

**AGENDA AND NOTICE OF MEETING  
STATE OF WISCONSIN  
EMPLOYEE TRUST FUNDS BOARD**



**Friday, June 27, 2008  
8:30 a.m.  
Holiday Inn Hotel and Suites  
1109 Fourier Drive  
Madison, Wisconsin**

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Documents for this meeting are available on-line at:  
**[http://etf.wi.gov/boards/board\\_etf.htm](http://etf.wi.gov/boards/board_etf.htm)**  
To request a printed copy of any of the agenda items, please contact  
*Ann McCarthy, at (608) 261-0736.*

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 *Denotes action item*

- |            |   |  |
|------------|---|--|
| 8:30 a.m.  |  | 1. <b>Consideration of Minutes of Previous Meeting</b>   |
| 8:35 a.m.  |   | 2. <b>Announcements</b>  |
| 8:40 a.m.  |  | 3. <b>Approvals</b> <ul style="list-style-type: none"><li>• <b>40.65 Duty Disability Actuarial Review (Tim Gustafson, Deloitte Consulting)</b></li><li>• <b>Accumulated Sick Leave Conversion Credit Program Annual Review (Brian Murphy and Mark Buis, Gabriel, Roeder, Smith &amp; Company)</b></li><li>• <b>Wisconsin Retirement System 27<sup>th</sup> Annual Valuation of Active Lives December 31, 2007 (Brian Murphy and Mark Buis, Gabriel, Roeder, Smith &amp; Company)</b></li></ul> |
| 9:10 a.m.  |   | 4. <b>Consultant Report</b> <ul style="list-style-type: none"><li>• <b>Governance Study Presentation (Nancy Williams, Ennis Knupp &amp; Associates)</b></li></ul>  |
| 9:55 a.m.  |   | 5. <b>Operational Updates</b> <ul style="list-style-type: none"><li>• <b>2008 Board Roster</b></li><li>• <b>2009-2011 Biennial Budget Status</b></li><li>• <b>ETF Administrative Costs</b></li><li>• <b>Miscellaneous</b><ul style="list-style-type: none"><li>➤ <b>Future Items for Discussion</b></li></ul></li></ul>  |
| 10:05 a.m. |   | <b>Break</b>   |

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The meeting location is handicap accessible. If you need other special accommodations due to a disability, please contact Ann McCarthy, Department of Employee Trust Funds, P.O. Box 7931, Madison, WI 53707-7931. Telephone: (608) 261-0736. Wisconsin Relay Service 7-1-1. E-mail: [ann.mccarthy@etf.state.wi.us](mailto:ann.mccarthy@etf.state.wi.us)

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- 10:15 a.m.            6.    **Board Discussion**
- **Design Philosophy of the Wisconsin Retirement System: Core vs. Variable (Department Staff)**
- 10:45 a.m.     \*7.   **Personnel Matters**
- **Secretary's Annual Personnel Evaluation**
- 11:45 a.m.     \*8.   **Appeals**
- **2007-004-ETF**
- 12:10 a.m.            9.    **Announcement of Action Taken on Business Deliberated During Closed Session**
- 12:15 p.m.            10.   **Adjournment**

*Times shown are estimates only.*

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\*    **The Board may be required to meet in closed session pursuant to the exemptions contained in Wis. Stat. § 19.85 (1) (a) and (c) for quasi-judicial deliberations and to discuss personnel matters.**

**If a closed session is held, the Board will reconvene into open session for further action on these and subsequent agenda items.**

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**MINUTES OF MEETING**  
**STATE OF WISCONSIN**  
**EMPLOYEE TRUST FUNDS BOARD**

**Friday, March 14, 2008**

**Holiday Inn Hotel and Suites**  
**1109 Fourier Drive**  
**Madison, Wisconsin**

**BOARD PRESENT:**

Marilyn Wigdahl, Chair  
Robert Niendorf, Secretary  
John Brown  
Jennifer Donnelly  
Rosemary Finora  
Theron Fisher  
Rick Gale  
Kathleen Kreul  
Wayne McCaffery  
Gary Sherman  
Nancy Thompson

**BOARD NOT PRESENT:**

Wayne Koessler, Vice-Chair  
Irena Macek

**PARTICIPATING ETF STAFF:**

Dave Stella, Secretary  
Bob Conlin, Deputy Secretary  
Marcia Blumer, Employee Benefit Plan Policy Advisor  
Sari King, Administrator, Division of Retirement Services  
Mary Alice McGreevy, Compliance/Privacy Officer  
Rob Weber, Chief Legal Counsel  
Ann McCarthy, Board Liaison

**OTHERS PRESENT:**

Sandy Drew, State of Wisconsin Investment Board  
Rhonda Dunn, Office of the Secretary  
Lisa Ellinger, Division of Insurance Services  
Jean Gilding, Division of Retirement Services  
Pam Henning, Division of Management Services  
Jon Kranz, Office of Internal Audit and Budget  
Brian Murphy, Gabriel, Roeder, Smith, and Company  
Paul Ostrowski, Office of State Employment Relations  
Linda Owen, Division of Retirement Services  
Matt Stohr, Director, Legislation, Communications, and Planning

Board	Mtg Date	Item #
ETF	6/27/08	1

John Vincent, Division of Trust Finance and Employer  
Services  
Sharon Walk, Division of Management Services

Marilyn Wigdahl, Chair, called the meeting of the Employee Trust Funds Board (Board) to order at 8:30 a.m.

## CONSIDERATION OF PREVIOUS MEETING MINUTES

***Motion: Mr. McCaffery moved approval of the minutes of the December 14, 2007, meeting as submitted by the Board Liaison. Ms. Kreul seconded the motion, which passed without objection on a voice vote.***

## ELECTION OF OFFICERS

Ms. King requested the action of the Board regarding the election of officers. A memorandum was provided to the Board, which included a list of current officers as well as a current Board member roster.

***Nomination: Mr. Brown nominated the current slate of officers for another one-year term. Mr. McCaffery seconded the nomination.***

***Motion: Hearing no further nominations, Ms. Kreul moved to close nominations and cast a unanimous ballot for the current slate of officers (Wigdahl – Chair, Koessl – Vice-Chair, Niendorf – Secretary) for another one-year term. Mr. McCaffery seconded the motion, which passed without objection on a voice vote.***

## CONSIDERATION OF ADMINISTRATIVE RULE

Mr. Conlin indicated that the Board is asked to approve the final draft report of Clearinghouse Rule 07-062 relating to the purchase of service credit under the WRS. He directed the Board's attention to the material provided by Mr. Weber, he noted that Mr. Weber was not yet present, and suggested that if members had questions, the item could be held over until Mr. Weber arrived.

***Motion: Mr. McCaffery moved approval of the final draft report on Clearinghouse Rule 07-062. Ms. Kreul seconded the motion, which passed without objection on a voice vote.***

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

Brian Murphy of Gabriel, Roeder, Smith and Company (GRS), reviewed the report, *Wisconsin Retirement System 25th Annual Actuarial Valuations of Retired Lives – December 31, 2007*. The report represents a comparison of annuity reserve balances of the Core and Variable reserves with the present value of annuities being paid within each fund, as well as the methodology used to calculate the annual post-retirement dividend. Mr. Murphy reviewed highlights of the annual valuation and responded to questions.

***Motion: Mr. Brown moved to accept the actuary's report and adopt its recommendations. Mr. Niendorf seconded the motion, which passed without objection on a voice vote.***

## **VARIABLE FUND ASSET ALLOCATION**

Mr. Stella updated the Board on the Variable trust fund. He explained that the State of Wisconsin Investment Board (SWIB) was presented with the Board's concerns about the fund and has since adopted new strategic asset allocation targets for the Core and Variable funds. The memo that he provided clarified the breakdown of the new asset allocations. He asked the Board to consider other possible changes to the fund including elimination of the fund.

An open discussion occurred. The Board provided suggestions about issues that should be examined and considered and directed staff to develop options for the Board's consideration. This will be an agenda item at future meetings.

## **MISCELLANEOUS**

**Benefit Payment System Update** Ms. King updated the Board on the progress of the Benefit Payment System (BPS). She explained that the data cleanup and data migration processes have been completed. The Department has set an implementation date of October 2008.

**Retirement Statistics** Ms. King discussed her memo with the Board and highlighted some of the key items. The first half of the year is when the largest number of requests for retirement estimates are received. This was also the case in 2007. The highest months of retirement have been April, June and July, in 2006 and 2007. She noted there was an increase in the number of estimated annuities started in 2007, over 9,000+ members versus 8,233 in 2006.

**Items for Future Discussion** Board members expressed interest in further discussion of the Variable fund.

## EDUCATIONAL TOPIC

### **Senate Bill 351/Assembly Bill 623 – State of Wisconsin Investment Board Modifications**

Mr. Conlin discussed his memo with the Board relating to SB 351/AB 623 as well as the composition of the SWIB Board. He explained that the topic of SWIB membership was raised at the Wisconsin Retirement (WR) Board meeting in September 2007. The WR Board appoints one member to SWIB, and has traditionally appointed the Department Secretary. In its advisory capacity, the WR Board recommended that the ETF Board recommend a change in state law to modify SWIB membership to automatically include the Department Secretary as an ex-officio member with voting authority. This proposed change would allow the WR Board to appoint a different member to SWIB.

Mr. Conlin noted that SWIB membership would be discussed again at a future meeting and that the Department would provide a list of options for the Board to consider.

*Mr. Sherman clarified that he does not vote on legislative bills that involve the Department.*

## MOTION TO CONVENE IN CLOSED SESSION

Ms. Wigdahl announced that the Board would convene in closed session pursuant to the exemptions contained in Wis. Stat. § 19.85 (1) (e) to discuss use of public employee trust funds. Department staff, Office of State Employment Relations staff, and State of Wisconsin Investment Board staff were invited to remain during the entire closed session.

***Motion: Ms. Thompson moved to convene in closed session, pursuant to the exemptions contained in Wis. Stat. § 19.85 (1) (e) to discuss use of public employee trust funds. Mr. Brown seconded the motion, which passed on the following roll call vote.***

***Members voting aye: J. Brown, J. Donnelly, R. Finora, T. Fisher, R. Gale, K. Kreul, W. McCaffery, R. Niendorf, G. Sherman, N. Thompson, M. Wigdahl***

***Members voting nay: none***

*The Board convened in closed session at 10:26 a.m. and reconvened in open session at 11:10 a.m.*

## ANNOUNCEMENT OF ACTION TAKEN ON BUSINESS DELIBERATED ON DURING CLOSED SESSION

Mr. Conlin announced that the Board took the following actions during the closed session:

The Board voted to extend the contract with the Fringe Benefits Management Company (FBMC) for another year contingent upon reaching acceptable contract language to indemnify the Board and participating employees in the event of a security breach attributable to FBMC or its employees.

**ADJOURNMENT**

***Motion: Mr. Fisher moved adjournment. Mr. Brown seconded the motion, which passed without objection on a voice vote.***

The meeting of the Employee Trust Funds Board adjourned at 11:11 a.m.

Date Approved: \_\_\_\_\_

Signed: \_\_\_\_\_

Robert Niendorf, Secretary  
Employee Trust Funds Board

**ACCUMULATED SICK LEAVE CONVERSION CREDIT PROGRAMS  
PRESENTED TO THE WISCONSIN DEPARTMENT OF EMPLOYEE TRUST FUNDS  
ANNUAL ACTUARIAL VALUATION  
DECEMBER 31, 2007**



June 11, 2008

Employee Trust Funds Board  
 Wisconsin Retirement System  
 801 West Badger Road  
 Madison, Wisconsin 55713-2526

Ladies and Gentlemen:

The results of the **Annual Actuarial Valuation** of benefit liabilities and costs of non-retired participants of the Accumulated Sick Leave Conversion Credit Programs are presented in this report. The recommended contribution rates are shown below:

	<b>University Hospital Authority</b>	<b>Health and Education Facility</b>	<b>Wiscraft</b>	<b>Other State Employers</b>	<b>Totals</b>
Base Rate	0.8%	1.4%	1.8%	0.6%	0.6%
Supplemental Rate	0.4%	0.8%	1.2%	0.2%	0.2%
Total	1.2%	2.2%	3.0%	0.8%	0.8%

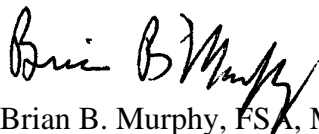
The date of the valuation was **December 31, 2007**.

The valuation was based upon data, furnished by the Department of Employee Trust Funds, concerning retired and non-retired participants and pertinent financial information.

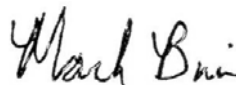
Both actuaries submitting this report are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

The valuation was completed in accordance with standards of practice prescribed by the Actuarial Standards Board and in conformance with Chapter 40 of the Wisconsin Statutes. To the best of our knowledge, this report is complete and accurate, and the actuarial methods and assumptions produced results which are reasonable.

Respectfully submitted,



Brian B. Murphy, FSA, MAAA



Mark Buis, FSA, MAAA

BBM/MB:lr

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## COMBINED RESULTS AND DISCUSSION

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**ASLCC PROGRAM  
BASE PLUS SUPPLEMENTAL  
COMPUTED TOTAL EMPLOYER CONTRIBUTION RATES**

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The financial objectives of the ASLCC Program are to establish and receive contributions to support benefits that will remain approximately level from year to year. Combined program valuation results since 1997 are presented below.

<b>Valuation Date December 31</b>	<b>Base</b>	<b>Supplemental</b>	<b>Total</b>	<b>UAAL* Amortization Years</b>
1997 @#	1.8%	0.9%	2.7%	27
1998	1.9%	0.8%	2.7%	20
1999	1.8%	0.9%	2.7%	25
2000 @	1.7%	1.0%	2.7%	24
2001	1.7%	1.1%	2.8%	24
2002	1.8%	1.2%	3.0%	23
2003 @&	0.9%	0.5%	1.4%	22
2004	0.9%	0.4%	1.3%	21
2005	0.8%	0.4%	1.2%	20
2006 @	0.7%	0.3%	1.0%	19
2007	0.6%	0.2%	0.8%	18

\* *Unfunded actuarial accrued liabilities.*

@ *Assumption change.*

# *Benefit change.*

& *Method change.*

**COMMENTS**

- Based on the policy established at the June 2002 ETF Board meeting, the amortization period for unfunded actuarial accrued liabilities was closed. Therefore, the remaining period will decline one year at a time until the UAAL is fully amortized.
- The decrease in contribution rates shown above from 2002 to 2003 is primarily due to the issuance of Pension Obligation Bonds by the State of Wisconsin which paid off the majority of unfunded liabilities of the ASLCC Program.
- In computing the rates in this report, we used the frozen initial liability (FIL) method. This method was used because the Pension Obligation Bond paid off unfunded liabilities for some, but not all employers, requiring separate contribution rates for some of the employers. This method is described further on page 12.

**ASLCC PROGRAM  
SUMMARY OF PARTICIPANT DATA  
DECEMBER 31, 2007**

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**Active Participants**

	<b>State Employees</b>			<b>Total</b>
	<b>(Non-University)</b>	<b>University</b>	<b>University Hospital</b>	
Number	33,624	28,983	6,182	68,789
Annual Payroll	\$1,716,273,967	\$1,678,040,406	\$332,068,155	\$3,726,382,529
Accrued Unused Sick Days	3,005,783 days	2,729,877 days	256,574 days	5,992,233 days
Averages: Age	45.7 years	47.1 years	41.0 years	45.9 years
Service	13.1 years	12.0 years	8.4 years	12.2 years
Sick Leave Days	89.4 days	94.2 days	41.5 days	87.1 days

**Retirees & Beneficiaries**

	<b>Rate Category</b>		<b>Total</b>
	<b>Without Medicare</b>	<b>With Medicare</b>	
Number*	4,014	6,375	10,389
Monthly Premiums			
Total	\$3,747,301	\$3,858,302	\$7,605,603
Average	\$ 933.56	\$ 605.22	
Prior Year Average	\$ 894.89	\$ 580.97	

\* Number count does not include 4,138 escrowed annuitants.

**ASLCC PROGRAM  
SUMMARY OF ASSETS  
DECEMBER 31, 2007**

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	<u>Base Program</u>	<u>Supplemental Program</u>	<u>Total</u>
Beginning Balance	\$1,272,703,596	\$670,539,774	\$1,943,243,370
Adjustment	6,559,183	(4,060,075)	2,499,108
Adjusted Beginning Balance	<u>\$1,279,262,779</u>	<u>\$666,479,699</u>	<u>\$1,945,742,478</u>
<b>Revenues</b>			
Contributions	\$ 29,551,675	\$ 14,996,625	\$ 44,548,300
Investment Income	157,851,759	83,109,082	240,960,841
Total Revenues	<u>\$ 187,403,434</u>	<u>\$ 98,105,707</u>	<u>\$ 285,509,141</u>
<b>Expenses</b>			
Insurance Premiums	\$ 65,909,150	\$ 20,058,611	\$ 85,967,761
Administration	191,140	102,014	293,154
Total Expenses	<u>\$ 66,100,290</u>	<u>\$ 20,160,625</u>	<u>\$ 86,260,915</u>
Ending Balance - December 31, 2007	<u><u>\$1,400,565,923</u></u>	<u><u>\$744,424,781</u></u>	<u><u>\$2,144,990,704</u></u>
Internal Rate of Return	12.5%	12.5%	12.5%

**ASLCC PROGRAM**  
**UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)**  
**DECEMBER 31, 2007**

	<b>University Hospital Authority</b>	<b>Health and Education Facility</b>	<b>Wiscraft</b>	<b>Other State Employers</b>	<b>Totals</b>
Balance December 31, 2006	\$ 16,478,394	\$ 58,213	\$233,957	\$ 0	\$ 16,770,564
Less: Adjustments	0	0	0	0	0
Less: Payments	(4,037,621)	(7,983)	(25,906)	0	(4,071,510)
Plus: Interest	970,378	3,918	16,228	0	990,524
<b>Balance December 31, 2007</b>	<b>\$ 13,411,151</b>	<b>\$ 54,148</b>	<b>\$ 224,279</b>	<b>\$ 0</b>	<b>\$ 13,689,578</b>
Base UAAL	<b>\$ 7,034,652</b>	<b>\$ 30,849</b>	<b>\$121,631</b>	<b>\$ 0</b>	<b>\$ 7,187,132</b>
Supplemental UAAL	<b>\$ 6,376,499</b>	<b>\$ 23,299</b>	<b>\$102,648</b>	<b>\$ 0</b>	<b>\$ 6,502,446</b>
Annual Payroll	\$211,867,098	\$295,670	\$785,017	\$3,513,434,744	\$3,726,382,529
Base Contribution Rate					
Normal Cost	0.6%	0.6%	0.6%	0.6%	0.6%
UAAL	<u>0.2%</u>	<u>0.8%</u>	<u>1.2%</u>	<u>0.0%</u>	<u>0.0%</u>
Total	0.8%	1.4%	1.8%	0.6%	0.6%
Supplemental Contribution Rate					
Normal Cost	0.2%	0.2%	0.2%	0.2%	0.2%
UAAL	<u>0.2%</u>	<u>0.6%</u>	<u>1.0%</u>	<u>0.0%</u>	<u>0.0%</u>
Total	0.4%	0.8%	1.2%	0.2%	0.2%
<b>Total Contribution Rate</b>	<b>1.2%</b>	<b>2.2%</b>	<b>3.0%</b>	<b>0.8%</b>	<b>0.8%</b>

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## **BASE PLAN RESULTS**

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**SECTION 40.05(4)(B)**  
**ACCUMULATED SICK LEAVE CONVERSION CREDIT PROGRAM**  
**SUMMARY OF ACCUMULATION AND PAYMENT CONDITIONS**

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**Accumulation.** For most participants, sick leave has historically accrued at the rate of 4 hours every two weeks to a maximum of 13 days a year. The potential accrual rate was increased to 5 hours per pay period in 1998, which corresponds to 16.25 days per year. Unused portions accumulate from year to year and are converted at retirement as indicated below. The average annual sick leave balance of Wisconsin State employees (other than University employees) in 2007 was 89.4 days. Based upon an average of 13.1 years of service, this would correspond to an average annual addition of 6.8 days per year to sick leave accounts for past years. For University and University Hospital employees, the average balance was 84.9 days. Based upon an average of 11.3 years of service, this would correspond to an average annual addition of 7.5 days per year to the sick leave accounts for past years. In the future, average annual additions are assumed to be higher because potential sick leave accrual rates have been increased. For purposes of estimating sick leave balances at retirement, each individual was assumed to continue using sick leave at the same rate as in the past but not less than 25% nor more than 75% of the person's annual accrual rate (usually 16.25 days).

**Eligibility for Payment of Accrued Sick Leave.** Termination of employment with 20 or more years of service or eligibility for an immediate annuity from the Wisconsin Retirement System. State elected officials and certain state administrative officials terminating before their minimum service retirement age retain eligibility for benefits at their minimum service retirement age providing they do not elect a WRS separation benefit.

**Amount of Payment for Unused Sick Leave.** A conversion credit is computed at the time of retirement or death by multiplying the number of days of unused sick leave by the highest basic pay rate. The conversion credit is then used to cover the cost of health insurance premiums for the employee and eligible dependents. Unused portions are carried forward from year to year without interest and when total health insurance premiums paid on behalf of the retired employee equal or exceed the conversion credit, no further payments are made under the ASLCC program. Payments from the sick leave account may be escrowed indefinitely after retirement for participants who provide evidence of comparable health insurance coverage from another source.



**40.05(4)(B) - BASE ASLCC PROGRAM  
DEVELOPMENT OF NORMAL COST**

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<u>Actuarial Present Value of</u>	<u>December 31</u>	
	<u>2007</u>	<u>2006</u>
(1) Future Amount to be paid on behalf of present retirants and beneficiaries	\$ 270,542,067	\$ 260,791,285
(2) Future Amount to be paid on behalf of future retirees and beneficiaries	<u>1,325,445,865</u>	<u>1,257,073,135</u>
(3) Total Actuarial Present Value	\$ 1,595,987,932	\$ 1,517,864,420
(4) Assets	1,394,425,084	1,272,703,595
(5) Unfunded Actuarial Accrued Liabilities (UAAL)	<u>\$ 7,187,132</u>	<u>\$ 9,237,119</u>
(6) Present Value of Future Normal Cost: (3) - (4) - (5)	\$ 194,375,716	\$ 235,923,706
(7) Present Value of Future Salary	\$35,264,205,346	\$34,198,198,644
(8) Normal Cost: (6) / (7)	0.6%	0.7%

**40.05(4)(B) - BASE ASLCC PROGRAM  
COMPUTED EMPLOYER CONTRIBUTIONS  
DECEMBER 31, 2007**

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<b>Contributions for</b>	<b>Computed Employer Contribution Rate as a % of Covered Payroll</b>
Normal Cost	0.6%
UAAL*	0.0%
<b>Total</b>	<b>0.6%</b>

\* *Unfunded actuarial accrued liabilities of \$7.2 million were amortized over 18 years. Although this results in a 0.0% of pay contribution due to rounding, unfunded liabilities are allocated to individual employers as shown on page 4 and employers having an unfunded liability will make a separate contribution towards this unfunded liability.*

**Discussion:**

The financial objective of the ASLCC program is to establish and receive contributions to support benefits that will remain approximately level from year to year. In 2003, the State of Wisconsin issued Pension Obligation Bonds which paid off the majority of unfunded liabilities of the ASLCC Program. Since unfunded liabilities remained for certain employers, the funding method was changed to the Frozen Initial Liability Actuarial Cost Method. Under this method, gains and losses arising from the difference between actual and assumed experience are reflected in the determination of the normal cost. Separate amortization schedules are established for employers with unfunded liabilities (see page 4), resulting in separate contribution rates for each participating employer.

