Gabriel Roeder Smith & Company
Consultants & Actuaries

WISCONSIN RETIREMENT SYSTEM

TWENTY-EIGHTH ANNUAL ACTUARIAL VALUATION

DECEMBER 31, 2008

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June 3, 2009

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, 2008 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 2010 calendar year in conformance with Chapter 40 of the Wisconsin Statutes. The change in the normal cost rates from last year are shown below:

General	Executive	Protective With SS	Protective Without SS
0.6%	0.4%	1.0%	1.4%

The valuations are based upon all current plan provisions related to General, Executive and Elected, and Protective Occupation employment with and without Social Security coverage. The provisions evaluated are summarized in Section One of this report.

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.

Actuarial valuations are based upon assumptions regarding future activity in specific risk areas including the rates of investment return and payroll growth, eligibility for the various classes of benefits, and longevity among retired lives. The Board adopts these assumptions after considering the advice of the actuary and other professionals. The assumptions and the methods comply with the requirements of Statement No. 25 of the Governmental Accounting Standards Board. Each actuarial valuation takes into account all prior differences between actual and assumed experience in each risk area and adjusts the contribution rates as needed. The December 31, 2008 valuations were based upon assumptions that were recommended in connection with a study of experience covering the 2003-2005 period.

To the best of our knowledge, this report is complete and accurate and was made in accordance with generally recognized actuarial methods. The actuaries submitting this statement are Members of the American Academy of Actuaries (MAAA), and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

The valuations were completed by qualified actuaries in accordance with accepted actuarial procedures as prescribed by the Actuarial Standards Board. It is our opinion that the Wisconsin Retirement System is operating in accordance with actuarial principles of level percent-of-payroll financing.

Respectfully submitted,

Norman L. Jones, FSA, MAAA

Brian B. Murphy, FSA, MAAA

Mark Buis, FSA, MAAA

NLJ/BBM/MB:lr

SECTION ONE

ACTUARIAL VALUATION RESULTS

OVERVIEW

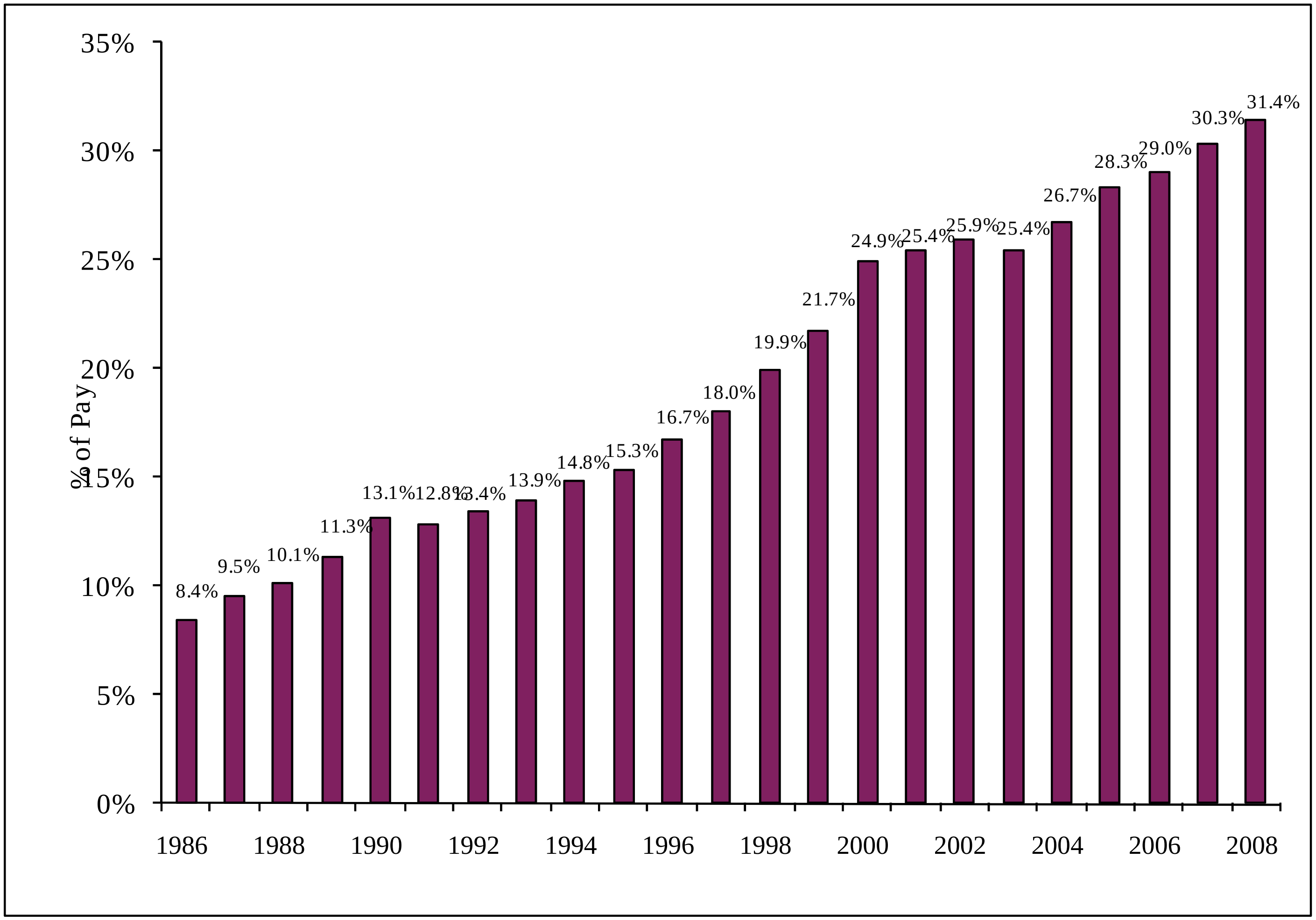
COMPARATIVE SUMMARY OF VALUATION RESULTS
CONTRIBUTION RATES FOR INDICATED YEARS
EXPRESSED AS A % OF PARTICIPANT PAYROLL

	General Participants		Executives & Elected Officials		Protective Occupation With Soc. Sec.		Protective Occupation Without Soc. Sec.	
	2010	**2009**	**2010**	**2009**	**2010**	**2009**	**2010**	**2009**
Employer Normal Cost	4.8%	4.5%	8.7%	8.5%	8.6%	8.1%	11.3%	10.6%
Benefit Adjustment Contribution	1.2%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Participant Normal Cost	5.0%	5.0%	3.2%	3.0%	5.5%	5.0%	3.9%	3.2%
Total Normal Cost	11.0%	10.4%	11.9%	11.5%	14.1%	13.1%	15.2%	13.8%
Unfunded Actuarial Accrued Liability (UAAL)	0.2%	0.2%	0.0%	0.0%	0.0%	0.1%	0.3%	0.3%
WRS Average Total	**11.2%**	**10.6%**	**11.9%**	**11.5%**	**14.1%**	**13.2%**	**15.5%**	**14.1%**

Under Section 40.05 of the 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.

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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
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 %
2003	2005	5.0 %	0.8 %	4.7 %	10.5 %	2.8 %	0.0 %	8.4 %	11.2 %
2004	2006	5.0 %	0.9 %	4.7 %	10.6 %	2.9 %	0.0 %	8.5 %	11.4 %
2005	2007	5.0 %	1.0 %	4.8 %	10.8 %	3.0 %	0.0 %	8.6 %	11.6 %
2006	2008	5.0 %	1.0 %	4.8 %	10.8 %	3.0 %	0.0 %	8.6 %	11.6 %
2007	2009	5.0 %	0.9 %	4.7 %	10.6 %	3.0 %	0.0 %	8.5 %	11.5 %
2008	2010	5.0 %	1.2 %	5.0 %	11.2 %	3.2 %	0.0 %	8.7 %	11.9 %

* *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
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 %
2003	2005	4.9 %	0.0 %	8.1 %	13.0 %	3.3 %		11.3 %	14.6 %
2004	2006	5.0 %	0.0 %	8.2 %	13.2 %	3.3 %		11.1 %	14.4 %
2005	2007	5.1 %	0.0 %	8.3 %	13.4 %	3.4 %		11.2 %	14.6 %
2006	2008	5.1 %	0.0 %	8.3 %	13.4 %	3.4 %		11.2 %	14.6 %
2007	2009	5.0 %	0.0 %	8.2 %	13.2 %	3.2 %		10.9 %	14.1 %
2008	2010	5.5 %	0.0 %	8.6 %	14.1 %	3.9 %		11.6 %	15.5 %

* *Employer normal cost plus weighted average of unfunded actuarial accrued liability contribution rates.*
@ *Benefit change.*
& *Act 11 of 1999 was implemented in 2001.*

Based upon this valuation, normal cost contribution rates increased for all groups primarily due to unfavorable investment performance. Detail concerning experience gains and losses in individual risk areas will be presented at a later date in the annual Gain Loss Analysis. Accumulated gains in the Experience Amortization Reserve (EAR) currently help to reduce the normal cost rate. Normal cost rates could be higher in the future if gains in the EAR account are reduced or fully amortized.

