						
c. Market value	52,012,351,144	46,388,922,709	46,388,922,709	46,388,922,709	46,388,922,709	46,388,922,709
d. Non-investment cash flow						
(contributions minus benefits)	(1,101,913,600)	(986,559,051)				
e. Investment income						
e1. Total Investment Income	(1,389,673,675)	(4,636,869,385)				
e2. Assumed rate	8.0%	8.0%				
e3. Amount for immediate recognition	3,945,905,644	4,185,253,142	-	-	-	-
e4. Amount for phased-in recognition: e1-e3	(5,335,579,319)	(8,822,122,527)	-	-	-	-
f. Phased-in recognition of investment income						
f1. Current year: .2 x e4	(1,067,115,864)	(1,764,424,505)	-	-	-	-
f2. First prior year	(824,740,722)	(1,067,115,864)	(1,764,424,505)	-	-	-
f3. Second prior year	-	(824,740,722)	(1,067,115,864)	(1,764,424,505)	-	-
f4. Third prior year	-	-	(824,740,722)	(1,067,115,864)	(1,764,424,505)	-
f5. Fourth prior year	-	-	-	(824,740,722)	(1,067,115,864)	(1,764,424,505)
f6. Total MRA recognition	(1,891,856,586)	(3,656,281,091)	(3,656,281,091)	(3,656,281,091)	(2,831,540,369)	(1,764,424,505)
f7. Amount for TAA recognition	1,982,030,989	1,982,030,989	1,982,030,989	1,982,030,989	-	-
f8. Total recognized gain (loss)	90,174,403	(1,674,250,102)	(1,674,250,102)	(1,674,250,102)	(2,831,540,369)	(1,764,424,505)
g. Total Recognized Investment Income: e3 + f8	4,036,080,047	2,511,003,040	(1,674,250,102)	(1,674,250,102)	(2,831,540,369)	(1,764,424,505)
h. Funding value end of year: a + d + e3 + f8	52,808,943,798	54,333,387,787	52,659,137,685	50,984,887,583	48,153,347,214	46,388,922,709
i. Difference between market and funding values	(796,592,654)	(7,944,465,079)	(6,270,214,977)	(4,595,964,874)	(1,764,424,505)	-
j. Recognized Rate of Return	8.2%	4.8%				
k. Market Rate of Return	(2.6)%	(9.3)%				

SUMMARY OF ASSUMPTIONS
USED FOR ANNUAL ACTUARIAL VALUATIONS
ASSUMPTIONS ADOPTED BY ETF BOARD AFTER
CONSULTING WITH ACTUARY

ECONOMIC ASSUMPTIONS

The long-term rates of investment return used in making the valuation was 8.0% a year, compounded yearly.

Dividends for present and future retirees are assumed to be 2.86% each year.

Salary adjustment factors used to project earnings for each participant between the valuation date and the participant's retirement age are shown below for sample ages. This assumption is used to project a participant's current earnings to the earnings upon which benefits will be based.

% Merit and Longvity Increase Next Year					
			Protective		Exec. &
Age	Gen.	Teachers	With S.S.	w/o S.S.	Elec.
20	5.6 %	6.0 %	4.2 %	5.0 %	5.0 %
25	5.6 %	5.8 %	4.2 %	4.2 %	4.2 %
30	4.3 %	4.2 %	3.8 %	2.8 %	2.8 %
35	3.1 %	3.1 %	2.6 %	1.4 %	1.4 %
40	2.2 %	2.2 %	1.2 %	0.8 %	0.8 %
45	1.5 %	1.5 %	0.5 %	0.5 %	0.5 %
50	1.0 %	1.0 %	0.3 %	0.3 %	0.3 %
55	0.4 %	0.4 %	0.1 %	0.1 %	0.1 %
60	0.3 %	0.3 %	0.1 %	0.1 %	0.1 %
65	0.3 %	0.3 %	0.1 %	0.1 %	0.1 %

In addition to the merit and longevity increase, each person is assumed to get an economic increase of 4.5% each year. While this economic increase includes price inflation as a component, this valuation does not require a specific price inflation assumption, and none is made.

Population and Payroll Growth: The active population is assumed to remain constant. The active payroll is assumed to grow 4.5% per year. This increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities.

DECREMENT PROBABILITIES

The mortality table used to measure mortality for retired participants was the Wisconsin Projected Experience Table - 96 for men and women. Sample retirement values from this table are shown below. This assumption is used to measure the probabilities of participants dying before retirement and the probabilities of each benefit payment being made after retirement.

