WISCONSIN LEGISLATIVE COUNCIL

2002 COMPARATIVE STUDY OF MAJOR PUBLIC EMPLOYEE RETIREMENT SYSTEMS

Prepared by:

William Ford, Senior Staff Attorney
Wisconsin Legislative Council

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One East Main Street, Suite 401 • P.O. Box 2536 • Madison, WI 53701-2536
Telephone: (608) 266-1304 • Fax: (608) 266-3830 • Email: leg.council@legis.state.wi.us
http://www.legis.state.wi.us/lc

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CONTENTS

Page

Introduction 3

Part I - Description of Retirement Systems in Report 5

A. Introduction 5

B. Number of Participants 5

C. Categories of Employees Included in Plans 5

D. Ratio of Active Employees to Retired Employees 5

E. Social Security Coverage 6

F. Trends 6

G. The Wisconsin Retirement System 6

Part II - Normal and Early Retirement Provisions 9

A. Introduction 9

B. Normal Retirement 9

C. Early Retirement 10

D. Trends 11

E. The WRS 11

Part III - Contribution and Vesting Requirements 15

A. Introduction 15

B. Vesting 15

B. Employee Contributions 15

C. Employer "Pick-up" of Employee Contributions 16

D. Employer Contributions 16

E. Trends 17

F. The WRS 17

Page

Part IV - Retirement Benefit Calculations ***21***

A. Introduction 21

B. "Basic" Plans in Which Employees Are Not Covered by Social Security 21

C. "Coordinated" Plans in Which Employees Are Covered by Social Security 22

C. Final Average Salary 22

D. Limitations on Benefits 23

E. Trends 23

F. The WRS 23

Part V - Post-Retirement Annuity Increases and Taxes ***27***

a. Introduction 27

B. Social Security 27

C. Post-Retirement Annuity Cost-of-Living Adjustments 28

D. State Income Taxation of Annuities 28

E. Trends 29

F. The WRS 29

Part VI - Actuarial and Accounting Information ***33***

A. Introduction 33

B. Actuarial Methods 33

C. Interest Assumption 33

D. Economic Spread 34

E. Funding Ratio 34

F. Trends 34

G. The WRS 35

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 2 years since 1982 by the Wisconsin Retirement Research Committee staff or the Legislative Council staff.

The 2002 Report includes data from the same 85 public employee retirement systems that have been compared in each of the previous reports. 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 Report differs from that of previous reports. Previously, 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 problem 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 Report, the data was gathered, to the extent possible, from the web site maintained by each of the plans covered by the report. Any information not available from the web site was gathered by addressing specific questions, either by e-mail or telephone, to plan administrators. The data compiled for each of the public employee retirement systems is current for 2002. 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 first hired currently.

A new feature of the 2002 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. Please communicate reports of any errors or comments you may have about the report to: William Ford, Senior Staff Attorney; Wisconsin Legislative Council Staff; Suite 401,1 East Main Street; Madison, Wisconsin, 53703; or at the following e-mail address: william.ford@legis.state.wi.us.

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.

PART I
DESCRIPTION OF RETIREMENT SYSTEMS IN REPORT

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 85 plans in the 2002 Report provide pension coverage for 11,609,149 active employees and 4,868,526 retirees and beneficiaries, for a total of 16,477,675 participants. This total is 8% greater than the 15,278,212 participants in the 2000 Report. The number of active participants has grown between the 2000 and the 2002 Reports by 6% while the number of retirees has grown by 12% 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 85 plans reported on are categorized as follows:

Employee Coverage	Number of Plans
State employees only	11
Teachers only	27
Local employees only	8
State and local employees	16
State employees and teachers	3
State employees, local employees, and teachers	20

D. RATIO OF ACTIVE EMPLOYEES TO RETIRED EMPLOYEES

Chart 1 also shows the ratio of active employees to retired employees in the 85 systems surveyed. The average ratio has declined over prior years. For 2002, the average ratio was 2.38 while the comparable figures for the 2000 Report, and the 1996 Report, respectively, were 2.52 and 2.89. 19 of the systems (including the City of Milwaukee and Milwaukee County) had an active employees to retired employees ratio of less than 2. In the 2000 Report, 17 of the systems had an active employees to retired employee ratio of less than 2 and in the 1996 Report, only 8 systems had a ratio of less than 2.

E. SOCIAL SECURITY COVERAGE

In 68 of the 85 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 2000 study, 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 2002, had 263,500 active employees and 116,289 beneficiaries and annuitants, for a total of 379,789 participants. This total is 8% greater than the 353,116 participants in the 2000 Report. The WRS covers state and local employees and teachers. The ratio of active employees to retired employees in the WRS in 2002 is 2.27, which is a reduction from the ratio of 2.43 found in the 2000 Report. The ratio of active employees to retired employees in the WRS for 2002 (2.27) is somewhat lower than the average ratio for all plans in the report (2.38). Most WRS employees are covered by Social Security.