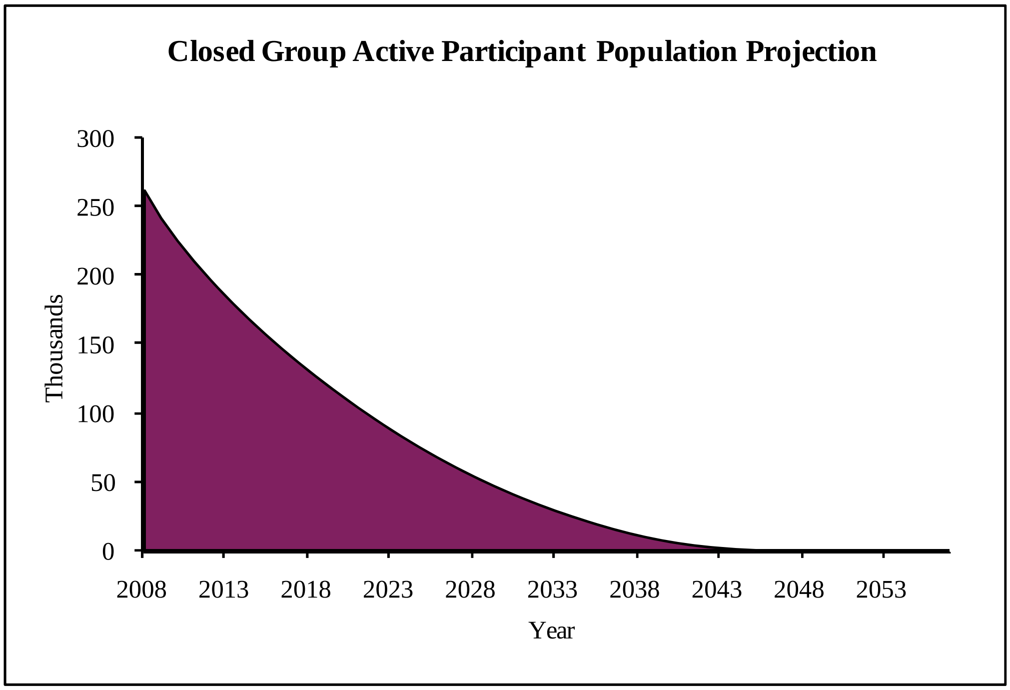
In total, during 2008, investment return was well below the assumed level of 7.8% on a market value basis (please see pages I-18 and III-3). However, under the asset valuation method, gains and losses are phased in over a five year period, resulting in a 3.1% return on an actuarial value of assets basis in the Core Fund. The Actuarial Value of Assets exceeds the Market Value of Assets by approximately 32% as of the valuation date. The statutory asset valuation method (see page III-3) will recognize all of the differences between actuarial value and market value ($18.6 billion) over four future years. The result will be strong upward pressure on contribution rates.

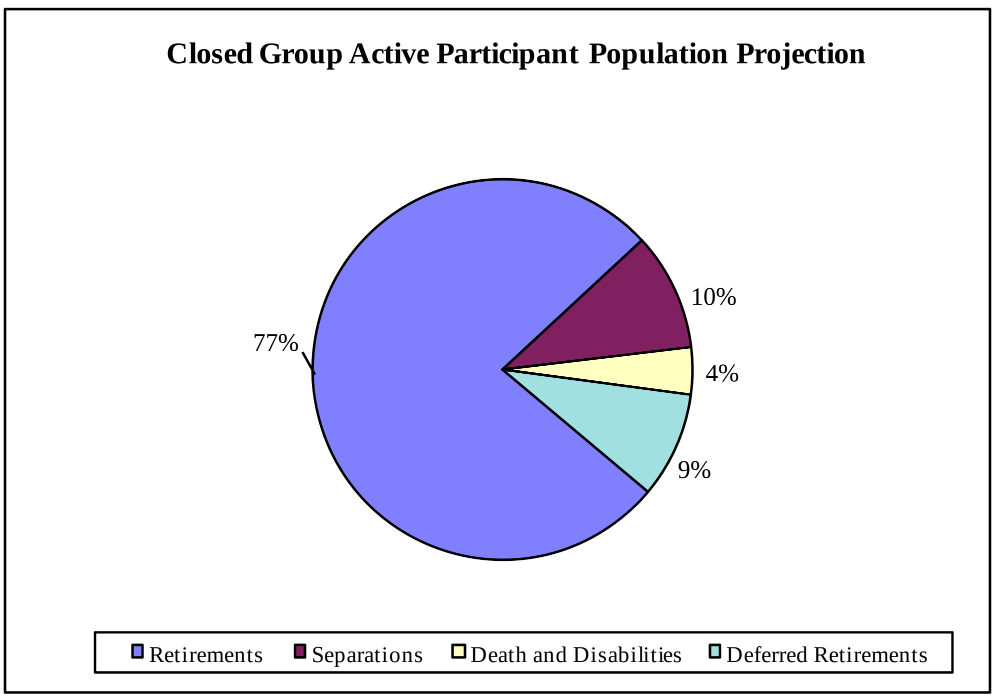
The statutory allocation of the rate change among Participant Normal Cost, Employer Normal Cost, and Benefit Adjustment Contribution is shown on page I-24. The original intent of the statutory allocation was most likely to permit participants to share equally with employers in good and bad investment results and in other actuarial results. The Participant Normal Cost contributions and the Benefit Adjustment Contributions are, in most cases, paid by the employers rather than by the participants. This means that good and bad experience is not really shared, since the employers are paying the whole contribution anyway. Rather, in some cases, good experience tends to reduce benefits payable to future retirees, and bad experience tends to increase such benefits. That counterintuitive effect occurs because certain benefits, such as money purchase minimum benefits, separation benefits, and some death benefits, depend on the nominal Participant Normal Cost rate: the higher the nominal participant normal cost rate, the higher the benefit, and conversely. The participant normal cost rate is presently lower for the Elected group and Protective Without Social Security group than it is for the other groups, resulting in reduced separation benefits for these participants. The WRS is a complicated retirement system, and changes should not be undertaken lightly. However, we do recommend a careful review of this portion of the interaction between the statutory allocation of contribution rate changes and money purchase benefits, with a view toward correcting the unintended impact on benefits.

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, 2008 regular annual actuarial valuation, it is our opinion that ***the Wisconsin Retirement System continues to operate in accordance with actuarial principles of level percent-of-payroll financing.***

EXPECTED DEVELOPMENT OF PRESENT POPULATION
DECEMBER 31, 2008





The charts show the expected future development of the present population in simplified terms. The retirement system presently covers 263,186 active members. Eventually, 10% of the population is expected to terminate covered employment prior to retirement and forfeit eligibility for an employer provided benefit. Nearly 86% 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 10 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 0.5%.

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.

For protective occupations, eligibility also can be met if a member has 15 years of service, is between the ages of 50 and 55 and unable to safely and efficiently perform one's duties.

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 contributions 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 core accounts (including the variable at core accounts) are credited with interest at the full (core) 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%

Participant variable accounts are credited with interest based on the earnings in the variable portfolio.

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.

Normal Form of Benefit. The normal form of benefit is a straight life annuity with no death benefits. Optional forms of benefit which are actuarially reduced are listed below:

- A life annuity with 60 or 180 monthly payments guaranteed.
- A joint survivorship annuity with 75% continued to beneficiary.
- A joint survivorship annuity with 100% continued to beneficiary.
- A joint survivorship annuity reduced 25% upon either your death or your beneficiary's death.
- A joint survivorship annuity with 100% continued to beneficiary combined with 180 monthly payments guaranteed.

Non-Retired Participant Data

ACTIVE PARTICIPANTS INCLUDED IN VALUATIONS
DECEMBER 31, 2008

Active participants included in the valuations totaled 263,186 with an annual payroll totaling $12,187.4 million, as follows:

Valuation Group	Number	Annual Earnings ($Millions)	Group Averages			
			Earnings	Age	Years of Service	Contribs.
General	238,994	$10,806.3	$45,216	46.0	11.8	$53,408
Executive Group & Elected Officials	1,430	100.6	70,316	54.6	13.6	90,261
Protective Occupation with Social Security	20,038	1,099.3	54,859	40.0	12.0	55,167
Protective Occupation without Social Security	2,724	181.2	66,502	40.9	14.1	83,026
Total Active Participants	**263,186**	**$12,187.4**	**$46,307**	**45.6**	**11.8**	**$54,049**
Prior Year	261,003	$11,581.8	$44,374	45.5	11.8	$55,459

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

INACTIVE PARTICIPANTS INCLUDED IN VALUATIONS
DECEMBER 31, 2008

Inactive participants included in the valuations totaled 140,039 as follows:

Valuation Group	Number	Group Averages		
		Age	Service	Money Purchase Balance
General	135,020	46.1	3.0	$13,098
Executive Group & Elected Officials	608	53.6	4.8	32,409
Protective Occupation with Social Security	4,220	39.8	3.7	15,561
Protective Occupation without Social Security	191	42.5	6.8	44,296
Total Inactive Participants	**140,039**	**45.9**	**3.0**	**$13,299**
Prior Year	137,411	45.6	3.0	$13,701