**40.05(4)(B) - BASE ASLCC PROGRAM  
COMPARATIVE STATEMENT OF RESULTS**

Valuation Date	No. Active	Covered Payroll \$ Millions	Average		Accr. Sick Days	\$ Millions		Average Computed Employer Rate
			Age	Service		Assets	UAAL	
December 31								
1989	48,247	\$1,434.5	43.4	12.2	80.7	\$ 50.0	\$ 383.5	2.1%
1990	49,983	1,624.3	43.5	12.1	80.8	73.9	377.4	2.1%
1991@	54,675	1,810.4	43.4	11.8	78.0	92.4	407.9	2.1%
1992	57,577	1,932.4	43.0	11.3	74.7	121.6	387.4	2.1%
1993	58,299	2,021.8	43.3	11.6	76.0	156.4	364.4	2.1%
1994@	58,971	2,136.9	43.6	11.8	77.0	186.7	380.4	1.9%
1995	57,941	2,151.9	44.2	12.5	80.3	236.8	370.1	1.9%
1996	57,920	2,184.3	44.2	12.3	79.4	283.2	354.4	1.8%
1997@#	58,872	2,260.8	44.3	12.3	79.5	337.2	251.8	1.8%
1998	60,502	2,415.5	44.4	12.2	79.9	392.9	241.9	1.9%
1999	62,158	2,521.6	44.6	12.2	81.0	457.0	260.0	1.8%
2000@	63,008	2,753.3	44.6	12.0	80.6	515.6	214.2	1.7%
2001	64,510	2,980.6	44.5	11.8	80.9	611.7	218.7	1.7%
2002	66,442	3,096.7	44.8	11.8	80.9	619.0	262.6	1.8%
2003@&	68,366	3,349.0	45.0	11.8	80.9	1,085.1	10.9	0.9%
2004	68,269	3,400.0	45.4	12.0	83.1	1,154.0	9.5	0.9%
2005	67,460	3,410.0	45.6	12.2	84.3	1,196.0	9.3	0.8%
2006@	67,892	3,592.5	45.8	12.2	85.5	1,272.7	9.2	0.7%
2007	68,789	3,726.4	45.9	12.2	87.1	1,394.4	7.2	0.6%

@ Assumption change.

# Benefit change.

& Method change.

---

## **SUPPLEMENTAL PLAN RESULTS**

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**ACCUMULATED SICK LEAVE CONVERSION CREDIT PROGRAM  
SUPPLEMENTAL PLAN  
DECEMBER 31, 2007**

---

This supplemental plan provides matching credits for participants retiring with 15 or more years of state service as follows:

- **Protective:** Match up to 78 hours (9.75 days) per full year of service through 24 years, plus 104 hours (13 days) per full year of service over 24 years.
- **Others:** Match up to 52 hours (6.5 days) per full year of service through 24 years, plus up to 104 hours (13 days) per full year of service over 24 years.

The results below are for the supplemental program only. (The results on page 6 are for the ASLCC base program only.) The supplemental plan accrued liabilities are offset by supplemental plan assets which are accounted for separately by DETF. The contribution rate sufficient to amortize the UAAL over a period of 18 years (the same period as in the base program) is 0.2% of covered payroll as shown below.

<b>Contributions for</b>	<b>Computed Employer Contribution Rate as a % of Covered Payroll</b>
Normal Cost	0.2%
UAAL*	0.0%
<b>Total</b>	<b>0.2%</b>

\* *Unfunded actuarial accrued liabilities of \$6.5 million were amortized over 18 years. Although this results in a 0.0% of pay contribution due to rounding, unfunded liabilities are allocated to individual employers as shown on page 4 and employers having an unfunded liability will make a separate contribution towards this unfunded liability.*

The contribution rate shown above was developed based upon the active participant data as shown on page 2. This is the same data that was used in the development of the base plan rates.

**40.05(4)(B) – SUPPLEMENTAL ASLCC PROGRAM  
DEVELOPMENT OF NORMAL COST**

---

<u>Actuarial Present Value of</u>	<u>December 31</u>	
	<u>2007</u>	<u>2006</u>
(1) Future Amount to be paid on behalf of present retirants and beneficiaries	\$ 232,145,537	\$ 211,802,751
(2) Future Amount to be paid on behalf of future retirees and beneficiaries	<u>590,950,919</u>	<u>565,661,462</u>
(3) Total Actuarial Present Value	\$ 823,096,456	\$ 777,464,213
(4) Assets	744,424,781	670,539,773
(5) Unfunded Actuarial Accrued Liabilities (UAAL)	<u>\$ 6,502,446</u>	<u>\$ 7,533,445</u>
(6) Present Value of Future Normal Cost: (3) - (4) - (5)	\$ 72,169,229	\$ 99,390,995
(7) Present Value of Future Salary	\$ 35,264,205,346	\$ 34,198,198,644
(8) Normal Cost: (6) / (7)	0.2%	0.3%

**ASLCC SUPPLEMENTAL PLAN  
COMPARATIVE STATEMENT OF RESULTS**

Valuation Date	No. Active	Covered Payroll \$ Millions	Average			\$ Millions		Average Computed Employer Rate
			Age	Service	Accr. Sick Days	Assets	UAAL	
1997@#	58,872	\$2,260.8	44.3	12.3	79.5	\$ 13.7	\$154.5	0.9%
1998	60,502	2,415.5	44.4	12.2	79.9	41.2	139.6	0.8%
1999	62,158	2,521.6	44.6	12.2	81.0	69.4	143.1	0.9%
2000@	63,008	2,753.3	44.6	12.0	80.6	97.3	212.6	1.0%
2001	64,510	2,980.6	44.5	11.8	80.9	133.4	245	1.1%
2002	66,442	3,096.7	44.8	11.8	80.9	154.2	273.9	1.2%
2003@&	68,366	3,349.0	45.0	11.8	80.9	519.9	9.1	0.5%
2004	68,269	3,400.0	45.4	12.0	83.1	570.6	7.9	0.4%
2005	67,460	3,410.0	45.6	12.2	84.3	609.7	7.8	0.4%
2006@	67,892	3,592.5	45.8	12.2	85.5	670.5	7.5	0.3%
2007	68,789	3,726.4	45.9	12.2	87.1	744.4	6.5	0.2%

@ Assumption change.

# Benefit change.

& Method change.

For the 2000 and subsequent valuations, retiree liabilities were separately calculated for the supplemental plan. For 1999 and prior, those liabilities were reported as base plan liabilities.

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## ACTUARIAL METHODS AND ASSUMPTIONS

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## ACTUARIAL VALUATION METHOD

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The actuarial funding method prescribed in the statute for WRS is the **Frozen Initial Liability Actuarial Cost Method**. This funding method is also used for the ASLCC valuation. 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.

## ACTUARIAL METHODS AND ASSUMPTIONS USED IN VALUATIONS

---

The principal areas of risk assumption are:

- long-term *rates of investment return* likely to be generated by system assets
- *rates of mortality* among participants, retirees 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*
- future *rates of sick leave usage* by plan participants

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 liabilities calculated in this report reflect a 5% load for contingencies. Examples of contingencies are:

- A change in the potential sick leave accrual rate in 1998 from 4 hours per pay period to 5 hours per pay period. This reduces the accuracy of the assumption regarding future accrual rates since they are developed based on historical accrual rates.
- Actual data for some employers (including Health and Education Facility, Housing and Economic Development and Wiscraft) was not available at the time of this report. Based on prior calculations, they represent approximately 0.2% of total liabilities.
- Higher than the anticipated rate of increase in health care costs.

**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 7.8% a year, compounded yearly.

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 years of service. This assumption is used to project a participant's current earnings to the earnings upon which benefits will be based.

% Merit and Longevity Increase Next Year						
Service	General	University Teachers	Public School Teachers	Protective		Exec. & Elec.
				With S.S.	W/O S.S.	
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 %

If the number of active participants remains constant, then the total active participant payroll will increase 4.1% a year, the base portion of the individual salary increase assumptions. This increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities. Premium payments from the ASLCC Program were also assumed to increase 4.1% a year.

Separate assumptions regarding secular trend of health care inflation and aging assumptions were not used. Because of the structure of the ASLCC program, use of these assumptions would not significantly affect results.

## DECREMENT PROBABILITIES

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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 life expectancy 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 Expectancy  
Wisconsin Projected Experience Table – 2005**

Sample Attained Ages	Future Life Expectancy (years)	
	Males	Females
40	40.9	45.3
45	36.2	40.5
50	31.5	35.7
55	27.0	30.9
60	22.7	26.4
65	18.5	22.0
70	14.5	17.8
75	11.0	13.9
80	8.1	10.4
85	5.7	7.4

The values shown above are for non-disabled participants.

## 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. & Elected
	Male	Female	Male	Female	Male	Female	With S.S.	W/O S.S.	
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. & Elected
	Male	Female	Male	Female	Male	Female	
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 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**

Age	Service	% of Active Participants Terminating								
		Protective		Public Schools		University		Exec. & Elected	Other	
		With Soc. Sec.	Without Soc. Sec.							
		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**

Age	% of Active Participants Becoming Disabled									
	Protective		Public Schools		University		Exec. & Elected		Other	
	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%	0.70%
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%

June 11, 2008

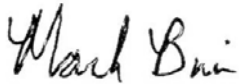
Mr. David Stella  
Wisconsin Department of Employee Trust Funds  
801 West Badger Road  
Madison, Wisconsin 53713

**Re: Accumulated Sick Leave Conversion Credit Programs**

Dear Dave:

Enclosed are 75 bound copies and one unbound copy of the report of the December 31, 2007 annual actuarial valuations of the ASLCC Programs.

Sincerely,



Mark Buis

MB:lr  
Enclosures



**WISCONSIN RETIREMENT SYSTEM**

**TWENTY-SEVENTH ANNUAL ACTUARIAL VALUATION**

**DECEMBER 31, 2007**

# OUTLINE OF CONTENTS

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June 11, 2008

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, 2007 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 2009 calendar year in conformance with Chapter 40 of the Wisconsin Statutes. The change in the normal cost rates from last year are shown below:

<u>General</u>	<u>Executive</u>	<u>Protective With SS</u>	<u>Protective Without SS</u>
(0.2)%	0.0%	(0.2)%	(0.4)%

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, 2007 valuations were based upon assumptions that were recommended in connection with a study of experience covering the 2003-2005 period.

Employee Trust Funds Board  
Wisconsin Department of Employee  
Trust Funds  
June 11, 2008  
Page 2

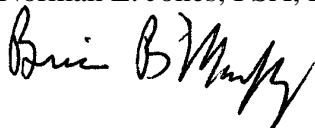
To the best of our knowledge, this report is complete and accurate and was made in accordance with generally recognized actuarial methods. The actuaries submitting this statement are Members of the American Academy of Actuaries (MAAA), and meet the Qualification Standards of the American Academy of Actuaries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

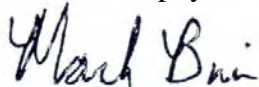
Respectfully submitted,



Norman L. Jones, FSA, MAAA



Brian B. Murphy, FSA, MAAA



Mark Buis, FSA, MAAA

NLJ/BBM/MB:lr

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**SECTION ONE**

**ACTUARIAL VALUATION RESULTS**

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# OVERVIEW

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

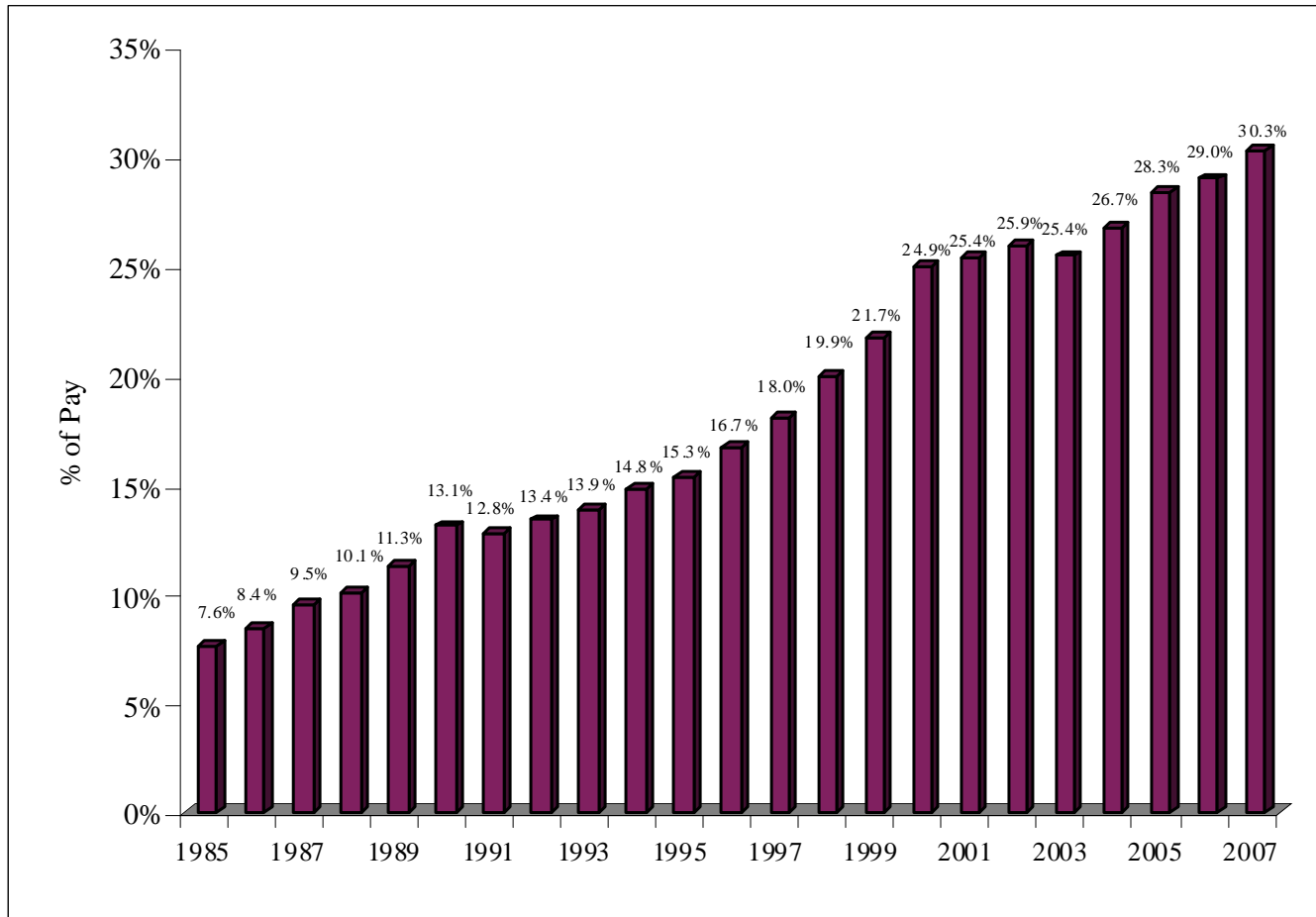
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	General Participants		Executives & Elected Officials		Protective Occupation			
					With Soc. Sec.		Without Soc. Sec.	
	2009	2008	2009	2008	2009	2008	2009	2008
Employer Normal Cost	4.5%	4.6%	8.5%	8.5%	8.1%	8.2%	10.6%	10.8%
Benefit Adjustment Contribution	0.9%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Participant Normal Cost	5.0%	5.0%	3.0%	3.0%	5.0%	5.1%	3.2%	3.4%
Total Normal Cost	10.4%	10.6%	11.5%	11.5%	13.1%	13.3%	13.8%	14.2%
Unfunded Actuarial Accrued Liability (UAAL)	0.2%	0.2%	0.0%	0.1%	0.1%	0.1%	0.3%	0.4%
<b>WRS Average Total</b>	<b>10.6%</b>	<b>10.8%</b>	<b>11.5%</b>	<b>11.6%</b>	<b>13.2%</b>	<b>13.4%</b>	<b>14.1%</b>	<b>14.6%</b>

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
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 %
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 %

# 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
1983	1985	6.0 %		12.1 % <sup>#</sup>	18.1 %	8.0 %		19.8 % <sup>#</sup>	27.8 %
1984 <sup>@</sup>	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 <sup>@</sup>	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 %

<sup>#</sup> 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.

<sup>@</sup> Benefit change.

& Act 11 of 1999 was implemented in 2001.

## COMMENTS ON DECEMBER 31, 2007 RESULTS

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Based upon this valuation, normal cost contribution rates decreased for all groups primarily due to favorable 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.

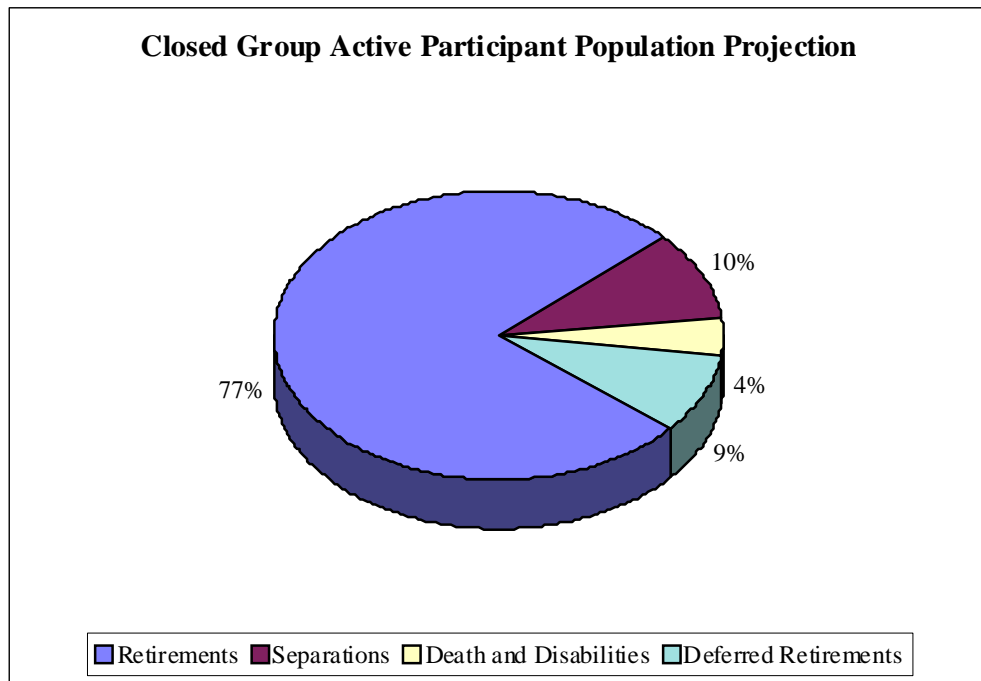
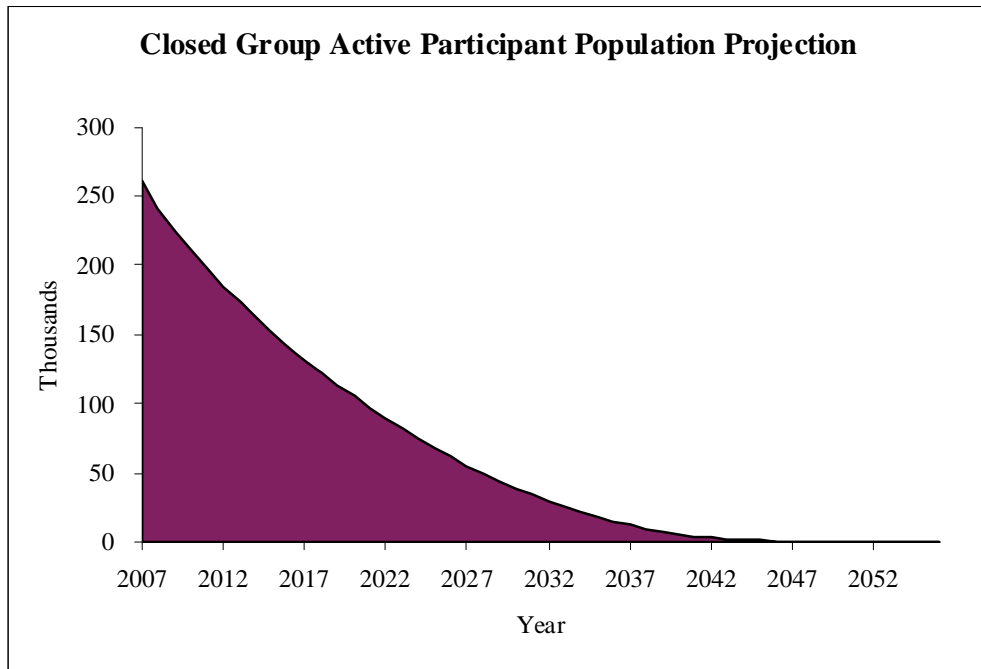
In total, during 2007, investment return was well above the assumed level of 7.8% on a market value basis (please see pages I-18 and III-3). However, under the asset valuation method, gains and losses are phased in over a five year period, resulting in a 12.5% return on an actuarial value of assets basis. The Market Value of Assets exceeds the Actuarial Value of Assets by approximately 6% as of the valuation date. This difference is within commonly accepted bounds, and is a favorable condition for the WRS.

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, 2007 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, 2007



The charts show the expected future development of the present population in simplified terms. The retirement system presently covers 261,003 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**

## SUMMARY OF BENEFIT PROVISIONS EVALUATED DECEMBER 31, 2007 ACTUARIAL VALUATION

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### 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		Group
After 1999	Before 2000	
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.