CHART I
PUBLIC RETIREMENT SYSTEMS SURVEYED

	State	Fund Name	Employee Coverage*	Active Employees	Beneficiaries & Annuitants	Ratio	S.S. Coverage
1	Alabama	ERS	S, L	79,500	28,093	2.83	Yes
2	Alabama	TRS	T	124,880	51,903	2.41	Yes
3	Alaska	PERS	S, L	33,242	17,215	1.93	No
4	Alaska	TRS	T	9,690	7,804	1.24	No
5	Arizona	SRS	S, L, T	198,627	61,467	3.23	Yes
6	Arkansas	PERS	S, L	42,230	17,748	2.38	Yes
7	Arkansas	TRS	T	60,000	18,000	3.33	Yes
8	California	PERS	S, L	795,785	388,126	2.05	Yes
9	California	TRS	T	442,208	177,069	2.50	No
10	Colorado	PERA	S, L, T	169,833	55,733	3.05	No
11	Connecticut	SERS	S	54,287	32,354	1.68	Yes
12	Connecticut	TRS	T	49,114	21,997	2.23	No
13	Delaware	SEPP	S, T	31,951	16,233	1.97	Yes
14	Florida	FRS	S, L, T	611,455	228,386	2.68	Yes
15	Georgia	ERS	S	153,687	27,270	5.64	Yes
16	Georgia	TRS	T	201,278	54,222	3.71	Yes
17	Hawaii	ERS	S, L, T	62,200	30,300	2.05	Yes
18	Idaho	PERS	S, L, T	62,375	24,018	2.60	Yes
19	Illinois	SERS	S	81,680	44,557	1.83	Yes
20	Illinois	TRS	T	155,979	67,949	2.30	No
21	Illinois	MRF	L	164,845	72,832	2.26	Yes
22	Indiana	PERF	S, L	145,019	50,769	2.86	Yes
23	Indiana	TRF	T	75,515	34,800	2.17	Yes
24	Iowa	PERS	S, L, T	159,074	70,969	2.24	Yes
25	Kansas	PERS	S, L, T	139,253	56,115	2.48	Yes
26	Kentucky	ERS	S, L	142,567	58,438	2.44	Yes
27	Kentucky	TRS	T	56,000	27,000	2.07	No
28	Louisiana	SERS	S	64,692	31,887	2.03	No
29	Louisiana	TRSL	T	87,356	54,156	1.61	No
30	Maine	SRS	S, L, T	52,480	30,122	1.74	No
31	Maryland	SRPS	S, L, T	184,600	84,185	2.19	Yes
32	Massachusetts	SERS	S	82,155	48,766	1.68	No
33	Massachusetts	TRS	T	88,178	37,443	2.35	No
34	Michigan	SERS	S	43,064	39,666	1.09	Yes
35	Michigan	MERS	L	36,856	16,932	2.18	Yes
36	Michigan	PSERS	T	326,538	135,277	2.41	Yes
37	Minnesota	MSRS	S	53,755	20,379	2.64	Yes
38	Minnesota	PERA	L	151,027	56,912	2.65	Yes
39	Minnesota	TRA	T	71,685	32,216	2.23	Yes
40	Mississippi	PERS	S, L, T	152,148	56,705	2.68	Yes