The valuations also included 3,751 QDRO cases whose average age was 50.5 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, 2008
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	198							198	$ 3,398,990
20-24	4,814	37						4,851	121,754,255
25-29	15,187	2,277	18					17,482	600,610,192
30-34	9,636	10,648	1,532	8				21,824	898,454,999
35-39	8,240	7,773	8,233	1,234	9			25,489	1,154,708,420
40-44	8,567	7,179	6,636	6,994	1,186	11		30,573	1,409,974,760
45-49	8,773	7,994	6,345	6,458	5,688	1,544	85	36,887	1,687,924,905
50-54	6,610	7,498	6,477	6,297	5,673	5,763	2,676	40,994	1,973,918,884
55	1,091	1,190	1,171	1,258	1,214	1,102	1,316	8,342	421,855,361
56	957	1,143	1,138	1,205	1,046	973	1,357	7,819	396,251,373
57	907	1,063	1,138	1,175	1,059	943	1,418	7,703	391,811,323
58	835	927	982	1,077	964	792	1,225	6,802	341,104,308
59	708	829	801	963	831	677	1,063	5,872	297,740,793
60	655	724	787	854	712	604	883	5,219	260,638,481
61	629	599	635	753	703	454	707	4,480	216,650,889
62	557	565	597	684	616	419	638	4,076	199,620,440
63	358	338	317	378	326	237	326	2,280	108,825,663
64	342	302	271	316	262	179	257	1,929	87,204,989
65	261	235	201	243	203	123	222	1,488	66,981,421
66	223	198	166	137	149	89	139	1,101	49,063,258
67	187	135	87	86	72	55	86	708	29,077,581
68	163	94	80	68	45	33	74	557	20,505,712
69	167	70	52	56	41	17	58	461	16,269,505
70	120	58	41	43	30	17	40	349	12,078,645
71	108	47	31	31	21	13	29	280	9,252,743
72	103	46	26	12	17	12	16	232	6,564,507
73	109	40	29	15	14	6	24	237	6,571,625
74	75	33	16	9	7	8	10	158	4,195,181
75 & Up	293	152	42	32	23	13	48	603	13,265,559
Totals	**70,873**	**52,194**	**37,849**	**30,386**	**20,911**	**14,084**	**12,697**	**238,994**	**$10,806,274,762**

EXECUTIVE GROUP AND ELECTED OFFICIALS
AS OF DECEMBER 31, 2008
BY ATTAINED AGE AND YEARS OF SERVICE

Attained Ages	Years of Service to Valuation Date 0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals No.	Valuation Payroll
20-24	2							2	$ 46,893
25-29	8							8	188,248
30-34	20	9						29	1,678,063
35-39	36	21	17	3				77	4,998,711
40-44	54	14	24	18	2			112	6,734,790
45-49	58	30	27	33	31	4	2	185	13,253,213
50-54	62	30	35	33	30	35	18	243	17,261,179
55	19	6	8	6	8	8	5	60	4,422,645
56	8	8	3	9	7	7	12	54	4,642,781
57	13	9	9	8	18	11	11	79	6,508,256
58	18	5	10	7	7	8	9	64	5,142,278
59	15	9	9	7	9	8	6	63	4,463,311
60	6	7	4	9	11	8	11	56	5,037,294
61	15	6	9	6	7	5	9	57	4,375,667
62	16	9	4	4	10	4	15	62	4,661,878
63	7	6	4	6	5	5	7	40	3,064,648
64	7	4	5	4	7	4	7	38	3,326,102
65	7	4	3	7	4	2	5	32	2,261,738
66	16	3	2	4	5	3	3	36	2,468,126
67	2		3	2	2		1	10	839,075
68	8	3	2	3	2	1	5	24	1,515,588
69	6		3		1	1	1	12	475,317
70	10	1	1	1	2	1	2	18	753,267
71	2		1	1			4	8	603,612
72	5	1	2			1		9	414,410
73	1	2			1			4	155,356
74	6	3		1		1	1	12	327,165
75 & Up	22	5	3	2		1	3	36	931,639
Totals	**449**	**195**	**188**	**174**	**169**	**118**	**137**	**1,430**	**$100,551,250**

Protective Occupation Participants With Social Security
as of December 31, 2008
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	9							9	$ 224,925
20-24	836	10						846	29,617,875
25-29	1,799	722	13					2,534	113,195,232
30-34	760	1,671	616	4				3,051	156,395,715
35-39	432	965	1,762	430	1			3,590	198,396,458
40-44	275	512	933	1,245	322	1		3,288	192,409,546
45-49	167	347	433	737	878	274	5	2,841	173,805,770
50	34	66	61	107	125	140	17	550	34,166,322
51	33	48	52	92	126	157	38	546	34,430,974
52	36	61	33	71	93	172	45	511	31,982,350
53	32	47	51	53	85	97	51	416	25,077,279
54	27	31	44	63	69	86	78	398	24,833,816
55	12	29	25	47	51	48	59	271	16,727,246
56	16	31	40	39	47	41	37	251	14,819,345
57	14	29	23	36	44	26	38	210	12,360,125
58	10	33	19	27	35	29	39	192	11,133,841
59	11	14	14	26	29	22	26	142	8,551,399
60	8	17	16	19	22	10	18	110	6,112,006
61	4	17	14	16	11	13	10	85	4,803,810
62	7	11	8	14	16	8	9	73	4,073,173
63	3	2	10	10	3	3	8	39	2,213,872
64	2	7	6	1	3	3	4	26	1,429,237
65	3	2	3	2	2		5	17	834,583
66	3	2		2	2		1	10	430,725
67	3	4		5		1		13	580,086
68	2	1	2					5	148,249
69	1	2	1	1				5	217,235
70 & Up	4	1	2				2	9	301,409
Totals	**4,543**	**4,682**	**4,181**	**3,047**	**1,964**	**1,131**	**490**	**20,038**	**$1,099,272,603**

PROTECTIVE OCCUPATION PARTICIPANTS WITHOUT SOCIAL SECURITY AS OF DECEMBER 31, 2008 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	73							73	$ 3,074,977
25-29	194	56						250	13,027,202
30-34	102	208	71					381	22,723,151
35-39	53	156	241	81				531	34,508,483
40-44	14	70	160	172	40			456	31,008,480
45-49	3	20	72	144	195	66		500	36,155,122
50	2	3	8	23	26	31	2	95	7,175,045
51	1	2	6	21	25	30	8	93	6,889,886
52		1	6	13	24	26	11	81	6,072,375
53			1	12	19	20	14	66	5,239,709
54			3	10	24	18	10	65	5,051,431
55	2	1	2	10	13	9	10	47	3,596,295
56			1	4	6	7	13	31	2,290,397
57			1	1	6	4	7	19	1,420,722
58			2	1	5	5	4	17	1,445,634
59		1		1	1	1	2	6	482,407
60						1		1	102,889
61		1				2	1	4	357,470
62		1	1			2	1	5	362,173
63									
64		1					1	2	88,610
65							1	1	79,809
Totals	**444**	**521**	**575**	**493**	**384**	**222**	**85**	**2,724**	**$181,152,267**

ACTIVE PARTICIPANTS
AS OF DECEMBER 31, 2008
BY YEARS OF SERVICE AND GENDER

Completed Years of Service	Males	Females	Totals	Valuation Payroll Total	Valuation Payroll Average
0	6,594	14,234	20,828	$ 493,575,561	$23,698
1	6,000	11,216	17,216	528,718,339	30,711
2	4,868	9,490	14,358	486,931,608	33,914
3	4,132	8,133	12,265	443,980,562	36,199
4	3,856	7,786	11,642	443,094,623	38,060
5	3,448	7,278	10,726	415,788,205	38,765
6	3,739	7,543	11,282	466,469,807	41,346
7	4,547	7,861	12,408	538,850,555	43,428
8	4,585	7,578	12,163	551,262,436	45,323
9	4,107	6,906	11,013	514,944,253	46,758
10	4,013	6,380	10,393	500,467,738	48,154
11	3,586	5,629	9,215	451,604,480	49,008
12	3,084	5,007	8,091	407,940,119	50,419
13	2,964	4,676	7,640	395,667,927	51,789
14	2,945	4,509	7,454	394,232,329	52,889
15 & Up	37,303	49,189	86,492	5,153,722,341	59,586
Totals	**99,771**	**163,415**	**263,186**	**$12,187,250,883**	**$46,307**

Average	Males	Females	Totals
Age	45.6	45.5	45.6
Service	12.9	11.2	11.8

COMPARATIVE STATEMENT OF ACTIVE PARTICIPANTS IN VALUATIONS

Valuation 12/31	General				Executive and Elected			
		Earnings				Earnings		
	No.	$ Millions	Average	% Incr.	No.	$ Millions	Average	% Incr.
1984	174,193	$3,339	$19,167		1,329	$32	$24,418	
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	2.1%	1,476	87	58,865	3.2%
2003	239,696	9,273	38,686	3.5%	1,468	86	58,336	-0.9%
2004	238,943	9,501	39,764	2.8%	1,469	89	60,379	3.5%
2005	237,501	9,661	40,678	2.3%	1,452	90	61,788	2.3%
2006	236,877	9,933	41,935	3.1%	1,436	93	64,480	4.4%
2007	237,124	10,278	43,344	3.4%	1,427	95	66,320	2.9%
2008**	238,994	10,806	45,216	4.3%	1,430	101	70,316	6.0%

* *After change in method of calculating average pay.*
** *Some groups had a 27 period payroll during 2008.*

COMPARATIVE STATEMENT OF ACTIVE PARTICIPANTS IN VALUATIONS

Valuation 12/31	Protective With Social Security				Protective Without Social Security			
		Earnings				Earnings		
	No.	$ Millions	Average	% Incr.	No.	$ Millions	Average	% Incr.
1984	9,226	$ 217	$23,551		2,535	$ 67	$26,414	
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%
2003	18,660	856	45,891	4.6%	2,714	154	56,673	3.8%
2004	18,964	896	47,266	3.0%	2,709	159	58,546	3.3%
2005	19,036	920	48,330	2.3%	2,689	162	60,241	2.9%
2006	19,297	977	50,622	4.7%	2,692	167	62,153	3.2%
2007	19,757	1,036	52,419	3.5%	2,695	174	64,449	3.7%
2008**	20,038	1,099	54,859	4.7%	2,724	181	66,502	3.2%