SINGLE LIFE RETIREMENT VALUES
WISCONSIN PROJECTED EXPERIENCE TABLE - 96 WITH 5% INTEREST

Sample Attained Ages	Present Value of $1 Monthly for Life		Future Life Expectancy (years)	
	Males	Females	Males	Females
40	$203.49	$213.51	39.7	45.1
45	193.18	205.50	34.9	40.3
50	180.98	195.63	30.2	35.4
55	166.76	183.57	25.7	30.7
60	150.13	168.96	21.4	26.1
65	131.03	151.77	17.3	21.6
70	110.56	131.92	13.5	17.3
75	90.31	110.50	10.3	13.4
80	70.75	89.29	7.6	10.1
85	54.29	69.03	5.5	7.3

For disability retirements basing mortality on an age 12 years older than the actual age recognizes impaired longevity.

ACTIVE PARTICIPANT MORTALITY RATES

Sample	Mortality Rates	
Attained Ages	Males	Females
20	0.000145	0.000085
25	0.000179	0.000113
30	0.000234	0.000153
35	0.000324	0.000212
40	0.000472	0.000305
45	0.000844	0.000454
50	0.001526	0.000699
55	0.002460	0.001057
60	0.003788	0.001782
65	0.006433	0.003126
70	0.011998	0.005513
75	0.020418	0.011278
80	0.035773	0.020671

This assumption is used to measure the probability of participants dying while in service. All participants who die in service are assumed married.

RATES OF RETIREMENT FOR THOSE ELIGIBLE TO RETIRE

Normal Retirement Pattern

	General		Public School		University		Protective*		Exec. &
Age	Male	Female	Male	Female	Male	Female	With S.S.	W/O S.S.	Elected
50							5%	2%	
51							5%	2%	
52							5%	4%	
53							31%	34%	
54							27%	36%	
55							27%	39%	
56							27%	42%	
57	25%	27%	30%	25%	20%	25%	27%	38%	8%
58	25%	27%	30%	22%	16%	15%	27%	37%	8%
59	25%	27%	30%	22%	15%	25%	27%	33%	12%
60	25%	28%	30%	25%	16%	17%	31%	31%	14%
61	28%	34%	30%	23%	18%	19%	26%	40%	20%
62	47%	50%	45%	36%	25%	32%	47%	40%	15%
63	45%	50%	45%	25%	22%	26%	38%	40%	15%
64	45%	50%	45%	40%	23%	37%	31%	40%	15%
65	45%	50%	55%	40%	25%	33%	34%	40%	20%
66	32%	39%	50%	31%	25%	32%	50%	40%	20%
67	29%	30%	40%	20%	25%	24%	50%	40%	20%
68	24%	25%	40%	20%	25%	26%	50%	40%	20%
69	22%	20%	40%	20%	25%	20%	50%	40%	20%
70	12%	20%	40%	20%	25%	20%	100%	100%	20%
71	12%	20%	40%	20%	25%	20%	100%	100%	20%
72	12%	20%	40%	20%	25%	20%	100%	100%	20%
73	12%	20%	40%	20%	25%	20%	100%	100%	20%
74	12%	20%	40%	20%	25%	20%	100%	100%	20%
75	100%	100%	100%	100%	100%	100%	100%	100%	100%

* *Includes early retirements.*

Early Retirement Pattern

	% Retiring Next Year						
	General		Public School		University		Exec. &
Age	Male	Female	Male	Female	Male	Female	Elected
55	7%	6%	13%	11%	5%	7.5%	6%
56	5%	6%	10%	7%	5%	7.5%	6%
57	4%	6%	6%	8%	5%	7.5%	6%
58	4%	6%	8%	9%	5%	7.5%	6%
59	4%	7%	9%	10%	5%	7.5%	6%
60	6%	9%	10%	13%	5%	7.5%	6%
61	9%	11%	15%	14%	5%	7.5%	6%
62	20%	20%	15%	20%	5%	7.5%	
63	20%	20%	15%	20%	5%	7.5%	
64	20%	20%	15%	20%	5%	7.5%	

The assumed rates of separation from employment prior to service retirement due to disability and other causes are shown below for sample ages. For other terminations it was assumed that a percentage depending on age of participants terminating after age 35 with 5 or more years service will leave their contributions on deposit and be paid a benefit at normal retirement age and that the remaining participants would take a separation benefit. The percentage taking a separation benefit is 100% at age 35, grading downward to 0% at retirement eligibility. All participants terminating prior to normal retirement age with less than 5 years of service were assumed to take a separation benefit.