41	Missouri	SERS	S	59,066	21,910	2.70	Yes
42	Missouri	LAGERS	L	30,504	9,719	3.14	Yes
43	Missouri	PSRS	T	83,049	30,865	2.69	No
44	Montana	PERS	S, L	29,808	14,116	2.11	Yes
45	Montana	TRS	T	18,600	9,342	1.99	Yes
46	Nebraska	PERS	S, L	74,000	10,800	6.85	Yes
47	Nebraska	TRS	T	35,974	11,360	3.17	Yes
48	Nevada	PERS	S, L, T	85,224	25,535	3.34	No
49	New Hampshire	NHRS	S, L, T	46,187	16,670	2.77	Yes
50	New Jersey	PERS	S, L	255,401	107,671	2.37	Yes
51	New Jersey	TPAF	T	132,654	56,102	2.36	Yes
52	New Mexico	PERA	S, L	49,466	19,149	2.58	Yes
53	New Mexico	ERA	T	62,000	24,500	2.53	Yes
54	New York	ERS	S, L	544,530	306,604	1.78	Yes
55	New York	TRS	T	242,834	110,858	2.19	Yes
56	North Carolina	TSERS	S, T	281,731	118,525	2.38	Yes
57	North Carolina	LGERS	L	112,736	33,134	3.40	Yes
58	North Dakota	PERS	S, L	17,039	5,110	3.33	Yes
59	North Dakota	TRF	T	9,931	5,054	1.96	Yes
60	Ohio	PERS	S, L	304,406	139,665	2.18	No
61	Ohio	STRS	T	178,557	105,300	1.70	No
62	Oklahoma	PERS	S, L	44,292	21,452	2.06	Yes
63	Oklahoma	TRS	T	85,366	36,515	2.34	Yes
64	Oregon	PERS	S, L, T	167,062	86,082	1.94	Yes
65	Pennsylvania	SERS	S	109,716	89,217	1.23	Yes
66	Pennsylvania	PSERS	T	243,000	132,000	1.84	Yes
67	Rhode Island	ERS	S, T	19,618	35,568	0.55	Yes
68	South Carolina	SCRS	S, L, T	216,652	81,393	2.66	Yes
69	South Dakota	SRS	S, L, T	35,130	15,891	2.21	Yes
70	Tennessee	CRS	S, L, T	197,971	80,426	2.46	Yes
71	Texas	ERS	S	150,868	51,041	2.96	Yes
72	Texas	TRS	T	745,923	201,441	3.70	No
73	Texas	MRS	L	90,298	21,938	4.12	Yes
74	Utah	SRS	S, L, T	93,543	30,576	3.06	Yes
75	Vermont	SRS	S	7,725	3,633	2.13	Yes
76	Vermont	TRS	T	10,257	3,991	2.57	Yes
77	Virginia	SRS	S, L, T	310,214	103,622	2.99	Yes
78	Washington	PERS	S, L	217,237	62,189	3.49	Yes
79	Washington	TRS	T	66,220	33,107	2.00	Yes
80	West Virginia	PERS	S, L	34,763	18,190	1.91	Yes
81	West Virginia	TRS	T	93,457	43,187	2.16	Yes
82	Wyoming	WRS	S, L, T	36,039	16,139	2.23	Yes
83	Milwaukee	City	L	14,000	10,000	1.40	Yes
84	Milwaukee	County	L	5,793	6,637	0.87	Yes
85	Wisconsin	WRS	S, L, T	263,500	116,289	2.27	Yes
	Totals: (85 Funds)			11,609,149	4,868,526	2.38	

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

PART II
NORMAL AND EARLY RETIREMENT PROVISIONS

A. INTRODUCTION

Chart 2, on pages 12 and 13, shows the normal and early retirement provisions for each of the plans covered in the report. All but 2 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. The 2 exceptions (the Nebraska State Employee Retirement System and the Texas Municipal Retirement System) 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.

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. As is shown in Chart 2, the 3 Minnesota plans are the only plans covered in this report in which normal retirement age conforms to the Social Security full benefit retirement age as it gradually increases over time. [Note that each of the 3 Minnesota plans also permit normal retirement under the "Rule of 90," as will be described below.]

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 83 of the 85 plans allow normal retirement at age 62 or earlier, for persons with long years of service. In addition, Chart 2 shows that 57 of the 85 plans permit normal retirement at age 62 or earlier, with 10 or less years of service. Only 2 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) 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 2002, 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.

	2000	2002
35 years of service/age 55 or younger	8 plans	7 plans
30 years of service/age 55 or younger	28 plans	29 plans
28 years of service/age 55 or younger	3 plans	4 plans
27 years of service/age 55 or younger	2 plans	2 plans
25 years of service/age 55 or younger	12 plans	10 plans
20 years of service/age 55 or younger	4 plans	4 plans
TOTAL	57 plans	56 plans

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 number of plans with Rule of Y provisions have steadily increased from 13 plans in the 1996 Report, 18 plans in the 2000 Report, and 20 plans in the 2002 Report. The following table shows the number of plans that, in 2002, had Rule of Y provisions and compares these with the number of plans that had Rule of Y provisions in 1996 and 2000.

	1996 Report	2000 Report	2002 Report
Rule of 90	4 plans	5 plans	6 plans
Rule of 88	1 plan	1 plan	1 plan
Rule of 85	3 plans	5 plans	6 plans
Rule of 80	4 plans	6 plans	6 plans
Rule of 75	1 plan	1 plan	1 plan
TOTAL	13 plans	18 plans	20 plans

In addition, for 2002, 6 plans have modified "Rule of Y" provisions. 2 plans have Rule of 80 provisions with a minimum age of 55; 4 plans have Rule of 85 provisions with a minimum age of 55; and 1 plan has a Rule of 75 with a minimum age of 60.

C. EARLY RETIREMENT

75 of the 85 plans covered in the 2002 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.