	<b>Pre-10/16/92 WRS Plan</b>	<b>Post-10/15/92 LTDI Plan</b>
<b>Participants covered</b>	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.
<b>Benefit to age 65*</b>	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.
<b>Benefit at age 65*</b>	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:

<b>Date of Participation</b>	<b>Rate Credited For Purpose of</b>	
	<b>Money Purchase</b>	<b>Refunds</b>
	<b>Minimum</b>	
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, 2007**

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Active participants included in the valuations totaled 261,003 with an annual payroll totaling \$11,581.8 million, as follows:

Valuation Group	Number	Annual Earnings (\$Millions)	Group Averages			
			Earnings	Age	Years of Service	Contribs.
General	237,124	\$10,277.9	\$43,344	45.9	11.8	\$54,865
Executive Group & Elected Officials	1,427	94.6	66,320	54.4	13.1	89,599
Protective Occupation with Social Security	19,757	1,035.6	52,419	39.8	11.8	55,686
Protective Occupation without Social Security	2,695	173.7	64,449	41.0	14.1	87,919
<b>Total Active Participants</b>	<b>261,003</b>	<b>\$11,581.8</b>	<b>\$44,374</b>	<b>45.5</b>	<b>11.8</b>	<b>\$55,459</b>
Prior Year	260,302	\$11,170.3	\$42,913	45.4	11.8	\$52,286

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

**INACTIVE PARTICIPANTS INCLUDED IN VALUATIONS  
DECEMBER 31, 2007**

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**Inactive participants** included in the valuations totaled 137,411 as follows:

Valuation Group	Number	Group Averages		
		Age	Service	Money Purchase Balance
General	132,555	45.8	3.0	\$13,443
Executive Group & Elected Officials	614	53.1	4.8	33,584
Protective Occupation with Social Security	4,055	39.5	3.8	16,986
Protective Occupation without Social Security	187	43.0	7.7	59,852
<b>Total Inactive Participants</b>	<b>137,411</b>	<b>45.6</b>	<b>3.0</b>	<b>\$13,701</b>
Prior Year	133,985	45.4	3.0	\$13,033

The valuations also included 3,710 QDRO cases whose average age was 50.2 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, 2007**  
**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	168							168	\$ 2,676,894
20-24	4,621	39						4,660	110,759,473
25-29	14,881	2,500	15					17,396	573,817,665
30-34	9,094	10,849	1,291	4				21,238	836,344,911
35-39	8,156	8,383	7,827	1,368	17			25,751	1,109,493,517
40-44	8,550	7,648	6,294	7,055	1,199	12		30,758	1,347,528,012
45-49	8,741	8,479	6,210	6,588	5,598	1,826	71	37,513	1,641,272,469
50-54	6,351	7,639	6,236	6,482	5,557	6,385	2,614	41,264	1,920,892,348
55	994	1,280	1,158	1,314	1,055	1,156	1,422	8,379	408,929,347
56	982	1,179	1,157	1,268	1,086	1,081	1,436	8,189	401,448,436
57	855	1,047	1,000	1,202	978	947	1,454	7,483	367,742,205
58	771	898	883	1,035	833	784	1,127	6,331	311,296,457
59	725	801	815	946	754	699	959	5,699	275,876,281
60	666	702	700	834	763	531	817	5,013	234,706,863
61	635	646	664	762	683	494	700	4,584	218,338,363
62	411	397	424	454	391	293	417	2,787	128,708,834
63	378	337	321	392	309	212	305	2,254	99,858,577
64	306	299	252	299	259	171	262	1,848	81,617,247
65	261	261	226	230	202	142	182	1,504	65,022,553
66	216	162	122	123	103	74	118	918	37,768,690
67	175	122	92	93	56	43	84	665	24,360,513
68	180	84	58	77	43	24	64	530	18,934,505
69	143	65	53	53	38	24	44	420	14,631,679
70	129	50	41	35	30	19	37	341	11,165,397
71	117	60	20	16	20	11	21	265	7,398,699
72	122	41	34	17	14	6	27	261	7,041,904
73	85	36	16	15	12	6	12	182	4,750,440
74	77	39	16	12	9	3	12	168	3,858,645
75 & Up	274	134	43	24	24	12	44	555	11,642,020
<b>Totals</b>	<b>69,064</b>	<b>54,177</b>	<b>35,968</b>	<b>30,698</b>	<b>20,033</b>	<b>14,955</b>	<b>12,229</b>	<b>237,124</b>	<b>\$10,277,882,944</b>

**EXECUTIVE GROUP AND ELECTED OFFICIALS  
AS OF DECEMBER 31, 2007  
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									
25-29	6	1						7	\$ 192,875
30-34	24	10	2					36	2,010,874
35-39	37	21	14	2				74	4,047,580
40-44	54	17	24	22	5			122	7,331,472
45-49	53	32	27	41	19	8		180	12,315,800
50-54	77	35	29	36	33	38	15	263	17,561,153
55	10	7	4	11	7	7	10	56	4,348,352
56	12	11	5	11	16	13	8	76	5,997,619
57	19	5	8	8	8	7	8	63	4,448,016
58	15	10	6	11	9	3	9	63	4,368,449
59	5	9	6	9	9	8	11	57	4,930,580
60	20	7	11	4	8	6	8	64	4,518,590
61	17	9	5	2	9	7	11	60	4,443,720
62	10	5	5	6	5	4	9	44	3,238,237
63	7	4	5	6	6	4	6	38	3,427,137
64	9	4	6	6	4	1	5	35	2,259,378
65	16	5	1	5	6	1	5	39	2,742,591
66	1	1	4	4	2		2	14	1,210,543
67	8	2	3	3	1	1	5	23	1,438,810
68	7	1	2	1		1	1	13	457,691
69	9	1	1	1	3	1	1	17	663,151
70	3	1	3				4	11	613,034
71	5	2	1			1		9	417,041
72	2	2	1		1			6	228,024
73	6	3		1	1		1	12	313,433
74	3	2					1	6	176,249
75 & Up	19	7	7	2	1		3	39	937,950
<b>Totals</b>	<b>454</b>	<b>214</b>	<b>180</b>	<b>192</b>	<b>153</b>	<b>111</b>	<b>123</b>	<b>1,427</b>	<b>\$94,638,349</b>

**PROTECTIVE OCCUPATION PARTICIPANTS WITH SOCIAL SECURITY  
AS OF DECEMBER 31, 2007  
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	\$ 222,793
20-24	789	6						795	25,288,267
25-29	1,709	812	7					2,528	108,084,671
30-34	719	1,805	512	4				3,040	149,821,382
35-39	439	1,090	1,716	441				3,686	194,266,245
40-44	286	536	821	1,215	304	2		3,164	177,953,672
45-49	209	364	420	674	844	326	4	2,841	165,819,274
50	31	56	46	104	142	179	14	572	34,261,169
51	40	55	37	79	101	195	24	531	31,795,581
52	41	44	53	58	96	131	38	461	27,047,493
53	30	34	48	69	88	130	65	464	27,987,625
54	19	27	34	59	56	64	48	307	18,219,149
55	21	40	35	47	50	48	37	278	15,766,087
56	15	31	27	41	55	32	37	238	13,463,014
57	16	33	20	29	37	39	32	206	11,670,112
58	11	14	14	32	29	24	34	158	9,232,937
59	13	19	21	20	21	15	22	131	6,920,970
60	10	22	13	16	16	14	11	102	5,545,698
61	9	12	12	14	17	10	11	85	4,401,848
62	3	6	12	13	6	9	7	56	3,118,426
63	4	7	6	2	2	3	4	28	1,477,082
64	5	1	4	4	2	3	4	23	1,096,386
65	4	3	2	2	2		1	14	538,359
66	3	6	2	4		2		17	713,584
67	2	1	2		2	1		8	344,431
68	1	2	1	1				5	202,667
69			2			1	2	5	278,824
70 & Up	4	1	1					6	99,327
<b>Totals</b>	<b>4,441</b>	<b>5,027</b>	<b>3,868</b>	<b>2,928</b>	<b>1,870</b>	<b>1,228</b>	<b>395</b>	<b>19,757</b>	<b>\$1,035,637,073</b>



**PROTECTIVE OCCUPATION PARTICIPANTS WITHOUT SOCIAL SECURITY  
AS OF DECEMBER 31, 2007  
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	52							52	\$ 2,089,566
25-29	180	65						245	12,352,178
30-34	81	235	65					381	22,555,551
35-39	52	182	228	73				535	33,451,134
40-44	16	71	145	185	46	1		464	30,339,223
45-49	8	23	67	146	190	68	1	503	35,248,788
50	2	2	7	24	31	33	2	101	7,177,609
51			6	20	23	32	2	83	5,999,250
52			1	14	21	31	7	74	5,535,592
53			4	14	24	30	5	77	5,656,490
54	3	1	3	10	18	17	9	61	4,506,600
55			1	8	4	15	12	40	2,827,842
56			1	4	5	8	13	31	2,271,123
57		1	1	2	4	9	5	22	1,717,607
58		1		1	2	4	3	11	875,641
59						1		1	99,176
60	1				1	2	1	5	422,161
61		1	1			2	1	5	353,560
62									
63		1					1	2	83,197
64						1		1	71,520
65					1			1	54,953
<b>Totals</b>	<b>395</b>	<b>583</b>	<b>530</b>	<b>501</b>	<b>370</b>	<b>254</b>	<b>62</b>	<b>2,695</b>	<b>\$173,688,761</b>

**ACTIVE PARTICIPANTS  
AS OF DECEMBER 31, 2007  
BY YEARS OF SERVICE AND GENDER**

Completed Years of Service	Males	Females	Totals	Valuation Payroll	
				Total	Average
0	6,709	13,830	20,539	\$ 469,747,280	\$22,871
1	5,530	10,902	16,432	475,741,583	28,952
2	4,542	8,986	13,528	433,923,078	32,076
3	4,146	8,307	12,453	429,973,699	34,528
4	3,651	7,751	11,402	403,379,192	35,378
5	3,934	8,105	12,039	455,705,691	37,852
6	4,746	8,269	13,015	525,060,761	40,343
7	4,769	8,024	12,793	537,134,419	41,987
8	4,191	7,165	11,356	495,055,825	43,594
9	4,126	6,672	10,798	483,725,923	44,798
10	3,666	5,903	9,569	437,110,693	45,680
11	3,163	5,185	8,348	394,387,365	47,243
12	3,043	4,890	7,933	384,139,275	48,423
13	3,011	4,700	7,711	382,891,696	49,655
14	2,666	4,319	6,985	351,553,900	50,330
15 & Up	37,451	48,651	86,102	4,922,316,747	57,168
<b>Totals</b>	<b>99,344</b>	<b>161,659</b>	<b>261,003</b>	<b>\$11,581,847,127</b>	<b>\$44,374</b>

Average

Age	45.5	45.4	45.5
Service	12.9	11.1	11.8

## COMPARATIVE STATEMENT OF ACTIVE PARTICIPANTS IN VALUATIONS

Valuation 12/31	General				Executive and Elected			
	No.	Earnings			No.	Earnings		
		\$ Millions	Average	% Incr.		\$ Millions	Average	% Incr.
1983	171,928	\$3,200	\$18,612		1,314	\$30	\$22,510	
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	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%

\* After change in method of calculating average pay.

## COMPARATIVE STATEMENT OF ACTIVE PARTICIPANTS IN VALUATIONS

Valuation 12/31	Protective With Social Security				Protective Without Social Security			
	No.	Earnings			No.	Earnings		
		\$ Millions	Average	% Incr.		\$ Millions	Average	% Incr.
1983	9,084	\$ 208	\$22,866		2,556	\$ 65	\$25,257	
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%
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%

\* After change in method of calculating average pay.

# FINANCIAL DATA

## DEVELOPMENT OF PARTICIPANT AND EMPLOYER RESERVES DURING THE YEAR

	Participant Accumulation			Employer Accumulation			Grand Total
	Core	Variable	Total	Core	Variable	Total	
Ending Balance December 31, 2006	\$14,533,402,942	\$1,211,709,291	\$15,745,112,233	\$20,320,094,137	\$1,216,637,361	\$21,536,731,498	\$37,281,843,731
Closing Adjustments	3,887,828	245,391	4,133,219	20,985,166	(4,682,679)	16,302,487	20,435,706
Beginning Balance January 1, 2007	14,537,290,770	1,211,954,682	15,749,245,452	20,341,079,303	1,211,954,682	21,553,033,985	37,302,279,437
Revenues:							
Employer Contributions	-	-	-	668,471,443	85,041,882	753,513,325	753,513,325
Participant Contributions	505,324,389	86,559,283	591,883,672	-	-	-	591,883,672
Total Revenues	505,324,389	86,559,283	591,883,672	668,471,443	85,041,882	753,513,325	1,345,396,998
Expenses:							
Separations	23,205,305	1,039,732	24,245,037	-	-	-	24,245,037
Retirement Single Sums	13,730,864	426,868	14,157,732	14,391,091	353,814	14,744,905	28,902,637
Death Benefits	17,716,060	2,576,771	20,292,831	13,550,723	2,023,132	15,573,855	35,866,686
Disability Insurance	-	-	-	-	-	-	-
	54,652,230	4,043,371	58,695,601	27,941,814	2,376,946	30,318,760	89,014,360
Transfers:							
Earnings Allocation	1,738,301,725	66,188,499	1,804,490,224	2,508,190,313	66,188,499	2,574,378,812	4,378,869,036
Annuities Awarded	(1,325,312,858)	(133,344,059)	(1,458,656,917)	(1,581,103,049)	(138,286,811)	(1,719,389,860)	(3,178,046,777)
Intra-Fund Transfers	(393,493)	-	(393,493)	393,493	105,993	499,486	105,993
Inter-Fund Transfers	30,358,500	(30,358,500)	-	30,358,500	(30,358,500)	-	-
	442,953,874	(97,514,059)	345,439,815	957,839,256	(102,350,819)	855,488,437	1,200,928,252
<b>Ending December 31, 2007</b>	<b>\$15,430,916,804</b>	<b>\$1,196,956,535</b>	<b>\$16,627,873,338</b>	<b>\$21,939,448,188</b>	<b>\$1,192,268,799</b>	<b>\$23,131,716,988</b>	<b>\$39,759,590,326</b>
Internal Rate of Return	12.3%	5.7%	11.8%	12.6%	5.7%	12.2%	12.0%

**RESERVES FOR NON-RETIRED PARTICIPANTS  
BALANCES BY VALUATION GROUP**

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	Reserve for Year Ended			
	December 31, 2007			December 31, 2006
	Participant	Employer	Total *	(Total in \$ Millions)
General	\$14,946,808,206	\$20,040,669,197	\$34,987,477,403	\$32,897.7
Executives & Elected	109,353,173	188,601,079	297,954,252	293.8
Protective with Soc. Sec.	1,234,096,821	2,297,862,800	3,531,959,621	3,217.0
Protective w/o Soc. Sec.	337,615,138	604,583,911	942,199,049	873.4
<b>Total</b>	<b>\$16,627,873,338</b>	<b>\$23,131,716,987</b>	<b>\$39,759,590,325</b>	<b>\$37,281.8</b>

*\* 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, 2007**

	General	Executives & Elected Officials	Protective Occupation		Totals
			With Soc. Sec	Without Soc. Sec	
Balance January 1, 2007	\$298,883,384	\$ 783,902	\$11,123,907	\$ 9,746,353	\$320,537,546
Plus: New Employers	84,087	0	0	0	84,087
Less: Adjustments	(2,924)	9,375	(9,375)	0	(2,924)
Less: Payments	(47,244,670)	(162,194)	(3,667,716)	(2,601,930)	(53,676,510)
Plus: Interest	19,634,150	49,224	580,852	557,265	20,821,491
<b>Balance December 31, 2007</b>	<b>\$271,354,027</b>	<b>\$ 680,307</b>	<b>\$ 8,027,668</b>	<b>\$ 7,701,688</b>	<b>\$287,763,690</b>

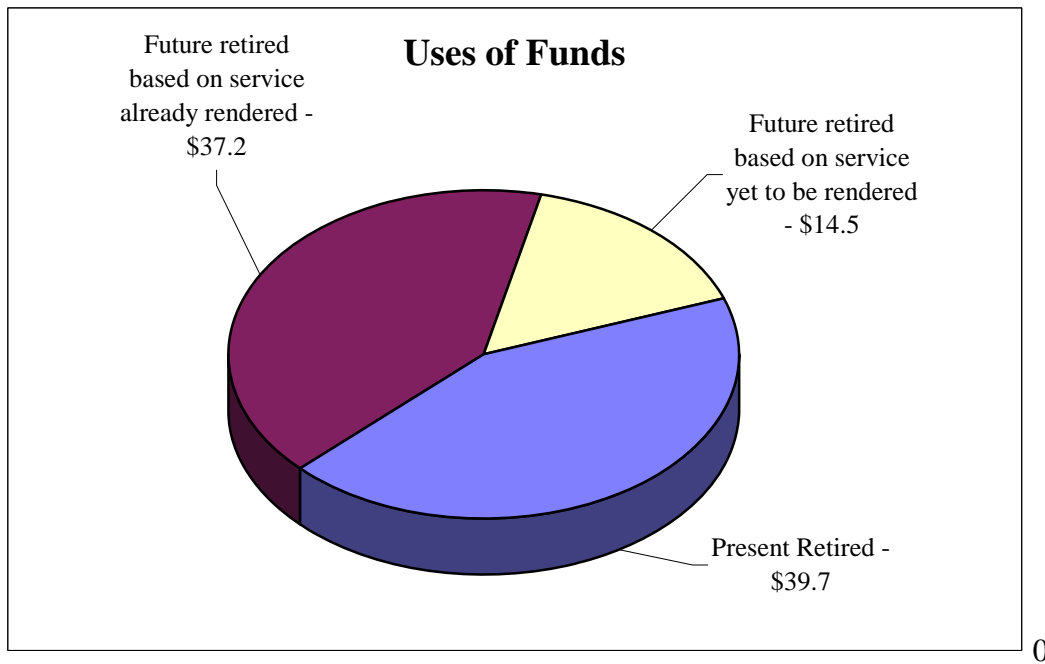
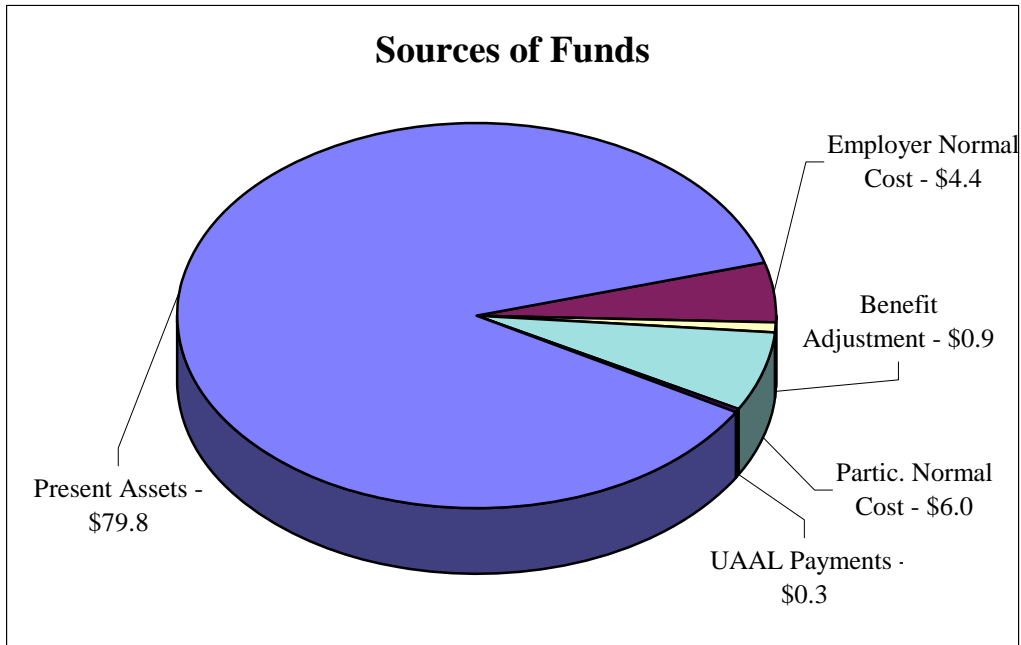
The UAAL is affected year to year by new employers entering the Wisconsin Retirement System, amortization payments, interest assessments, and statutory changes in benefits provided by the Retirement System. The UAAL is being amortized as a level percent of payroll. Since the payroll is assumed to increase 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 \$91.4 BILLION\* OF BENEFIT PROMISES  
FOR PRESENT ACTIVE AND RETIRED PARTICIPANTS  
DECEMBER 31, 2007**

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

**DEVELOPMENT OF ACTUARIAL PRESENT VALUES**  
**DECEMBER 31, 2007**  
**(\$ MILLIONS)**

Present Value of Future Benefits for	General	Executives & Elected Officials	Protectives		Total
			With Soc. Sec.	Without Soc. Sec.	
Active Participants					
Service Retirement	\$36,823.2	\$284.0	\$4,314.5	\$ 1,022.4	\$42,444.1
Withdrawal	1,899.9	11.6	179.0	20.3	2,110.8
Death-in-Service	676.6	9.3	63.9	13.2	763.0
Disability	912.7	2.2	74.5	36.9	1,026.3
Variable Excess	206.6	3.2	8.7	1.6	220.1
Total Active	40,519.0	310.3	4,640.6	1,094.4	46,564.3
Inactive Participants	4,584.4	67.1	274.0	39.5	4,965.0
Active and Inactive	45,103.4	377.4	4,914.6	1,133.9	51,529.3
Additional Contributions Present Retired					167.5 39,675.1
<b>Actuarial Present Value of Future Benefits</b>					<b>\$91,371.9</b>

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 \$91,371.9 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, 2007

	General	Executives & Elected Officials	Protective Occupation		Total
			With Soc. Sec	Without Soc. Sec.	
<b>\$ Millions</b>					
1. Present Value of Future Benefits for Non-Retired	\$45,103.4	\$377.4	\$4,914.6	\$1,133.9	\$51,529.3
2. Present Value of Future Entry Age Normal Costs	12,288.6	84.7	1,775.2	367.1	14,515.6
3. Entry Age Accrued Liability: (1)-(2)	32,814.8	292.7	3,139.4	766.8	37,013.7
4. Non-Retired Assets-WRS	34,987.5	298.0	3,532.0	942.2	39,759.7
-LTDI	154.5	1.3	26.8	7.0	189.6
-Total	35,142.0	299.3	3,558.8	949.2	39,949.3
5. Entry Age Unfunded Accrued Liability: (3)-(4)	(2,327.2)	(6.6)	(419.4)	(182.4)	(2,935.6)
6. WRS Frozen Unfunded Accrued Liability	271.4	0.7	8.0	7.7	287.8
<b>7. EAR: (6)-(5)</b>	<b>\$ 2,598.6</b>	<b>\$ 7.3</b>	<b>\$ 427.4</b>	<b>\$ 190.1</b>	<b>\$ 3,223.4</b>

