



WISCONSIN LEGISLATIVE COUNCIL

# 2008 COMPARATIVE STUDY OF MAJOR PUBLIC EMPLOYEE RETIREMENT SYSTEMS

Prepared by:

Daniel Schmidt, Senior Analyst  
Wisconsin Legislative Council

December 2009 (Revised May 2010)



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## INTRODUCTION

This report compares significant features of major state and local public employee retirement systems in the United States. The report compares retirement benefits provided to general employees and teachers, rather than benefits applicable only to narrower categories of employees such as police, firefighters, or elected officials. Generally, the report has been prepared every two years since 1982 by the Wisconsin Retirement Research Committee staff or the Legislative Council staff.

The 2008 Report includes data from the same 85 public employee retirement systems that have been compared in each of the previous reports. For 2008, two new systems were added in order to account for larger systems that have been split. The new systems are the Kentucky CERS and the Nebraska CEPP. Although this report does not cover all major public employee retirement systems, it does include at least one statewide plan from each state. Because the same public employee retirement systems have been covered in the report over time, it can be used to determine long-term trends in public employee retirement systems.

The methodology for preparing the 2002-08 Reports differs from that of previous reports. Through the 2000 Report, each public employee retirement system covered by the report was asked to send to the Wisconsin Retirement Research Committee or the Legislative Council all annual reports, employee handbooks, statutes, actuarial reports, and related materials. One issue with this approach is that, in many cases, the published reports, handbooks, and materials were not current with respect to the data included in the report for a given year. In addition, because of the large volume of material that each plan was asked to send and the storage of that material, this was a relatively inefficient way of gathering the data necessary for the report.

For the 2002-08 Reports, the data was gathered, to the extent possible, from the web site maintained by each of the plans covered by the report. All information is based on the most recent actuarial valuation available at the time of publishing. Most of the data was gathered from the 2008 actuarial analyses of each of the plans. Any information not available from a web site was gathered by addressing specific questions, either by e-mail or telephone, to plan administrators. The response by public employee pension plan administrators, who took time from their busy schedules to respond to request for data, is greatly appreciated. In addition, the wealth of information available on web sites with respect to public employee pension plans is impressive.

In many cases, the public employee retirement systems in this report have features that differ according to when an employee was initially hired or the identity of the employer. Where this situation exists, an attempt was made to describe the features of the plan applicable to the largest category of participants and to employees who are newly hired.

One feature of the 2008 Report is that it discusses how retirement benefits and certain other features of the Wisconsin Retirement System (WRS) compare to the other plans in this report. This feature of the report is intended to be useful to Wisconsin legislators and persons interested in comparing the WRS, while maintaining the structure of prior reports for the convenience of retirement system administrators and policymakers from other states.

While every attempt was made to ensure the accuracy of the great amount of data in this report, it is inevitable that errors have occurred in both prior and current reports. Please communicate reports of any errors or comments you may have about the report to: Daniel Schmidt, Senior

Analyst; Wisconsin Legislative Council Staff; Suite 401, One East Main Street; Madison, Wisconsin, 53703; or at the following e-mail address: dan.schmidt@legis.wisconsin.gov.

Any corrections that need to be made to the report will be included in the version maintained at the Wisconsin Legislative Council web site: <http://www.legis.state.wi.us/lc>.

<p><b>PART I</b></p> <p><b>DESCRIPTION OF RETIREMENT SYSTEMS IN REPORT</b></p>
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**A. INTRODUCTION**

Chart 1, on pages 7 and 8, provides descriptive data pertaining to the public employee retirement systems covered in this report.

**B. NUMBER OF PARTICIPANTS**

The 87 plans in the 2008 Report provide pension coverage for 12,029,028 active employees and 6,002,982 retirees and beneficiaries, for a total of 18,032,010 participants. This total is 1.7% greater than the 17,738,158 participants in the 2006 Report. The number of active participants has decreased between the 2006 and 2008 Reports by 0.5% while the number of retirees has grown by 6.3% in the same time period.

**C. CATEGORIES OF EMPLOYEES INCLUDED IN PLANS**

The column entitled “Employee Coverage” in Chart 1 shows whether the plan reported on provides pension coverage to state employees (“S”), local employees (“L”), teachers (“T”), or some combination of these categories of employees. The 87 plans are categorized as follows:

<u>Employee Coverage</u>	<u>Number of Plans</u>
State employees only	13
Teachers only	27
Local employees only	10
State and local employees	14
State employees and teachers	3
State employees, local employees, and teachers	20

See Figure 1, *2008 Employee Coverage*, for a graphical representation of the categories.

**D. RATIO OF ACTIVE EMPLOYEES TO RETIRED EMPLOYEES**

Chart 1 also shows the ratio of active employees to retired employees in the 87 systems surveyed. The average ratio has declined over prior years. For 2008, the average ratio was two while the comparable figures for the 2006 Report, the 2004 Report, the 2002 Report, the 2000 Report, and the 1996 Report, respectively, were 2.14, 2.24, 2.38, 2.52, and 2.89 (see Figure 2, *Participant Growth 2000 to 2008*). Forty-seven of the systems (including the City of Milwaukee and Milwaukee County) had an active employees to retired employees ratio of less than two. In the 2000 Report, 17 of the systems had an active employees to retired employees ratio of less than two.

## E. SOCIAL SECURITY COVERAGE

In 70 of the 87 plans, participants are also covered under the federal Social Security program. Of the 17 public employee retirement systems included in this report that do not provide Social Security coverage, 10 represent pension plans covering teachers only. The decision on whether to participate in the Social Security program was at one time elective, rather than mandatory, for public employers. However, for those employers who elect coverage, future participation is mandatory.

## F. TRENDS

Chart 1 shows a continued growth in the total number of participants in the plans surveyed. However, the number of retirees is growing at a faster rate than is the number of active employees. This is reflected in the declining ratios of active to retired participants for the plans surveyed. As compared to the 2006 Report, there has been no change in the number of plans whose participants are covered by the federal Social Security program.

## G. THE WISCONSIN RETIREMENT SYSTEM

The WRS, in 2008, had 263,186 active employees and 144,033 beneficiaries and annuitants, for a total of 407,219 participants. This total is 4.5% greater than the 389,591 participants in the 2006 Report. The number of active employees covered by the WRS increased by 2,884 between 2006 and 2008. The WRS covers state and local employees and teachers. The ratio of active employees to retired employees in the WRS in 2008 is 1.83, which is a reduction from the ratio of 2.01 found in the 2006 Report. The ratio of active employees to retired employees in the WRS for 2008 (1.83) is somewhat lower than the average ratio for all plans in the report (2.0). Most WRS employees are covered by Social Security.



CHART I  
PUBLIC RETIREMENT SYSTEMS SURVEYED

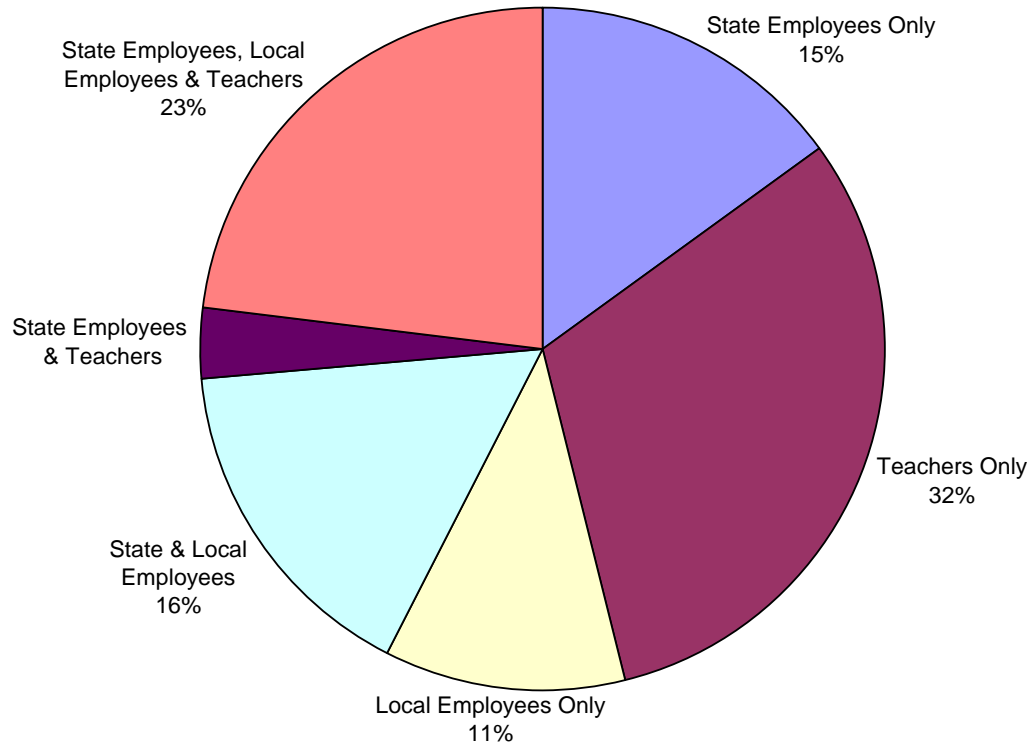
	<u>State</u>	<u>Fund Name</u>	<u>Employee Coverage*</u>	<u>Active Employees</u>	<u>Beneficiaries &amp; Annuitants</u>	<u>Ratio</u>	<u>S.S. Coverage</u>
1	Alabama	ERS	S, L	87,247	34,175	2.55	Yes
2	Alabama	TRS	T	141,528	66,928	2.11	Yes
3	Alaska	PERS	S, L	28,850	24,082	1.20	No
4	Alaska	TRS	T	8,531	10,026	0.85	No
5	Arizona	SRS	S, L, T	227,730	92,673	2.46	Yes
6	Arkansas	PERS	S, L	44,340	23,555	1.88	Yes
7	Arkansas	TRS	T	70,172	26,801	2.62	Yes
8	California	PERS	S, L	836,914	468,898	1.78	Yes
9	California	TRS	T	461,378	223,968	2.06	No
10	Colorado	PERA	S, L, T	190,367	80,965	2.35	No
11	Connecticut	SERS	S	53,196	38,093	1.40	Yes
12	Connecticut	TRS	T	51,738	28,787	1.80	No
13	Delaware	SEPP	S, T	34,764	18,056	1.93	Yes
14	Florida	FRS	S, L, T	683,302	276,252	2.47	Yes
15	Georgia	ERS	S	75,293	35,579	2.12	Yes
16	Georgia	TRS	T	225,024	78,633	2.86	Yes
17	Hawaii	ERS	S, L, T	65,251	35,324	1.85	Yes
18	Idaho	PERS	S, L, T	66,765	30,912	2.16	Yes
19	Illinois	SERS	S	66,237	60,813	1.09	Yes
20	Illinois	TRS	T	165,572	91,462	1.81	No
21	Illinois	MRF	L	180,615	90,132	2.00	Yes
22	Indiana	PERF	S, L	138,863	60,332	2.30	Yes
23	Indiana	TRF	T	76,256	42,817	1.78	Yes
24	Iowa	PERS	S, L, T	167,823	87,309	1.92	Yes
25	Kansas	PERS	S, L, T	153,804	64,188	2.40	Yes
26	Kentucky	ERS	S	52,478	37,711	1.39	Yes
27	Kentucky	CERS	L	95,394	43,001	2.22	Yes
28	Kentucky	TRS	T	75,539	40,739	1.85	No
29	Louisiana	SERS	S	61,780	37,575	1.64	No
30	Louisiana	TRSL	T	85,979	64,830	1.33	No
31	Maine	PERS	S, L, T	51,402	34,182	1.50	No
32	Maryland	SRPS	S, L, T	199,255	112,422	1.77	Yes
33	Massachusetts	SERS	S	86,529	50,873	1.70	No
34	Massachusetts	TRS	T	89,636	50,024	1.79	No
35	Michigan	SERS	S	28,568	48,078	0.59	Yes
36	Michigan	MERS	L	37,135	23,995	1.55	Yes
37	Michigan	PSERS	T	278,642	167,265	1.67	Yes
38	Minnesota	MSRS	S	48,361	25,346	1.91	Yes
39	Minnesota	PERA	L	146,226	61,436	2.38	Yes
40	Minnesota	TRA	T	76,938	47,190	1.63	Yes
41	Mississippi	PERS	S, L, T	165,733	73,540	2.25	Yes
42	Missouri	SERS	S	54,542	30,132	1.81	Yes
43	Missouri	LAGERS	L	31,424	13,356	2.35	Yes
44	Missouri	PSRS	T	78,436	41,738	1.88	No
45	Montana	PERS	S, L	28,293	16,627	1.70	Yes