ASSUMED TERMINATION RATES BY ATTAINED AGE AND YEARS OF SERVICE

		% of Active Participants Terminating								
		Protective		Public Schools		University		Exec. & Elected	Other	
Age &	Service	With Soc. Sec.	Without Soc. Sec.	Males	Females	Males	Females		Males	Females
	0	11.7%	4.9%	10.1%	10.0%	18.0%	18.9%	7.5%	17.6%	16.9%
	1	6.4%	2.5%	7.0%	7.0%	15.0%	16.2%	7.0%	10.6%	11.1%
	2	5.1%	2.4%	5.3%	6.0%	13.0%	14.9%	6.5%	7.9%	8.7%
	3	3.6%	2.3%	3.8%	5.4%	11.0%	12.8%	6.0%	6.8%	7.1%
	4	3.0%	2.2%	3.5%	4.0%	10.0%	10.5%	5.5%	6.0%	6.0%
25	5 & Over	2.1%	1.0%	3.5%	4.0%	10.0%	10.5%	5.0%	6.0%	6.0%
30		1.7%	1.0%	2.7%	3.5%	10.0%	10.5%	4.8%	4.6%	5.8%
35		1.2%	0.7%	1.5%	2.3%	9.0%	8.3%	4.6%	3.1%	4.5%
40		1.1%	0.7%	1.2%	1.5%	5.0%	5.3%	4.0%	2.1%	3.2%
45		1.1%	0.7%	1.0%	1.2%	3.3%	3.8%	3.2%	1.8%	2.9%
50		1.0%	0.7%	0.9%	1.2%	2.0%	2.9%	2.4%	1.5%	2.5%
55		1.0%	0.7%	0.9%	1.2%	1.0%	2.0%	2.0%	1.5%	1.8%
60		1.0%	0.7%	0.9%	1.2%	0.7%	2.0%	2.0%	1.5%	0.6%

DISABILITY RATES

	% of Active Participants Becoming Disabled									
	Protective		Public Schools		University		Exec. & Elected		Other	
Age	With SS	W/O SS	Males	Females	Males	Females	Males	Females	Males	Females
20	0.01%	0.04%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
25	0.01%	0.04%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
30	0.01%	0.05%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.04%
35	0.04%	0.06%	0.01%	0.01%	0.01%	0.05%	0.02%	0.02%	0.02%	0.05%
40	0.06%	0.11%	0.02%	0.02%	0.02%	0.08%	0.02%	0.02%	0.06%	0.07%
45	0.11%	0.19%	0.05%	0.07%	0.04%	0.07%	0.04%	0.04%	0.11%	0.10%
50	0.38%	0.59%	0.14%	0.13%	0.07%	0.13%	0.08%	0.08%	0.25%	0.16%
55	1.25%	0.65%	0.26%	0.19%	0.21%	0.20%	0.30%	0.30%	0.48%	0.29%
60	0.85%	0.50%	0.43%	0.28%	0.28%	0.30%	0.37%	0.37%	0.85%	0.41%

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Expenses	Assumed investment return is net of administrative and investment expenses.
Marriage Assumption	Everyone is assumed married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses.
Pay Increase Timing	Beginning of (calendar) year for most people. Middle of calendar year for teachers.
Decrement Timing	Decrements of all types are assumed to occur mid-year.
Eligibility Testing	Eligibility for benefits is determined based upon the age nearest birthday and total service (in all benefit groups) nearest whole year on the date the decrement is assumed to occur.
Benefit Service	Exact fractional service on the decrement date is used to determine the amount of benefit payable.
Non-Benefit Service	Liabilities for service in divisions other than the division in which the individual is currently active are calculated as indexed deferred vested benefits. People are assumed to retire at the earliest age that full benefits will become available. The liabilities are assigned to the division in which the service was rendered.
Decrement Relativity	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.

SECTION FOUR

The Valuation Process

FINANCIAL PRINCIPLES & OPERATIONAL TECHNIQUES OF THE WISCONSIN RETIREMENT SYSTEM

Benefit Promises Made Which Must be Paid For. A retirement program is an orderly means of handing out, keeping track of, and financing contingent retirement promises. As each participant of the Retirement System acquires a unit of service credit he is, in effect, handed an "IOU" which reads: "The Wisconsin Retirement System promises to pay you one unit of annuity benefits, payments in cash commencing when you retire."