## DEVELOPMENT OF CONTRIBUTION RATES FOR CALENDAR YEAR 2009

	General	Executive & Elected Officials	Protective Occupation		Total
			With Soc. Sec	Without Soc. Sec.	
<b>\$ Millions</b>					
Total Reported Earnings	\$ 10,277.9	\$ 94.6	\$ 1,035.6	\$ 173.7	\$ 11,581.8
Present Value of Future Earnings	101,574.7	704.0	11,177.2	1,765.8	115,221.7
Present Value of Future Benefits	45,103.4	377.3	4,914.6	1,133.9	51,529.2
Non-Retired Assets	35,142.0	299.3	3,558.8	949.2	39,949.3
Unfunded Liability	271.4	0.7	8.0	7.7	287.8
Present Value of Future Normal Costs					
Future Service Portion	12,288.6	84.6	1,775.2	367.1	14,515.5
Exp. Amort. Res. Portion	(2,598.6)	(7.3)	(427.4)	(190.1)	(3,223.4)
<b>Total</b>	<b>9,690.0</b>	<b>77.3</b>	<b>1,347.8</b>	<b>177.0</b>	<b>11,292.1</b>
Normal Cost Amortization Years					
Future Service Portion	12.4	8.8	13.9	12.9	12.5
Exp. Amort. Res. Portion	20.0	20.0	20.0	22.0	
Unfunded Liability Amortization Years	21.0	21.0	21.0	21.0	21.0
<b>%'s of Active Member Payroll</b>					
Normal Cost					
Future Service Portion	12.1 %	12.0 %	15.9 %	20.8 %	12.6 %
Exp. Amort. Res. Portion	(1.8)%	(0.5)%	(2.8)%	(7.1)%	(2.0)%
<b>Total</b>	<b>10.3 %</b>	<b>11.5 %</b>	<b>13.1 %</b>	<b>13.7 %</b>	<b>10.6 %</b>
2008 Total Normal Cost Rates	10.6 %	11.5 %	13.3 %	14.2 %	10.9 %
Change from 2008 (current)	(0.3)%	0.0 %	(0.2)%	(0.5)%	(0.3)%
Allocation of Change					
Employer Normal Cost	(0.1)%	0.0 %	(0.1)%	(0.2)%	(0.1)%
Benefit Adjustment	(0.1)%	0.0 %	0.0 %	0.0 %	(0.1)%
Participant Normal Cost	0.0 %	0.0 %	(0.1)%	(0.2)%	0.0 %
<b>Total Allocated Change</b>	<b>(0.2)%</b>	<b>0.0 %</b>	<b>(0.2)%</b>	<b>(0.4)%</b>	<b>(0.2)%</b>
Unallocated Change *	(0.1)%	0.0 %	0.0 %	(0.1)%	(0.1)%
<b>2009 Normal Cost Rates</b>					
<b>Employer Normal Cost</b>	<b>4.5 %</b>	<b>8.5 %</b>	<b>8.1 %</b>	<b>10.6 %</b>	<b>5.0 %</b>
<b>Benefit Adjustment</b>	<b>0.9 %</b>	<b>0.0 %</b>	<b>0.0 %</b>	<b>0.0 %</b>	<b>0.8 %</b>
<b>Participant Normal Cost</b>	<b>5.0 %</b>	<b>3.0 %</b>	<b>5.0 %</b>	<b>3.2 %</b>	<b>5.0 %</b>
<b>Total Normal Cost</b>	<b>10.4 %</b>	<b>11.5 %</b>	<b>13.1 %</b>	<b>13.8 %</b>	<b>10.8 %</b>
Average Unfunded Liability Amortization	0.2 %	0.0 %	0.1 %	0.3 %	0.2 %
<b>Average Total Rate</b>	<b>10.6 %</b>	<b>11.5 %</b>	<b>13.2 %</b>	<b>14.1 %</b>	<b>11.0 %</b>

\* 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)**

<b>Present Resources and Expected Future Resources</b>	<b>December 31</b>	
	<b>2007</b>	<b>2006</b>
A. Book Value of Present System Assets		
Annuity Reserves		
Core	\$35,050.1	\$31,180.5
Variable	4,625.0	4,594.2
Total Annuity Reserves	39,675.1	35,774.7
Non-Retired Participant Reserves		
Participant Contribution Balance	16,627.9	15,745.1
Additional Contributions	167.5	157.3
Employer Accumulation Balance	23,131.8	21,536.8
Adjustment for 62.13 Contributions	0.0	0.0
LTDI Reserve for Future Claims	189.6	201.4
Total Non-Retired Reserves	40,116.8	37,640.6
Total System Assets Used in Valuation	79,791.9	73,415.3
B. Actuarial Present Value of Future Participant Contributions	5,929.4	5,735.6
C. Actuarial Present Value of Future Benefit Adjustment Contributions	914.2	984.2
D. Actuarial Present Value of Future Employer Contributions for		
Unfunded Accrued Liabilities	287.8	320.5
Section 62.13	0.0	0.0
Normal Costs	4,448.5	4,881.5
Total	4,736.3	5,202.0
<b>E. Total Present and Expected Future Resources</b>	<b>\$91,371.8</b>	<b>\$85,337.1</b>

**SUMMARY STATEMENT OF RETIREMENT SYSTEM OBLIGATIONS**  
**(\$ MILLIONS)**

Retirement System Obligations	December 31	
	2007	2006
A. To Annuitants and Beneficiaries Receiving Benefits		
Core Annuities		
Reported at Year End	\$32,877.5	\$30,273.9
Dividend Adjustment and Reserve	2,172.6	906.6
Total Fixed Annuities	35,050.1	31,180.5
Variable Annuities		
Reported at Year End	4,563.7	4,145.2
Distribution and Reserve	61.3	449.0
Total Variable Annuities	4,625.0	4,594.2
 Total for Benefits in Pay Status	 39,675.1	 35,774.7
B. To Active and Inactive Participants For Benefits Based on		
Participant Contributions Made		
In the Past	16,627.9	15,745.1
In the Future	5,929.4	5,735.6
Additional Contributions Made in the Past	167.5	157.3
Benefit Adjustment Contributions Made in the Future	914.2	984.2
Employer Contributions	28,057.7	26,940.2
 Total for Benefits Not Yet in Pay Status	 51,696.7	 49,562.4
<b>C. Total Actuarial Value of Expected Future Benefits</b>	<b>\$91,371.8</b>	<b>\$85,337.1</b>



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**SECTION TWO**  
**FINANCIAL REPORTING**

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## SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

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Valuation Date	December 31, 2007
Actuarial Cost Method	Frozen Entry Age
Amortization Method	Level Percent -- Closed Period
Remaining Period	21 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)

	2006*	2005
Assets		
Cash and Cash Equivalents	\$ 1,482,316	\$ 1,018,141
Securities Lending Collateral	6,843,721	5,976,637
Prepaid Expenses	3,171	2,427
<b>Total Short Term Assets</b>	<b>8,329,208</b>	<b>6,997,205</b>
Receivables		
Contributions	107,392	105,174
Prior Service Contributions	345,298	382,006
Benefits Overpayment	2,008	1,689
Due from other Trust Funds	2,094	3,420
Miscellaneous	2,205	2,145
Interest and dividends	260,427	201,959
Investment Sales	144,140	146,518
<b>Total Receivables</b>	<b>863,564</b>	<b>842,911</b>
Investments at Fair Value		
Fixed Income	21,040,235	17,614,513
Preferred Securities	368,981	297,458
Convertible Securities	39,670	37,027
Stocks	54,797,815	50,402,131
Limited Partnerships	3,815,157	2,836,669
Mortgages	300,093	355,825
Real Estate	394,352	350,483
Multi Asset Investments	844,778	735,937
<b>Total investments</b>	<b>81,601,081</b>	<b>72,630,043</b>
Capital Assets	58	23
<b>Total Assets</b>	<b>90,793,911</b>	<b>80,470,182</b>
Liabilities:		
Fixed Investment Due Other Programs	2,920,010	2,576,769
Variable Investment Due Other Programs	22,702	22,907
Securities Lending Collateral	6,843,721	5,976,637
Benefits Payable	227,541	216,456
Deferred Revenue	252	270
Due to Other Trust Funds	2,969	36,577
Miscellaneous Payables	100,520	80,781
Investment Payables	285,441	89,261
<b>Total Liabilities</b>	<b>10,403,156</b>	<b>8,999,658</b>
<b>Net Assets in Trust for Pension Benefits</b>	<b>\$80,390,755</b>	<b>\$71,470,524</b>

\* 2007 Summary not yet available.

## STATEMENT OF CHANGES IN ASSETS (\$ THOUSANDS)

	Activity During Year	
	2006*	2005
Additions:		
Contributions:		
Employer Contributions	\$ 568,970	\$ 538,097
Employee Contributions	670,254	640,229
Total Contributions	1,239,224	1,178,326
Investment Income:		
Net Appreciation (Depreciation) in Fair Value of Investments	10,448,085	4,656,309
Interest	580,778	577,442
Dividends	460,459	535,510
Securities Lending Income	317,129	203,335
Other	74,421	76,224
Less		
Current Income Distributed	403,074	201,645
SWIB Investment Expense	210,660	165,940
Investment Income Distributed to Securities Lending Rebates and Fees	304,857	188,686
Net Investment Income	10,962,281	5,492,549
Interest on Prior Service Receivable	23,193	25,006
Miscellaneous Income	1,905	2,338
Total Additions	12,226,603	6,698,219
Deductions:		
Benefits and Refunds:		
Retirement, Disability, and Beneficiary	3,264,163	3,067,662
Separation Benefits	25,072	25,221
Total Benefits and Refunds	3,289,235	3,092,883
Unusual Write-off of receivable	0	(7)
Administrative Expense	17,134	17,859
Total Deductions	3,306,369	3,110,735
Net Increase (Decrease)	8,920,234	3,587,484
Net Assets Held in Trust:		
Beginning of Year	\$71,470,524	\$67,883,042
End of Year	<b>\$80,390,755</b>	<b>\$71,470,524</b>

\* 2007 Summary not yet available.

**SCHEDULE OF FUNDING PROGRESS**  
**\$ MILLIONS**

<b>Valuation Date Dec 31</b>	<b>Actuarial Value of Assets (a)</b>	<b>Actuarial Accrued Liability (AAL) Frozen Entry Age (b)</b>	<b>Unfunded AAL (UAAL) (b) - (a)</b>	<b>Funded Ratio (a)/(b)</b>	<b>Covered Payroll (c)</b>	<b>UAAL as a Percent of Covered Payroll [(b) - (a)] / (c)</b>
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 %
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 %

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

## SOLVENCY TEST (\$ MILLIONS)

Valuation Date Dec 31	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
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%
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%

## CONTRIBUTIONS REQUIRED AND CONTRIBUTIONS MADE

Year Ended December 31	Annual Required Contribution	Percent Contributed
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%
2003	462.7	100.0%
2004	497.6	100.0%
2005	535.6	100.0%
2006	569.0	100.0%
2007	614.0	105.3%

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

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## **SECTION THREE**

### **ACTUARIAL METHODS AND ASSUMPTIONS**

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## ACTUARIAL VALUATION METHOD

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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.



## ASSET VALUATION METHOD

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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-24. ETF Staff maintains the breakdown of the separate asset accounts.

## CORE INVESTMENT TRUST: MARKET RECOGNITION ACCOUNT

	For the Year Ended December 31						
	2005	2006	2007	2008	2009	2010	2011
Beginning of year							
a. Funding value	\$62,064,552,008	\$64,459,957,721	\$68,996,478,572	\$75,617,958,774	\$77,499,271,040	\$78,862,413,577	\$80,139,272,053
b. Market value	63,565,374,407	67,277,918,278	75,891,313,801	80,351,562,358	80,351,562,358	80,351,562,358	80,351,562,358
End of year							
c. Market value	67,277,918,278	75,891,313,801	80,351,562,358	80,351,562,358	80,351,562,358	80,351,562,358	80,351,562,358
d. Non-investment cash flow (contributions minus benefits)	(1,501,358,511)	(1,672,109,754)	(1,908,496,915)				
e. Investment income							
e1. Total Investment Income	5,213,902,382	10,285,505,277	6,368,745,472				
e2. Assumed rate	7.8%	7.8%	7.8%				
e3. Amount for immediate recognition	4,782,482,075	4,962,664,422	5,307,293,949	-	-	-	-
e4. Amount for phased-in recognition: e1-e3	431,420,308	5,322,840,855	1,061,451,523	-	-	-	-
f. Phased-in recognition of investment income							
f1. Current year: .2 x e4	86,284,062	1,064,568,171	212,290,305	-	-	-	-
f2. First prior year	518,169,729	86,284,062	1,064,568,171	212,290,305	-	-	-
f3. Second prior year	1,341,370,902	518,169,729	86,284,062	1,064,568,171	212,290,305	-	-
f4. Third prior year	(1,764,426,680)	1,341,370,902	518,169,729	86,284,062	1,064,568,171	212,290,305	-
f5. Fourth prior year	(1,067,115,864)	(1,764,426,680)	1,341,370,902	518,169,729	86,284,062	1,064,568,171	212,290,305
f6. Total MRA recognition	(885,717,851)	1,245,966,184	3,222,683,168	1,881,312,266	1,363,142,537	1,276,858,476	212,290,305
f7. Amount for TAA recognition	-	-	-	-	-	-	-
f8. Total recognized gain (loss)	(885,717,851)	1,245,966,184	3,222,683,168	1,881,312,266	1,363,142,537	1,276,858,476	212,290,306
g. Total Recognized Investment Income: e3 + f8	3,896,764,224	6,208,630,606	8,529,977,117	1,881,312,266	1,363,142,537	1,276,858,476	212,290,306
h. Funding value end of year: a + d + e3 + f8	64,459,957,721	68,996,478,572	75,617,958,774	77,499,271,040	78,862,413,577	80,139,272,053	80,351,562,359
i. Difference between market and funding values	2,817,960,557	6,894,835,229	4,733,603,584	2,852,291,318	1,489,148,780	212,290,305	-
j. Recognized Rate of Return	6.4%	9.8%	12.5%				
k. Market Rate of Return	7.9%	14.2%	8.1%				

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

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**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.

<b>% Merit and Longevity Increase Next Year</b>						
<b>Service</b>	<b>Gen.</b>	<b>University Teachers</b>	<b>Public School Teachers</b>	<b>Protective</b>		<b>Exec. &amp; Elec.</b>
				<b>With S.S.</b>	<b>w/o S.S.</b>	
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

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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. & Elected
	Male	Female	Male	Female	Male	Female	With S.S.	W/O S.S.	
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. & Elected
	Male	Female	Male	Female	Male	Female	
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**

Age	Service	% of Active Participants Terminating								
		Protective		Public Schools		University		Exec. & Elected	General	
		With Soc. Sec.	Without Soc. Sec.							
		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**

Age	% of Active Participants Becoming Disabled									
	Protective		Public Schools		University		Exec. & Elected		General	
	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%	0.32%	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

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<b>Expenses:</b>	Assumed investment return is net of administrative and investment expenses.
<b>Marriage Assumption:</b>	Everyone is assumed married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses.
<b>Pay Increase Timing:</b>	Beginning of (calendar) year for most people. Middle of calendar year for teachers.
<b>Pay Annualization:</b>	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.
<b>Final Average Salary:</b>	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.
<b>Decrement Timing:</b>	Decrements of all types are assumed to occur mid-year.
<b>Decrement Operation:</b>	All decrements operate during the first 5 years of service.
<b>Decrement Relativity:</b>	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
<b>Eligibility Testing:</b>	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.
<b>Benefit Service:</b>	Exact fractional service on the decrement date is used to determine the amount of benefit payable.
<b>Non-Benefit Service:</b>	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.
<b>Service Credit Accruals:</b>	It is assumed that members accrue one year of service credit per year.



## MISCELLANEOUS AND TECHNICAL ASSUMPTIONS (CONCLUDED)

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<b>Incidence of Contributions:</b>	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.
<b>Normal Form of Benefit:</b>	The assumed normal form of benefit is a straight life benefit, except where otherwise noted.
<b>Disability Valuation:</b>	<p>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.</p> <p>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.</p>
<b>Variable Excess Benefits:</b>	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.)
<b>Loads:</b>	Final Average Salary was loaded 1% to account for additional contingencies in actual benefit amount calculated at the time of retirement.
<b>Amortization Payoff Reserve:</b>	Additional reserves in the amount of \$229,821,108 (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.

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## SECTION FOUR

### THE VALUATION PROCESS

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## FINANCIAL PRINCIPLES & OPERATIONAL TECHNIQUES OF THE WISCONSIN RETIREMENT SYSTEM

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**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 ...  
Ivestment 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 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.

## ACTUARIAL METHOD AND ASSUMPTIONS USED IN VALUATIONS

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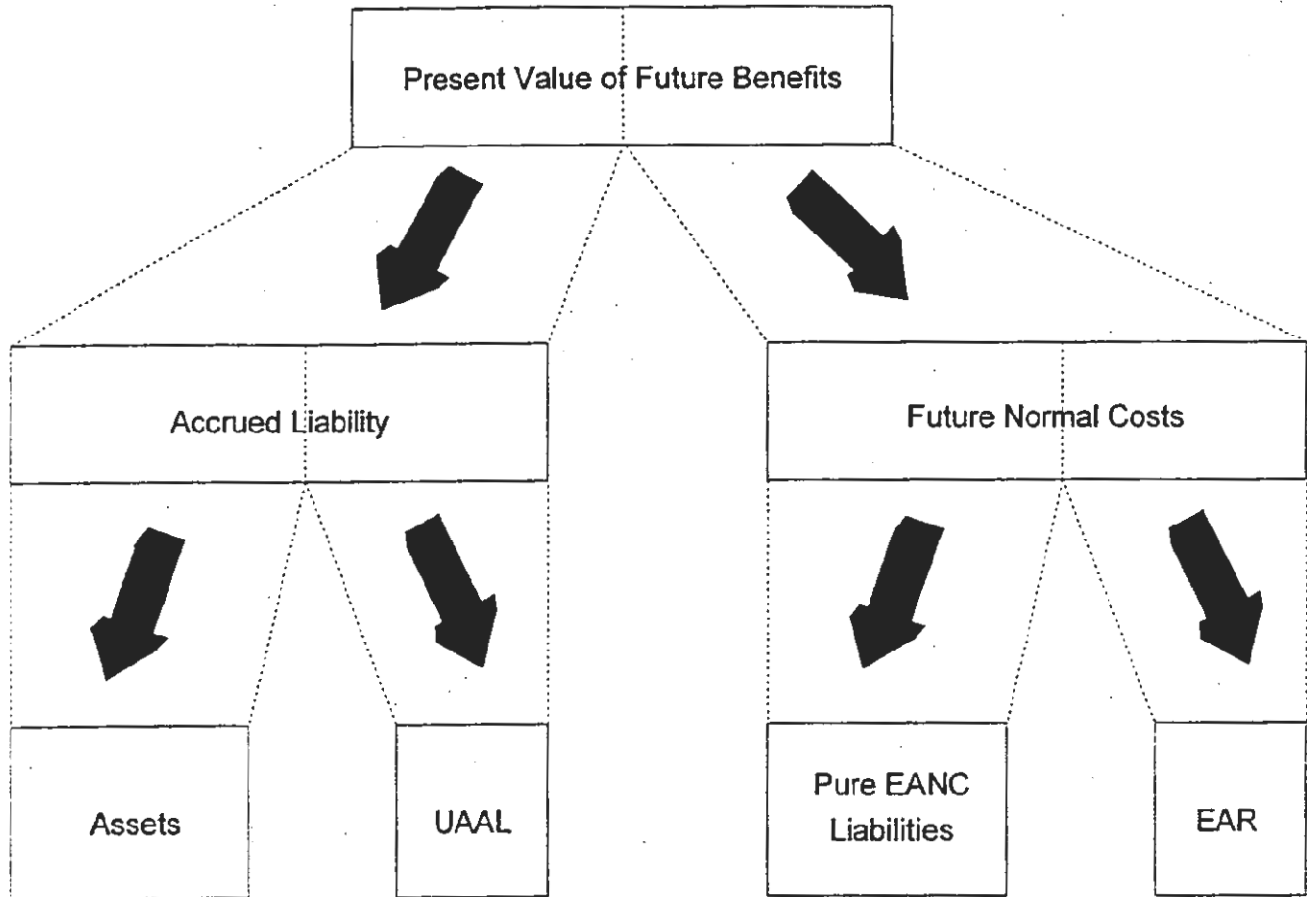
### The principal areas of risk assumption are:

- 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*

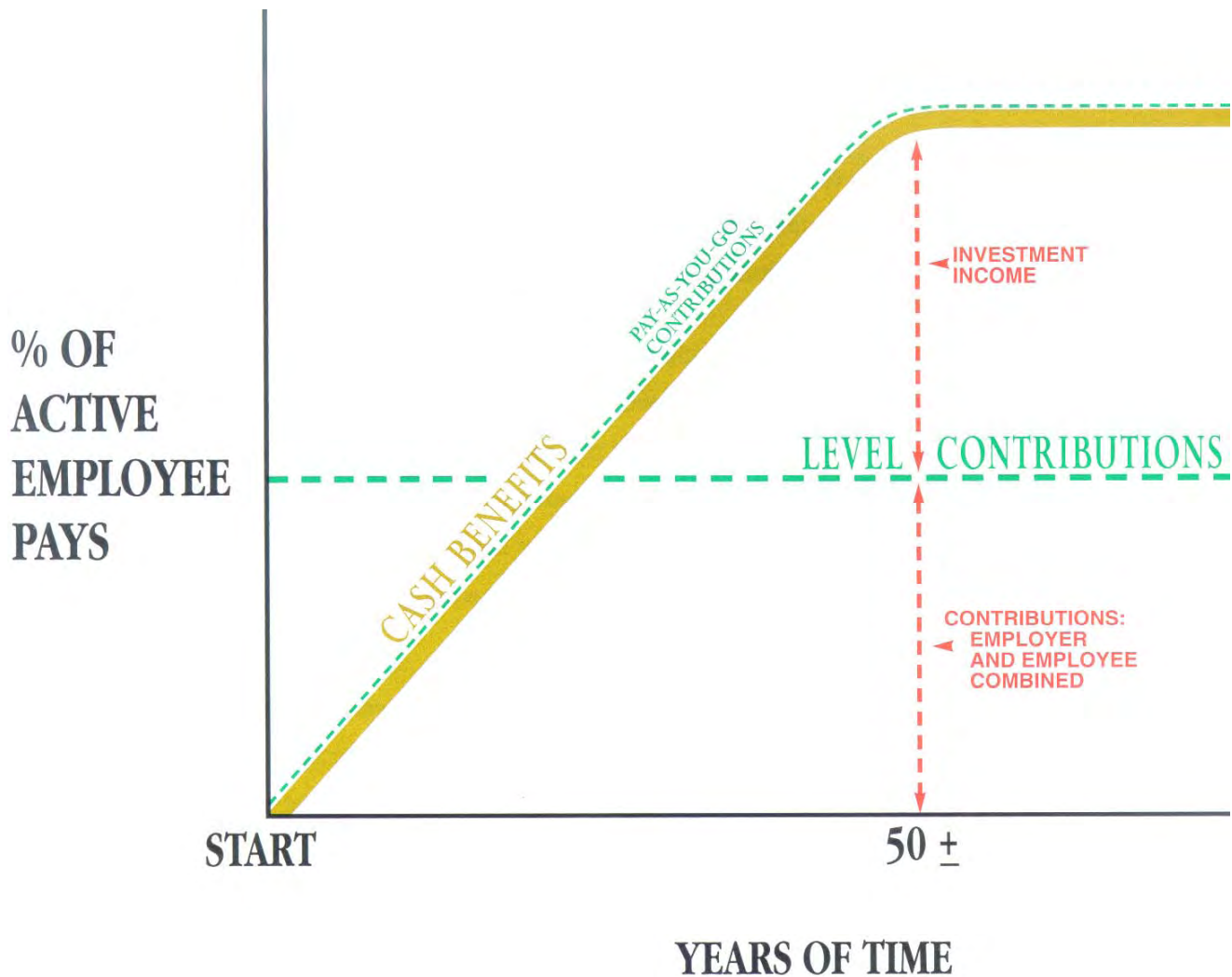
In an actuarial valuation, the actuary projects the monetary effect of each risk assumption for each distinct experience group, for the next year and for each year over the next half-century or longer.