46	Montana	TRS	T	18,292	11,788	1.55	Yes
47	Nebraska	SEPP**	S	17,200	410	41.95	Yes
48	Nebraska	CEPP**	L	7,711	187	41.24	Yes
49	Nebraska	SPP	T	37,832	15,339	2.47	Yes
50	Nevada	PERS	S, L, T	106,203	33,479	3.17	No
51	New Hampshire	NHRS	S, L, T	50,988	22,870	2.23	Yes
52	New Jersey	PERS	S, L	319,182	133,017	2.40	Yes
53	New Jersey	TPAF	T	142,887	68,479	2.09	Yes
54	New Mexico	PERA	S, L	52,507	24,910	2.11	Yes
55	New Mexico	ERA	T	63,698	31,192	2.04	Yes
56	New York	ERS	S, L	528,435	328,726	1.61	Yes
57	New York	TRS	T	274,901	136,706	2.01	Yes
58	North Carolina	TSERS	S, T	338,490	145,855	2.32	Yes
59	North Carolina	LGERS	L	127,959	42,408	3.02	Yes
60	North Dakota	PERS	S, L	19,296	6,836	2.82	Yes
61	North Dakota	TRF	T	9,561	6,317	1.51	Yes
62	Ohio	PERS	S, L	374,002	166,516	2.25	No
63	Ohio	STRS	T	173,327	126,506	1.37	No
64	Oklahoma	PERS	S, L	45,120	26,033	1.73	Yes
65	Oklahoma	TRS	T	88,678	45,238	1.96	Yes
66	Oregon	PERS	S, L, T	198,626	98,066	2.03	Yes
67	Pennsylvania	SERS	S	110,866	108,146	1.03	Yes
68	Pennsylvania	PSERS	T	272,690	173,540	1.57	Yes
69	Rhode Island	ERS	S, T	35,051	23,419	1.50	Yes
70	South Carolina	SCRS	S, L, T	187,968	100,897	1.86	Yes
71	South Dakota	SRS	S, L, T	37,707	19,321	1.95	Yes
72	Tennessee	CRS	S, L, T	212,725	98,230	2.17	Yes
73	Texas	ERS	S	134,626	72,678	1.85	Yes
74	Texas	TRS	T	801,455	275,228	2.91	No
75	Texas	MRS	L	100,459	34,123	2.94	Yes
76	Utah	SRS	S, L, T	93,576	31,731	2.95	Yes
77	Vermont	SRS	S	8,442	4,555	1.85	Yes
78	Vermont	TRS	T	10,685	5,555	1.92	Yes
79	Virginia	SRS	S, L, T	345,737	136,394	2.53	Yes
80	Washington	PERS	S, L	158,022	71,244	2.22	Yes
81	Washington	TRS	T	64,939	38,091	1.70	Yes
82	West Virginia	PERS	S, L	35,491	20,912	1.70	Yes
83	West Virginia	TRS	T	35,219	28,522	1.23	Yes
84	Wyoming	WRS	S, L, T	35,021	16,275	2.15	Yes
85	Milwaukee	City	L	11,581	11,082	1.05	Yes
86	Milwaukee	County	L	4,837	7,308	0.66	Yes
87	Wisconsin	WRS	S, L, T	263,186	144,033	1.83	Yes
Totals: (87 Funds)				12,029,028	6,002,982	2.00	

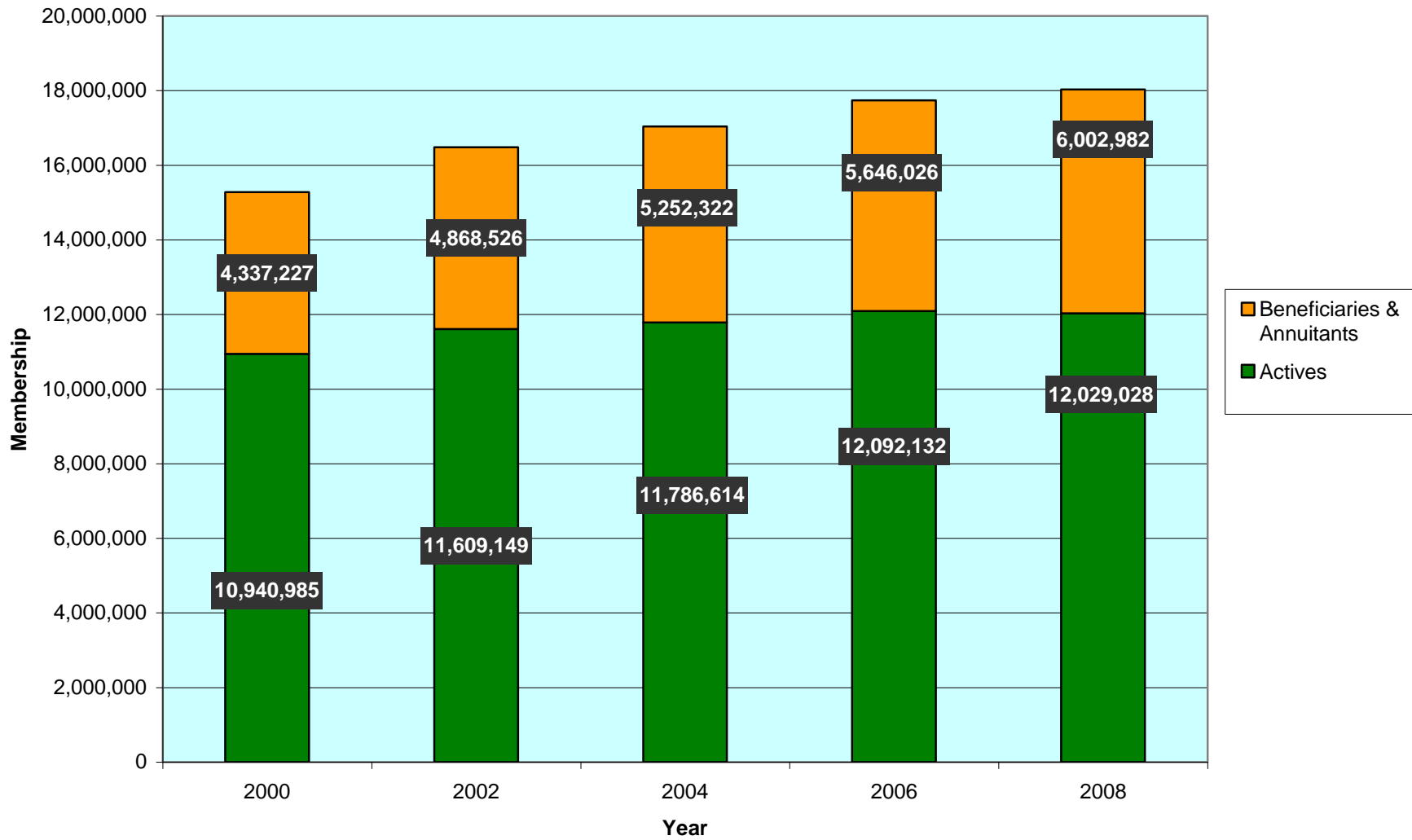
\*Coverage: S = State; L = Local; T = Teachers

\*\*Converted to individual cash balance plans from defined contribution plan

**Figure 1. 2008 Employee Coverage**



**Figure 2. Participant Growth 2000 to 2008**



## **PART II**

### **NORMAL AND EARLY RETIREMENT PROVISIONS**

#### **A. INTRODUCTION**

Chart 2, on pages 14 and 15, shows the normal and early retirement provisions for each of the plans covered in the report. All but four of the plans covered in this report are “defined benefit plans” in which retirement benefits are calculated by a formula that takes into account years of service and final average salary. Two of the exceptions are “money purchase” plans in which retirement benefits are calculated by the amount of money in the person's account and the age of the person at the time he or she retires. Benefits are calculated as the total value of the employer and employee contributions plus investment earnings at the time of retirement. The other two exceptions are “defined contribution plans” that have been converted from defined benefit plans (both in Alaska). Benefits are calculated for defined contribution plans as the total value of the employer and employee contributions plus investment earnings at the time of retirement.

Note that some of the defined benefit plans also contain elements of money purchase plans, generally an option under which an employee may elect to have some of his or her contribution to the retirement plan placed in a money purchase account. These “money purchase options” are not reflected in Chart 2, which describes the features of each plan that are standard and that apply to employees generally.

#### **B. NORMAL RETIREMENT**

“Normal retirement” refers to the age, number of years of service, or both, that a person must attain in order to qualify for full retirement benefits without an actuarial reduction in his or her annuity for early retirement. Most plans in this report have adopted multiple combinations of age and service under which a person may qualify for normal retirement. These are shown in the column entitled “Normal Retirement” in Chart 2.

Some retirement plans integrate normal retirement with the age under which a person is entitled to receive retirement benefits under the Social Security system. Age 65 is the age at which a person is entitled to receive full Social Security benefits, but this age is scheduled to increase to 66 and then to 67 over time.

Age 62 is the earliest age at which a person can receive Social Security retirement benefits, although the amount of the benefits are reduced to reflect the longer payout period. Chart 2 shows that 84 of the 87 plans allow normal retirement at age 62 or earlier, for persons with many years of service. In addition, Chart 2 shows that 57 of the 87 plans permit normal retirement at age 62 or earlier, with 10 or less years of service. Only two of the plans in this report restrict normal retirement to persons who are at least 65.

Some plans that permit persons to retire earlier than age 62 also allow them to elect to increase their annuity prior to age 62 to reflect the amount of Social Security benefits it is estimated that they will receive at that time. The amount of the annuity paid after age 62 is then adjusted to compensate for the earlier payments.

Many of the plans in this report have adopted “**X years and out**” provisions, which allow employees to retire at any age (or at a minimum age) with normal retirement benefits after “X” years of service. The most common provision is 30 years of service combined with a minimum age of 55. The following table shows the number of plans that, in 2008, had in effect X years and out provisions and compares these with the number of plans that had in effect X years and out provisions in the 2000 Report:

	<u>2006</u>	<u>2008</u>
35 years of service/age 55 or older	7 plans	8 plans
30 years of service/age 55 or older	28 plans	29 plans
28 years of service/age 55 or older	4 plans	4 plans
27 years of service/age 55 or older	2 plans	3 plans
25 years of service/age 55 or older	11 plans	11 plans
20 years of service/age 55 or older	4 plans	8 plans
<b>TOTAL</b>	<b>56 plans</b>	<b>63 plans</b>

See Figure 3, *2008 Normal Retirement “X Years and Out” Provisions*, for a graphical representation of the 2008 “X years and out” provisions.

In addition to the “X years and out” provisions, some plans have adopted “**Rule of Y**” provisions under which a person can retire with normal retirement benefits when that person's number of years of service, plus his or her age, equals a specified number. The following table shows the number of plans that, in 2008, had Rule of Y provisions and compares these with the number of plans that had Rule of Y provisions in 2006:

	<u>2006</u>	<u>2008</u>
Rule of 90	3 plans	4 plans
Rule of 88	1 plan	1 plan
Rule of 85	5 plans	9 plans
Rule of 80	5 plans	7 plans
Rule of 75	1 plan	2 plans
<b>TOTAL</b>	<b>15 plans</b>	<b>23 plans</b>

See Figure 4, *Normal Retirement “Rule of Y” Provisions (Of 23 Plans Incorporating “Rule of Y” Provisions)*, for a graphical representation.

### C. EARLY RETIREMENT

Seventy-five of the 87 plans covered in the 2008 Report permit “early retirement” before the normal age and service requirements of the plans have been met. The annuity of a person who elects early retirement is reduced from the amount that would have been received if the person had reached the normal retirement requirements. The early retirement provisions of each of the plans are shown in the column entitled “Early Retirement” in Chart 2. The most common minimum age for early retirement is age 55, with some minimum years of service. The second most common minimum age for early retirement is age 50.

Fifty-four of the 87 plans in the 2008 Report allow early retirement at a minimum age of 55 or more. Thirteen of the 87 plans in the report allow early retirement at a minimum age of less than

55. Ten of the 87 plans in the report do not allow early retirement. The remainder of the plans are either money purchase plans or allow early retirement after a certain number of years of service, without specifying any minimum age (see Figure 5, *2008 Early Retirement Provisions*).

The annuity of a person who elects to retire before reaching the minimum age and years of service required for normal retirement is subject to a reduction that is commonly referred to as an “**actuarial discount**.” The amount of the reduction for each of the plans is shown in the column entitled “Reduction for Early Retirement” in Chart 2. In many cases, the column in Chart 2 is not able to show all of the complexity of how the amount of the reduction is actually computed, because this amount is frequently different for employees at different ages or with different numbers of years of service or for various classifications of employees. However, the column does show the most common percentage reduction for each of the plans in the report.

## D. TRENDS

The 2008 Report indicates the return to a trend noted in previous reports that permits retirement at earlier ages. Between the 2000 and 2004 Reports, the plans reduced their normal retirement provisions by reducing the minimum age or the number of years of service required, or both. Between the 2004 and 2006 Reports, only two plans did so. Between the 2006 and 2008 Reports, an additional seven plans reduced their normal retirement provisions.

In addition, between the 2000 and 2004 Reports, 10 plans reduced their early retirement provisions by reducing the minimum age or the number of years of service required, or both. Between the 2004 and 2006 Reports, only two plans did so. Between the 2006 and 2008 Reports, an additional eight plans reduced their early retirement provisions.

## E. THE WRS

The normal retirement requirement for general employees in the WRS is 65 years of age. However, general employees who are at least 57 years of age and who have at least 30 years of service can retire without an actuarial discount. General employees in the WRS may retire at 55 years of age with an actuarial discount. The amount of actuarial discount for early retirement for general employees in the WRS varies according to the employee's number of years of service.