The principal related financial question is: ***When shall the money required to cover the "IOU" be contributed?*** This year, when the benefit of the participant's unit of service is received? Or, some future year, when the "IOU" becomes a cash demand?

The law governing the Wisconsin Retirement System financing intends that the money to cover an "IOU" is contributed in the year the "IOU" is handed out. In this way contribution rates expressed as percents of participant payroll can be determined so as to remain approximately level from year to year and decade to decade as long as the basic experience and make-up of the group of participants does not change significantly. This means that for equivalent benefits each generation of Wisconsin taxpayers will contribute at approximately the same payroll rates.

Translated into actuarial terminology, the level percent-of-payroll contribution objective means that the contribution rate must total at least:

> **Normal Cost** (the current discounted value of benefits likely to be paid on account of participants' service rendered in the current year)
>
> ... plus ...
>
> **Interest on Unfunded Actuarial Accrued Liabilities** (unfunded actuarial accrued liabilities are the difference between (i) the present value of future benefits and (ii) the present value of future normal costs, and reduced by the assets on hand at the valuation date).

If contributions to the system are less than the preceding amount, the difference, **plus investment earnings not realized thereon**, will have to be contributed at some later time, or benefits will have to be reduced, to satisfy the fundamental equation under which all retirement programs must operate; that is:

B = C + I - E

Benefit payments to any group of participants and their beneficiaries cannot exceed

Contributions received on behalf of the group
... plus ...
Investment earnings on those contributions
... minus ...
Expenses incurred in operating the program.

There are retirement programs (Social Security is an example) designed to defer the bulk of contributions far into the future. The present contribution rate for such systems is artificially low, but is destined to increase relentlessly to a level which may be greatly in excess of the level percent-of-payroll rate.

A by-product of a level percent-of-payroll contribution objective is the accumulation of invested assets for varying periods of time. Investment income becomes the 3rd and largest contributor to the retirement system and the amount is directly related to the amount of contributions and investment performance.

Computing Contribution Rates To Finance Benefits. From a given schedule of benefits and from the data furnished, the actuary calculates the contribution rates **by means of an actuarial valuation** - the technique of assigning monetary values to the risks assumed in operating a retirement program.

The principal areas of risk assumption are:

- long-term ***rates of investment income*** likely to be generated by system assets
- ***rates of mortality*** among participants, retirants and beneficiaries
- ***rates of withdrawal*** of active participants
- ***rates of disability*** among participants
- ***patterns of salary increases*** to be experienced by participants
- the age and service ***distribution of actual retirements.***

In an actuarial valuation, the actuary projects the monetary effect of each risk assumption for each distinct experience group, for the next year and for each year over the next half-century or longer.

Once actual risk experience has occurred and been observed, it will not coincide exactly with assumed risk experience, regardless of the skill of the actuary, the completeness of the data, and the precision of the calculations. Each valuation provides a complete recalculation of assumed future risk experience and takes into account all past differences between assumed and actual risk experience. The result is a continual series of small adjustments to the computed contribution rate. From time to time it becomes necessary to adjust the package of risk measurements to reflect basic experience trends -- but not random year to year fluctuations.

GLOSSARY

Actuarial Accrued Liability. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

Accrued Service. The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Assumptions. Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

Actuarial Equivalent. A series of payments is called an actuarial equivalent of another series of payments if the two series have the same actuarial present value.

Actuarial Present Value. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Experience Gain (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

Normal Cost. The annual cost assumed, under the actuarial funding method, for current and subsequent plan years. Sometimes referred to as "current service cost". Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Plan Termination Liability. The actuarial present value of future plan benefits based on the assumption that there will be no future accruals for future service and salary. The termination liability will generally be less than the liabilities computed on a "going-concern" basis and is not normally determined in a routine actuarial valuation.

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liability. The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."

Valuation Assets. The value of current plan assets recognized for valuation purposes. Generally based on book value plus a portion of unrealized appreciation or depreciation.

June 4, 2003

Ms. Julie Reneau
Wisconsin Department of Employee
Trust Funds
801 West Badger Road
Madison, Wisconsin 53713

Re: Report of Twenty-Second Annual Actuarial Valuation

Dear Julie:

Enclosed are 75 copies of the December 31, 2002 regular annual actuarial valuations.

Sincerely,

Norman L. Jones

NLJ/lr

Enclosures