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

## GLOSSARY

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**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.



## **GLOSSARY (CONCLUDED)**

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**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.

**DRAFT**

The State of Wisconsin  
Employee Trust Funds Board



Section 40.65  
Duty Disability Plan  
Actuarial Review  
As of December 31, 2007

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# I. Overview

The purpose of this report is to summarize our review of the Section 40.65 Duty Disability Plan. Included is a brief review of the Plan's experience during 2007, an estimate of the State's liability as of December 31, 2007 and an analysis of current funding levels.

In preparing this report, we have relied on claim information provided by the Department of Employee Trust Funds. We have not audited this information, but have relied on it as submitted after making reasonableness checks as we deemed appropriate under the circumstances.

The results of this review indicate that the Duty Disability Plan has assets of \$321.6 million and estimated liabilities of \$383.4 million as of December 31, 2007. The accrued funding shortfall is \$61.8 million, which represents about 5.1% of the \$1,213 million in covered payroll. This is a 3.5% decrease to the shortfall as a percentage of covered payroll from last year. The asset balance does not include \$4.1 million in deferred market gains which will be recognized over the next four years.

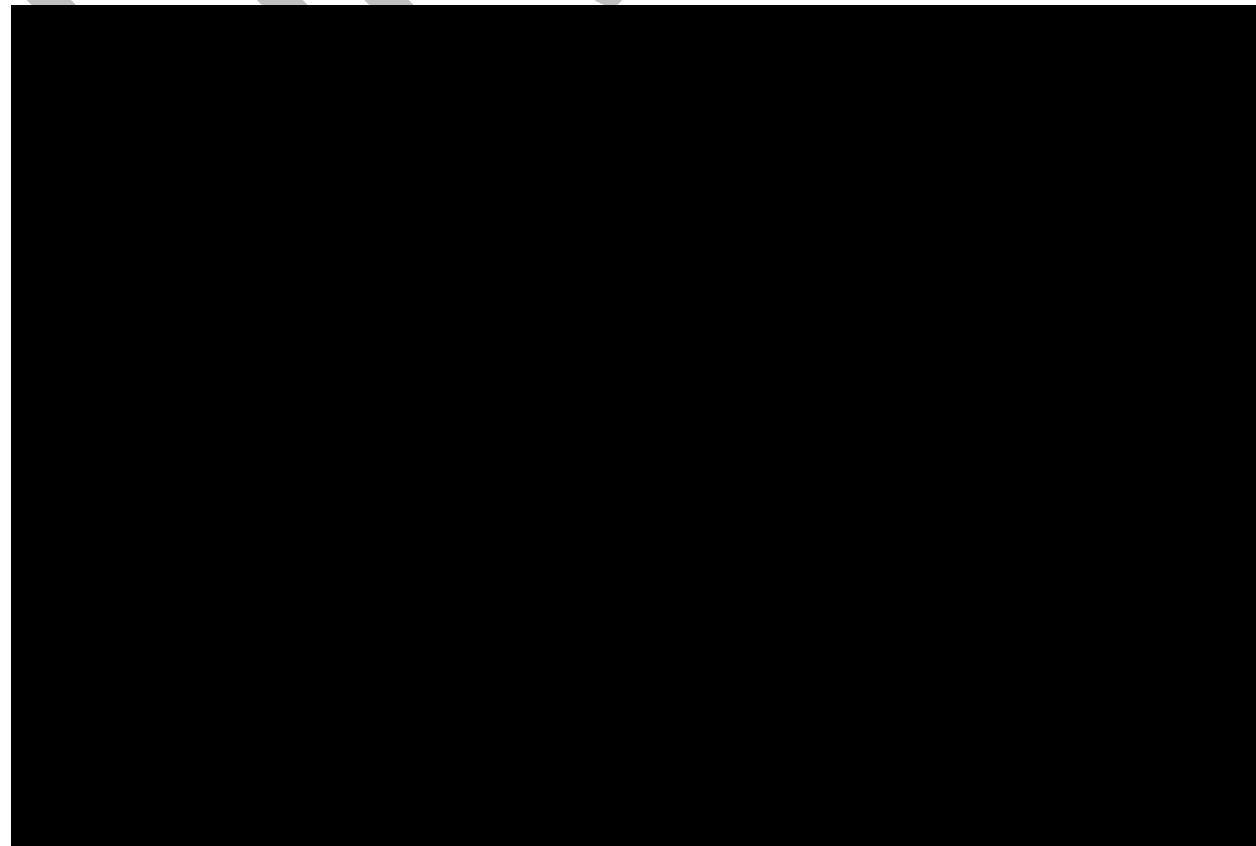
If experience continues at recent levels, the present premium level will be sufficient to eliminate the accrued funding shortfall in approximately four years. Funding at such levels is consistent with the Board's past practice. Therefore, no premium increase is recommended at this time.

The remainder of this report summarizes the review in more detail. A number of assumptions have been made in estimating the State's liability. Such assumptions are described throughout the report and summarized in Exhibit 2.

## II. 2007 Experience Review

### Fund Balance

During 2007 the fund balance increased from \$266,223,389 to \$321,640,407. Investment earnings were \$34,437,480 with paid claims and administrative expenses totaling \$26,434,713. These components are shown in the following table along with figures for the prior years for comparison purposes.



\* Includes adjustment to beginning balance.

<sup>1</sup> Includes a \$5,601,954 adjustment for 1999 Wisconsin Act 11.

<sup>2</sup> Includes a \$3,838,988 adjustment for understated interest during 2002 (including Wisc Act 11).

<sup>3</sup> Includes a \$215,444 adjustment for understated interest during 2003 (including Wisc Act 11).

<sup>4</sup> Includes a \$63,179 adjustment for understated interest during 2004 (including Wisc Act 11).

- <sup>5</sup> Includes a \$31,517 adjustment for understated interest during 2005 (including Wisc Act 11).
- <sup>6</sup> Includes a \$473,544 adjustment for understated interest during 2006 (including Wisc Act 11).
- <sup>7</sup> Includes a \$351,103 adjustment for understated interest during 2007 (including Wisc Act 11).
- # Includes 3 1/2 years of administrative expense charges.

As of December 31, 2007 there were 902 claims in payment status with annual benefits totaling \$25,806,128. 859 of the claims were for disabled participants and 43 were for beneficiaries. The number of claims and benefits being paid increased over last year from 894 and \$25,275,061 respectively. The following table shows annual benefits as a dollar amount and as a percentage of payroll by recipient type.

	Claims in Payment Status		
	No.	Annual \$	% of Payroll
Disabled Participants	859	\$25,151,479	2.07%
Survivor Beneficiaries	43	\$654,648	0.05%
Total	902	\$25,806,128	2.13%

# III. Estimated Liability as of December 31, 2007

The liability for outstanding claims under the Duty Disability Plan was estimated in two parts - reported claims and incurred claims not yet in pay status. The following paragraphs summarize the methods used and results.

## Claims in Pay Status

The total liability for claims in payment status as of December 31, 2007, \$334 million, is approximately \$4 million greater than the liability as of December 31, 2006.

## Incurred Claims Not Yet in Pay Status

A review of recent claims data showed lags in the time between when claims are incurred and when they are reported and reach pay status. There were 84 claims which are likely to be approved for pay status that were in either pending or appeal status as of December 31, 2007. This includes 10 claims for which applications were received during the first two months of 2008. Note that 6 of the 84 claims were approved in 2007 but, due to the timing of their incurrals, data necessary to value their liability as a reported claim was unavailable at the time of our valuation. As a result, these claims were included in the incurred but not reported (IBNR) liability.

The IBNR liability for December 31, 2007, \$49 million, was developed using claims that are currently either in appeal or pending status or for which sufficient data is not available to value their liability as a typical claim in payment status, average projected reserve factors, and a 10% load for conservatism.



## Results

The total estimated liability as of December 31, 2007 for the Duty Disability plan is \$383,431,938, developed as follows:

	Offsets \$	Annual \$
Annual Benefits Before Offsets		40,472,247
Offsets		
Social Security	3,632,340	
Unemployment Compensation	0	
Worker's Compensation	472,542	
WRS Benefits		
- Separation	901,825	
- Disability	5,408,219	
- Normal Retirement	6,249,949	
Earnings	675,678	
Total Offsets*	17,340,553	
Adjustment for offsets greater than base benefit	2,674,433	
Net Offsets*	14,666,119	
Annual benefits after offsets*		25,806,128
Present value of benefits being paid		334,235,938
Reserve for incurred but not paid claims		49,196,000
<b>Total</b>		<b>383,431,938</b>

\*Subtotals may not tie to the sum of items due to rounding.

***Total net offsets are 36.2% of gross benefits before offsets.***

# IV. Analysis of Funding Levels

## Financial Progress

As of December 31, 2007 the payout rate from this plan decreased to 2.18% of covered payroll (down from 2.29% a year ago). Pertinent elements of the present financial picture include:

- During 2007 benefit reserves to pay claims increased from \$266.2 million to \$321.6 million.
- The contribution rate currently in effect (December 31, 2007) will generate approximately 3.94% of covered payroll. This rate appears to be sufficient to achieve a fully reserved status over a 4-year period (down from 21 years at December 31, 2000, 16 years at December 31, 2003 and 7 years at December 31, 2006). These calculations assume that the group size stabilizes at about its current level, as follows:

Provision for annual incurred claims*	2.18%
Amortization of accrued shortfall	<u>1.76%</u>
<b>Total</b>	<b>3.94%</b>

\* Includes (Benefit Payments + Expenses) as a % of covered payroll as indicated in ETF Trust Statement.

Recent funding practice has been to limit the period of amortization of the shortfall to approximately 30 years. The data above verifies that the current rate schedule is projected to fund the shortfall in a shorter period of time. In 1998 the Board approved a rate increase of approximately .22% of payroll. At that time, we expected the increase to be sufficient to meet the funding policy for two years. After nine years, it still appears that the new contribution level is sufficient for at least one more year. Therefore, we do not recommend a contribution increase at this time.

# Exhibit 1

Section 40.65 duty disability benefits for protective occupation participants were added in 1982. Benefits are summarized below:

**Eligibility.** Duty-related injury or disease that is likely to be permanent, which causes a protective occupation participant to retire, accept reduced pay or light duty assignment, or in some cases, that impairs promotional opportunities.

**Amount.** 80% of salary (75% if partially disabled and not a State Employee), less the following offsets:

- Social Security
- Unemployment Compensation
- Worker's Compensation
- Any other WRS benefit
- All earnings from the employer under which the disability occurred
- A percent of other earnings as follows:
  - 1/3 of earnings less than 40% of monthly salary
  - 1/2 of earnings between 40% and 80% of monthly salary
  - 2/3 of earnings over 80% of monthly salary

## **Survivor Benefits.**

- All survivor benefits are offset by any Chapter 102 death benefits
- Pre-5/3/88 and certain state employees:
  - 1/3 of the participant's monthly salary at time of death to surviving spouse, plus
  - \$15/month to each unmarried child under the age of 18
  - Not to exceed 65% of participant's monthly salary at time of death
  - State employees are included
- Post-5/3/88 and certain state employees:
  - 1/2 of the participants monthly salary at time of death to surviving spouse, less other income sources that are based on the participant's earnings record
  - 1/10 of the participant's monthly salary at time of death to each unmarried child under the age of 18
  - Not to exceed 70% of participant's monthly salary at time of death
  - State employees are not included (with the exception of cancer presumptive)
- Cancer Presumptive Law:
  - 70% of the participant's monthly salary at time of death to surviving spouse, less other income sources that are based on the participant's earnings record
  - 1/10 of the participant's monthly salary at time of death to the guardian of any minor child, as long as there is no surviving spouse
  - There is no maximum

## **Annual Increases.**

- To age 60: In accordance with WRS salary index.
- After age 60: In accordance with WRS dividend increases (as long as the claimant is not also receiving a disability retirement benefit.)

**Contributions.** Vary by experience.

## Exhibit 2

**Mortality:** Wisconsin Projected Experience Table - 93; 98% of male mortality and 97% of female mortality.

**Set Forward:** 3 years for males only.

**Recovery:** None.

**Sex:** All disabled recipients are assumed to be male; all beneficiary recipients are assumed to be female.

**Benefit Form:** Life annuity for unmarried disabled recipients and all beneficiaries; 50% joint and survivor annuity for married disabled recipients.

**Interest:** 4.8% (which approximates a 7.8% valuation rate with 3.0% annual benefit increases). The valuation rate was changed for the December 31, 2004 valuation to match the WRS interest rate. The WRS interest rate was reduced from 8.0% to 7.8% as of February 1, 2004.

**IBNR Loading:** 10% margin for conservatism

# Exhibit 3

## Benefits Being Paid and Reported Claim Liability by Year of Incurral

Year Incurred	Number Valued	No Benefit Payable	Total	Annual Benefit	% of Payroll	Actuarial Liability
2007	9	1	10	\$ 286,897	0.02%	\$ 4,428,064
2006	17	2	19	421,123	0.03%	6,012,177
2005	28	0	28	795,619	0.07%	12,611,427
2004	31	3	34	1,127,893	0.09%	17,043,013
2003	26	0	26	664,656	0.02%	10,192,607
2002	32	2	34	1,144,274	0.09%	17,131,014
2001	26	0	26	861,561	0.07%	13,032,140
2000	21	2	23	554,071	0.05%	8,157,792
1999	29	1	30	1,101,741	0.09%	16,175,921
1998	39	2	41	1,214,612	0.10%	17,163,376
1997	26	2	28	756,082	0.06%	10,918,725
1996	21	1	22	686,567	0.06%	9,419,769
1995	30	3	33	974,994	0.08%	13,235,465
1994	30	2	32	1,042,616	0.09%	13,767,619
1993	45	7	52	1,318,757	0.11%	17,618,152
1992	52	5	57	1,499,625	0.12%	19,604,551
1991	43	9	52	1,061,663	0.09%	13,202,049
1990	40	8	48	1,039,504	0.09%	13,311,277
1989	54	7	61	1,444,356	0.12%	17,205,405
1988	55	2	57	1,651,552	0.14%	19,394,734
1987	40	2	42	1,229,648	0.10%	13,632,531
1986	42	3	45	1,511,193	0.12%	15,612,643
1985	44	2	46	1,455,728	0.12%	15,460,193
1984	30	0	30	1,035,373	0.09%	10,953,180
1983	16	0	16	540,563	0.04%	4,900,253
1982	9	0	9	351,238	0.03%	3,598,843
1979	1	0	1	34,220	0.00%	453,018
<b>Total</b>	<b>836</b>	<b>66</b>	<b>902</b>	<b>\$ 25,806,128</b>	<b>2.13%</b>	<b>\$ 334,235,938</b>

## Exhibit 4

### Rate Schedule: Present & Proposed December 31, 2007 Valuation

% of Covered Payroll	Applicable To
1.9	Groups with claims payout during the prior year of less than or equal to 0.5% of payroll.
2.4	Groups with one claim in which the payout during the prior year exceeded 0.5% of payroll, and groups with two or more claims in which the payout was more than 0.5% but less than 1.0% of payroll.
3.6	Groups with two or more claims in which the payout during the prior year was more than 1.0% but less than 2.0% of payroll.
5.4	Groups with two or more claims in which the payout during the prior year was more than 2.0% and less than 3.0% of payroll.
6.6	Groups with two or more claims in which the payout exceeded 3.0% but was less than 6.6% of payroll during the prior year.
6.6 + ½ of claims over 6.6%	Groups with two or more claims in which the payout exceeded 6.6% of payroll during the prior year.



DRAFT

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# Wisconsin Retirement System

27th Annual Actuarial Valuations  
December 31, 2007

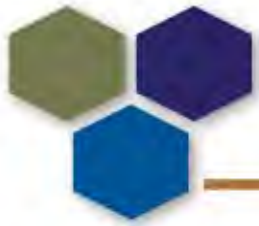
June 2008

**GRS**

Gabriel Roeder Smith & Company  
Consultants & Actuaries  
[www.gabrielroeder.com](http://www.gabrielroeder.com)

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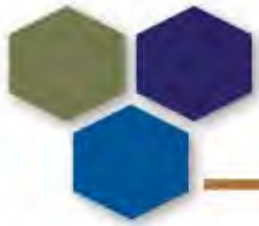




# Funding Objectives

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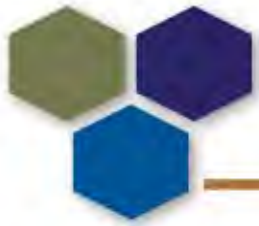
- ◆ Intergenerational equity with respect to plan costs
- ◆ Stable or increasing ratio of Assets to Liabilities
- ◆ Stable pattern of contribution rates



# What's Needed to Meet Objectives?

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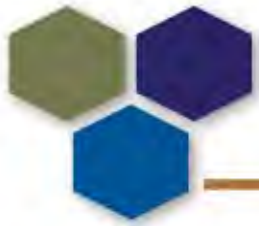
- ◆ Reasonable forecasts of resources and obligations (i.e., good assumptions)
- ◆ Level % of payroll funding method
- ◆ Funding discipline
- ◆ Sound investment program



# Funding Method

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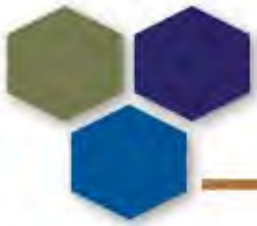
- ◆ “Frozen Initial Liability Method” in which normal cost is pooled, but each employer is separately responsible for its own unfunded liability
- ◆ Actuarial Gains and Losses affect the pooled normal cost not the unfunded liability as in most plans
- ◆ Pooled Normal Cost contains a component related to accumulated unamortized past Gains and Losses
- ◆ That component is called the Experience Amortization Reserve or “EAR”



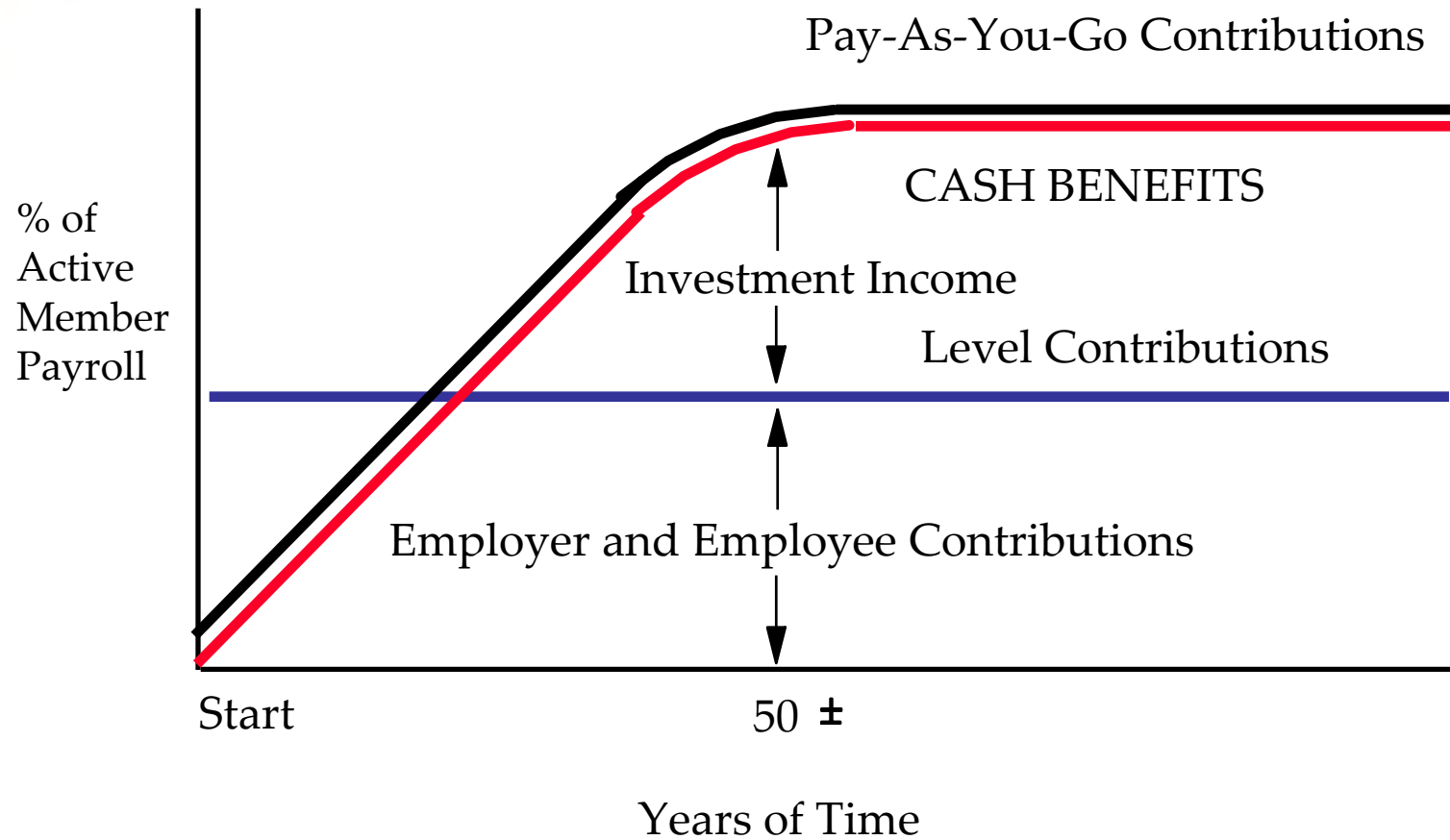
## Funding Method

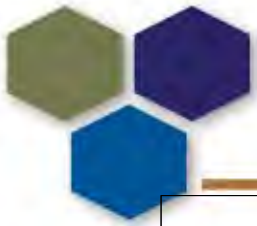
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- ◆ Most of the Normal Cost is amortized over the future working lifetime of the active employees
- ◆ The EAR is amortized separately over a variable period and is used as a smoothing mechanism