CHART II  
NORMAL AND EARLY RETIREMENT REQUIREMENTS

<u>State</u>	<u>Fund Name</u>	<u>Coverage*</u>	<u>Normal Retirement (Age/Years)</u>	<u>Early Retirement (Age/Years)</u>	<u>Reduction for Early Retirement</u>
1 Alabama	ERS	S, L	60/10; any/25	None	
2 Alabama	TRS	T	60/10; any/25	None	
3 Alaska	PERS	S, L	59-1/2*	None	
4 Alaska	TRS	T	59-1/2*	None	
5 Arizona	SRS	S, L, T	65; 62/10; R80	50/5	Table
6 Arkansas	PERS	S, L	65/5; any/28	55/5; any/25	6% a yr
7 Arkansas	TRS	T	60/5; any/28	Any/25	Lesser of 5% for each yr less than 28 yrs of service or 5% for each yr prior to age 60
8 California	PERS	S, L	55/5	50/5	Multiplier varies
9 California	TRS	T	60/5	55/5; 50/30	3% to 6% a yr
10 Colorado	PERA	S, L, T	65/5; 50/30; 55/R85; any/35	50/25; 55/20; 60/5	Table
11 Connecticut	SERS	S	62/10; 60/25	55/10	3% a yr
12 Connecticut	TRS	T	60/20; any/35	Any/25; 55/20; 60/10	3% a yr
13 Delaware	SEPP	S, T	62/5; 60/15; any/30	55/15; any/25	2.4% a yr
14 Florida	FRS	S, L, T	62/6; any/30	Any/6	5% a yr
15 Georgia	ERS	S	65/10; any/30	60/10; any/25	7% a yr; max 35%
16 Georgia	TRS	T	60/10; any/30	Any/25	7% a yr
17 Hawaii	ERS	S, L, T	62/5; 55/30	55/20	5% a yr
18 Idaho	PERS	S, L, T	65/5; R90	55/5	3% a yr for 1st 5 yrs; 5.75% a yr thereafter
19 Illinois	SERS	S	60/8; R85	55/25	6% a yr
20 Illinois	TRS	T	62/5; 60/10; 55/35	55/20	6% a yr
21 Illinois	MRF	L	60/8; 55/35	55/8	3% a yr
22 Indiana	PERF	S, L	65/10; 60/15; 55/R85	50/15	Table
23 Indiana	TRF	T	65/10; 60/15; 55/R85	50/15	5% a yr to 60; 1.2% a yr age 60 to 65
24 Iowa	PERS	S, L, T	65; 62/20; R88	55/4	3% a yr
25 Kansas	PERS	S, L, T	65/1; 62/10; R85	55/10	2.4%/7.20% a yr
26 Kentucky	ERS	S	65/4; any/27	55/5; any/25	5%/4% a yr
27 Kentucky	CERS	L	65/4; any/27	55/5; any/25	5%/4% a yr
28 Kentucky	TRS	T	60/5; any/27	55/5	5% a yr
29 Louisiana	SERS	S	60/10	Any/20	Table
30 Louisiana	TRSL	T	60/5; 55/25; any/30	Any/20	Multiplier varies
31 Maine	PERS	S, L, T	62/5	Any/25	6% a yr
32 Maryland	SRPS	S, L, T	60/5; any/30	Any/25	6% a yr; max 42%
33 Massachusetts	SERS	S, L	55/10; any/20	None	
34 Massachusetts	TRS	T	55/10; any/20	None	
35 Michigan	SERS	S	60/10; 55/30	55/15	6% a yr
36 Michigan	MERS	L	Varies by plan	Varies by plan	Varies by plan
37 Michigan	PSERS	T	60/5; any/30	55/15	6% a yr
38 Minnesota	MSRS	S	62; 60/6; any/30; R90	55/3	Table
39 Minnesota	PERA	L	65/1; any/30; R90	55/3	Table
40 Minnesota	TRA	T	65/1; 62/30; any/30; R90	55/3	Table

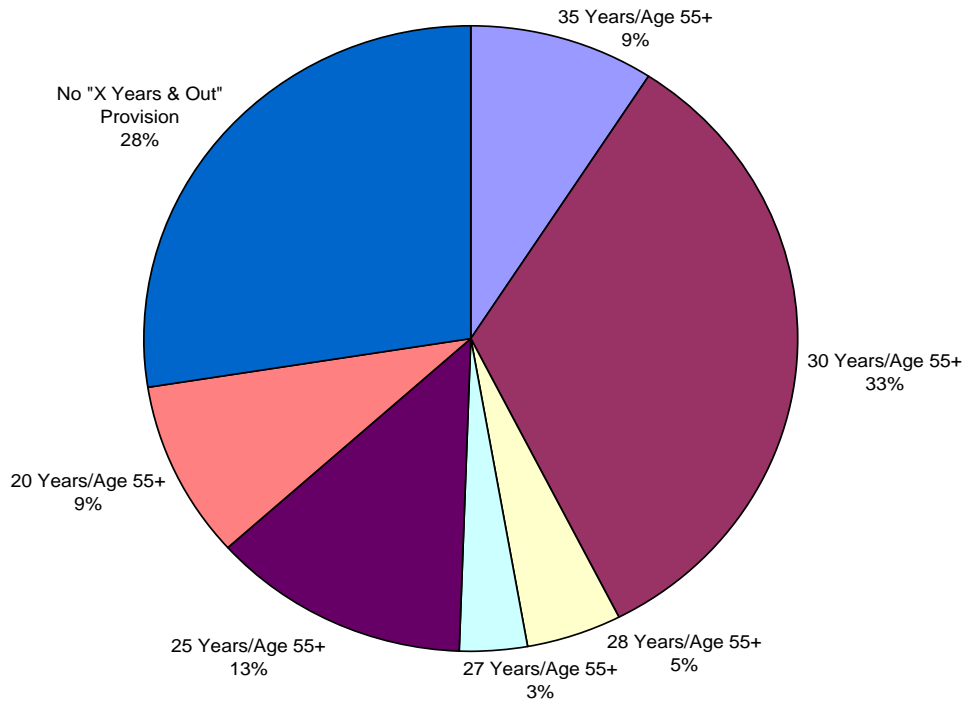


41	Mississippi	PERA	S, L, T	60/8; any/25	None	
42	Missouri	SERS	S	65/5; 65/4 active; 62/5; 60/15; 48/R80	57/5; 55/10	6% a yr
43	Missouri	LAGERS	L	60/5; R80 option	55/5	6% a yr
44	Missouri	PSRS	T	60/5; R80; any/30	55/5; any/25	Table
45	Montana	PERS	S, L	65/any; 60/5; any/30	50/5; any/25	Table
46	Montana	TRS	T	60/5; any/25	50/5	6%; 3.6% a yr
47	Nebraska	SERS	S	55		Money purchase
48	Nebraska	CERS	L	55		Money purchase
49	Nebraska	SPP	T	65; 55/R85	60/5; any/35	3% a yr
50	Nevada	PERS	S, L, T	65/5; 60/10; any/30	Any/5	4% a yr
51	New Hampshire	NHRS	S, L, T	60/any	50/10; R70/20	1.5%; 3%; 4%; 6.67% a yr
52	New Jersey	PERS	S, L	62/any	Any/25	3% a yr
53	New Jersey	TRS	T	60/any	Any/25	3% a yr
54	New Mexico	PERA	S, L	65/5 to 60/20; any/25	None	
55	New Mexico	ERA	T	65/5; any/25; 60/R75	R75	Table
56	New York	ERS	S, L	62/5; 55/30	55/5	6%/3% a yr
57	New York	TRS	T	62/5; 55/30	55/5	6%/3% a yr
58	North Carolina	TSERS	S, T	65/5; 60/25; any/30	60/5; 50/20	3% a yr
59	North Carolina	LGERS	L	65/5; 60/25; any/30	60/5; 50/20	3% a yr
60	North Dakota	PERS	S, L	65/any; R85	55/3	6% a yr
61	North Dakota	TRF	T	65/5; R90	55/5	6% a yr
62	Ohio	PERS	S, L	60/5; any/30	55/25	3% a yr
63	Ohio	STRS	T	65; any/30	60/5; 55/25	3% a yr
64	Oklahoma	PERS	S, L	62/6; R90	55/10	Table
65	Oklahoma	TRS	T	62/5; R90	55/5; any 30	Table
66	Oregon	PERS	S, L, T	65/any; 60/any; 58/30	55; any 30	Full actuarial reduction
67	Pennsylvania	SERS	S	60/3; any/35	Any/5	3% to 6% per yr average
68	Pennsylvania	PSERS	T	62; 60/30; any/35	55/25	3% a yr
69	Rhode Island	ERS	S, T	60/10; any/28	55/20	Table
70	South Carolina	SCRS	S, L, T	65/any; any/28	60; 55/25	5% a yr for each yr under age 65; 4% a yr for each yr under age 28
71	South Dakota	SRS	S, L, T	65/3; 55/R85	55/3	Table
72	Tennessee	CRS	S, L, T	60/5; any/30	55/10; any/25	4.8% a yr
73	Texas	ERS	S	60/5; R80	None	
74	Texas	TRS	T	65/5; 60/20; R80	55/5; any/30	Table
75	Texas	MRS	L	60/5; 60/10; any/20 or 25 option	None	
76	Utah	SRS	S, L, T	65/4; any/30	Any/25; 60/20; 62/10	3% a yr; full actuarial reduction for each yr before age 60
77	Vermont	SRS	S	62/any; any/30	55/5	6% a yr
78	Vermont	TRS	T	62/any; any/30	55/5	6% a yr
79	Virginia	SRS	S, L, T	65/5; 50/30	50/10; 55/5	6%; 4.8% a yr
80	Washington	PERS	S, L	65/5; 65/10	55/20; 55/10	3% a yr or table
81	Washington	TRS	T	65/5; 65/10	55/20; 55/10	3% a yr or table
82	West Virginia	PERS	S, L	60/5; 55/R80	55/10	Full actuarial reduction
83	West Virginia	TRS	T	60/5; 55/30; any/35	Any/30	Full actuarial reduction
84	Wyoming	WRS	S, L, T	60/4; R85	50/4; any/25	5% a yr
85	Milwaukee	City	L	60/any; 55/30	55/15	Table
86	Milwaukee	County	L	60/any; R75	55/15	5% a yr
87	Wisconsin	WRS	S, L, T	65/any; 57/30	55	Varies by amt of service

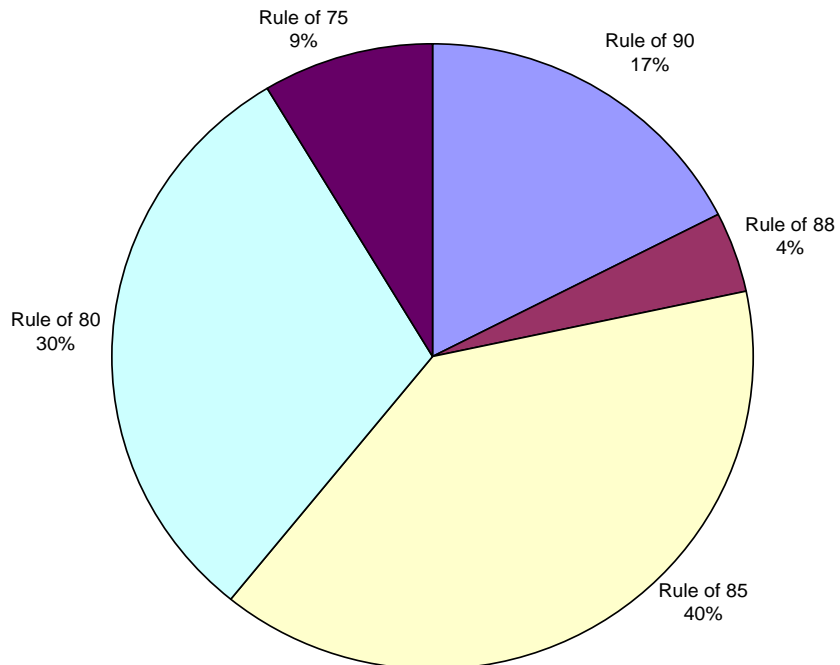
Coverage: S = State; L = Local; T = Teachers; x/y = Age/Service.

\*Defined contribution plan: taxes and penalties may apply if contributions are withdrawn prior to age 59-1/2

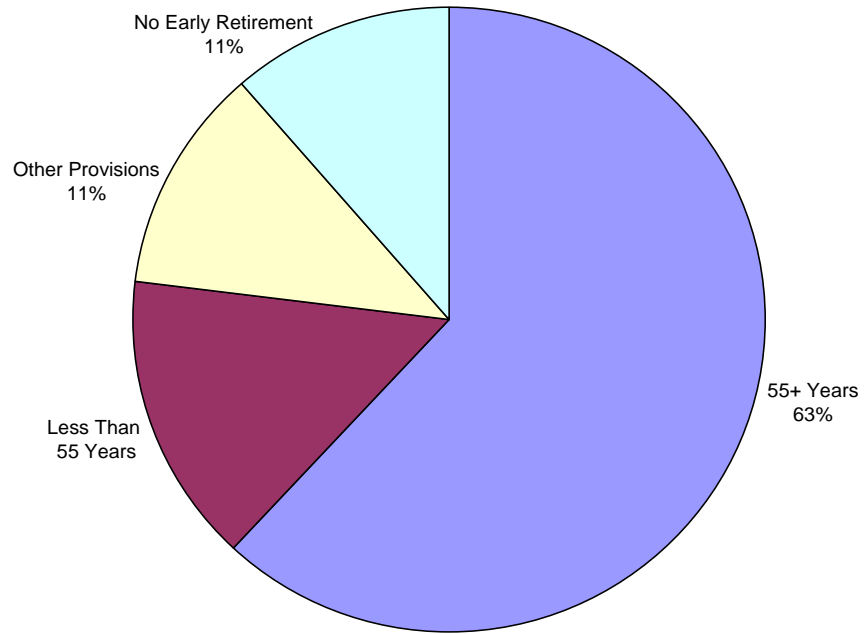
**Figure 3. 2008 Normal Retirement "X Years and Out" Provisions**



**Figure 4. Normal Retirement "Rule of Y" Provisions  
(Of 23 Plans Incorporating "Rule of Y" Provisions)**



**Figure 5. 2008 Early Retirement Provisions**





<p><b>PART III</b></p> <p><b>CONTRIBUTION RATES AND VESTING REQUIREMENTS</b></p>
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**A. INTRODUCTION**

Chart 3, on pages 22 and 23, shows the employee contribution rate, the employer contribution rate, and the vesting period for each of the 87 plans in the report. The contribution rates are shown as a percentage of salary.