** After change in method of calculating average pay.*
*** Some groups had a 27 period payroll during 2008.*

Financial Data

DEVELOPMENT OF PARTICIPANT AND EMPLOYER RESERVES DURING THE YEAR

	Participant Accumulation			Employer Accumulation			
	Core	**Variable**	**Total**	**Core**	**Variable**	**Total**	**Grand Total**
Ending Balance December 31, 2007	$15,430,916,804	$1,196,956,534	$16,627,873,338	$21,939,448,189	$1,192,268,799	$23,131,716,988	$39,759,590,326
Closing Adjustments	5,505,287	1,667,302	7,172,590	83,177,077	6,355,037	89,532,114	96,704,704
Beginning Balance January 1, 2008	15,436,422,091	1,198,623,836	16,635,045,927	22,022,625,266	1,198,623,836	23,221,249,102	39,856,295,030
Revenues:							
Employer Contributions	-	-	-	694,669,165	88,710,348	783,379,513	783,379,513
Participant Contributions	529,537,842	89,748,285	619,286,127	-	-	-	619,286,127
Total Revenues	529,537,842	89,748,285	619,286,127	694,669,165	88,710,348	783,379,513	1,402,665,640
Expenses:							
Separations	26,092,067	1,230,375	27,322,442	-	-	-	27,322,442
Retirement Single Sums	12,341,521	329,881	12,671,402	13,172,008	419,982	13,591,990	26,263,392
Death Benefits	14,563,868	1,649,112	16,212,980	10,685,980	900,596	11,586,576	27,799,556
Disability Insurance	-	-	-	-	-	-	-
	52,997,456	3,209,367	56,206,823	23,857,988	1,320,577	25,178,566	81,385,389
Transfers:							
Earnings Allocation	492,504,126	(414,077,488)	78,426,638	698,423,292	(425,031,115)	273,392,177	351,818,815
Annuities Awarded	(1,277,230,518)	(106,797,241)	(1,384,027,759)	(1,577,316,939)	(109,791,340)	(1,687,108,279)	(3,071,136,038)
Intra-Fund Transfers	4,391,947	377,930	4,769,877	543,684	7,767	551,451	5,321,327
Inter-Fund Transfers	38,727,348	(38,727,348)	-	25,260,313	(25,260,313)	-	-
	(741,607,096)	(559,224,148)	(1,300,831,244)	(853,089,650)	(560,075,001)	(1,413,164,651)	(2,713,995,896)
Ending December 31, 2008	**$15,171,355,380**	**$725,938,606**	**$15,897,293,986**	**$21,840,346,792**	**$725,938,606**	**$22,566,285,398**	**$38,463,579,385**
Internal Rate of Return	3.3%	(35.4)%	0.5%	3.2%	(36.2)%	1.2%	0.9%

RESERVES FOR NON-RETIRED PARTICIPANTS
BALANCES BY VALUATION GROUP

	Reserve for Year Ended			
	December 31, 2008			December 31, 2007
	Participant	Employer	Total *	(Total in $ Millions)
General	$14,274,798,820	$19,467,769,925	$33,742,568,745	$34,987.5
Executives & Elected	94,777,701	193,654,913	288,432,614	298.0
Protective with Soc. Sec.	1,210,107,715	2,310,160,112	3,520,267,827	3,532.0
Protective w/o Soc. Sec.	317,609,747	594,700,449	912,310,196	942.2
Total	**$15,897,293,983**	**$22,566,285,399**	**$38,463,579,382**	**$39,759.6**

** Totals differ slightly from page I-18 due to rounding*

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.

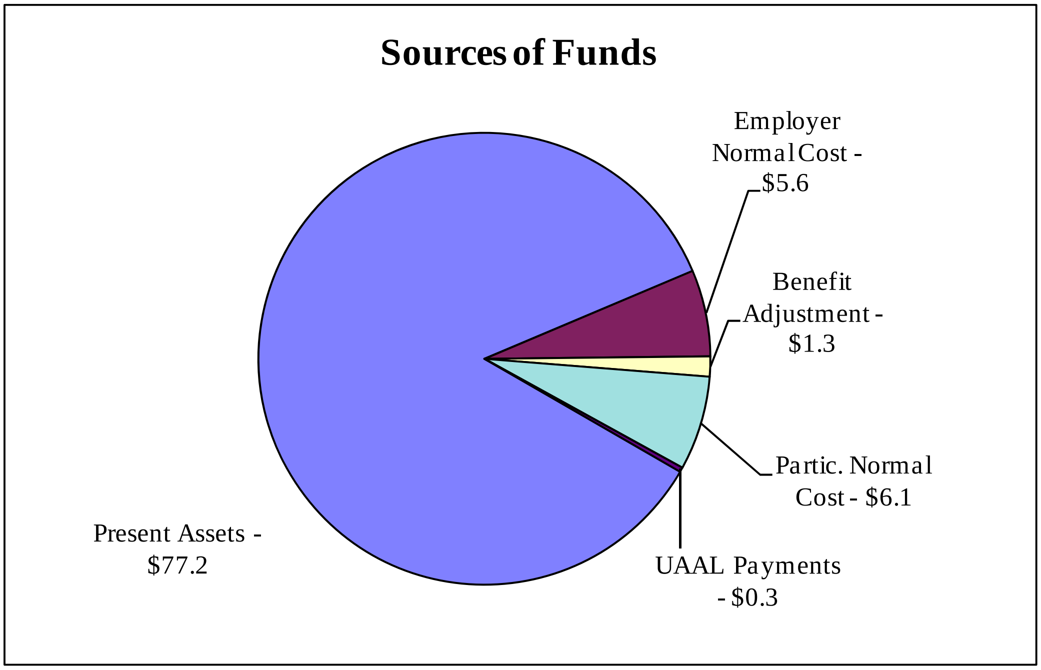
UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)
DECEMBER 31, 2008

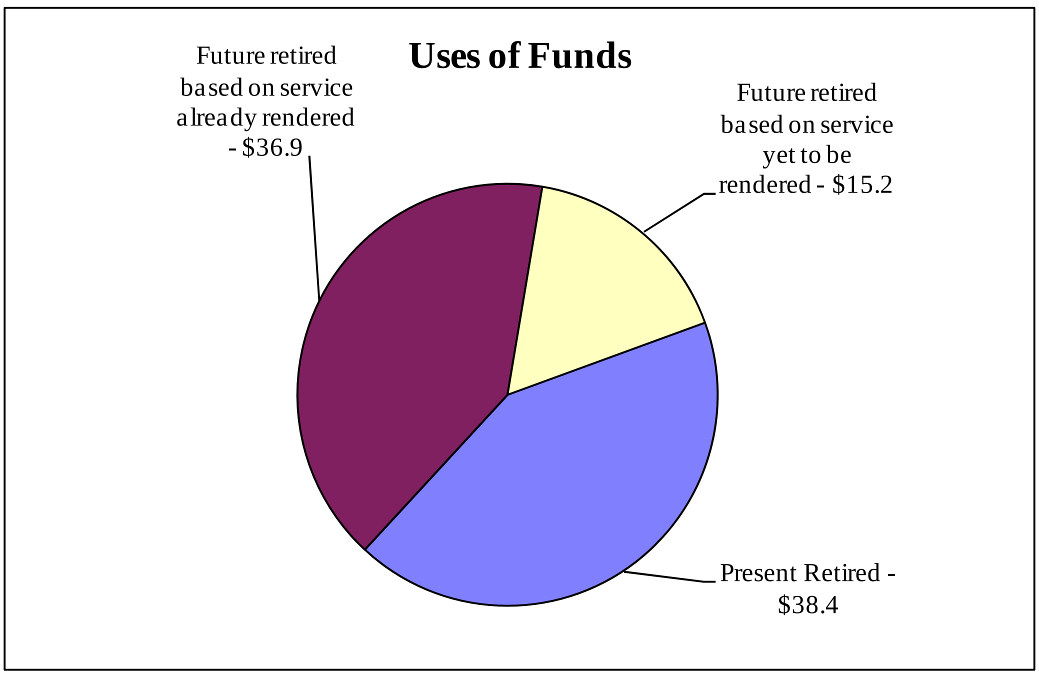
	General	Executives & Elected Officials	Protective Occupation With Soc. Sec	Protective Occupation Without Soc. Sec	Totals
Balance January 1, 2008	$271,354,027	$ 680,307	$8,027,668	$ 7,701,688	$287,763,690
Plus: New Employers	974,558	17,071	0	0	991,629
Less: Adjustments	(11)	0	0	0	(11)
Less: Payments	(51,430,152)	(34,825)	(1,661,622)	(1,307,385)	(54,433,984)
Plus: Interest	17,230,077	51,679	496,552	498,756	18,277,064
Balance December 31, 2008	**$238,128,499**	**$ 714,232**	**$ 6,862,598**	**$ 6,893,059**	**$252,598,388**

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 $90.5 BILLION* OF BENEFIT PROMISES FOR PRESENT ACTIVE AND RETIRED PARTICIPANTS DECEMBER 31, 2008





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

DEVELOPMENT OF ACTUARIAL PRESENT VALUES
DECEMBER 31, 2008
($ MILLIONS)

Present Value of Future Benefits for	General	Executives & Elected Officials	Protectives With Soc. Sec.	Protectives Without Soc. Sec.	Total
Active Participants					
Service Retirement	$37,823.2	$298.7	$4,582.2	$ 1,064.5	$43,768.6
Withdrawal	1,898.4	11.6	185.4	20.7	2,116.1
Death-in-Service	693.9	9.8	67.5	13.6	784.8
Disability	939.4	2.2	79.8	36.9	1,058.3
Variable Adjustment	(642.7)	(8.4)	(51.0)	(8.8)	(710.9)
Total Active	40,712.2	313.9	4,863.9	1,126.9	47,016.9
Inactive Participants	4,567.0	65.1	274.7	34.0	4,940.8
Active and Inactive	45,279.2	379.0	5,138.6	1,160.9	51,957.7
Additional Contributions					148.0
Present Retired					38,372.6
Actuarial Present Value of Future Benefits					**$90,478.3**