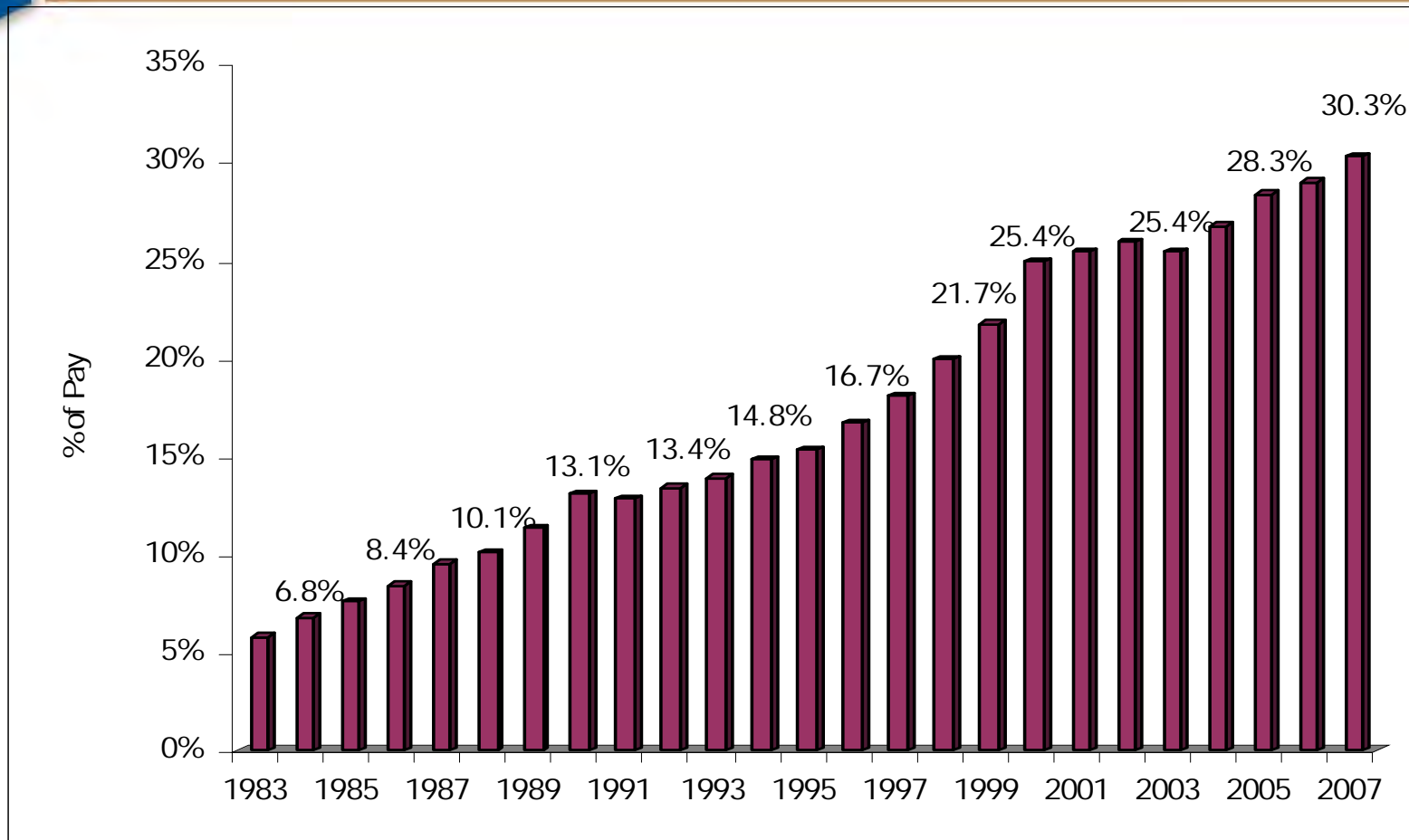


# Financing Diagram

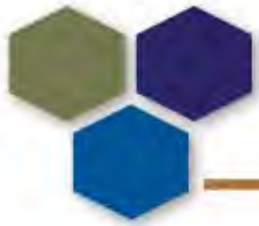




# Annuities as a % of Payroll

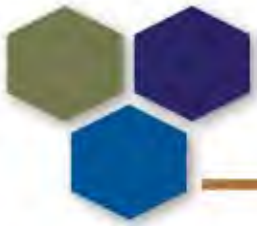


Annuities are expected to continue to increase as a percent of payroll for several more decades. Increases will be paid from income from Retirement System assets.

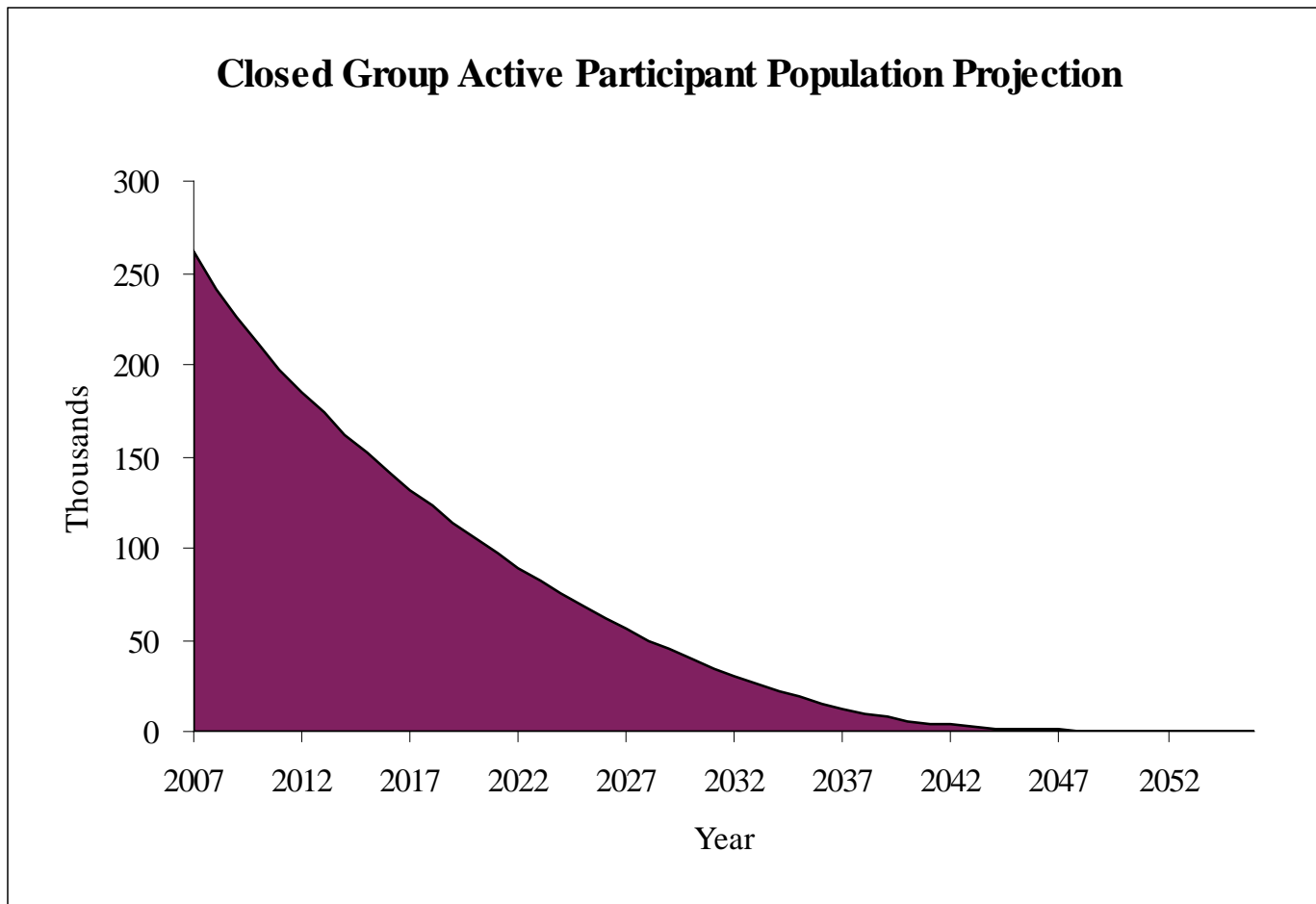


# Active Participants

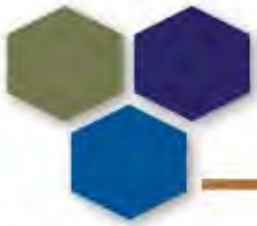
Valuation Group	Number	Annual Earnings (\$Millions)	Group Averages			
			Earnings	Age	Years of Service	Contribs.
General	237,124	\$10,277.9	\$43,344	45.9	11.8	\$54,865
Executive Group & Elected Officials	1,427	94.6	66,320	54.4	13.1	89,599
Protective Occupation with Social Security	19,757	1,035.6	52,419	39.8	11.8	55,686
Protective Occupation without Social Security	2,695	173.7	64,449	41.0	14.1	87,919
<b>Total Active Participants</b>	<b>261,003</b>	<b>\$11,581.8</b>	<b>\$44,374</b>	<b>45.5</b>	<b>11.8</b>	<b>\$55,459</b>
Prior Year	260,302	\$11,170.3	\$42,913	45.4	11.8	\$52,286



# Closed Group Active Participant Population Projection

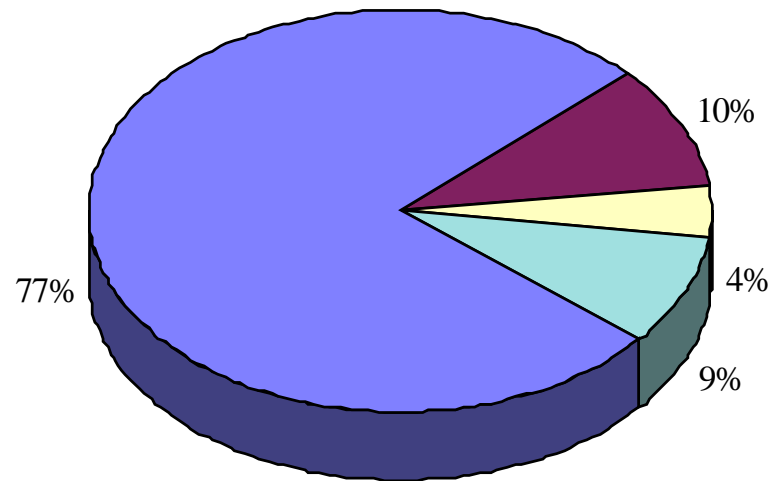




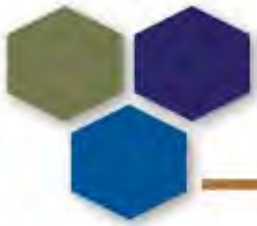


# Expected Terminations from Active Employment for Current Active Participants

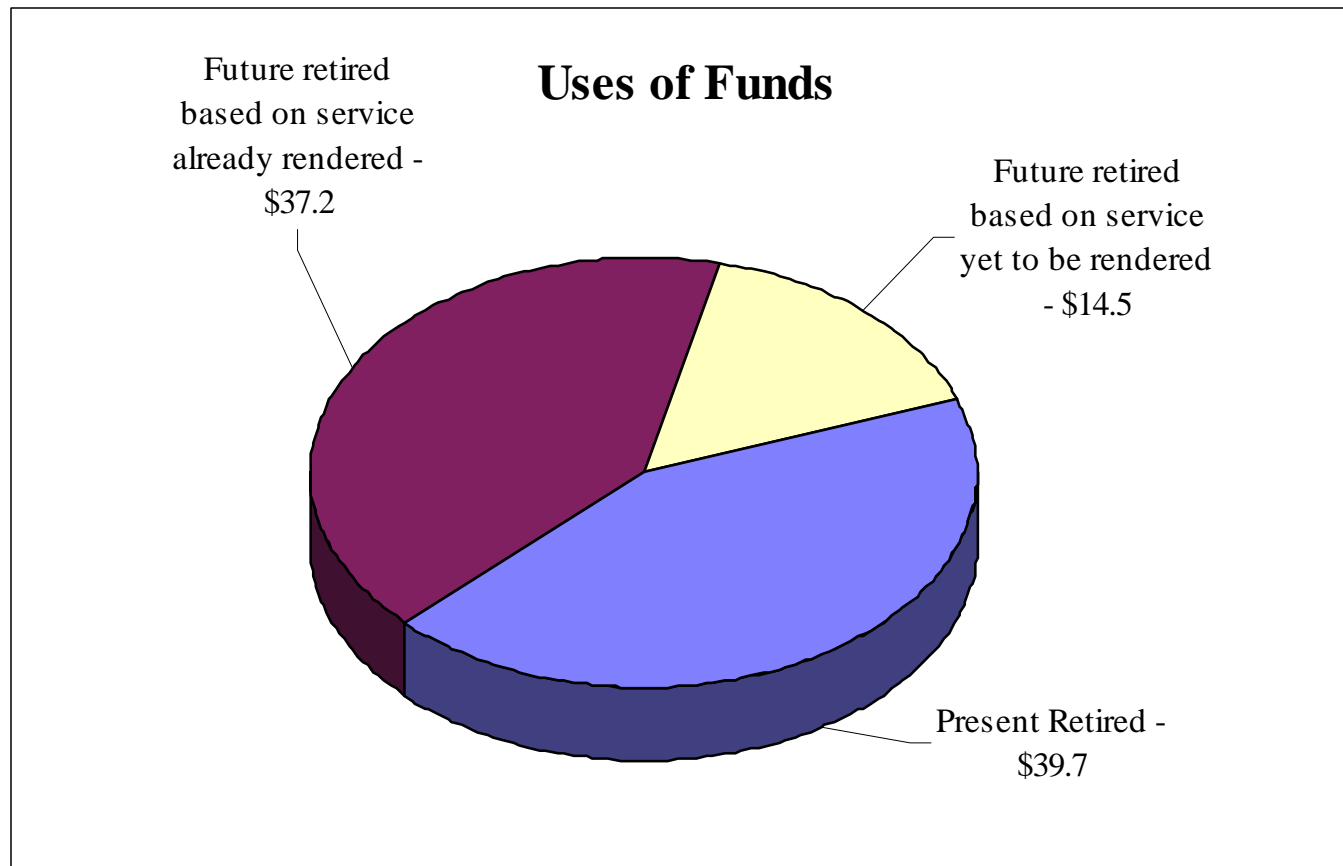
**Closed Group Active Participant Population Projection**



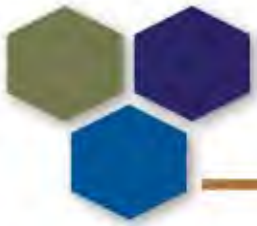
■ Retirements ■ Separations ■ Death and Disabilities ■ Deferred Retirements



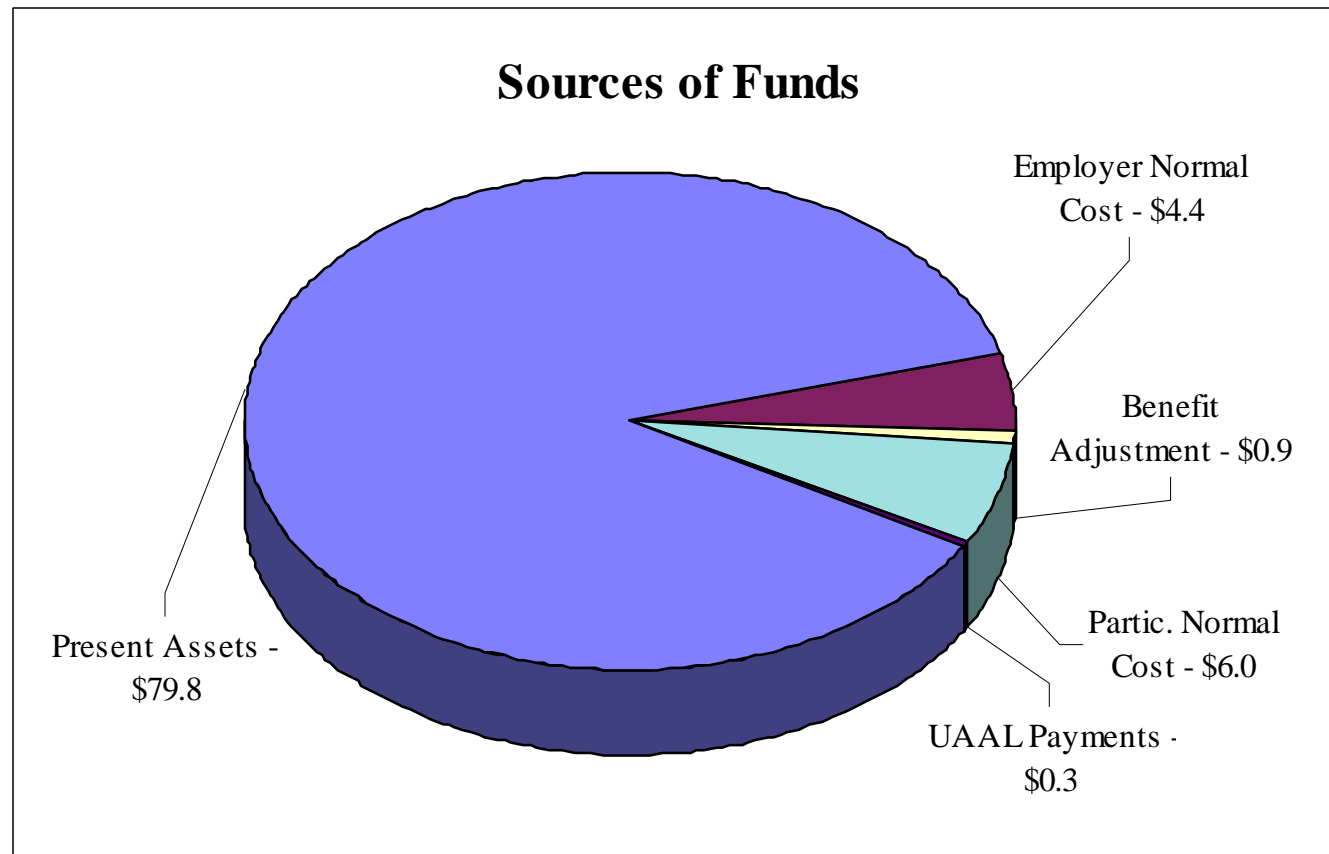
# \$91.4 Billion\* of Benefit Promises to Present Active and Retired Members



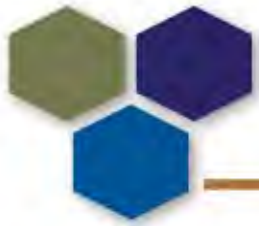
\* Present value of future benefits; all divisions combined



# Sources of Funds for Financing \$91.4 Billion\* of Benefit Promises

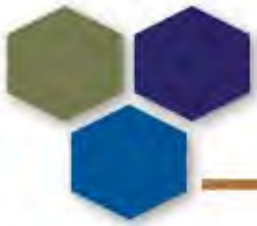


\* *Present value of future benefits; all divisions combined*



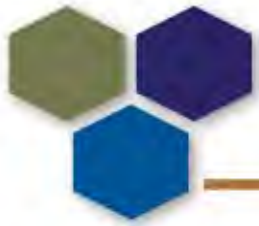
# Summary of December 31, 2007 Valuation Results

	General Participants		Executives & Elected Officials	
	2009	2008	2009	2008
Employer Normal Cost	4.5%	4.6%	8.5%	8.5%
Benefit Adjustment Contribution	0.9%	1.0%	0.0%	0.0%
Participant Normal Cost	5.0%	5.0%	3.0%	3.0%
Total Normal Cost	10.4%	10.6%	11.5%	11.5%
Unfunded Actuarial Accrued Liability (UAAL)	0.2%	0.2%	0.0%	0.1%
<b>WRS Average Total</b>	<b>10.6%</b>	<b>10.8%</b>	<b>11.5%</b>	<b>11.6%</b>



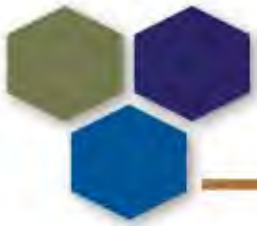
# Summary of December 31, 2007 Valuation Results

	Protective Occupation			
	With Soc. Sec.		Without Soc. Sec.	
	2009	2008	2009	2008
Employer Normal Cost	8.1%	8.2%	10.6%	10.8%
Benefit Adjustment Contribution	0.0%	0.0%	0.0%	0.0%
Participant Normal Cost	5.0%	5.1%	3.2%	3.4%
Total Normal Cost	13.1%	13.3%	13.8%	14.2%
Unfunded Actuarial Accrued Liability (UAAL)	0.1%	0.1%	0.3%	0.4%
<b>WRS Average Total</b>	<b>13.2%</b>	<b>13.4%</b>	<b>14.1%</b>	<b>14.6%</b>

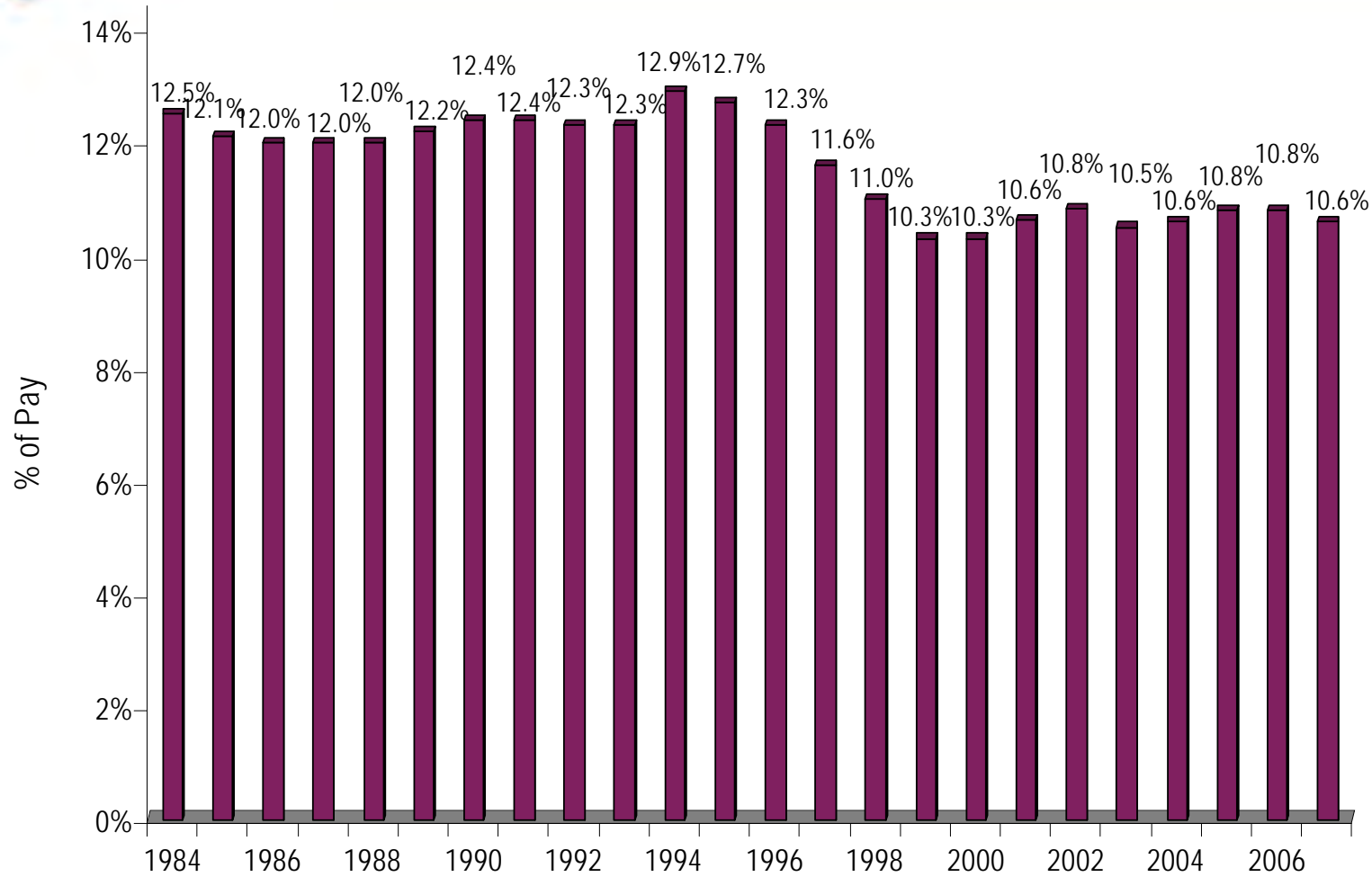


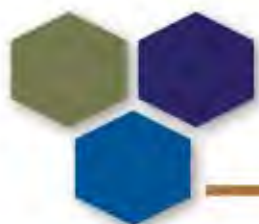
# Comparative Statement of Contribution Rates