**B. EMPLOYEE CONTRIBUTIONS**

Large private sector corporations that provide defined benefit pension plans frequently do not require employee contributions to the primary plan, but frequently also provide supplemental profit-sharing or savings plans that allow employees to contribute to the plan and receive an employer “match” to some or all of the contribution. Conversely, most public employee pension plans at least nominally require employees to contribute a certain percentage of their salary to the plan, although some public employee pension plans provide for employer “pick-up” of the employee contribution. In addition, secondary savings plans for public employees, such as Section 457 deferred compensation plans, are funded totally from employee contributions with no employer match.

In many plans, amounts designated as employee contributions for accounting purposes are actually paid by the employer. There are financial advantages to both the employer and the employee if, instead of granting compensation increases, an employer pays the employee contribution to the retirement plan. Compensation payments are subject to old age, survivors and disability insurance payments (Social Security), and Medicare payments while contributions to a retirement plan are not. In addition, the practice may be attractive to employers because employer pick-up of retirement contributions is not added into employee base wages, limiting future percentage-based salary increases.

The column in Chart 3 entitled “Employee Contribution” shows the employee contribution rates, expressed as a percentage of payroll, for the 87 plans covered in the report. These requirements are compared with employee contributions in the 2006 Report in the following table:

<u>Employee Contribution Rates</u>	<u>2006</u>	<u>2008</u>
5% or less	28 plans	30 plans
More than 5%	45 plans	46 plans
Rate varies (usually by age or employee classification)	6 plans	5 plans
Plan is noncontributory	6 plans	6 plans
<b>TOTAL</b>	<b>85 plans</b>	<b>87 plans</b>

See Figure 6, *2008 Employee Contribution Rates*, for a graphical representation.

## C. EMPLOYER CONTRIBUTIONS

As has been noted in previous reports, the employer contribution information in Chart 3 is of less reliability than other information found in this report. Employer contributions often vary between categories of employees and change significantly from year to year, particularly if investment returns from pension funds are volatile. In addition, employer costs are often designated under several categories reflecting normal costs, amortization, administrative costs, and unfunded post-retirement increases and the designation of these costs may vary from plan to plan. The employer contribution rates shown in Chart 3 are derived from actuarial reports and, where these were not available, by information received from plan administrators. Where possible, the normal cost rate or the statutory rate is stated. Medical and other nonpension costs are generally not included in “employer contributions.”

In addition, the employer contributions reported in Chart 3 are intended to reflect actual contributions made by the employer. In some plans covered by the report, employers paid contributions to the retirement plans at rates less than those that were determined by actuarial valuation as necessary to fully fund the pension plan.

## D. VESTING

The term “vesting” refers to an employee’s right, after satisfying some minimum service requirement, to receive some pension benefits regardless of whether the employee remains in a job covered by the pension plan. Vesting requirements for the plans included in the 2006 Report are displayed in the last column of Chart 3. The following table shows the changes that have occurred since 2000 in the plans covered by the report:

	<u>2006</u>	<u>2008</u>
Immediate vesting	2 plans	2 plans
Vesting after 3 years	6 plans	7 plans
Vesting after 4 years	5 plans	4 plans
Vesting after 5 years	50 plans	51 plans
Vesting after 6 years	0 plans	1 plan
Vesting after 8 years	4 plans	4 plans
Vesting after 10 years	17 plans	17 plans
Graded or varying	1 plan	1 plan
<b>TOTAL</b>	85 plans	87 plans

In 2008, a total of 64 plans, or 73.6% of the 87 plans in the report, require five or less years of service to vest. This is an increase of one plan since the 2006 Report and nine plans since the 2000 Report. The trend appears to be towards vesting periods of five years or less, perhaps reflecting federal vesting requirements that apply to private sector pension plans. The number of plans in 2008 that require 10 years of service to vest has decreased by eight plans from the 2000 Report and by 23 plans from the 1990 Report. See Figure 7, *2008 Vesting Rates*, for a graphical representation.

## E. TRENDS

The trend in public employee pension plan vesting is generally toward vesting periods of five years or less than five years. Only 22 of the 87 plans covered in the 2008 Report had vesting requirements that were greater than five years. Employee contribution rates were increased in 17 plans between the 2006 and 2008 Reports. Employer contribution rates increased for 32 plans between 2006 and 2008. There were a significant number of rates that decreased between 2006 and 2008. However, it should be noted that the majority of these decreases were due to the adjustment of rates to the normal cost or statutory rates from prior rates that included actuarial liabilities.

## F. THE WRS

No vesting period is required for employees in the WRS. The employee contribution rate for general employees for 2006 is 5% but, for the reasons discussed above, in practice, almost all contributions to the WRS are paid by employers. The employer contribution rate for 2006 was 4.5%, plus an additional 0.9% benefit adjustment contribution credited to the employer accumulation account.

CHART III  
CONTRIBUTION AND VESTING REQUIREMENTS

	<u>State</u>	<u>Fund Name</u>	<u>Social Security</u>	<u>Employee Contribution</u>	<u>Employer Normal Cost or Statutory Contribution</u>	<u>Vesting Period</u>
1	Alabama	ERS	Yes	5.00%	4.90%	10 years
2	Alabama	TRS	Yes	5.00%	6.39%	10 years
3	Alaska	PERS	No	8.00%	5.00%*	5 years
4	Alaska	TRS	No	8.00%	7.00%*	5 years
5	Arizona	SRS	Yes	9.00%	6.45%	Immediate
6	Arkansas	PERS	Yes	5.00%	12.54%	5 years
7	Arkansas	TRS	Yes	6.00%	12.87%	5 years
8	California	PERS	Yes	5.00% or 6.00%	10.55%	5 years
9	California	TRS	No	8.00%	8.25%	5 years
10	Colorado	PERA	No	8.00%	10.15%	5 years
11	Connecticut	SERS	Yes	2.00%	4.70%	5 years
12	Connecticut	TRS	No	6.00%	4.40%	10 years
13	Delaware	SEPP	Yes	3.00% above \$6,000	6.85%	5 years
14	Florida	FRS	Yes	Non-contributory	8.69%	6 years
15	Georgia	ERS	Yes	1.25%	6.80%	10 years
16	Georgia	TRS	Yes	5.00%	7.96%	10 years
17	Hawaii	ERS	Yes	6.00%	5.85%	5 years
18	Idaho	PERS	Yes	6.23%	10.39%	5 years
19	Illinois	SERS	Yes	4.00%	16.56%	8 years
20	Illinois	TRS	No	9.40%	9.15%	5 years
21	Illinois	MRF	Yes	4.50%	7.58%	8 years
22	Indiana	PERF	Yes	3.00%	6.26%	10 years
23	Indiana	TRF	Yes	3.00%	4.97%	10 years
24	Iowa	PERS	Yes	3.90%	6.05%	4 years
25	Kansas	PERS	Yes	4.00%	7.39%	10 years
26	Kentucky	ERS	Yes	5.00%	3.55%	5 years
27	Kentucky	CRS	Yes	5.00%	3.85%	5 years
28	Kentucky	TRS	No	9.86%	9.86%	5 years
29	Louisiana	SERS	No	7.80%	7.31%	10 years
30	Louisiana	TRSL	No	8.00%	15.5% min	5 years
31	Maine	SRS	No	7.65%	17.01%	5 years
32	Maryland	SRS	Yes	2.00%	8.86%	5 years
33	Massachusetts	SERS	No	9.00%	3.80%	10 years
34	Massachusetts	TRS	No	11.00%	1.96%	10 years
35	Michigan	SERS	Yes	Non-contributory	8.30%	10 years
36	Michigan	MERS	Yes	Varies by plan	Varies by plan	6, 8, or 10 yrs
37	Michigan	PSERS	Yes	3.00% to 4.30%	5.60%	10 years
38	Minnesota	MSRS	Yes	4.50%	4.50%	3 years
39	Minnesota	PERA	Yes	6.00%	6.50%	3 years
40	Minnesota	TRA	Yes	5.50%	5.50%	3 years
41	Mississippi	PERS	Yes	7.25%	11.85%	8 years
42	Missouri	SERS	Yes	Non-contributory	12.75%	5 years
43	Missouri	LAGERS	Yes	0%-4.00%	Varies by plan	5 years
44	Missouri	PSRS	No	10.86%	10.86%	5 years
45	Montana	PERS	Yes	6.90%	6.94%	5 years

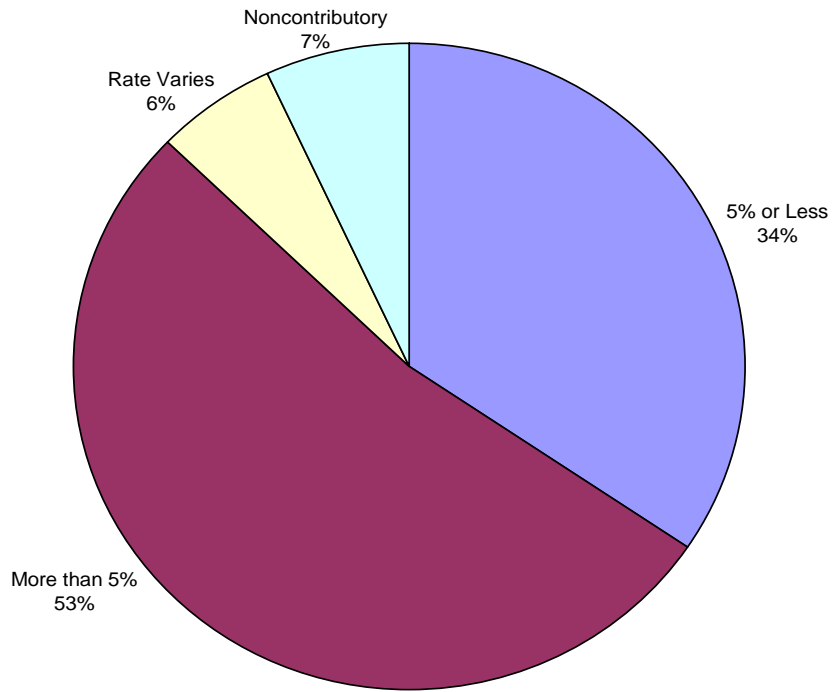


46	Montana	TRS	Yes	7.15%	7.47%	5 years
47	Nebraska	SERS	Yes	4.80%	156% of mbr contr	3 years
48	Nebraska	CERS	Yes	4.50%	150% of mbr contr	3 years
49	Nebraska	SPP	Yes	7.28%	101% of mbr contr	5 years
50	Nevada	PERS	No	11.25%	11.25%	5 years
51	New Hampshire	NHRS	Yes	5.00%	4.67%	10 years
52	New Jersey	PERS	Yes	5.50%	4.80% state; 3.44% local	10 years
53	New Jersey	TPAF	Yes	5.50%	1.8 billion (total varies)	10 years
54	New Mexico	PERA	Yes	7.42%	16.59%	5 years
55	New Mexico	ERB	Yes	7.90%	5.66%	5 years
56	New York	ERS	Yes	3.00%	9.60%**	5 years
57	New York	TRS	Yes	3.00%	7.63%	5 years
58	North Carolina	TSERS	Yes	6.00%	3.36%	5 years
59	North Carolina	LGERS	Yes	6.00%	4.80%	5 years
60	North Dakota	PERS	Yes	4.00%	4.12%	3 years
61	North Dakota	TRF	Yes	7.75%	8.25%	5 years
62	Ohio	PERS	No	10.00%	14.00%	5 years
63	Ohio	STRS	No	10.00%	14.00%	5 years
64	Oklahoma	PERS	Yes	3.00% to 3.50%	12.46%	8 years
65	Oklahoma	TRS	Yes	7.00%	9.00%	5 years
66	Oregon	PERS	Yes	6.00%	7.50%	5 years
67	Pennsylvania	SERS	Yes	6.25%	9.51%	5 years
68	Pennsylvania	PSERS	Yes	7.32% (average)	4.00%	5 years
69	Rhode Island	ERS	Yes	8.75% (9.50% teachers)	1.64% (2.33% teachers)	10 years
70	South Carolina	SCRS	Yes	6.50%	9.24%	5 years
71	South Dakota	SRS	Yes	6.00%	6.00%	3 years
72	Tennessee	CRS	Yes	Non-contributory	13.58%	5 years
73	Texas	ERS	Yes	6.00%	6.45%	5 years
74	Texas	TRS	No	6.40%	6.58%	5 years
75	Texas	MRS	Yes	5.00%, 6.00%, or 7.00%	5.00% to 14.00%	5 years
76	Utah	SRS	Yes	Non-contributory	11.62% to 14.22%	4 years
77	Vermont	SRS	Yes	5.10%	5.93%	5 years
78	Vermont	TRS	Yes	3.40%	3.54%	5 years
79	Virginia	SRS	Yes	5.00%	6.15%	5 years
80	Washington	PERS	Yes	4.61%; non-contributory	4.72%	5 yrs; 10 yrs
81	Washington	TRS	Yes	4.93%; non-contributory	5.70%	5 yrs; 10 yrs
82	West Virginia	PERS	Yes	4.50%	10.50%	5 years
83	West Virginia	TRS	Yes	6.00%	7.50%	5 years
84	Wyoming	WRS	Yes	5.57%	5.68%	4 years
85	Milwaukee	City	Yes	5.50%	11.22% (due in 2010)	4 years
86	Milwaukee	County	Yes	Non-contributory	\$34,981,095	5 years
87	Wisconsin	WRS	Yes	5.00%	4.80%	Immediate