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, retirees and beneficiaries. *There is no need for the Retirement System to have* $90,478.3 *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 (EAR)

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, 2008

		Executives	Protective Occupation		
		& Elected	With	Without	
	General	Officials	Soc. Sec	Soc. Sec.	Total
	$ Millions				
1. Present Value of Future Benefits for Non-Retired	$45,279.2	$379.0	$5,138.6	$1,160.9	$51,957.7
2. Present Value of Future Entry Age Normal Costs	12,880.0	88.6	1,868.6	381.5	15,218.7
3. Entry Age Accrued Liability: (1)-(2)	32,399.2	290.4	3,270.0	779.4	36,739.0
4. Non-Retired Assets-WRS	33,742.6	288.4	3,520.3	912.3	38,463.6
-LTDI	139.9	1.5	27.6	6.2	175.2
-Total	33,882.5	289.9	3,547.9	918.5	38,638.8
5. Entry Age Unfunded Accrued Liability: (3)-(4)	(1,483.3)	0.5	(277.9)	(139.1)	(1,899.8)
6. WRS Frozen Unfunded Accrued Liability	238.1	0.7	6.9	6.9	252.6
7. EAR: (6)-(5)	**$ 1,721.4**	**$ 0.2**	**$ 284.8**	**$ 146.0**	**$ 2,152.4**

DEVELOPMENT OF CONTRIBUTION RATES FOR CALENDAR YEAR 2010

	General	Executive & Elected Officials	Protective Occupation With Soc. Sec	Protective Occupation Without Soc. Sec.	Total
	$ Millions				
Total Reported Earnings	$ 10,806.3	$ 100.6	$ 1,099.3	$ 181.2	$ 12,187.4
Present Value of Future Earnings	106,433.2	737.4	11,777.0	1,835.9	120,783.5
Present Value of Future Benefits	45,279.3	378.8	5,138.6	1,160.9	51,957.6
Non-Retired Assets	33,882.5	289.9	3,547.9	918.5	38,638.8
Unfunded Liability	238.1	0.7	6.9	6.9	252.6
Present Value of Future Normal Costs					
Future Service Portion	12,880.1	88.4	1,868.6	381.5	15,218.6
Exp. Amort. Res. Portion	(1,721.4)	(0.2)	(284.8)	(146.0)	(2,152.4)
Total	11,158.7	88.2	1,583.8	235.5	13,066.2
Normal Cost Amortization Years					
Future Service Portion	12.4	8.7	13.8	12.8	12.5
Exp. Amort. Res. Portion	20.0	20.0	20.0	20.0	
Unfunded Liability Amortization Years	20.0	20.0	20.0	20.0	20.0
	% 's of Active Member Payroll				
Normal Cost					
Future Service Portion	12.1 %	12.0 %	15.9 %	20.8 %	12.6 %
Exp. Amort. Res. Portion	(1.1)%	0.0 %	(1.8)%	(5.6)%	(1.2)%
Total	11.0 %	12.0 %	14.1 %	15.2 %	11.4 %
2009 Total Normal Cost Rates	10.4 %	11.5 %	13.1 %	13.8 %	10.7 %
Change from 2009 (current)	0.6 %	0.5 %	1.0 %	1.4 %	0.7 %
Allocation of Change					
Employer Normal Cost	0.3 %	0.2 %	0.5 %	0.7 %	0.3 %
Benefit Adjustment	0.3 %	0.0 %	0.0 %	0.0 %	0.3 %
Participant Normal Cost	0.0 %	0.2 %	0.5 %	0.7 %	0.1 %
Total Allocated Change	0.6 %	0.4 %	1.0 %	1.4 %	0.7 %
Unallocated Change *	0.0 %	0.1 %	0.0 %	0.0 %	0.0 %
2010 Normal Cost Rates					
Employer Normal Cost	**4.8 %**	**8.7 %**	**8.6 %**	**11.3 %**	**5.3 %**
Benefit Adjustment	**1.2 %**	**0.0 %**	**0.0 %**	**0.0 %**	**1.1 %**
Participant Normal Cost	**5.0 %**	**3.2 %**	**5.5 %**	**3.9 %**	**5.0 %**
Total Normal Cost	**11.0 %**	**11.9 %**	**14.1 %**	**15.2 %**	**11.4 %**
Average Unfunded Liability Amortization	0.2 %	0.0 %	0.0 %	0.3 %	0.1 %
Average Total Rate	**11.2 %**	**11.9 %**	**14.1 %**	**15.5 %**	**11.5 %**

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

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SUMMARY STATEMENT OF PRESENT AND FUTURE RESOURCES
($ MILLIONS)

Present Resources and Expected Future Resources	December 31 2008	December 31 2007
A. Book Value of Present System Assets		
Annuity Reserves		
Core	$35,798.1	$35,050.1
Variable	2,574.5	4,625.0
Total Annuity Reserves	38,372.6	39,675.1
Non-Retired Participant Reserves		
Participant Contribution Balance	15,897.3	16,627.9
Additional Contributions	148.0	167.5
Employer Accumulation Balance	22,566.3	23,131.8
Adjustment for 62.13 Contributions	0.0	0.0
LTDI Reserve for Future Claims	175.2	189.6
Total Non-Retired Reserves	38,786.8	40,116.8
Total System Assets Used in Valuation	77,159.4	79,791.9
B. Actuarial Present Value of Future Participant Contributions	6,215.7	5,929.4
C. Actuarial Present Value of Future Benefit Adjustment Contributions	1,277.2	914.2
D. Actuarial Present Value of Future Employer Contributions for		
Unfunded Accrued Liabilities	252.6	287.8
Section 62.13	0.0	0.0
Normal Costs	5,573.3	4,448.5
Total	5,825.9	4,736.3
E. Total Present and Expected Future Resources	**$90,478.2**	**$91,371.8**

SUMMARY STATEMENT OF RETIREMENT SYSTEM OBLIGATIONS
($ MILLIONS)

Retirement System Obligations	December 31 2008	December 31 2007
A. To Annuitants and Beneficiaries Receiving Benefits		
Core Annuities		
Reported at Year End	$36,551.5	$32,877.5
Dividend Adjustment and Reserve	(753.4)	2,172.6
Total Fixed Annuities	35,798.1	35,050.1
Variable Annuities		
Reported at Year End	4,491.0	4,563.7
Distribution and Reserve	(1,916.5)	61.3
Total Variable Annuities	2,574.5	4,625.0
Total for Benefits in Pay Status	38,372.6	39,675.1
B. To Active and Inactive Participants For Benefits Based on		
Participant Contributions Made		
In the Past	15,897.3	16,627.9
In the Future	6,215.7	5,929.4
Additional Contributions Made in the Past	148.0	167.5
Benefit Adjustment Contributions Made in the Future	1,277.2	914.2
Employer Contributions	28,567.4	28,057.7
Total for Benefits Not Yet in Pay Status	52,105.6	51,696.7
C. Total Actuarial Value of Expected Future Benefits	**$90,478.2**	**$91,371.8**

SECTION TWO

FINANCIAL REPORTING

This information is presented in draft form for review by the State's auditor. Please let us know if there are any changes so that we may maintain consistency with the State's financial statements.

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Valaution Date	December 31, 2008
Actuarial Cost Method	Frozen Entry Age
Amortization Method	Level Percent -- Closed Period
Remaining Period	20 years (completion in 2029)
Asset Valuation Method	5-Year Smoothed Market (Closed)
Actuarial Assumptions	
Investment Rate of Return	7.8%
Projected Salary Increases*	4.1% to 9.6%
Payroll Growth Rate	4.1%
Population Growth Rate	0.0%
Cost-of-Living Adjustments#	2.67%

* *Includes merit and seniority increases that vary by service plus wage inflation of 4.1%/year.*

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

STATEMENT OF NET PLAN ASSETS ($ THOUSANDS)

	2007*	2006
Assets		
Cash and Cash Equivalents	$ 1,724,377	$ 1,482,316
Securities Lending Collateral	6,124,099	6,843,721
Prepaid Expenses	4,896	3,171
Total Short Term Assets	7,853,372	8,329,208
Receivables		
Contributions	97,118	107,392
Prior Service Contributions	315,803	345,298
Benefits Overpayment	2,206	2,008
Due from other Trust Funds	3,016	2,094
Miscellaneous	9,572	2,205
Interest and dividends	212,574	260,427
Investment Sales	53,181	144,140
Total Receivables	693,470	863,564
Investments at Fair Value		
Fixed Income	23,501,853	21,040,235
Preferred Securities	199,272	368,981
Convertible Securities	41,034	39,670
Stocks	54,955,760	54,797,815
Limited Partnerships	5,744,092	3,815,157
Mortgages	133,219	300,093
Real Estate	484,591	394,352
Multi Asset Investments	900,015	844,778
Total investments	85,959,836	81,601,081
Capital Assets	25	58
Total Assets	**94,506,703**	**90,793,911**
Liabilities:		
Fixed Investment Due Other Programs	3,146,903	2,920,010
Variable Investment Due Other Programs	13,047	22,702
Securities Lending Collateral	6,124,099	6,843,721
Benefits Payable	246,316	227,541
Deferred Revenue	225	252
Due to Other Trust Funds	2,070	2,969
Miscellaneous Payables	90,398	100,520
Investment Payables	227,250	285,441
Total Liabilities	**9,850,308**	**10,403,156**
Net Assets in Trust for Pension Benefits	**$84,656,395**	**$80,390,755**