<b>Valuation 12/31</b>	<b>General</b>	<b>Exec. &amp; Elected</b>	<b>Protective with Soc. Sec.</b>	<b>Protective without Soc. Sec.</b>
1983	11.5 %	17.4 %	18.1 %	27.8 %
1988	12.0 %	17.4 %	18.1 %	24.9 %
1993	12.3 %	17.6 %	17.1 %	23.2 %
1998	11.0 %	14.7 %	12.1 %	17.7 %
2003	10.5 %	11.2 %	13.0 %	14.6 %
2004	10.6 %	11.4 %	13.2 %	14.4 %
2005	10.8 %	11.6 %	13.4 %	14.6 %
2006	10.8 %	11.6 %	13.4 %	14.6 %
2007	10.6 %	11.5 %	13.2 %	14.1 %



# Contribution Rate History (General)



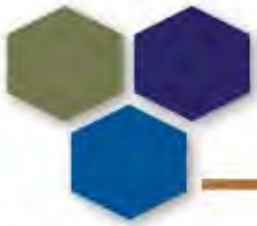


## Core Investment Trust: Market Recognition Account (\$ Millions)

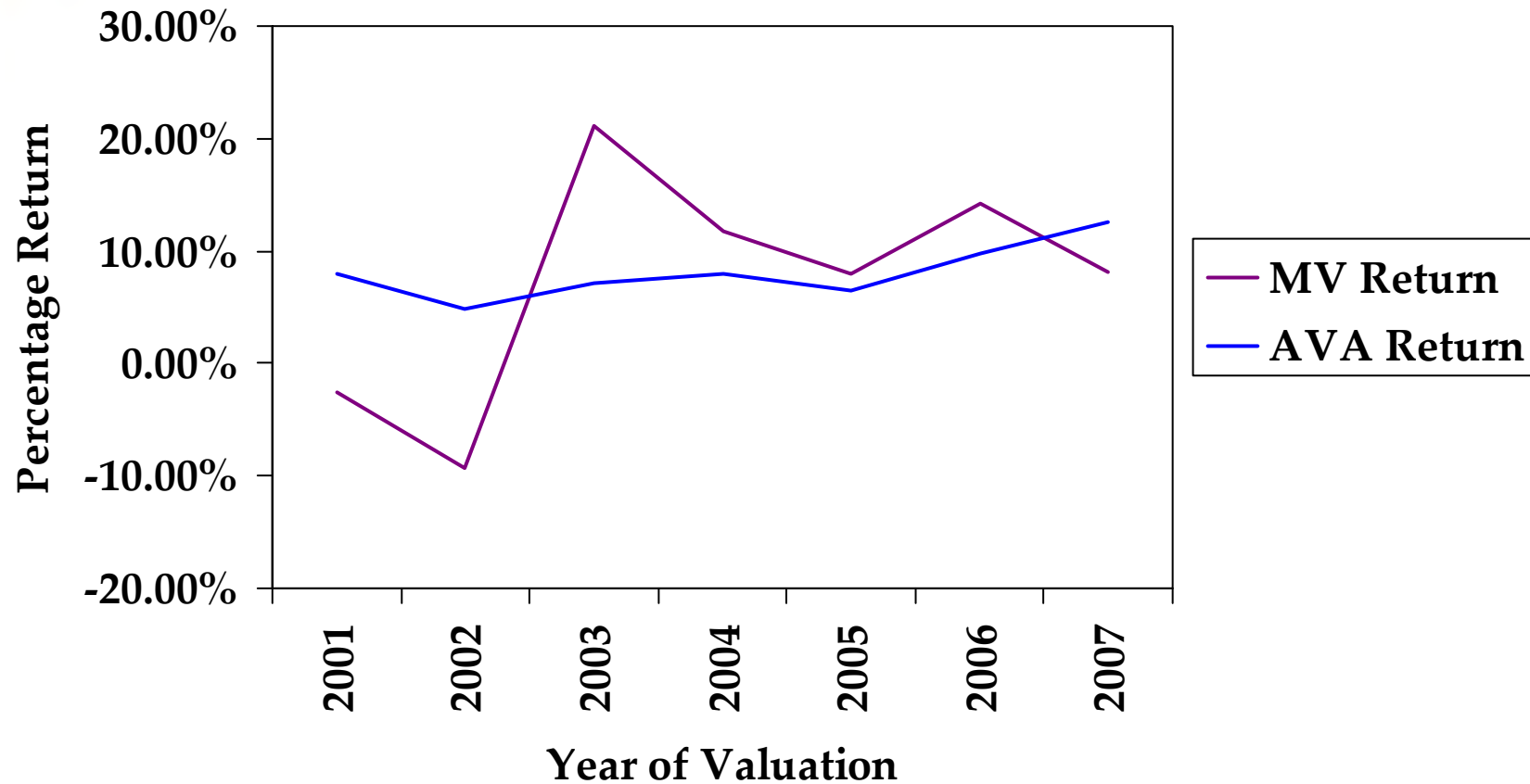
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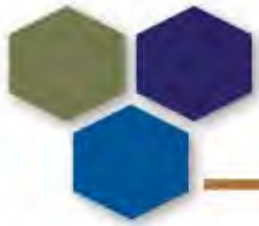
	<u>2007</u>	<u>2008</u>
Beginning Market Value	\$ 75,891	
Ending Market Value	80,352	
Total Investment Return	6,369	
Amount for immediate recog.	5,307	-
Amount for phase-in	1,061	-
MRA recognition	3,223	1,881
Total Recognized Return	\$ 8,530	\$ 1,881
Ending Funding Value	75,618	
Difference between MV and FV	4,734	2,852
Recognized Rate of Return	12.5%	
Market Rate of Return	8.1%	





# Market Value Return vs. Actuarial Value Return





## Concluding Comments

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- ◆ Normal Cost contributions decreased for all valuation groups (except Executive & Elected) due to favorable investment performance
- ◆ Core investment return was above the assumed level of 7.8% and has exceeded the assumed rate for each of the last 5 years
- ◆ WRS continues to operate in accordance with principles of level percent of payroll financing

2008

**EMPLOYEE TRUST FUNDS BOARD**

**MEMBERSHIP ROSTER**

MEMBER NAME	TERM BEGAN	TERM EXPIRES	MEMBERSHIP REQUIREMENTS
Brown John (Jack)	5/1/02  (5/90-5/94) (5/94-5/98) (5/98-5/02)	5/1/06	§ 15.16(1)(b) Appointed by Wisconsin Retirement Board Any Wisconsin Retirement Board member 4-year term
Donnelly Jennifer	3/23/07	Ex Officio	§ 15.16 (1)(intro.) Director of the Office of State Employment Relations or the Director's designee Ex Officio
Finora Rosemary	8/8/06	5/1/09	§ 15.16 (1)(c) Appointed by Governor, with Senate confirmation Public member who is not a participant in or beneficiary of the WRS, with at least five years of experience in actuarial analysis, administration of an employee benefit plan, or significant administrative responsibility in a major insurer 4-year term
Fisher Theron	5/1/07  (5/03-5/07)	5/1/11	§ 15.16 (1)(d) Elected by WRS Annuitants WRS Annuitant as defined for purposes other than life insurance under § 40.02 (4) 4-year term
Gale Rick	9/25/03	5/1/05	§ 15.16 (1)(b)2 Appointed by Wisconsin Retirement Board Wisconsin Retirement Board member appointed under § 15.165 (3)(b) 3, 6 or 7 (participating employee of city or village, or participating state employee) 4-year term
Koessler (V) Wayne	5/1/00  (5/96-5/00)	5/1/04	§ 15.16 (1)(b)1 Appointed by Wisconsin Retirement Board Wisconsin Retirement Board member appointed under § 15.165 (3)(b)1, 2, 4, 5 or 8 (chief executive, finance officer or member of governing body of a participating city or village, county clerk, deputy county clerk, chairperson, or member of the governing body of a participating county or town, or public member who is not a participant) 4-year term
Kreul Kathleen	5/1/07  (5/03-5/07)	5/1/11	§ 15.16 (1)(f) Elected by educational support personnel WRS participant who is either a public school district educational support personnel employee or a technical college district educational support employee 4-year term
Macek Irena	5/1/00	5/1/04	§ 15.16 (1)(a)3 Appointed by Teachers Retirement Board Teachers Retirement Board member elected under § 15.165 (3)(a)7 (City of Milwaukee teacher participant) 4-year term
McCaffery Wayne	5/1/07  (5/03-5/07) (5/99-5/03)	5/1/11	§ 15.16 (1)(a)1 Appointed by Teachers Retirement Board Teachers Retirement Board member appointed or elected under § 15.165 (3)(a) 1 or 2 (public or vocational school teacher) 4-year term
Niendorf (S) Robert	5/1/00  (5/92-5/96) (5/96-5/00)	5/1/04	§ 15.16 (1)(a)2 Appointed by Teachers Retirement Board Teachers Retirement Board member appointed under § 15.165 (3)(a)4 (UW teacher participant) 4-year term
Sherman Gary	1/24/05	Ex Officio	§ 15.16 (1)(intro.) Governor or the Governor's designee on the Group Insurance Board Ex Officio
Thompson Nancy	5/1/01	5/1/05	§ 15.165 (3)(a) 5 Appointed by Teachers Retirement Board Teachers Retirement Board member appointed under § 15.165 (3)(a) 3 or 5 (public school administrator or school board member) 4-year term
Wigdahl (C) Marilyn	5/1/99  (6/87-5/91) (6/91-5/95) (5/95-5/99)	5/1/03	§ 15.16 (1)(b) 3 Appointed by Wisconsin Retirement Board Wisconsin Retirement Board member appointed under § 15.165 (3)(b) 7 or 8 (participating state employee or public member who is not a participant) 4-year term

(C) – Chair (V) – Vice-Chair (S) – Secretary

MAILINGS FOR BOARD MEMBERS SHOULD BE SENT TO:

Employee Trust Funds Board  
c/o Ann McCarthy, Board Liaison  
Department of Employee Trust Funds  
PO Box 7931  
Madison WI 53707-7931  
Phone (608) 261-0736



STATE OF WISCONSIN  
Department of Employee Trust Funds

David A. Stella  
SECRETARY

801 W Badger Road  
PO Box 7931  
Madison WI 53707-7931

1-877-533-5020 (toll free)  
Fax (608) 267-4549  
<http://etf.wi.gov>

**CORRESPONDENCE MEMORANDUM**

**DATE:** June 3, 2008  
**TO:** Employee Trust Funds Board  
**FROM:** Jon Kranz, Director  
Office of Internal Audit and Budget  
**SUBJECT:** FY 2009-11 Department Biennial Budget

**This memo is for informational purposes only. No Board action is required.**

This memo provides information regarding the fiscal year (FY) 2009-11 biennial budget. This budget will provide administrative resources for the two-year period that begins on July 1, 2009 and ends on June 30, 2011.

The Department is currently developing the agency request that is due to the Department of Administration on September 15, 2008. The anticipated schedule covering all aspects of the budget process from agency submittal through the final enacted budget is as follows:

Stage	Anticipated Schedule
Agency Budget Request Due	September 15, 2008
Governor Issues Budget Recommendations	Late January 2009/Early February 2009
Review and Action by the Joint Committee on Finance (JCF)	March 2009/April 2009
Action by Full Legislature	May 2009/June 2009
Final Enacted Budget	June 2009

While it is too early to know the precise details of the agency request, we expect to include the following components in the document that we submit for consideration later this Fall.

- **Statutory changes to enhance the Board and Department's ability to fulfill its fiduciary duties.**
- **Staff and funding resources to meet the anticipated increased demand for Department services.** Similar to the FY 2007-09 biennial budget request, the Department is currently assessing the resources required for each work unit for the next biennial budget

Reviewed and approved by Robert J. Conlin, Deputy Secretary.

Signature \_\_\_\_\_

Date \_\_\_\_\_

Board	Mtg Date	Item #
ETF	6/27/08	5

period based on stated Department service standards, current backlogs, and the anticipated increase in workload associated with impending retirement of the “baby boom” generation.

- **A capital budget request associated with obtaining a new facility to house Department operations.** The Department is currently at the maximum capacity at the Badger Road and Ann Street facilities. Department staffing levels are expected to grow for at least the next ten years to accommodate the anticipated workload growth. This request will address the agency’s long-term facility needs with the desired goal of occupying a new facility within the next three to four years.

An update will be provided at the September 2008 Board meeting. Please contact me at (608) 267-0908 should you desire any additional information.



STATE OF WISCONSIN  
Department of Employee Trust Funds  
David A. Stella  
SECRETARY

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Madison WI 53707-7931  
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Fax (608) 267-4549  
<http://etf.wi.gov>

**CORRESPONDENCE MEMORANDUM**

**DATE:** June 4, 2008  
**TO:** Employee Trust Funds Board  
**FROM:** Jon Kranz, Director  
Office of Internal Audit and Budget  
**SUBJECT:** Allocation of Administrative Costs

**This memo is for information purposes only and no action is required of the Board.**

This memo describes the process used to allocate the administrative expenses of the Department to the various benefit programs it administers.

Chapter 40 of the Wisconsin State Statutes contains two provisions related to the allocation of administrative costs to the various benefit programs administered by the Department. Specifically, s. 40.01(2) specifies that revenues and balances of the accounts for specific benefit programs may only be used for the purposes of that benefit plan. In addition, s. 40.04 (2) requires that every fiscal year the Secretary allocate the administrative expenses equitably to the various benefit plans. The intent is that each benefit plan is only charged its fair share of administrative expenses.

To implement these provisions, two general approaches are utilized: one for discreet expense items that are associated with a specific benefit program, and one for expense items that are related to more than one benefit program. The Department charges discreet or program-specific costs such as third-party administrator contract expenses directly to the related benefit program. For example, the fees paid to the Wisconsin Deferred Compensation (WDC) Program administrator (currently Great West Retirement Systems) are allocated to the WDC program.

A large portion of the Department's administrative costs are associated with shared services that support several benefit programs. Cost centers such as the Call Center, Division of Information Technology, Division of Trust Finance and Employer Services, and Records Management provide services that benefit several benefit programs administered by the Department. Allocation of these costs is implemented by estimating the percentage of effort within each of these shared services units associated with each benefit program.

Each year, the Office of Trust Finance surveys each operating unit to determine the percentage of effort dedicated to each of the benefit programs. This information is used to allocate the actual fiscal year administrative costs to each benefit program.

Reviewed and approved by Robert J. Conlin, Deputy Secretary.  
\_\_\_\_\_  
Signature Date

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## Administrative Costs

June 4, 2008

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These administrative costs are recovered either by directly charging the reserve/account or by including the cost as part of the premium. For example, costs associated with the Wisconsin Retirement System (WRS) are charged against the investment earnings allocated to each reserve prior to crediting interest to the participant accounts and employer reserve.

Administrative expenses associated with the health insurance programs are recovered by including these costs in the premium. Employee Reimbursement Account administrative expenses are recovered via the amounts forfeited by participants and a charge to state agencies.

The chart on the following page shows the general allocation of administrative costs for fiscal year 2007 (ending June 30, 2007).

Please contact me should you desire any additional information. I can be reached at (608) 267-0908.

attachments

## Summary of the Fiscal Year (FY) 2007 Allocation of Administrative Expenses

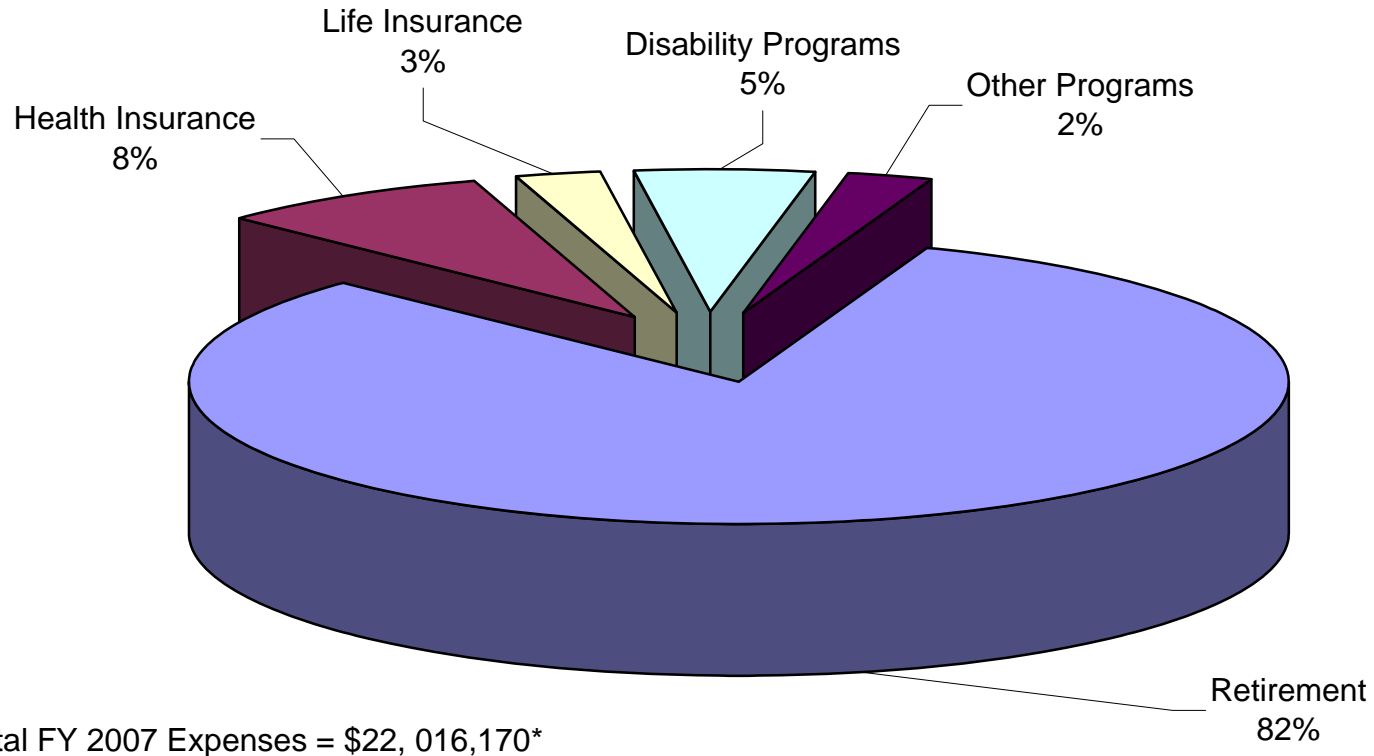
July 1, 2006 - June 30, 2007

(excludes third party administrator contracts)

<b>Benefit Program</b>	<b>Percent</b>	<b>Allocated Cost</b>
<b>Retirement</b>	81.58%	<b>\$ 17,720,735.35</b>
Core		\$ 14,169,491.88
Variable		3,551,243.47
<b>Police and Fire under s. 40.21(4)</b>	0.07%	<b>13,923.35</b>
<b>Health Insurance</b>	8.05%	<b>2,121,925.12</b>
State		\$ 1,828,450.15
Local		268,004.00
Local Annuitant Health		5,514.70
Local Deductible Health		19,956.27
<b>Life Insurance</b>	2.53%	<b>528,907.22</b>
Group Life		\$ 438,731.82
Spouse and Dependent		90,175.40
<b>Income Continuation Insurance</b>	2.26%	<b>473,382.98</b>
State		\$ 419,271.27
Local		54,111.71
<b>Accumulated Sick Leave</b>	1.10%	<b>231,328.99</b>
Base Plan		\$ 151,313.46
Supplemental Plan		80,015.53
<b>Duty Disability Insurance</b>	1.19%	<b>252,580.54</b>
<b>Long-Term Disability Insurance</b>	1.87%	<b>391,683.91</b>
<b>Deferred Compensation</b>	0.47%	<b>97,746.41</b>
<b>Employee Reimbursement Accounts</b>	0.51%	<b>105,891.03</b>
<b>Commuter Benefits</b>	0.24%	<b>50,073.99</b>
<b>Miscellaneous Plans</b>	0.13%	<b>27,991.11</b>
<b>Total</b>	100.00%	<b>\$ 22,016,170.00</b>



**Department of Employee Trust Funds**  
**Fiscal Year (FY) 2007 Allocation of Administrative Costs**  
July 1, 2006 - June 30, 2007



\* Includes only the expenditure authority provided under s. 20.515 (t), (um), (ut), and (w) - the administration appropriations. The above does not include investment expenses (charged directly to the Core and Variable funds) or third party administrator expenses (charge directly to the benefit program). The above essentially reflects the expenses incurred at the Badger Road and Ann Street facilities.





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Department of Employee Trust Funds  
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**CORRESPONDENCE MEMORANDUM**

**DATE:** June 10, 2008  
**TO:** Employee Trust Funds Board  
**FROM:** Bob Conlin, Deputy Secretary  
Bob Willett, Controller  
**SUBJECT:** Design of the Wisconsin Retirement System Investment Funds: Core vs. Variable

**This memo is for information and discussion purposes. No action is required.**

At the March Employee Trust Funds Board (Board) meeting, members expressed a desire to continue discussions about the design of the investment alternatives available in the Wisconsin Retirement System (WRS). In particular, the Board sought further discussion about the future of the Variable Fund and direction on how best to reach the various decision points necessary to address the issue.

A discussion about the design of the WRS, its investment alternatives, and the future of the Variable Fund involves questions of policy. The first policy question that must be addressed is: Should the WRS have a fund in addition to the Core Fund? This memo provides information to help the Board address this question.

We anticipate that at the September meeting the Board's discussion will involve the next logical decision points based upon the way the Board chooses to answer this first issue. For example, if the Board decides that the WRS should have a fund in addition to the Core Fund, the Board would discuss the specifics of the other offering, such as the purpose of the fund, the types of investments to be held in the fund, and the administration of the fund in terms of its availability to participants. If, on the other hand, the Board answers the question in the negative, the Board will likely discuss what should be done with the Variable Fund.