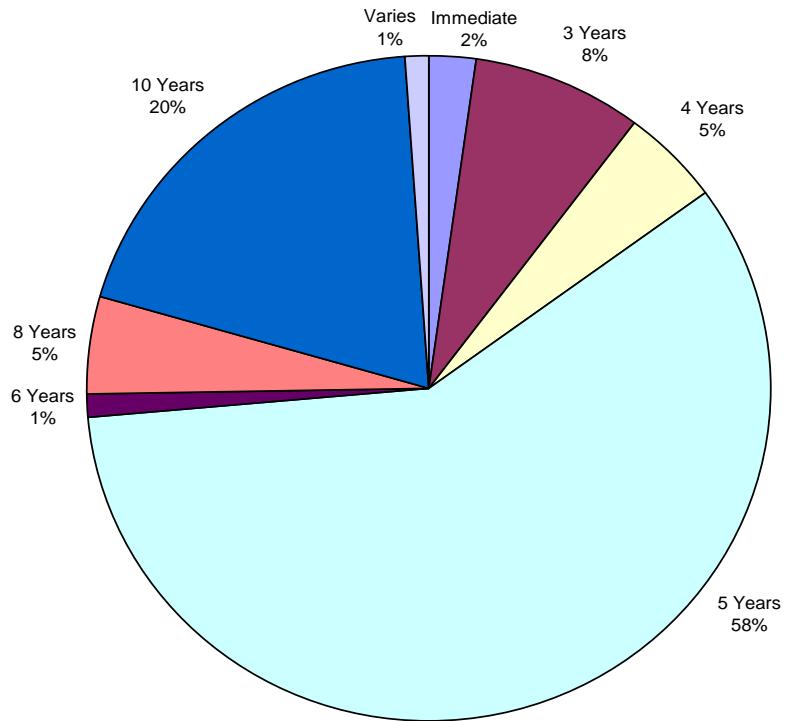
\*Alaska PERS and TRS converted to a defined contribution plan on July 1, 2006

\*\*Average rate for 2008

**Figure 6. 2008 Employee Contribution Rates**



**Figure 7. 2008 Vesting Rates**



## **PART IV**

### **RETIREMENT BENEFIT CALCULATIONS**

#### **A. INTRODUCTION**

Chart 4, on pages 28 and 29, shows the retirement benefit formulas in effect for 2008 for each of the plans. The formulas are those used to calculate the benefits of general employees and teachers and may not apply to other categories of employees. For example, elected officials and employees who are classified as “protective employees” generally have higher formula benefit multipliers and earlier normal retirement dates.

In addition, many of the plans in the report have different “tiers” of formula benefits that apply to employees depending upon when they were hired. In Chart 4, an attempt was made to present the data for each plan that is applicable to the largest category of employees and to employees who newly entered public service.

As is shown in Chart 4, 83 of the 87 plans in the report are “defined benefit plans” in which an employee's retirement benefits are generally calculated by multiplying the employee's number of years of service times a “formula multiplier” and multiplying the product of this calculation by the employee's final average salary:

$$\text{Years of Service} \times \text{Formula Multiplier} \times \text{Final Average Salary} = \text{Retirement Annuity}$$

In effect, the formula multiplier is the percentage of the final average salary that an employee earns as a retirement annuity for each year of service.

As previously noted, two of the 87 plans in the report are “money purchase” plans in which an employee's retirement benefits are calculated by the amount of money in the employee's retirement account. Some of the defined benefit plans in the report also include “money purchase” elements. The other two plans are defined contribution plans where the value of contributions plus interest equals the retirement benefit.

#### **B. “BASIC” PLANS IN WHICH EMPLOYEES ARE NOT COVERED BY SOCIAL SECURITY**

Employees of 17 of the 87 plans are not covered by Social Security. The plans in which employees are not covered by Social Security frequently have a higher formula multiplier to compensate for the lack of Social Security coverage.

The 17 plans in which employees are not covered by Social Security have formula multipliers ranging between 2% and 3.3% for each year of service. The average formula multiplier for these 17 plans is approximately 2.3% for each year of service.

## C. "COORDINATED" PLANS IN WHICH EMPLOYEES ARE COVERED BY SOCIAL SECURITY

Seventy of the 87 plans in this report are "coordinated" with the Social Security system, meaning that employees earn Social Security benefits for their employment. There are a wide range of formula multipliers in effect for these 70 plans, which sometimes vary by number of years of service, by date of employment, or by age at retirement. For 2008, the average formula multiplier for the coordinated plans that are not money purchase plans, defined contribution plans, or plans in which the employer determines the formula multiplier is approximately 1.94%. This number may be somewhat misleadingly low because a number of plans increase their multiplier rates following a certain number of years of service; generally 15, 25, or 30 years. Since the 2006 Report, four of the plans coordinated with Social Security have increased their formula multiplier.

The formula benefits for 2008, as shown in Chart 4, are summarized and compared with the data found in the 2006 Report in the following table:

<u>Formula Multiplier</u>	<u>2006</u>	<u>2008</u>
1.1% to 1.3%	0 plans	0 plans
Over 1.3% to 1.5%	2 plans	2 plans
Over 1.5% to 1.7%	12 plans	15 plans
Over 1.7% to 1.9%	14 plans	13 plans
Over 1.9% to 2.1%	24 plans	25 plans
Over 2.1%	8 plans	6 plans
Employer determines formula multiplier	2 plans	2 plans
Formula benefit plus money purchase	4 plans	3 plans
Money purchase plan	2 plans	2 plans
Defined contribution plan	0 plans	2 plans
<b>TOTAL</b>	<b>68 plans</b>	<b>70 plans</b>

See Figure 8, *2008 Formula Multipliers*, for a graphical representation.

## D. FINAL AVERAGE SALARY

Defined benefit plans base the amount of a retirement annuity on the employee's "final average salary." The final average salary is generally the employee's highest earnings over a specified number of years or months, which are sometimes required to be consecutive years or months. Generally, an employee's highest salary will be the amount of salary he or she earned immediately prior to retirement.

Since the 2006 Report, there has been little change in how any of the plans calculate final average salary. The most common method is to use a three-year average, which may be required to be consecutive years or may be required to be years that fall within a given period. (For example, the three highest years within a 10-year period.) Fifty-five of the 87 plans in the report use a three-year final average salary. The next most prevalent calculation of final average salary is a five-year period--18 of the 87 plans used a five-year period in 2008. See Figure 9, *2008 Final Average Salary Period*, for a graphical representation.

## E. LIMITATIONS ON BENEFITS

The last column of Chart 4 shows the plans that have established a limit on the amount of pension benefits that may be received by a retiree. This limitation may be expressed as a maximum percentage of final average salary, as a maximum number of years that may be credited, or as a maximum percentage of highest salary. The majority of plans surveyed in the report impose no maximum benefit limitation. They are followed by those with a limit of 100% of final average salary.

## F. TRENDS

The trend noted in previous reports to increase formula multipliers has noticeably slowed. Four (including both “basic” and “coordinated” plans) of the 87 plans increased their formula multipliers between 2006 and 2008. Thirty-two of 85 plans increased their formula multipliers between 1996 and 2000. Little change has been noted regarding how final average salary is computed or in the number of plans that cap retirement benefits.

## G. THE WRS

The WRS is primarily a defined benefit plan. However, it also has a “money purchase” feature that computes an employee's retirement benefits by the amount of an annuity that can be purchased with moneys in the employee's retirement account. The employee receives the higher of either the formula-based defined benefit annuity or the money purchase annuity.

The formula multiplier for general employees in the WRS is 1.6%, which is lower than the 1.94% average formula multiplier for the plans in the report that are coordinated with the Social Security system. 1999 Wisconsin Act 11 added an additional 0.165 to the formula multiplier for creditable service on or before January 1, 2000. However, for creditable service earned after January 1, 2000, the formula multiplier for general employees returned to 1.6%.

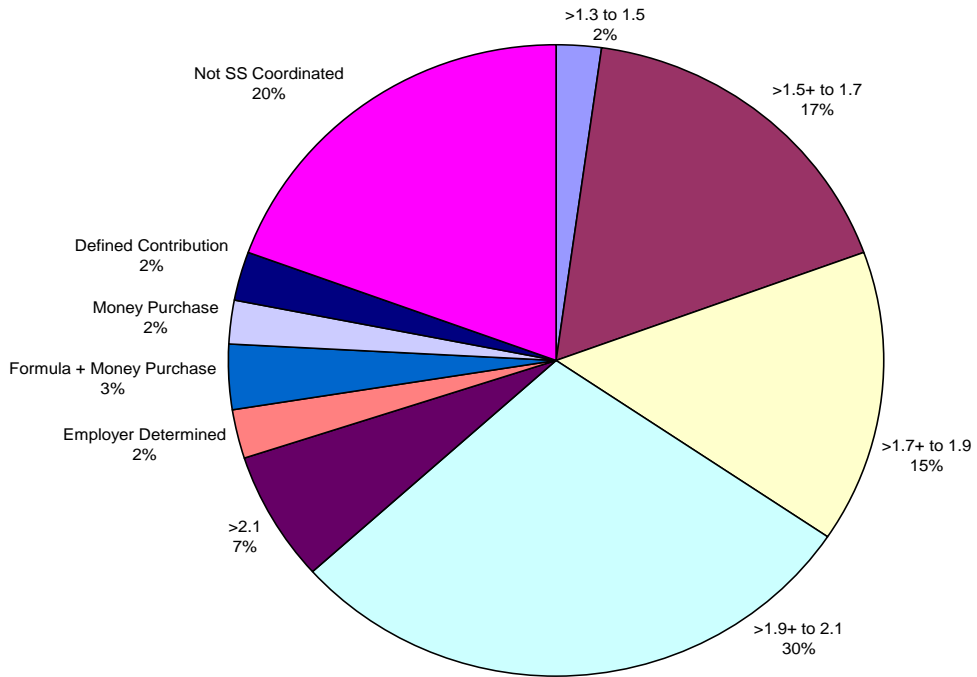
Final average salary under the WRS is an average of the three highest years of an employee's salary. Annuities for general employees are capped at 70% of final average salary.

CHART IV  
FINAL AVERAGE SALARY PERIODS-FORMULAS-LIMITATIONS

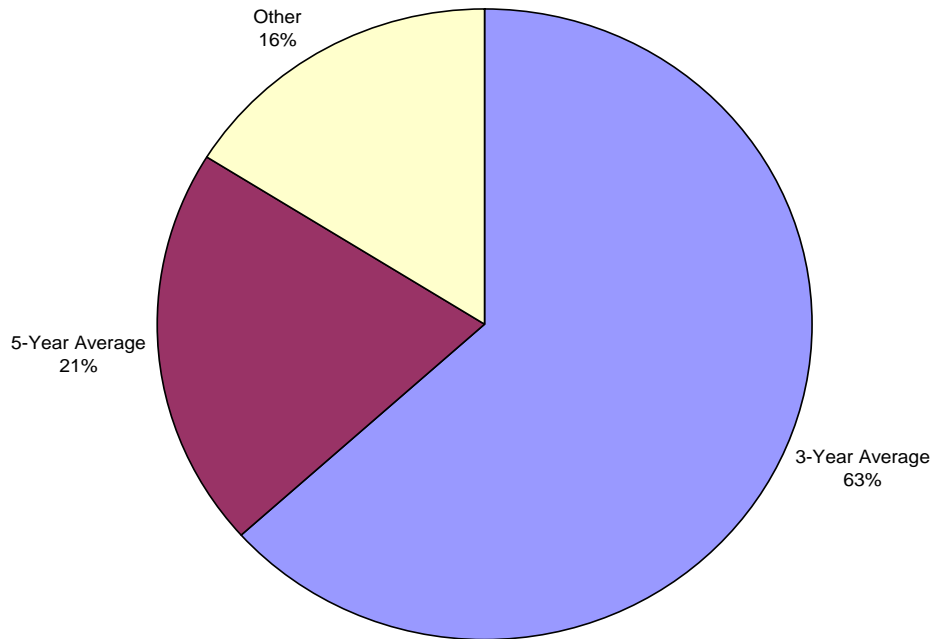
	<u>State</u>	<u>Fund Name</u>	<u>FAS Period</u>	<u>Formula Multiplier</u>	<u>Limitation</u>
1	Alabama	ERS	3 H/10	2.0125%	None
2	Alabama	TRS	3 H/10	2.0125%	None
3	Alaska	PERS	N/A	N/A; defined contribution plan	None
4	Alaska	TRS	N/A	N/A; defined contribution plan	None
5	Arizona	SRS	3 HC	2.1% (1st 20 yrs); 2.15% (next 5 yrs); 2.2% (next 5 yrs); 2.3% over 30 yrs	80% FAS
6	Arkansas	PERS	3 H	2%	100% FAS
7	Arkansas	TRS	3 H	2.15%	None
8	California	PERS	3 H	2% at 55; 2.5% at 63 or older	65 yrs max
9	California	TRS	1 H	2% at 60; 2.4% at 63	100% FAS
10	Colorado	PERA	3 H	2.5%	100% FAS
11	Connecticut	SERS	3 H (130% cap)	1.33% + .5% over \$48,800; 1.625% yrs over 35	None
12	Connecticut	TRS	3 H	2%	75% FAS
13	Delaware	SEPP	3 H	1.85%	None
14	Florida	FRS	5 H	1.6% to 1.68% (age & yrs of service)	100% FAS
15	Georgia	ERS	2 HC	2%	90% high yr
16	Georgia	TRS	2 HC (cap)	2%	40 yrs max
17	Hawaii	ERS	3 H	2%	None
18	Idaho	PERS	3 1/2 HC	2%	100% FAS
19	Illinois	SERS	4 HC/10	1.67%	75% FAS
20	Illinois	TRS	4 HC/10 (cap)	2.2%	75% FAS
21	Illinois	MRF	4 HC/10 (cap)	1.67% (1st 15 yrs); 2% (added yrs)	75% FAS
22	Indiana	PERF	5 H	1.1% + money purchase annuity	None
23	Indiana	TRF	5 H	1.1% + money purchase annuity	None
24	Iowa	PERS	3 H	2% (1st 30 yrs); 1% (next 5 yrs)	65% FAS
25	Kansas	PERS	3 H	1.75%	None
26	Kentucky	ERS	5 H	1.97%	None
27	Kentucky	CERS	5 H	2%	None
28	Kentucky	TRS	3 H	2.5% for up to 30 yrs; 3% for over 30 yrs	100% FAS
29	Louisiana	SERS	3 HC	2.5%	100% FAS
30	Louisiana	TRSL	3 HC + (cap)	2.5%	100% FAS
31	Maine	SRS	3 H	2%	None
32	Maryland	SRS	3 HC	1.82%	100% FAS
33	Massachusetts	SERS	3 HC	.5% to 2.5% (age-related)	80% FAS
34	Massachusetts	TRS	3 HC	.1% to 2.5% (age-related) + 2% for each yr over 24	80% FAS
35	Michigan	SERS	3 HC	1.5%	None
36	Michigan	MERS	5/3 HC	1.3% to 2.5% (employer option)	80% FAS for multipliers of 2.25% and over
37	Michigan	PSERS	3 HC	1.5%	None
38	Minnesota	MSRS	5 HC	1.7%	None
39	Minnesota	PERA	5 HC	1.7%	None
40	Minnesota	TRA	5 HC	1.9%	None