** 2008 Summary not yet available.*

STATEMENT OF CHANGES IN ASSETS ($ THOUSANDS)

	Activity During Year	
	2007*	2006*
Additions:		
Contributions:		
Employer Contributions	$ 601,540	$ 568,970
Employee Contributions	705,804	670,254
Total Contributions	1,307,344	1,239,224
Investment Income:		
Net Appreciation (Depreciation)		
in Fair Value of Investments	5,680,554	10,448,085
Interest	652,013	580,778
Dividends	508,952	460,459
Securities Lending Income	380,699	317,129
Other	91,545	74,421
Less		
Current Income Distributed	251,276	403,074
SWIB Investment Expense	212,143	210,660
Investment Income Distributed to		
Securities Lending Rebates and Fees	354,430	304,857
Net Investment Income	6,495,914	10,962,281
Interest on Prior Service Receivable	20,819	23,193
Miscellaneous Income	1,823	1,905
Total Additions	7,825,900	12,226,603
Deductions:		
Benefits and Refunds:		
Retirement, Disability,		
and Beneficiary	3,518,400	3,264,163
Separation Benefits	24,172	25,072
Total Benefits and Refunds	3,542,572	3,289,235
Unusual Write-off of receivable	0	0
Administrative Expense	17,689	17,134
Total Deductions	3,560,261	3,306,369
Net Increase (Decrease)	4,265,639	8,920,234
Net Assets Held in Trust:		
Beginning of Year	$80,390,755	$71,470,524
End of Year	**$84,656,395**	**$80,390,755**

** 2008 Summary not yet available.*

SCHEDULE OF FUNDING PROGRESS
$ MILLIONS

Valuation Date Dec. 31	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)
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 %
2003*	62,685.3	63,211.7	526.4	99.2 %	10,502.4	5.0 %
2004	66,209.4	66,622.3	412.9	99.4 %	10,897.6	3.8 %
2005	68,615.1	68,987.5	372.5	99.5 %	10,973.4	3.4 %
2006	73,415.3	73,735.8	320.5	99.6 %	11,308.2	2.8 %
2007	79,791.9	80,079.7	287.8	99.6 %	11,720.2	2.5 %
2008	77,159.4	77,412.0	252.6	99.7 %	12,289.6	2.1 %

* *Affected by prepayment of UAAL in connection with Pension Obligation Bond issued by the state and various local government employers.*

** *The funded ratios shown above are based on the statutory Frozen Initial Liability Valuation Method and are not suitable for comparison with plans using other valuation methods.*

SOLVENCY TEST ($ MILLIONS)

Valuation Date Dec. 31	Valuation Assets	Accrued Liability for: Annuitants and Beneficiaries	Member Contribs.	Active & Inactive Members	Total	Percent Funded for: Annuitants and Beneficiaries	Participant Contributions	Active & Inactive Members	Total
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%
2003	62,685.3	28,707.8	14,503.1	20,000.8	63,211.7	100.0%	100.0%	97.4%	99.2%
2004	66,209.4	30,829.9	15,050.3	20,742.1	66,622.3	100.0%	100.0%	98.0%	99.4%
2005	68,615.1	32,668.0	15,155.3	21,164.2	68,987.5	100.0%	100.0%	98.2%	99.5%
2006	73,415.3	35,774.7	15,902.4	22,058.7	73,735.8	100.0%	100.0%	98.5%	99.6%
2007	79,791.9	39,675.1	16,795.4	23,609.2	80,079.7	100.0%	100.0%	98.8%	99.6%
2008	77,159.4	38,372.6	16,045.3	22,994.1	77,412.0	100.0%	100.0%	98.9%	99.7%

CONTRIBUTIONS REQUIRED AND CONTRIBUTIONS MADE

Year Ended December 31	Annual Required Contribution	Percent Contributed
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%
2003	462.7	100.0%
2004	497.6	100.0%
2005	535.6	100.0%
2006	569.0	100.0%
2007	614.0	100.0%
2008	644.8	100.0%

Employers did not make the full actuarially required contribution for 2000 and 2001. In lieu of the full contribution, employers were allowed to recognize a credit due to a distribution from the TAA 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. The policy regarding the EAR amortization period is described below:

- The standard period is set 20 years.
- The standard period is reconsidered as part of each triennial experience study (no changes were made with the most recent experience study).
- Temporary interim changes in the period are made only when there are large, but mostly offsetting market gains and losses known to be flowing through the MRA that would otherwise result in contribution rate volatility. Large changes would be defined as those which, over a 2-year period, were expected to result in contribution rate changes of at least 0.4% of payroll.
- The minimum and maximum EAR amortization periods are 10 years and 30 years respectively.
- The amortization policy will be applied in the same manner to market gains and losses flowing through the MRA.

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 Core 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 Core 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 returns fully each year. Differences between actual and assumed returns are phased in over a closed 5-year period. 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 Core 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-23. ETF Staff maintains the breakdown of the separate asset accounts.

CORE INVESTMENT TRUST: MARKET RECOGNITION ACCOUNT

	For the Year Ended December 31						
	2006	2007	2008	2009	2010	2011	2012
Beginning of year							
a. Funding value	$64,459,957,721	$68,996,478,572	$75,700,688,814	$75,958,620,734	$71,952,267,230	$67,859,629,665	$62,702,423,929
b. Market value	67,277,918,278	75,891,313,801	80,431,789,317	57,333,553,657	57,333,553,657	57,333,553,657	57,333,553,657
End of year							
c. Market value	75,891,313,801	80,431,789,317	57,333,553,657	57,333,553,657	57,333,553,657	57,333,553,657	57,333,553,657
d. Non-investment cash flow (contributions minus benefits)	(1,672,109,754)	(1,828,269,957)	(2,077,514,949)				
e. Investment income							
e1. Total Investment Income	10,285,505,277	6,368,745,472	(21,020,720,710)				
e2. Assumed rate	7.8%	7.8%	7.8%				
e3. Amount for immediate recognition	4,962,664,422	5,310,422,800	5,823,630,644	-	-	-	-
e4. Amount for phased-in recognition: e1-e3	5,322,840,855	1,058,322,672	(26,844,351,354)	-	-	-	-
f. Phased-in recognition of investment income							
f1. Current year: .2 x e4	1,064,568,171	211,664,534	(5,368,870,271)	-	-	-	-
f2. First prior year	86,284,062	1,064,568,171	211,664,534	(5,368,870,271)	-	-	-
f3. Second prior year	518,169,729	86,284,062	1,064,568,171	211,664,534	(5,368,870,271)	-	-
f4. Third prior year	1,341,370,902	518,169,729	86,284,062	1,064,568,171	211,664,534	(5,368,870,271)	-
f5. Fourth prior year	(1,764,426,680)	1,341,370,902	518,169,729	86,284,062	1,064,568,171	211,664,534	(5,368,870,272)
f6. Total MRA recognition	1,245,966,184	3,222,057,398	(3,488,183,775)	(4,006,353,504)	(4,092,637,565)	(5,157,205,737)	(5,368,870,272)
f7. Amount for TAA recognition	-	-	-	-	-	-	-
f8. Total recognized gain (loss)	1,245,966,184	3,222,057,398	(3,488,183,775)	(4,006,353,504)	(4,092,637,565)	(5,157,205,737)	(5,368,870,272)
g. Total Recognized Investment Income: e3 + f8	6,208,630,606	8,532,480,198	2,335,446,870	(4,006,353,504)	(4,092,637,565)	(5,157,205,737)	(5,368,870,272)
h. Funding value end of year: a + d + e3 + f8	68,996,478,572	75,700,688,814	75,958,620,734	71,952,267,230	67,859,629,665	62,702,423,928	57,333,553,657
i. Difference between market and funding values	6,894,835,229	4,731,100,503	18,625,067,077	14,618,713,573	10,526,076,007	5,368,870,271	-
j. Recognized Rate of Return	9.8%	12.5%	3.1%				
k. Market Rate of Return	14.2%	8.1%	(30.1)%				

Summary of Assumptions Used for Annual Actuarial Valuations Assumptions Adopted by ETF Board After Consulting with Actuary

ECONOMIC ASSUMPTIONS

The investment return rate assumed in the valuations was 7.80% per year, compounded annually (net after administrative expenses).

The **Wage Inflation Rate** assumed in this valuation was 4.10% per year. The Wage Inflation Rate is defined to be the portion of total pay increases for an individual that are due to macro economic forces including productivity, price inflation, and labor market conditions. The wage inflation rate does not include pay changes rated to individual merit and seniority effects.

No specific **Price Inflation** assumption is required to perform this valuation, since there are no benefits that are linked to price increases. However, a price inflation assumption on the order of 3.0% to 3.5% would be consistent with the other economic assumptions.

The assumed **real rate of return** over wage inflation is defined to be the portion of total investment return that is more than the assumed total wage growth rate. Considering other economic assumptions, the 7.8% investment return rate translates to an assumed real rate of return over wage inflation of 3.7%. The assumed real rate of return over price inflation would be higher – on the order of 4.3% to 4.8%, considering both an inflation assumption and an average expense provision. Dividends for present and future retirees are assumed to be 2.67% each year.

The Active Member Population is assumed to remain constant. For purposes of financing the unfunded liabilities, total payroll is assumed to grow at the wage inflation rate – 4.10% per year.

Pay increase assumptions for individual active members are shown for sample services below. Part of the assumption for each age is for merit and/or seniority increase, and the other 4.10% recognizes wage inflation, including price inflation, productivity increases, and other macro economic forces.