**Should the WRS have a fund in addition to the Core Fund?**

**Background**

Last fall, the Legislative Audit Bureau (LAB) noted in an audit of the State of Wisconsin Investment Board (SWIB) that the asset mix in the Variable Fund, particularly a lower allocation of international stocks, has resulted in lower investment performance of equities in the Variable Fund versus the Core Fund. SWIB sought comments from the various retirement boards in order to help in its biennial asset allocation exercise. SWIB noted that it was concerned with its ability to appropriately balance risk and return given the current statutory parameters of the

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Variable Fund, which generally limit the Variable Fund's investments to equities. Preliminary discussions were held with the retirement boards in December 2007.

Based on those discussions, and internal and external reviews conducted by SWIB and its staff, SWIB modified its asset allocation strategy for the Variable Fund by directing a higher percentage of Variable Fund assets to international equities. By the end of 2008, approximately 69% of the Variable Fund will be allocated to domestic stocks (down from a previous allocation of about 79%), 30% to international stocks (up from a previous allocation of about 20%), and 1% to a multi-asset category that includes a mixture of domestic and international stocks in index funds to provide liquidity.

During the December 2007 discussions, the retirement boards decided that a broader review of the policy and legal limitations of the Variable Fund was appropriate. Further discussion was held at the March 2008 Board meeting.

### Important Considerations

It should be noted that the purpose of the WRS is to "aid public employees in protecting themselves and their beneficiaries against the financial hardships of old age, disability, [and] death." Generally, for career public employees who retire at their normal retirement age, the formula retirement benefit will, when combined with Social Security, produce a total retirement income of between 50% and 85% of a participant's pre-retirement gross earnings.

The following additional points are important in any discussion of whether the WRS should have a fund other than the Core Fund:

### **The Funds**

1. The Public Employee Trust Fund currently consists of the Core Fund and the Variable Fund. A participant may elect to have 50% of his or her WRS contributions invested in the Variable Fund. A participant has one opportunity to elect participation in the Variable Fund. If a participant who has elected to participate in the Variable Fund cancels his or her participation, he or she may not participate again.
2. According to LAB, the Variable Fund appears to be unique among public pension funds.
3. The Core Fund and Variable Fund were created in 1958, at a time when the existing retirement plans for Wisconsin public employees were predominantly defined contribution plans. The Core Fund, then called the Fixed Fund, was invested predominantly in fixed income investments, like bonds. The Variable Fund was created to balance out the conservative nature of the Core Fund by investing predominantly in equities, such as stocks. The stated purpose of the Variable Fund at its creation was to make the Public Employee Trust Fund a well-balanced, broadly diversified investment program that would provide retirement benefits that would fluctuate in proportion to changes in the general economy, thereby providing some measure of financial protection for participants' benefits during periods of high inflation.
4. Currently, the WRS is primarily a defined benefit plan (with elements of a defined contribution plan).

5. Generally, current law authorizes SWIB to manage the money and property of the Core Fund in any manner that does not violate SWIB's fiduciary standard. Assets of the Variable Fund, however, must be invested primarily in equities, including stocks, real estate or other recognized forms of equities.
6. Today, the Core Fund has evolved into a well-diversified fund in its own right, with approximately 60% of holdings in stocks, 30% in fixed income, and the remainder in private equity, real estate and multi-asset holdings. The Variable Fund, however, remains invested predominantly in stocks.
7. The Core and Variable Fund asset mixes interact with one another to determine the total risk and return trade-off. As part of its asset allocation modeling process, SWIB examined a hypothetical participant with a 65% Core and 35% Variable account. This "participant" served as a rough proxy for an average participant in the Variable Fund. The Variable Fund allocation options used in the modeling included a variety of splits for domestic and international stock. In no case did the combined Core and Variable allocation rest on the "efficient frontier" – that is, the point where the risk and return trade-off is deemed optimal. This is a result of the limitation on asset options available for the Variable Fund. Thus, what started out in 1958 as an attempt to allow for a better-diversified portfolio option now limits diversification.
8. The potential additional return produced by the Variable Fund over long periods is marginal, when compared to the diversified Core Fund.

### **Affect on Benefits**

9. In the WRS, a participant's retirement annuity will be based on either a formula or money purchase calculation. The participant will automatically receive the higher of the two calculations.
10. Participation in the Variable Fund affects each of these calculations differently. Under the money purchase calculation, a participant's Core Fund and Variable Fund account balances are multiplied by a money purchase factor relative to his or her age. Under the formula calculation, an adjustment is made to a participant's annuity based on the variable excess or deficiency in the participant's account when he or she retires. The excess or deficiency is based on a comparison of the actual balance of the Variable Fund account with what the balance would be had the contributions been invested solely in the Core Fund. The excess or deficiency is then multiplied by the money purchase factor based on the participant's age at the time the annuity begins. The result is a Variable Fund adjustment that increases or decreases the formula annuity. Anecdotal evidence indicates that participants generally do not have a good understanding of how this Variable adjustment works.
11. In the WRS, retirement annuities can increase or decrease from year to year depending upon investment returns in the Core and Variable Funds. A Core Fund portion of an annuity can never be reduced below its original amount. However, the Variable Fund portion of an annuity may decrease to less than the initial monthly Variable Fund amount.

12. Interest is credited to the WRS accounts of active and inactive participants. The amount of interest credited depends upon investment returns in the Core and Variable Funds.
13. From approximately 1984 through 1999, interest crediting in the Core Fund for newly-enrolled WRS members was limited to 5%, regardless of investment returns. That limit is no longer in place.
14. Investment returns in the Core Fund are smoothed over a five-year period. Smoothing tends to reduce the year to year volatility in credited interest and annuity dividends. Returns in the Variable Fund are not smoothed and the credited interest and annuity adjustments can fluctuate widely from year-to-year.
15. The chart on the next page identifies SWIB's Core and Variable fund investment returns, effective rates credited to the accounts of active employees, and dividends or adjustments made to retirees' annuities for the last 20 years.

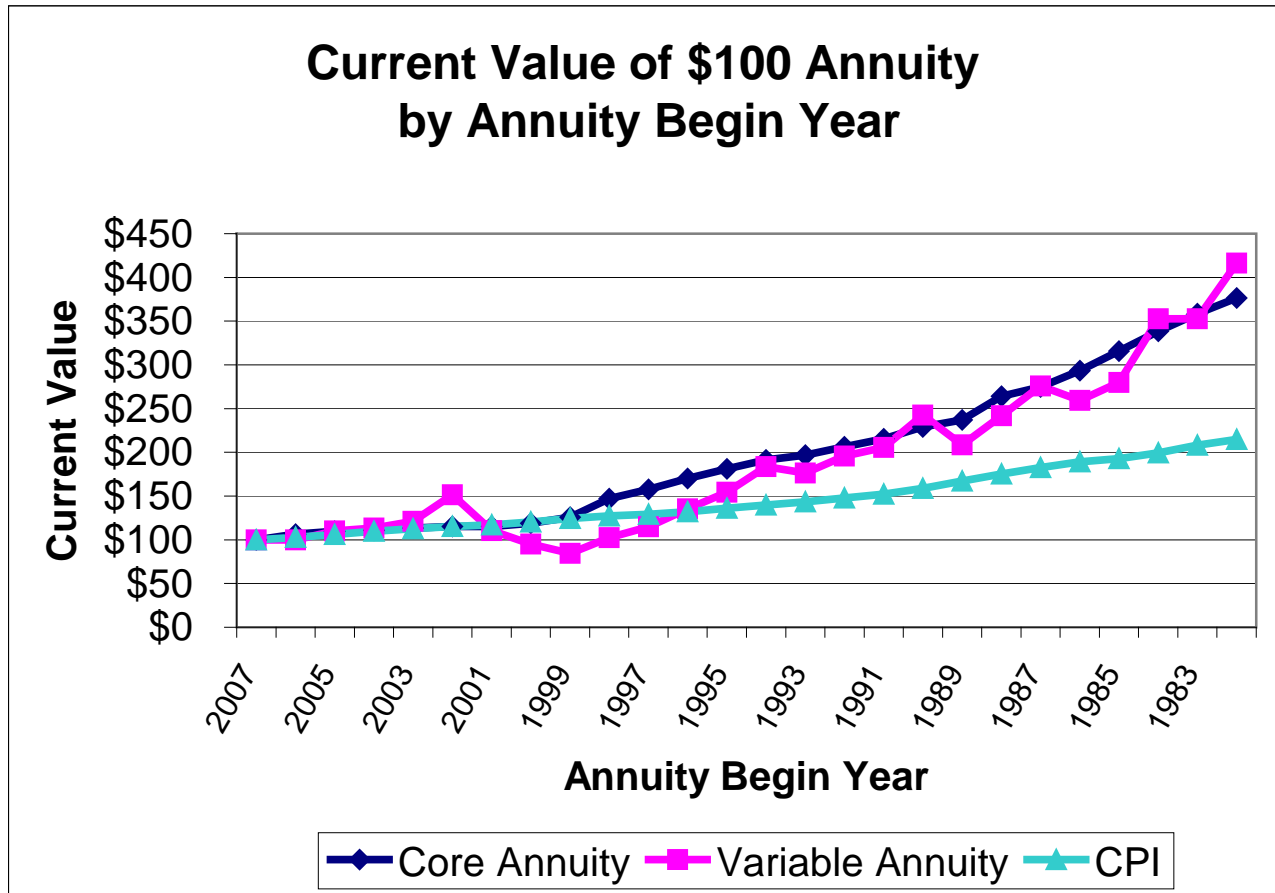
**WISCONSIN RETIREMENT SYSTEM Credited Effective Rates  
 and Corresponding Dividends/Adjustments  
 1987 - 2007**

CORE TRUST FUND				VARIABLE TRUST FUND		
YEAR	SWIB TOTAL RATE OF RETURN	EFFECTIVE RATE (Credited to active employees)	DIVIDEND (Paid to retirees)	SWIB TOTAL RATE OF RETURN	EFFECTIVE RATE (Credited to active employees)	ADJUSTMENT (Impacts retirees' accounts)
2007	8.7%	13.1%	6.6%	5.6%	6.0%	0.0%
2006	15.8%	9.8%	3.0%	17.6%	18.0%	10.0%
2005	8.6%	6.5%	0.8%	8.3%	9.0%	3.0%
2004	12.8%	8.5%	2.6%	12.7%	12.0%	7.0%
2003	24.2%	7.4%	1.4%	32.7%	34.0%	25.0%
2002	-8.8%	5.0%	0.0%	-21.9%	-23.0% (loss)	-27.0% (loss)
2001	-2.3%	8.4%	3.3%	-8.3%	-9.0% (loss)	-14.0% (loss)
2000	-0.8%	10.9%	5.7%	-7.2%	-7.0% (loss)	-11.0% (loss)
1999**	15.7%	24.1%	17.1%	27.8%	28.0%	21.0%
1998	14.6%	13.1%	7.2%	17.5%	18.0%	12.0%
1997	17.2%	12.8%	7.7%	21.6%	23.0%	18.0%
1996	14.4%	12.5%	6.6%	19.8%	20.0%	14.0%
1995	23.1%	11.3%	5.6%	25.6%	27.0%	19.0%
1994	-0.6%	7.7%	2.8%	0.8%	0.0%	-4.0% (loss)
1993	15.0%	11.0%	4.9%	16.5%	17.0%	11.0%
1992	9.7%	10.2%	4.4%	10.7%	11.0%	5.0%
1991	20.4%	12.1%	6.3%	27.1%	28.0%	18.0%
1990	-1.5%	8.6%	3.6%	-11.3%	-11.0% (loss)	-14.0% (loss)
1989*	19.2%	18.1%	11.3%	22.6%	24.0%	16.0%
1988	14.4%	10.2%	4.1%	21.7%	22.0%	14.0%
1987*	2.2%	14.0%	6.7%	-1.1%	-1.0% (loss)	-6.0% (loss)

\*Rates credited in 1987 and 1989 were distorted by one-time accounting changes.

\*\* Results include a special one-time recognition of past earnings created by 1999 WI Act 11.

16. The following chart compares increases accumulated if \$100 was invested over 20 years based on the percent of the Core Fund dividend, Variable Fund adjustment and Consumer Price Index increase.



17. Although the Core Fund’s evolution in its investment mix may enable it to achieve in one fund what the creators of the Variable Fund hoped to achieve in two, the benefits of the improved investment returns (and stability) generally flow to employers through reduced contribution rates and to annuitants through stable dividends. Because there is no opportunity to accrue a Variable excess in the Core Fund, active participants taking a formula annuity who are not participating in the Variable Fund generally do not benefit from the Core Fund’s evolution. They are not able to accumulate an excess and cannot improve their formula benefit. However, they also don’t run the risk of having lower benefits due to a Variable deficiency.

#### Participation in Variable

18. At the beginning of June 2008, there were about 112,000 participants in the Variable Fund. About 60% of these were active employees, about 32% were annuitants, and about 9% were inactive.



19. Since the Variable fund was reopened in 2001, over 1,000 new participants elect to participate each year. The number of new participants is trending higher since 2003, as shown in the chart below.

<b>New Variable Fund Participants by Year</b>	
2001*	62,991
2002	1,736
2003	1,020
2004	1,195
2005	1,278
2006	1,402
2007	1,705

\* Variable fund reopened to new participants.

20. A participant may elect to cancel participation in the Variable Fund at any time, but the cancellation is only effective on the first of the year after the Department receives the cancellation. Once cancelled, Variable Fund interest is applied to the participant's Variable Fund account and the account is transferred to the participant's Core Fund account. After the transfer, the Department still keeps track of any Variable Fund excess or deficiency that may exist at the time of cancellation. From the point of cancellation forward, Core Fund interest is credited each year. If a participant cancels Variable Fund participation with a deficiency, the deficiency will grow as Core Fund effective rate interest is credited to the deficiency.
21. The number of Variable Fund cancellations by year since 1999 and the number of cancellations that resulted in a Variable deficiency during that period are identified below:

<b>Variable Fund Cancellations by Year</b>		
	Total Cancellations	Cancellations with Deficiency
1999	49	0
2000	171	0
2001	433	11
2002	1,796	778
2003	1,481	15
2004	609	4
2005	647	6
2006	676	0
2007	970	13

22. Participants with a deficiency who want to cancel Variable Fund participation may do so conditionally. This means that their participation won't be cancelled until such time as the participant no longer has a deficiency.

**Other**

23. Current WRS members may have a right to continue participation in the Variable Fund. Members who have not exercised this option may have a limited right to do so in the future.
24. Supplemental tax-advantaged retirement savings alternatives, like section 457 deferred compensation plans, section 403(b) tax sheltered annuities and various IRA options, are widely available today for public employees. Often, these alternatives allow participants to choose a wide range of investment options.

**Decision Points**

1. Primary Question: Is there still a need to provide an option other than the Core Fund in the WRS?
2. Secondary Questions: If the answer is yes, what would be the purpose of that option? If the answer is no, what is the best way to eliminate the Variable Fund as an option?

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**HISTORICAL STRATEGIC ASSET ALLOCATION TARGETS  
CORE TRUST FUND**

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<b>Beginning Calendar Year</b>	<b>U.S. Equities</b>	<b>International Equities</b>	<b>Fixed Income</b>	<b>International Fixed Income</b>	<b>Real Estate</b>	<b>Private Equity/Debt</b>	<b>Multi- Asset</b>	<b>Cash</b>
1982	30%		60%		10%			0%
1983	30%		60%		10%			0%
1984	30%		60%		10%			0%
1985	30%		60%		10%			0%
1986	30%		60%		10%			0%
1987	40%		40%		20%			0%
1988	50%		40%		10%			0%
1989	50%		40%		10%			0%
1990	50%	6%	32%	4%	10%			0%
1991	50%	6%	32%	4%	10%			0%
1992	47%	8%	30%	5%	10%			0%
1993	45%	10%	30%	5%	10%			0%
1994	40%	15%	28%	7%	10%			0%
1995	40%	15%	28%	7%	5%	5%		0%
1996	40%	15%	28%	7%	7%	3%		0%
1997	40%	15%	30%	5%	7%	3%		0%
1998	40%	15%	30%	5%	5%	3%		2%
1999	42%	15%	35%	N/A	5%	3%		0%
2000	39%	18%	34%	N/A	4%	5%		0%
2001	39%	18%	34%	N/A	4%	5%		0%
2002	39%	18%	34%	N/A	4%	5%		0%
2003	40%	19%	31%	N/A	4%	6%		0%
2004	39%	20%	31%	N/A	4%	6%		0%
2005	39%	20%	29%	N/A	5%	5%	2%	0%
2006	36%	22%	30%	N/A	5%	5%	2%	0%
2007	36%	22%	30%	N/A	5%	5%	2%	0%
2008	32%	26%	30%	N/A	5%	5%	2%	0%

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Notes: For calendar 1998, cash was explicitly targeted. For all other calendar years, cash is targeted at 0%, and a 2% cash position is provided for in the fund benchmark.

Prior to calendar 1999, domestic and international fixed income were targeted separately. Since calendar 1999, total fixed income is targeted as a single asset class.

Prior to calendar 2000, private equity was considered part of U.S. equities. Since calendar 2000, private equity is considered part of Alternatives, renamed Private Equity/Debt in 2005.

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From Dave Wiltgen....

Unfortunately, I will not be able to attend the June meeting. Thus, I too wish to throw in my two cents and this is the only way I can do it.

I do participate in the variable plan, as does my wife. We made that choice to participate because we wanted the extra exposure to the stock market and the chance at higher returns. I think it is important to remember that all the teachers in the variable made that choice, for better or for worse... the variable wasn't forced upon anybody (no matter what participants may say in down years while they'll claim to be Mensa members during the up years). As seen in the data we received last week, the number of people choosing the variable is actually increasing every year. We have to assume that these people know what they are doing and that are accepting the greater risk. Since it is a choice to try to do better through wider exposure to stocks, I have trouble with us taking that choice away. Nobody is forced into the variable and anybody can conditionally withdraw when they become "even" so it really is a no harm no foul situation.

At previous meetings I voiced my concern about the limitations placed on what investment instruments the variable can use. Upon further thought, I believe I was wrong because that is not what the variable is about. The variable is simply about increasing exposure to stocks... good stocks that everyone in the core fund owns also. The goal of SWIB is to make everybody as much money as possible. Therefore, what is good for the core should be good for the variable as well. It would not be fair to allow the variable to do what the core fund is not able to do (or to overweight/underweight non-stock investments that the core fund is unable to do), because if there is a better way to do something everybody should have that exposure. I see the variable as simply a chance at generating higher long term results for our members from more exposure to stocks.

I feel that my fiduciary duty is to protect the ability of our members to make a choice... even if that choice potentially puts them at more risk of diminished returns because that choice could also deliver them great rewards from assuming that risk. Over the long term, the best place to be has always been the stock market. I don't see the variable risk as overwhelming simply because should the stock market crash precipitously ALL of our non-stock assets will eventually suffer as well. The variable definitely has risk over the short term, but over the long term it offers a chance for our members to do better than if they are in the core.

Finally, we need to realize that some of our constituents plan differently for retirement. It is true that the vast majority of our members rely on their WRS payments during retirement. Many need to be guaranteed a payment that does not fluctuate much year to year and month to month. The core fund is their obvious choice. However, many of our members have other solid investments outside of the WRS (rentals, businesses, other jobs, other investments, retirement plans from their spouse, etc.) that will pay for their retirement and those people may or may not be willing to shoulder additional risk by using their WRS variable account to try to "juice" their retirement earnings if you will. Fluctuations of 20% per year would not bother them at all during retirement. They want the chance at higher earnings and are not relying on their WRS to fund their expenses after they leave state employment or after they leave teaching. These people are also our constituents and they deserve the choice that we currently give them through the variable option. Therefore I think that we need to maintain the variable option. Sorry I can't be at this meeting and I'll see you all in September.

-Dave Wiltgen

This is Lon Mishler...

I wanted to provide some additional comments, and another view regarding the viability of the variable option.

First, the implication is that a larger portfolio exposure to stocks provides minimal benefit to investors. In the June 10 memo it was stated "The potential additional return produced by the Variable Fund over long periods is marginal, when compared to the diversified core fund." Wayne says: "...the potential of out performance by the Variable Fund is small and possible only with the acceptance of significant additional downside risk."

While I agree that risk, as measured by standard deviation, increases along with more equities in the portfolio, performance also increases. Ibbotson data for the period extending from 1926 to 2005 shows the historical average annual return for the following portfolio configurations (percentages in stocks/bonds):

50/50	8.16%
70/30	9.20%
85/15	9.91%

Although the increase in each percentage return does not look significant...moving from a 70/30 mix to an 85/15 mix will result in about 15% more money after 20 years.

Modern portfolio theory shows that for any given value of standard deviation, there is a portfolio that provides the higher possible rate of return. The efficient frontier curve is, nevertheless, upward sloping which indicates annual returns do increase with higher standard deviations, e.g. more stocks. While it is true that the returns increase at a decreasing rate, they still increase.

Do we want to limit the ability to younger teachers to take on more risk, perhaps appropriate risk given the number of years before they retire?

If we provide a money purchase option, where the value of the account can increase the level of a retirement benefit, do we owe participants an opportunity to enhance their account values by accepting more risk?

A more paternalistic approach is to decide how much risk is appropriate and to make investment decisions for the participants as a single group. Settling on a specific mix, however, removes the opportunity to vary risk, and results, on an individual basis.

In the private sector, many plans are changing from defined benefit plans to defined contribution plans. The benefits to the employers are obvious as investment risk and costs are shifted to the participants. In the process, however, some employees will appreciate the opportunity to be more involved in the investment decisions.

I want to quickly add that I am not proposing a defined contribution approach. We all love and appreciate our defined benefit plan.

Thanks.

Lon Mishler

Hello, this is Wayne McCaffery.

After considerable contemplation I felt it my duty to provide, for your consideration, my interpretation of the Variable Fund option. Keep in mind that there exist a million variations and exceptions on all that I say, but I am taking a mega-view of the Variable

The CORE Fund is a combination of a guaranteed minimum benefit, a floor if you will, and the potential of an enhanced benefit through the Money Purchase method of calculating retirement benefits.

It is important to remember that the CORE Fund participant enjoys a guaranteed floor to their benefits not only *at* retirement but also *in* retirement.

Opting out of the CORE Fund and into the Variable Fund does two things. One: In so doing the participant forfeits the guaranteed benefit floor *at* retirement and *during* retirement for that portion of their pension. Two: The Variable does offer a hope of a larger benefit than the CORE.

The hope today of an enhanced initial retirement benefit through the Variable Fund is a matter of market timing. Today, with the modern asset allocation of the CORE fund, the potential of out performance by the Variable Fund is small and possible only with the acceptance of significant additional downside risk.

Long and short? The Variable Fund increases risks by eliminating the benefit floor, and provides only a limited hope of a retirement package larger than what the CORE would provide. Choosing the Variable Fund is a case of **significantly increasing risks without a reasonable expectation of a commensurate increased benefit**. This is a choice best not made available to our participants. Making this option available is an implied endorsement of the option.

Thank you for your consideration,

Wayne McCaffery