41	Mississippi	PERS	4 H	2% (1st 25 yrs); 2.5% (added yrs)	100% FAS
42	Missouri	SERS	3 HC	1.7% (and .8% to age 62 if R80 met)	None
43	Missouri	LAGERS	5/3 HC	1% to 8% (varies by employer option)	None
44	Missouri	PSRS	3 HC	2.5%; 2.55% with 31 or more yrs of service	100% FAS
45	Montana	PERS	3 HC	1.785%; 2% with at least 25 yrs of service	None
46	Montana	TRS	3 HC	1.67%	None
47	Nebraska	SERS		Money purchase	None
48	Nebraska	CERS		Money purchase	None
49	Nebraska	SPP	3 HC	2%	None
50	Nevada	PERS	3 HC	2.67%	75% FAS
51	New Hampshire	NHRS	3 H (cap)	1.67% to 65; 1.515% after 65	100% FAS
52	New Jersey	PERS	3 H	1.82%	None
53	New Jersey	TPAF	3 H	1.82%	None
54	New Mexico	PERS	3 HC	3%	80% FAS
55	New Mexico	ERA	5 HC	2.35%	None
56	New York	ERS	3 HC (cap)	1.67% (under 20 yrs); 2% (over 20 yrs); 3.5% (over 30 yrs)	None
57	New York	TRS	3 HC (cap)	Same as New York's ERS	None
58	North Carolina	TSERS	4 HC	1.82%	None
59	North Carolina	LGERS	4 HC	1.85%	None
60	North Dakota	PERS	3 H/10	2%	None
61	North Dakota	TRF	5H	2%	None
62	Ohio	PERS	3 H	2.2% (1st 30 yrs); 2.5% (added yrs)	100% FAS
63	Ohio	STRS	3 H	2.2% (1st 35 yrs); 2.5% (35 or more yrs)	100% FAS
64	Oklahoma	PERS	3 H/10	2%	None
65	Oklahoma	TRS	5 HC	2%	None
66	Oregon	PERS	3 H	1.67%	None
67	Pennsylvania	SERS	3 H	2.5%	100% high yr
68	Pennsylvania	PSERS	3 H	2.5%	None
69	Rhode Island	ERS	3 HC	1.7% (1st 10 yrs); 1.9% (2nd 10 yrs); 3% (21-34 yrs); 2% (35+)	80% FAS
70	South Carolina	SCRS	3 HC	1.82%	None
71	South Dakota	SRS	3 HC/10	1.7%	None
72	Tennessee	CRS	5 HC	1.5% + .25% FAS over SSIL	94.5% FAS
73	Texas	ERS	3 H	2.3%	100% FAS
74	Texas	TRS	5 H	2.3%	None
75	Texas	MRS		Money purchase options	None
76	Utah	SRS	3 H	2%	None
77	Vermont	SRS	3 HC	1.67%	50% FAS
78	Vermont	TRS	3 HC	1.67%	50% FAS
79	Virginia	SRS	3 HC	1.7%	100% FAS
80	Washington	PERS	5 HC	2%; 1% + .25% per yr after 20 yrs (non-contributory)	None
81	Washington	TRS	5 HC	2%; 1% + .25% per yr after 20 yrs (non-contributory)	None
82	West Virginia	PERS	3 HC/10	2%	None
83	West Virginia	TRS	5 H/15	2%	None
84	Wyoming	WRS	3 H	2.125% (1st 15 yrs); 2.25% (added yrs)	None
85	Milwaukee	City	3 H	2%	70% FAS
86	Milwaukee	County	3 HC	2%	80% FAS
87	Wisconsin	WRS	3 H	1.6%	70% FAS

**Figure 8. 2008 Formula Multipliers**



**Figure 9. 2008 Final Average Salary Period**





## **PART V**

### **POST-RETIREMENT ANNUITY INCREASES AND TAXES**

#### **A. INTRODUCTION**

Chart 5, on pages 34 and 35, shows the provisions of each plan for increasing retirement annuities after an employee has retired. Chart 5 also shows how annuity payments from each plan are treated under that state's income tax laws. In addition, benefit adjustments in the Social Security program over the last 10 years and income taxation of Social Security benefits are also discussed in this part.

#### **B. SOCIAL SECURITY**

Pension designers are concerned with the adequacy of benefits at the time of retirement and also with the continuing purchasing power of those benefits during retirement as affected by inflation. Since 1975, Social Security benefits have been automatically adjusted each year by the percentage increase in the consumer price index (CPI). The increases in Social Security benefits for each of the last 10 years are shown below and displayed in Figure 10, *Social Security CPI % Adjustments 2000 to 2009*:

<u>CPI Year</u>	<u>Date on Which First Payable</u>	<u>Percentage Increase</u>
2000	1/1/2001	3.5%
2001	1/1/2002	2.6%
2002	1/1/2003	1.4%
2003	1/1/2004	2.1%
2004	1/1/2005	2.7%
2005	1/1/2006	4.1%
2006	1/1/2007	3.3%
2007	1/1/2008	2.3%
2008	1/1/2009	5.8%
2009	1/1/2010	0.0%

For those employees in the 70 of the 87 plans in this report (80%) that are also covered by the Social Security program, at least that portion of their total retirement income that is received from Social Security automatically keeps pace with inflation.

Under federal law, up to 50% of Social Security benefits are subject to income taxation if the taxpayer's adjusted gross income is between \$25,000 and \$34,000 for single taxpayers or between \$32,000 and \$44,000 for married taxpayers filing a joint income tax return. If a taxpayer's income exceeds these levels, then 85% of his or her Social Security benefits are subject to federal income taxation.

State income taxation of Social Security benefits varies. Twenty-six states completely exempt Social Security benefits from income taxation. Fifteen states impose income taxes on all or a

portion of Social Security benefits and nine states have no personal income tax or a very limited personal income tax that does not affect Social Security payments.

### C. POST-RETIREMENT ANNUITY COST-OF-LIVING ADJUSTMENTS

Most of the plans in this report have provisions for post-retirement annuity adjustments to protect the purchasing power of annuities against inflation. The provisions of each of the plans are described in the fourth column of Chart 5. The following table summarizes and compares the post-retirement annuity adjustment provisions found in the 2006 Report against those found in the 2008 Report:

	<u>2006</u>	<u>2008</u>
Adjustments indexed to CPI	38 plans	35 plans
Automatic percentage increase	23 plans	26 plans
Investment surplus	4 plans	5 plans
Ad hoc (any increase must be authorized by Legislature or a decision-making board) or money purchase	20 plans	19 plans
No increase	0 plans	2 plans
<b>TOTAL</b>	<b>85 plans</b>	<b>87 plans</b>

Note that, as shown in Chart 5, many of the plans in which post-retirement annuity increases are indexed to the CPI also include a cap on the total percentage adjustment that may be made within any given year. Also, many of the plans in which post-retirement annuity increases are indexed to the CPI or are automatic also include provisions for additional annuity adjustments if there are investment surpluses in the retirement fund. Nineteen of the 87 plans are either money purchase plans or provide post-retirement annuity increases only on an “ad hoc” basis, where either the Legislature or a decision-making board determines whether, and when, a post-retirement annuity increase is granted. See Figure 11, *2008 Cost of Living Adjustments (COLA)*, for a graphical representation.

### D. STATE INCOME TAXATION OF ANNUITIES

The last column of Chart 5 shows the treatment of pension benefits under each of the plans by the state income tax laws in effect in that state. In 23 of the 87 plans, pension benefits are subject to state income taxation and no specific amount of retirement benefits is tax exempt. In 21 of the 87 plans, pension benefits are totally exempt from state income taxation. Eleven of the plans are in states with no income taxation.

Caution must be used in interpreting the information in the last column of Chart 5. In many of the states in which pension income is fully taxable, other provisions of state income tax laws may ameliorate or completely eliminate the effect of the state income tax laws on retirees. For example, some state income tax laws have a level of exemptions, deductions, or tax credits that substantially reduce or eliminate state income taxation for persons at certain income levels. In addition, some of these exemptions, deductions, or tax credits may be increased for taxpayers who have reached a certain age. In these states, the level of income taxation on retirees may be equal to or less than that in states where public employee pension income is exempt from state income taxation.

## E. TRENDS

Most of the plans in this report have adopted provisions in which retirement annuities are annually increased, either by a set percentage or in response to changes in the CPI. These provisions were mostly adopted in the 1970s and 1980s, in response to the high inflation that occurred in those years.

## F. THE WRS

Retirees in the WRS whose annuities are paid from the “core” fund receive annual annuity adjustments tied to whether reserve surpluses in the fund, as adjusted by a formula, are sufficient to generate an increase. In addition, the annual adjustment may result in a reduction of annuities if investment losses are severe, particularly if investment losses occur over a number of consecutive years. However, annuities paid from the “core” fund may not be reduced below the level initially paid to a retiree. For annuities paid in 2008, the annuity adjustment in the core fund was -2.1%.

WRS retirement benefits are subject to state income taxation except for certain payments made with respect to persons who were employees prior to 1964 or who had retired prior to 1964. Beginning in 2008, income from Social Security will be completely exempt from Wisconsin income taxes. Beginning in 2009, up to \$5,000 per year of income from qualified retirement plans is exempt from Wisconsin income taxes for taxpayers with an adjusted gross income of \$15,000 or less (\$30,000 for married joint filers) who are 65 or older.