% Merit and Longevity Increase Next Year						
		University	Public School	Protective		Exec. &
Service	Gen.	Teachers	Teachers	With S.S.	w/o S.S.	Elec.
1	3.5 %	3.5 %	5.5 %	5.0 %	4.8 %	1.2 %
2	3.5 %	3.5 %	5.5 %	5.0 %	4.8 %	1.2 %
3	3.2 %	3.4 %	5.1 %	4.4 %	4.1 %	1.2 %
4	2.9 %	3.3 %	4.7 %	3.7 %	3.5 %	1.2 %
5	2.6 %	3.2 %	4.4 %	3.1 %	2.8 %	1.1 %
10	1.6 %	2.9 %	2.8 %	1.6 %	1.4 %	1.0 %
15	1.3 %	2.4 %	1.6 %	1.0 %	0.7 %	0.9 %
20	1.1 %	1.9 %	0.9 %	0.9 %	0.6 %	0.8 %
25	0.9 %	1.3 %	0.5 %	0.7 %	0.5 %	0.6 %
30	0.7 %	1.2 %	0.3 %	0.7 %	0.4 %	0.4 %

DECREMENT PROBABILITIES

The mortality table used to measure mortality for retired participants was the Wisconsin Projected Experience Table - 2005 for men and women, as adopted by the Board in connection with the 2003-2005 Experience Study. 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 - 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. For disabled participants, the following table was used:

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

ACTIVE PARTICIPANT MORTALITY RATES

Sample Attained Ages	Mortality Rates	
	Males	Females
20	0.000259	0.000077
25	0.000337	0.000085
30	0.000409	0.000115
35	0.000434	0.000203
40	0.000547	0.000285
45	0.000805	0.000446
50	0.001316	0.000614
55	0.002317	0.001281
60	0.003375	0.002174
65	0.005178	0.003325
70	0.009079	0.005327
75	0.016700	0.009751
80	0.030153	0.016934

This assumption is used to measure the probability of participants dying while in service.

RATES OF RETIREMENT FOR THOSE ELIGIBLE TO RETIRE

Normal Retirement Pattern

Age	General		Public School		University		Protective*		Exec. &
	Male	Female	Male	Female	Male	Female	With S.S.	W/O S.S.	Elected
50							8%	3%	
51							8%	3%	
52							8%	7%	
53							30%	25%	
54							20%	30%	
55							20%	30%	
56							18%	30%	
57	25%	20%	40%	30%	20%	15%	18%	35%	15%
58	25%	20%	35%	30%	15%	15%	18%	30%	15%
59	25%	20%	30%	30%	15%	15%	18%	20%	15%
60	25%	20%	30%	30%	15%	15%	18%	20%	15%
61	20%	20%	30%	35%	17%	25%	18%	20%	15%
62	35%	30%	40%	40%	17%	25%	20%	20%	10%
63	35%	30%	40%	35%	17%	20%	30%	20%	10%
64	25%	25%	25%	25%	17%	20%	20%	20%	10%
65	25%	25%	25%	30%	20%	20%	30%	40%	10%
66	25%	25%	25%	25%	20%	20%	25%	40%	20%
67	10%	15%	15%	25%	20%	20%	25%	40%	20%
68	10%	10%	15%	20%	20%	20%	25%	40%	20%
69	10%	10%	20%	20%	20%	20%	25%	40%	20%
70	10%	10%	20%	20%	20%	20%	100%	100%	10%
71	10%	10%	20%	20%	20%	20%	100%	100%	10%
72	10%	10%	20%	20%	20%	20%	100%	100%	10%
73	10%	10%	20%	20%	20%	20%	100%	100%	10%
74	10%	10%	20%	20%	20%	20%	100%	100%	10%
75	100%	100%	100%	100%	100%	100%	100%	100%	100%

* *Includes early retirements.*

Early Retirement Pattern

Age	% Retiring Next Year						
	General		Public School		University		Exec. &
	Male	Female	Male	Female	Male	Female	Elected
55	7.50%	5.25%	15.00%	11.00%	5.00%	6.00%	6.00%
56	7.50%	5.25%	15.00%	11.00%	5.00%	6.00%	6.00%
57	4.00%	4.00%	15.00%	11.00%	3.00%	5.00%	4.00%
58	5.00%	5.00%	15.00%	12.00%	3.50%	6.00%	4.00%
59	5.00%	5.00%	10.00%	12.00%	3.50%	8.00%	4.00%
60	7.50%	7.50%	15.00%	15.00%	5.50%	10.00%	6.00%
61	7.00%	7.50%	15.00%	15.00%	7.50%	7.50%	6.00%
62	18.00%	15.00%	25.00%	25.00%	10.00%	15.00%	
63	18.00%	15.00%	25.00%	20.00%	9.00%	15.00%	
64	15.00%	15.00%	15.00%	15.00%	8.00%	15.00%	

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 50% 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								
		With Soc. Sec.	Without Soc. Sec.	Public Schools		University		Exec. & Elected	General	
Age	Service			Males	Females	Males	Females		Males	Females
	0	12.0%	5.0%	14.0%	11.0%	20.0%	20.0%	16.0%	21.0%	20.0%
	1	6.5%	3.0%	11.0%	9.0%	16.0%	17.0%	14.0%	13.0%	14.0%
	2	4.5%	2.0%	7.0%	7.0%	13.0%	14.0%	12.0%	9.5%	10.0%
	3	4.1%	1.5%	5.2%	6.0%	11.0%	12.0%	10.0%	7.5%	8.0%
	4	3.2%	1.4%	4.0%	5.0%	9.0%	10.0%	9.5%	5.5%	7.0%
	5	3.0%	1.3%	3.2%	4.3%	7.5%	9.0%	9.0%	4.5%	6.0%
	6	2.7%	1.2%	2.7%	3.8%	6.0%	8.0%	8.5%	4.0%	5.0%
	7	2.5%	1.1%	2.5%	3.2%	5.0%	7.0%	8.0%	3.8%	4.5%
	8	2.3%	1.0%	2.3%	2.7%	4.0%	6.3%	7.5%	3.5%	4.3%
	9	2.0%	0.9%	2.0%	2.5%	3.5%	5.5%	7.0%	3.2%	4.0%
25	10 & Over	2.0%	0.9%	2.0%	2.5%	3.5%	5.5%	7.0%	3.0%	4.0%
30		2.0%	0.8%	1.8%	2.2%	3.5%	5.5%	7.0%	3.0%	3.7%
35		1.8%	0.8%	1.4%	1.8%	3.5%	5.5%	7.0%	2.6%	3.2%
40		1.4%	0.8%	1.2%	1.4%	3.4%	4.7%	5.8%	2.0%	2.7%
45		1.2%	0.7%	1.1%	1.2%	2.8%	3.4%	4.7%	1.6%	2.2%
50		1.0%	0.7%	0.9%	1.0%	1.9%	2.1%	4.2%	1.3%	1.9%
55		1.0%	0.7%	0.9%	1.0%	1.5%	1.6%	4.0%	1.3%	1.8%
60		1.0%	0.7%	0.9%	1.0%	1.5%	1.6%	4.0%	1.3%	1.8%

Disability Rates

	% of Active Participants Becoming Disabled									
	Protective		Public Schools		University		Exec. & Elected		General	
Age	With SS	W/O SS	Males	Females	Males	Females	Males	Females	Males	Females
20	0.02%	0.05%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
25	0.02%	0.05%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
30	0.02%	0.05%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.04%
35	0.03%	0.06%	0.01%	0.01%	0.01%	0.04%	0.01%	0.01%	0.02%	0.05%
40	0.05%	0.08%	0.02%	0.02%	0.01%	0.06%	0.01%	0.01%	0.05%	0.07%
45	0.07%	0.16%	0.05%	0.08%	0.03%	0.05%	0.02%	0.02%	0.10%	0.10%
50	0.11%	0.92%	0.14%	0.16%	0.05%	0.10%	0.04%	0.04%	0.23%	0.15%
55	1.73%	0.68%	0.26%	0.23%	0.15%	0.15%	0.15%	0.15%	0.43%	0.28%
60	2.92%	0.20%	0.43%	0.34%	0.20%	0.23%	0.19%	0.19%	0.77%	0.39%

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.
Pay Annualization:	Reported pay for members with less than twelve contributing months was annualized by the ratio of 12 to the number of contributing months in the year.
Final Average Salary:	For present value of future benefit purposes, final average salary was calculated in accordance with pay increase assumptions, but was not permitted to fall below the final average salary reported in the data.
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Decrement Operation:	All decrements operate during the first 10 years of service.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
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. Benefits are indexed in accordance with the salary adjustment factors (shown on page III-4) for the division where the member was formerly employed. 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.
Service Credit Accruals:	It is assumed that members accrue one year of service credit per year.

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS (CONCLUDED)

Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.

Normal Form of Benefit: The assumed normal form of benefit is a straight life benefit, except where otherwise noted.

Disability Valuation: The Post-10/15/92 Disability benefit consists of one benefit payable to age 65 (10% of FAE) plus another benefit payable on and after age 65 (WRS benefit accrued to date of disability plus 7% of FAE during disability). For valuation purposes, the 7% of FAE portion of the post 65 benefit was added to the 40% of FAE benefit prior to age 65.

Additionally, there are certain cases in which the disability benefit at the member's normal retirement age is larger than the member's benefit under the normal retirement benefit formula. To account for this, an adjustment is made to the member's normal retirement benefit present value calculation which is equal to 15% of the difference between the present values of the LTDI benefit and the normal retirement benefit.

Variable Excess Benefits: These benefits are valued by increasing the otherwise calculated liabilities by an amount equal to twice the value of the variable excess. (The variable excess is the difference between the variable account and the variable at core account, summed over all participants.)