CHART V  
POST-RETIREMENT INCREASES AND STATE TAX PROVISIONS

	<u>State</u>	<u>Fund Name</u>	<u>Social Security</u>	<u>Annual Post-Retirement Increases</u>	<u>State Taxation of PERS Benefits</u>
1	Alabama	ERS	Yes	Ad hoc only	Benefits exempt
2	Alabama	TRS	Yes	Ad hoc only	Benefits exempt
3	Alaska	PERS	No	N/A: acct balance + invest earnings	No income tax law
4	Alaska	TRS	No	N/A: acct balance + invest earnings	No income tax law
5	Arizona	SRS	Yes	Excess earnings - 4% cap	Exempt to \$2,500
6	Arkansas	PERS	Yes	3%	Exempt to \$6,000
7	Arkansas	TRS	Yes	3%	Exempt to \$6,000
8	California	PERS	Yes	2%	Benefits taxable
9	California	TRS	No	2%	Benefits taxable
10	Colorado	PERA	No	Lesser of 3%, CPI, or 10% of COLA fund assets	Exempt to \$20,000/\$24,000
11	Connecticut	SERS	Yes	60% of CPI up to 6%, 2.5% minimum	Benefits taxable
12	Connecticut	TRS	No	Excess earnings - 1.5% or 6% cap	Benefits taxable
13	Delaware	SEPP	Yes	Ad hoc only	Exempt to \$12,500
14	Florida	FRS	Yes	3%	No state income tax
15	Georgia	ERS	Yes	CPI - 1.5% semi-annual cap	Exempt to \$35,000
16	Georgia	TRS	Yes	CPI - 1.5% semi-annual cap	Exempt to \$35,000
17	Hawaii	ERS	Yes	2.5%	Benefits exempt
18	Idaho	PERS	Yes	CPI - 1% minimum to 6% max (conditional)	Benefits taxable
19	Illinois	SERS	Yes	3%	Benefits exempt
20	Illinois	TRS	No	3%	Benefits exempt
21	Illinois	MRF	Yes	3%	Benefits exempt
22	Indiana	PERF	Yes	Ad hoc only (1.5% presumed)	Benefits taxable
23	Indiana	TRF	Yes	Ad hoc only (1.5% presumed)	Benefits taxable
24	Iowa	PERS	Yes	Excess earnings - CPI; 3% cap	Exempt to \$6,000, \$12,000 married
25	Kansas	PERS	Yes	Ad hoc only	Benefits exempt
26	Kentucky	ERS	Yes	1.5%	Exempt to \$41,110
27	Kentucky	CERS	Yes	1.5%	Exempt to \$41,110
28	Kentucky	TRS	No	1.5%	Exempt to \$41,110
29	Louisiana	SERS	No	Excess earnings; CPI; 3% cap	Benefits exempt
30	Louisiana	TRSL	No	CPI - 3% cap	Benefits exempt
31	Maine	SRS	No	CPI - 4% cap	Exempt to \$6,000
32	Maryland	SRS	Yes	CPI - 3% cap	Exempt to \$23,600
33	Massachusetts	SERS	No	CPI - on 1st \$12,000-conditional, 3% cap	Benefits exempt
34	Massachusetts	TRS	No	CPI - on 1st \$12,000-conditional, 3% cap	Benefits exempt
35	Michigan	SERS	Yes	3% (\$300 annual cap)	Benefits exempt
36	Michigan	MERS	Yes	3 plans - depending on employer agreement (generally 2.5%)	Benefits exempt
37	Michigan	PSERS	Yes	3%	Benefits exempt
38	Minnesota	MSRS	Yes	CPI - 2.5% cap plus investment surplus	Benefits taxable
39	Minnesota	PERA	Yes	CPI - 2.5% cap plus investment surplus	Benefits taxable
40	Minnesota	TRA	Yes	CPI - 2.5% cap plus investment surplus	Benefits taxable

41	Mississippi	PERS	Yes	3%	Benefits exempt
42	Missouri	SERS	Yes	80% CPI - 5% cap	Exempt to \$6,000/\$12,000
43	Missouri	LAGERS	Yes	CPI - 4% cap	Exempt to \$6,000/\$12,000
44	Missouri	PSRS	No	CPI - 5% cap; 80% of original benefits lifetime cap	Exempt to \$6,000/\$12,000
45	Montana	PERS	Yes	3%	Exempt to \$3,600
46	Montana	TRS	Yes	1.5%	Exempt to \$3,600
47	Nebraska	SERS	Yes	Money purchase	Benefits taxable
48	Nebraska	CERS	Yes	Money purchase	Benefits taxable
49	Nebraska	SPP	Yes	CPI - 2.5% cap	Benefits taxable
50	Nevada	PERS	No	2% to 5% (varies)	No income tax law
51	New Hampshire	NHRS	Yes	Ad hoc	Benefits exempt
52	New Jersey	PERS	Yes	60% of CPI	Exempt to \$15,000/\$20,000
53	New Jersey	TPAF	Yes	60% of CPI	Exempt to \$15,000/\$20,000
54	New Mexico	PERA	Yes	3%	Benefits taxable
55	New Mexico	ERA	Yes	50% of CPI - 2% min; 4% cap	Benefits taxable
56	New York	ERS	Yes	50% of CPI, max 3% on 1st \$18,000	Benefits exempt
57	New York	TRS	Yes	50% of CPI, max 3% on 1st \$18,000	Benefits exempt
58	North Carolina	TSERS	Yes	Ad hoc	Exempt to \$4,000/\$8,000
59	North Carolina	LGERS	Yes	Ad hoc	Exempt to \$4,000/\$8,000
60	North Dakota	PERS	Yes	Ad hoc	Benefits taxable
61	North Dakota	TRF	Yes	Ad hoc	Benefits taxable
62	Ohio	PERS	No	3% cap	Benefits taxable
63	Ohio	STRS	No	3% cap	Benefits taxable
64	Oklahoma	PERS	Yes	Ad hoc	Exempt to \$10,000
65	Oklahoma	TRS	Yes	Ad hoc	Exempt to \$10,000
66	Oregon	PERS	Yes	CPI - 2% cap	Benefits taxable
67	Pennsylvania	SERS	Yes	Ad hoc	Benefits exempt
68	Pennsylvania	PSERS	Yes	Ad hoc	Benefits exempt
69	Rhode Island	ERS	Yes	3%	Benefits taxable
70	South Carolina	SCRS	Yes	CPI - 4% cap	\$15,000 deduction
71	South Dakota	SRS	Yes	3.1%	No income tax law
72	Tennessee	CRS	Yes	CPI - 3% cap	Benefits exempt
73	Texas	ERS	Yes	Ad hoc	No income tax law
74	Texas	TRS	No	Ad hoc	No income tax law
75	Texas	MRS	Yes	Up to 70% of CPI (employer option)	No income tax law
76	Utah	SRS	Yes	CPI - 4% cap	Exempt to \$7,500/\$15,000
77	Vermont	SRS	Yes	50% of CPI - 5% cap	Benefits taxable
78	Vermont	TRS	Yes	50% of CPI - 5% cap	Benefits taxable
79	Virginia	SRS	Yes	CPI - 5% cap	Exempt to \$12,000
80	Washington	PERS	Yes	CPI - 3% cap	No income tax law
81	Washington	TRS	Yes	CPI - 3% cap	No income tax law
82	West Virginia	PERS	Yes	No	Exempt to \$2,000
83	West Virginia	TRS	Yes	No	Exempt to \$2,000
84	Wyoming	WRS	Yes	CPI - 3% cap	No income tax law
85	Milwaukee	City	Yes	1.5% yrs 1-4; 2% thereafter	Exempt for some
86	Milwaukee	County	Yes	2%	Exempt for some
87	Wisconsin	WRS	Yes	Investment earnings; reductions possible	Exempt for some

**Figure 10. Social Security CPI % Adjustments 2000 to 2009**

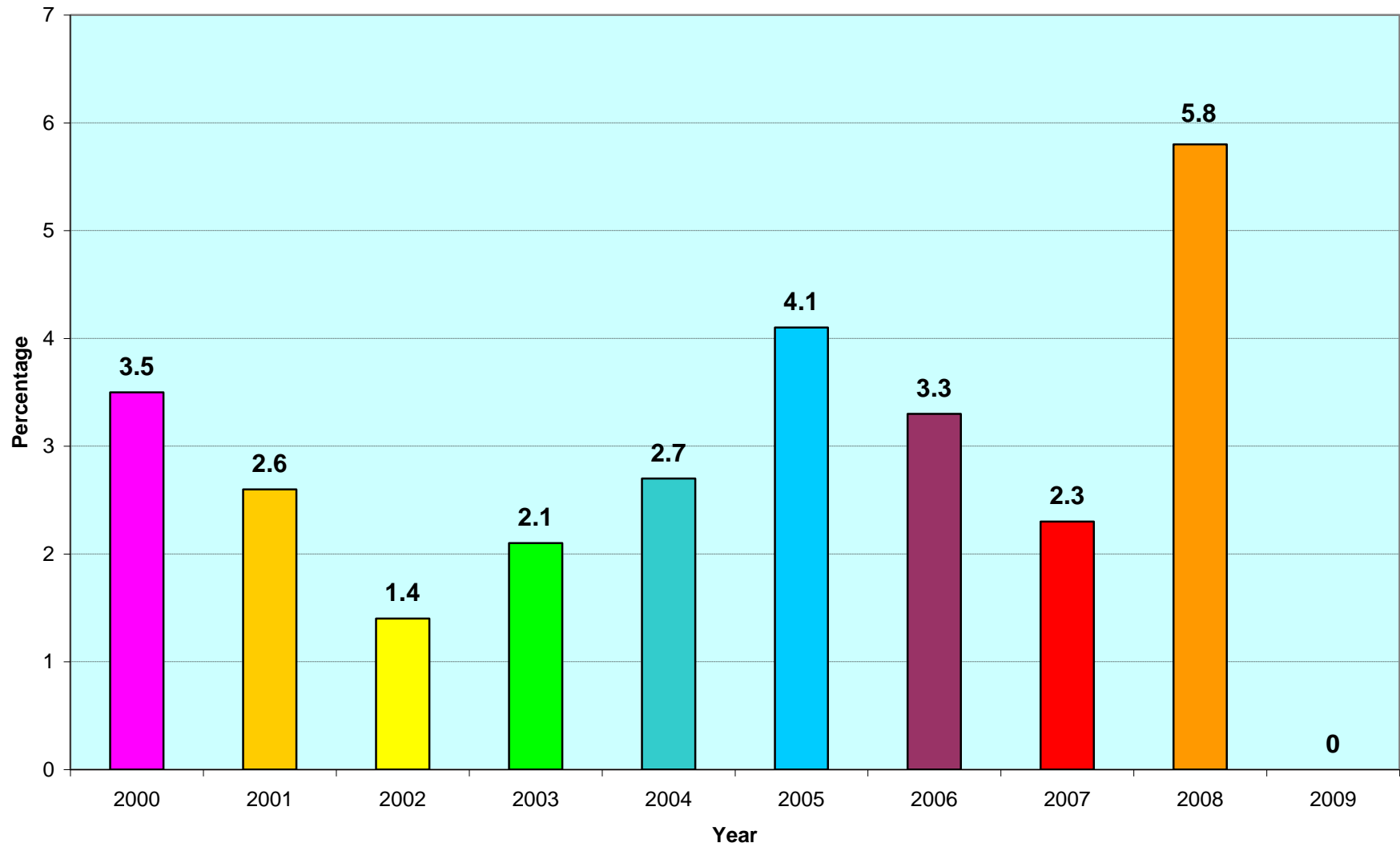
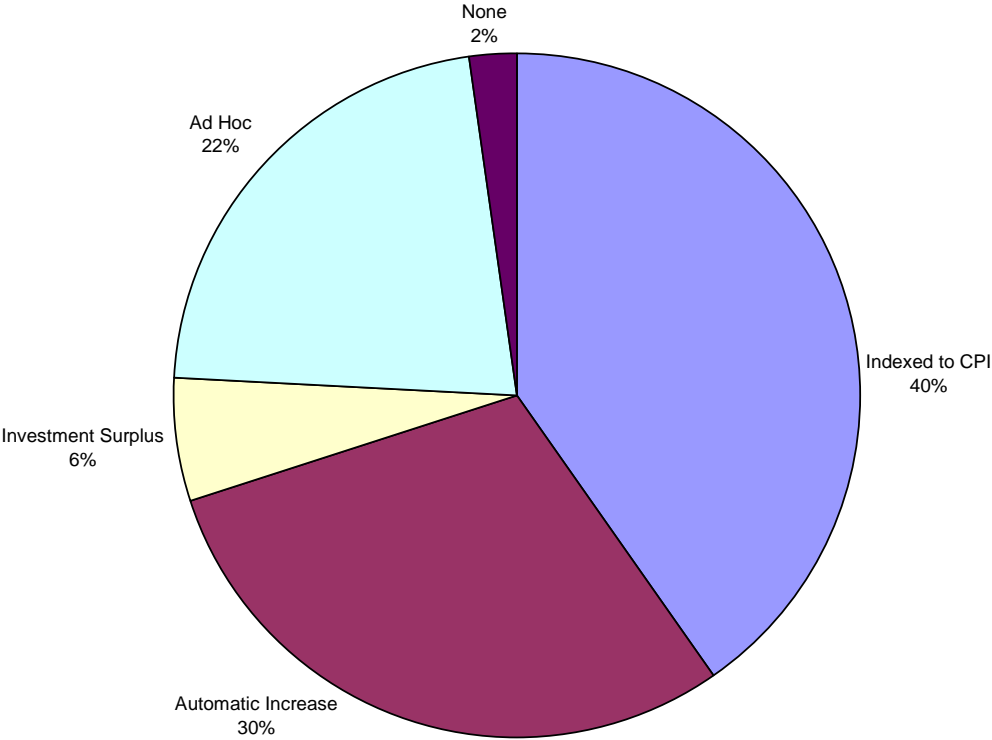


Figure 11. 2008 Cost of Living Adjustments (COLA)







<p><b>PART VI</b></p> <p><b>ACTUARIAL AND ACCOUNTING INFORMATION</b></p>
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**A. INTRODUCTION**

Chart 6, on pages 42 and 43, provides selected actuarial and accounting information about each of the plans in the report. This part of the report discusses the actuarial method used by each of the plans, provides the interest assumption, wage inflation assumption, and economic spread for each of the plans, and provides the Governmental Accounting Standards Board (GASB) 25 funding ratio for each of the plans in 2008.

**B. ACTUARIAL METHODS**

The third column in Chart 6 lists the actuarial methods used by each of the 87 plans. An actuarial method is a procedure for determining the present value of pension benefits that will be paid in the future and allocating that value and the cost of the benefits to specific time periods. There are a number of accepted actuarial methods that presumably will reach the goal of fully funding all pension obligations as they become due, but they allocate costs in different ways during the period of employment of participants in the plan.

Sixty-nine, or 79%, of the 87 plans use the entry age actuarial method; 14, or 16%, of the 87 plans use the unit credit method; four of the 87 plans use the aggregate cost method or other methods.

**C. INTEREST ASSUMPTION**

The interest assumption, which is also sometimes referred to as the “earnings assumption,” is one of the key economic assumptions in determining the level of contribution rates. The fourth column in Chart 6 provides the interest assumption for each of the 87 plans in the report. This information is compared with previous reports in the following table:

<u>Interest Assumption</u>	<u>2000</u>	<u>2004</u>	<u>2006</u>	<u>2008</u>
From 5% to 7%	1 plan	1 plan	1 plan	1 plan
Over 7% to 8%	56 plans	59 plans	61 plans	63 plans
Over 8%	27 plans	24 plans	23 plans	21 plans
Not determined or not applicable	1 plan	1 plan	0 plans	2 plans
<b>TOTAL</b>	85 plans	85 plans	85 plans	87 plans

See Figure 12, *2008 Plan Interest Assumptions*, for a graphical representation of current data.

**D. ECONOMIC SPREAD**

Another key economic assumption in pension planning is the assumption of the wage inflation rate or general salary increases in excess of those provided for merit or seniority. The difference between the wage inflation assumption and the interest assumption is often referred to as the

“economic spread,” which is the assumed real rate of return on invested assets above the wage inflation rate. The fifth and sixth columns of Chart 6 show the wage inflation assumptions and the resultant economic spread for each of the plans in the report.

## E. FUNDING RATIO

Until 1995, the GASB required public pension plans to disclose the “pension benefit obligation,” which is a measure of the present value of pension benefits, adjusted for the affects of projected salary increases. The pension benefits were estimated only on service earned by employees up to the date of the estimate.

GASB 25, issued in November 1994, requires that for funding disclosures beginning with periods after June 15, 1996, the funding disclosures be based upon regular actuarial valuations. Included in the requirements under GASB 25 is a “schedule funding progress that reports the actuarial value of assets, the actuarial accrued liability and the relationship between the two over time....”

The following table summarizes the funding ratios for each of the plans in the 2008 Report and compares them with the 2006, 2004, and 2000 Reports.

<u>Funding Ratio</u>	<u>2000</u>	<u>2004</u>	<u>2006</u>	<u>2008</u>
More than 100%	33 plans	9 plans	7 plans	10 plans
90% to 100%	22 plans	28 plans	21 plans	19 plans
80%, but less than 90%	14 plans	19 plans	20 plans	18 plans
70%, but less than 80%	5 plans	15 plans	17 plans	24 plans
60%, but less than 70%	1 plan	7 plans	11 plans	6 plans
50%, but less than 60%	1 plan	3 plans	3 plans	6 plans
Less than 50%	3 plans	2 plans	3 plans	2 plans
Not determined	6 plans	2 plans	3 plans	2 plans
<b>TOTAL</b>	<b>85 plans</b>	<b>85 plans</b>	<b>85 plans</b>	<b>87 plans</b>

See Figure 13, *2008 Plan Funding Ratios*, for a graphical representation of current data.

## F. TRENDS

Funding ratios of more than 100% have decreased substantially since the 2000 Report, reflecting the general decline in earnings that occurred during the period. However, there was a small increase between 2006 and 2008. Thirty-three plans had funding ratios in excess of 100% in 2000, but only 10 plans had funding ratios in excess of 100% in 2008. However, 33% of the plans studied had funding ratios of 90% or more in 2008. The average funding ratio in 2008 was 81%.

The entry age method is still the predominant method used by the plans studied.

## G. THE WRS

The actuarial method used by the WRS is entry age. The interest assumption for 2008 is 7.8% and the “economic spread” is 3.7%.

For 2008, the funding ratio for the WRS was 99.7%, which was greater than the average funding ratio of 81% for the plans studied.

CHART VI  
ACTUARIAL AND ACCOUNTING PROVISIONS

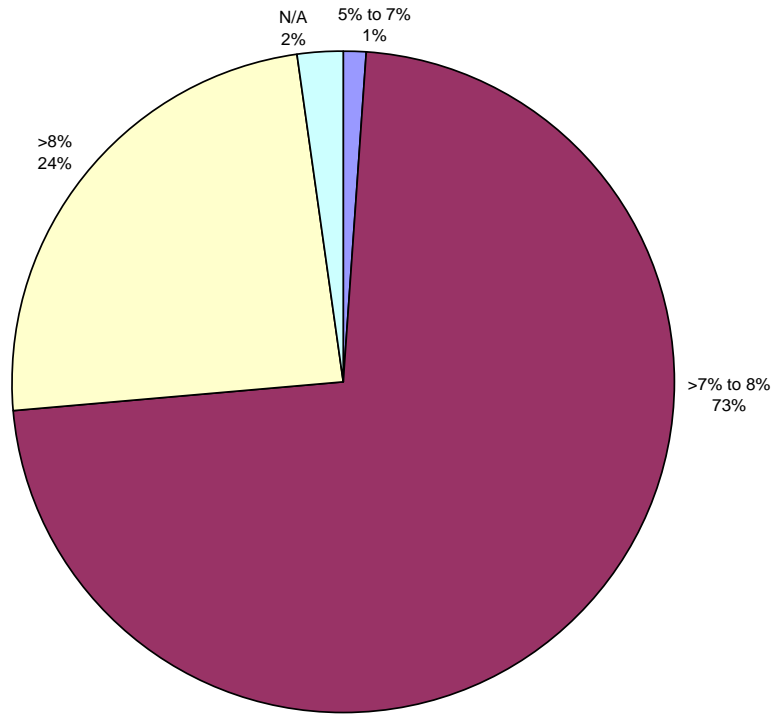
	<u>State</u>	<u>Fund Name</u>	<u>Actuarial Method</u>	<u>Interest Assumption</u>	<u>Wage Inflation</u>	<u>Economic Spread</u>	<u>Funded Ratio</u>
1	Alabama	ERS	Entry age	8.00%	4.50%	3.50%	75.90%
2	Alabama	TRS	Entry age	8.00%	4.50%	3.50%	77.60%
3	Alaska	PERS	Unit credit	N/A	N/A	N/A	N.D.
4	Alaska	TRS	Unit credit	N/A	N/A	N/A	N.D.
5	Arizona	SRS	Unit credit	8.00%	4.25%	3.75%	82.20%
6	Arkansas	PERS	Entry age	8.00%	4.00%	4.00%	90.00%
7	Arkansas	TRS	Entry age	8.00%	4.00%	4.00%	84.90%
8	California	PERS	Entry age	7.75%	3.00%	4.75%	87.20%
9	California	TRS	Entry age	8.00%	3.25%	4.75%	89.00%
10	Colorado	PERA	Entry age	8.50%	3.75%	4.75%	67.90%
11	Connecticut	SERS	Unit credit	8.25%	4.00%	4.25%	51.92%
12	Connecticut	TRS	Entry age	8.50%	4.00%	4.50%	70.00%
13	Delaware	SEPP	Entry age	8.00%	3.75%	4.25%	103.10%
14	Florida	FRS	Entry age	7.75%	3.00%	4.75%	105.35%
15	Georgia	ERS	Entry age	7.50%	3.75%	3.75%	89.40%
16	Georgia	TRS	Entry age	7.50%	3.75%	3.75%	94.70%
17	Hawaii	ERS	Entry age	8.00%	4.00%	4.00%	67.50%
18	Idaho	PERS	Entry age	7.25%	4.50%	3.25%	93.30%
19	Illinois	SERS	Unit credit	8.50%	3.00%	5.50%	46.10%
20	Illinois	TRS	Unit credit	8.50%	3.50%	5.00%	56.00%
21	Illinois	MRF	Entry age	7.50%	4.00%	3.50%	84.30%
22	Indiana	PERF	Entry age	7.25%	N.D.	N.D.	98.20%
23	Indiana	TRF	Entry age	7.50%	3.25%	4.25%	48.20%
24	Iowa	PERS	Entry age	7.50%	4.00%	3.50%	89.13%
25	Kansas	PERS	Entry age	8.00%	4.00%	4.00%	70.80%
26	Kentucky	ERS	Entry age	7.75%	3.50%	4.25%	54.20%
27	Kentucky	CERS	Entry age	7.75%	3.50%	4.25%	77.10%
28	Kentucky	TRS	Unit credit	7.50%	4.00%	3.50%	68.20%
29	Louisiana	SERS	Unit credit	8.25%	N.D.	N.D.	67.00%
30	Louisiana	TRSL	Unit credit	8.25%	3.20%	5.25%	70.20%
31	Maine	SRS	Entry age	7.75%	4.50%	3.25%	79.70%
32	Maryland	SRS	Entry age	7.75%	3.50%	4.25%	78.62%
33	Massachusetts	SERS	Entry age	8.25%	N.D.	N.D.	71.60%
34	Massachusetts	TRS	Entry age	8.25%	N.D.	N.D.	73.90%
35	Michigan	SERS	Entry age	8.00%	3.50%	4.50%	71.10%
36	Michigan	MERS	Entry age	8.00%	4.50%	3.50%	77.70%
37	Michigan	PSERS	Entry age	8.00%	3.50%	4.50%	71.50%
38	Minnesota	MSRS	Entry age	8.50%	4.50%	4.00%	90.18%
39	Minnesota	PERA	Entry age	8.50%	4.50%	4.00%	73.60%
40	Minnesota	TRA	Entry age	8.50%	4.50%	4.00%	81.99%
41	Mississippi	PERS	Entry age	8.00%	4.00%	4.00%	72.90%
42	Missouri	SERS	Entry age	8.50%	4.00%	4.50%	85.90%
43	Missouri	LAGERS	Entry age	7.50%	4.00%	3.50%	97.50%
44	Missouri	PSRS	Entry age	8.00%	3.25%	4.75%	83.40%
45	Montana	PERS	Entry age	8.00%	4.25%	3.75%	90.00%

46	Montana	TRS	Entry age	7.75%	4.50%	3.25%	79.90%
47	Nebraska	SERS	Entry age	7.75%	3.50%	4.10%	103.40%
48	Nebraska	CERS	Entry age	7.75%	3.50%	4.10%	108.10%
49	Nebraska	SPP	Entry age	8.00%	3.50%	4.50%	90.60%
50	Nevada	PERS	Entry age	8.00%	3.50%	4.50%	76.20%
51	New Hampshire	NHRS	Entry age	8.50%	3.50%	5.00%	67.80%
52	New Jersey	PERS	Unit credit	8.25%	4.00%	4.25%	77.40%
53	New Jersey	TPAF	Unit credit	8.25%	4.00%	4.25%	72.10%
54	New Mexico	PERA	Entry age	8.00%	4.00%	4.00%	92.00%
55	New Mexico	ERB	Entry age	8.00%	3.00%	5.00%	71.50%
56	New York	ERS	Aggregate	8.00%	3.00%	5.00%	105.80%
57	New York	TRS	Aggregate	8.00%	3.00%	5.00%	104.20%
58	North Carolina	TSERS	Entry age	7.25%	N.D.	N.D.	104.70%
59	North Carolina	LGERS	Entry age	7.25%	N.D.	N.D.	99.50%
60	North Dakota	PERS	Entry age	8.00%	4.50%	3.50%	92.60%
61	North Dakota	TRF	Entry age	8.00%	3.00%	5.00%	81.90%
62	Ohio	PERS	Entry age	8.00%	4.00%	4.00%	96.30%
63	Ohio	STRS	Entry age	8.00%	3.00%	5.00%	79.10%
64	Oklahoma	PERS	Entry age	7.50%	3.00%	4.50%	73.00%
65	Oklahoma	TRS	Entry age	8.00%	3.00%	5.00%	50.50%
66	Oregon	PERS	Unit credit	8.00%	2.75%	5.25%	112.20%
67	Pennsylvania	SERS	Entry age	8.00%	3.30%	4.70%	89.00%
68	Pennsylvania	PSERS	Entry age	8.25%	3.25%	5.00%	91.20%
69	Rhode Island	ERS	Entry age	8.25%	3.00%	5.25%	57.50%
70	South Carolina	SCRS	Entry age	7.25%	3.00%	4.25%	69.70%
71	South Dakota	SRS	Entry age	7.75%	N.D.	N.D.	97.20%
72	Tennessee	CRS	Entry age- FIL**	7.50%	3.00%	4.50%	96.20%
73	Texas	ERS	Entry age	8.00%	3.50%	4.50%	92.60%
74	Texas	TRS	Entry age	8.00%	3.00%	5.00%	86.20%
75	Texas	MRS	Unit credit	7.00%	3.00%	4.00%	74.40%
76	Utah	SRS	Entry age	7.75%	3.00%	4.75%	84.20%
77	Vermont	SRS	Entry age	8.25%	3.00%	5.25%	94.10%
78	Vermont	TRS	Entry age	8.25%	3.00%	5.25%	80.90%
79	Virginia	SRS	Entry age	7.50%	2.50%	5.00%	82.30%
80	Washington	PERS	Hybrid	8.00%	3.50%	4.50%	119.89%
81	Washington	TRS	Hybrid	8.00%	3.50%	4.50%	130.37%
82	West Virginia	PERS	Entry age	7.50%	3.00%	4.50%	84.20%
83	West Virginia	TRS	Entry age	7.50%	3.00%	4.50%	50.00%
84	Wyoming	WRS	Entry age	8.00%	3.50%	4.50%	78.60%
85	Milwaukee	City	Unit credit	8.50%	3.00%	5.50%	99.10%
86	Milwaukee	County	Entry age	8.00%	3.00%	5.00%	95.70%
87	Wisconsin	WRS	Entry age-FIL	7.80%	4.10%	3.70%	99.70%

\*N.D. = Not defined.

\*\*FIL = Frozen initial liability method.

**Figure 12. 2008 Plan Interest Assumptions**



**Figure 13. 2008 Plan Funding Ratios**