Liability Adjustments: Final Average Salaries were increased 1% to account for additional contingencies in actual benefit amount calculated at the time of retirement.

Amortization Payoff Reserve: Additional reserves in the amount of $159,106,363 (discounted from the year 2029 to the current valuation date) were added to general group liabilities to account for the possibility that some non-state employers may never be able to pay off their unfunded actuarial accrued liability.

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

C**ontributions** received on behalf of the group
... plus ...
I**nvestment** earnings on those contributions
... minus ...
E**xpenses** 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 third 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.

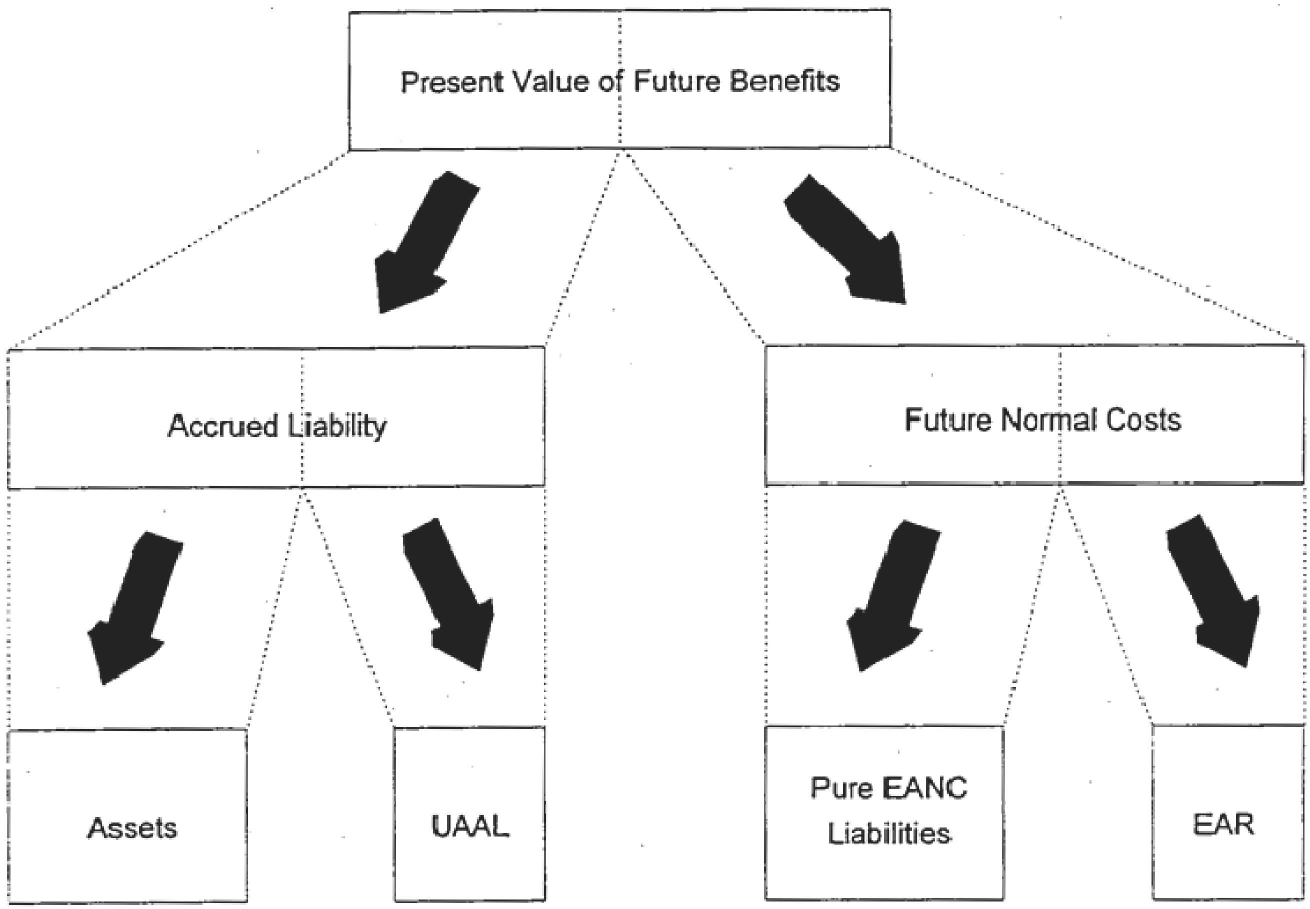
The principal areas of risk assumption are:

- 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***

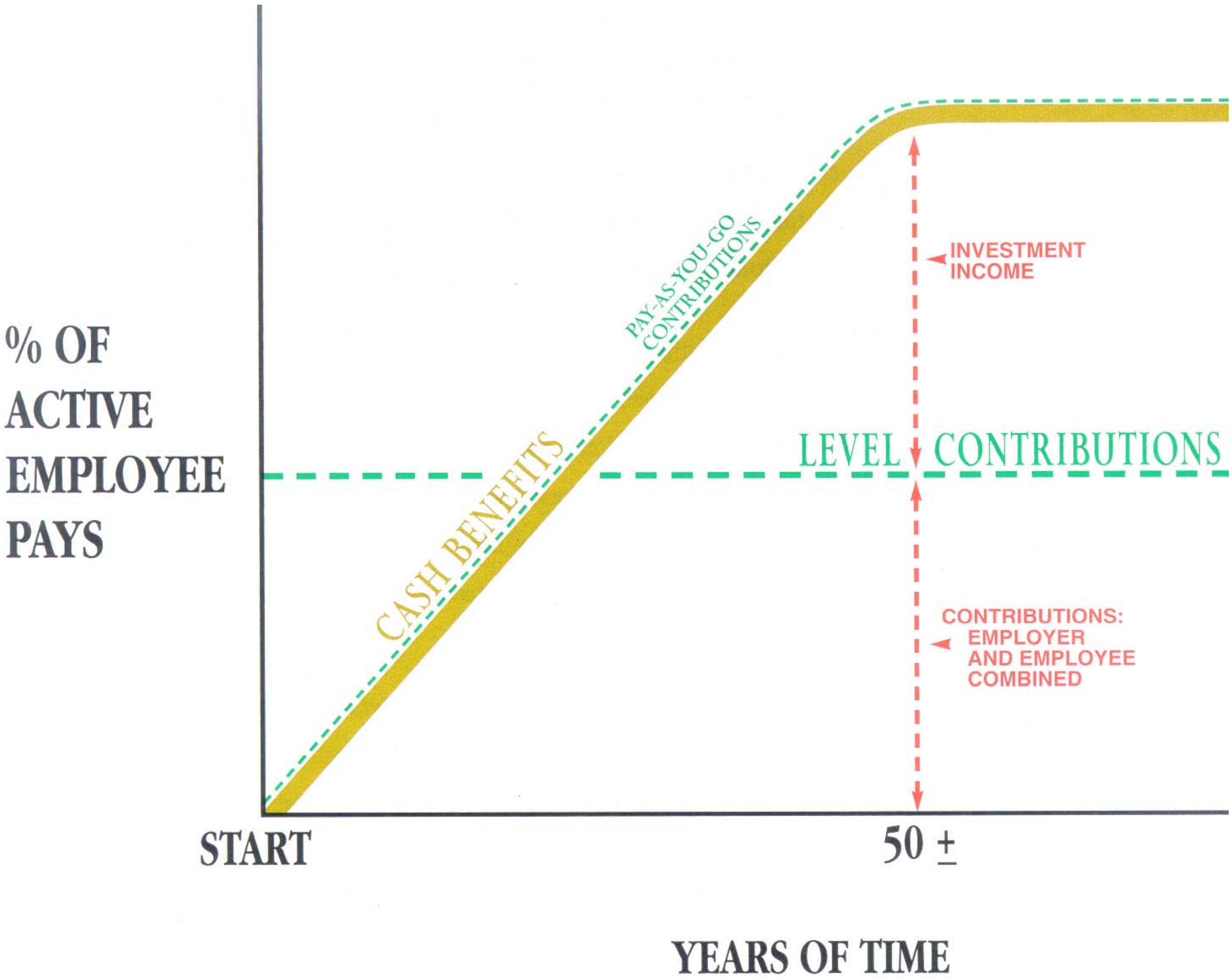
In an actuarial valuation, the actuary projects the monetary effect of each risk assumption for each distinct experience group, for the next year and for each year over the next half-century or longer.

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.

The Actuarial Valuation Process



- UAAL: Unfunded actuarial accrued liabilities are amortized over a fixed period of years.
- Pure EANC: Entry age normal cost liabilities are financed over the working lifetimes of WRS participants.
- EAR: The Experience Amortization Reserve portion of future normal costs is financed over varying periods which are selected to optimize contribution rate stability.



CASH BENEFITS LINE. This relentlessly increasing line is the fundamental reality of retirement plan financing. It happens each time a new benefit is added for future retirements (and happens regardless of the design for contributing for benefits).

LEVEL CONTRIBUTION LINE. Determining the level contribution line requires detailed assumptions concerning a variety of experiences in future decades, including:

- Economic Risk Areas
  - Rates of investment return
  - Rates of pay increase
  - Changes in active member group size
- Non-Economic Risk Areas
  - Ages at actual retirement
  - Rates of mortality
  - Rates of withdrawal of active members (turnover)
  - Rates of disability

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.

GRS

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June 3, 2009

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

Re: Report of Twenty-Eighth Annual Actuarial Valuation

Dear Dave:

Enclosed are 75 copies of the December 31, 2008 regular annual actuarial valuations.

Sincerely,

Mark Buis

Mark Buis

MB:lr
Enclosures