48 of the 85 plans in the 2002 Report allow early retirement at a minimum age of 55 or more. 16 of the 85 plans in the report allow early retirement at a minimum age of less than 55. 8 of the 85 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.

As was mentioned above, 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.

For those plans that reduce annuities by a certain percentage for each year that a person retires prior to reaching the normal retirement requirements, 20 plans use reduction percentages of between 3% and 5.9% per year and 20 plans use reduction percentages of 6% or more a year. These reduction percentages have not changed substantially from those found in the 2000 Report or the 1996 Report.

D. TRENDS

The 2002 Report indicates a continuation of the trend noted in previous reports to permit normal retirement at earlier ages--particularly for career employees with long service. Since the 2000 report, 7 plans have reduced their normal retirement provisions by reducing the minimum age or the number of years of service required, or both. In addition, since the 2000 Report, 6 plans have reduced their early retirement provisions by reducing the minimum age or the number of years of service required, or both.

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 actuarial discount. The early retirement requirement for general employees in the WRS is 55 years of age. 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

	State	Fund Name	Coverage*	Normal Retirement (Age/Years)	Early Retirement (Age/Years)	Reduction for Early Retirement
1	Alabama	ERS	S, L	60/10; any/25	None	
2	Alabama	TRS	T	60/10; any/25	None	
3	Alaska	PERS	S, L	60/5; any/30	55/5	6% a year
4	Alaska	TRS	T	60/8; any/20	55/8	Table
5	Arizona	SRS	S, L, T	65; 62/10; R80	50/5	Table
6	Arkansas	PERS	S, L	65/5; any/28; 55/35	55/5; any/25	6% a year
7	Arkansas	TRS	T	60/5; any/28	Any/25	Lesser of 5% for each year less than 28 yrs. of service or 5% for each year prior to age 60
8	California	PERS	S, L	60/5	50/5	Multiplier varies
9	California	TRS	T	60/5	55/5; 50/30	3% to 6% a year
10	Colorado	PERA	S, L, T	65/5; 50/30; 55/R80	50/25; 55/20; 60/5	6%; 3%; 4%
11	Connecticut	SERS	S	62/10; 60/25; 70/5	55/10	3% a year
12	Connecticut	TRS	T	60/20; any/35	Any/25; 55/20; 60/10	Table
13	Delaware	SEPP	S, T	62/5; 60/15; any/30	55/15; any/25	2.4% a year
14	Florida	FRS	S, L, T	62/6; any/30	Any/6	5% a year
15	Georgia	ERS	S	60/10; any/30	Any/25	7% a year; max. 35%
16	Georgia	TRS	T	60/10; any/30	Any/25	7% a year
17	Hawaii	ERS	S, L, T	62/10; 55/30	55/20	6% a year
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 year
20	Illinois	TRS	T	62/5; 60/10; 55/35	55/20	6% a year
21	Illinois	MRF	L	60/8; 55/35	55/8	3% a year
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 year
24	Iowa	PERS	S, L, T	65; 62/20; R88	55/4	3% a year
25	Kansas	PERS	S, L, T	65; 62/10; R85	55/10	2.4%/7.20% a year
26	Kentucky	ERS	S, L	65/4; any/27	55/5; any/25	5%/4% a year
27	Kentucky	TRS	T	60/5; any/27	55/5	5% a year
28	Louisiana	SERS	S	60/10; 55/25; any/30	50/10; any/20	Table
29	Louisiana	TRSL	T	65/20; 55/25; any/30	60/5; any/20	Multiplier varies
30	Maine	SRS	S, L, T	60/5	Any/25	2.25% a year
31	Maryland	SRS	S, L, T	62/5 to 65/2; any/30	55/15	6% a year; max. 42%
32	Massachusetts	SERS	S, L	55/10; any/20	None	
33	Massachusetts	TRS	T	55/10; any/20	None	
34	Michigan	SERS	S	60/10; 55/30	55/15	6% a year
35	Michigan	MERS	L	60/10	50/25; 55/15	6% a year
36	Michigan	PSERS	T	60/10; 55/30	55/15	6% a year
37	Minnesota	MSRS	S	Soc. Sec. Normal; R90	55/3	Table
38	Minnesota	PERA	L	Soc. Sec. Normal; R90	55/3	3%; 6% a year
39	Minnesota	TRA	T	Soc. Sec. Normal; R90	55/3	3%; 4-5.5% a year
40	Mississippi	PERA	S, L, T	60/4; any/25	None	

41	Missouri	SERS	S	62/5; R80	57/5	6% a year
42	Missouri	LAGERS	L	60/5; R80 option	55/5	6% a year
43	Missouri	PSRS	T	60/5; R80; 55/25; any/30	55/5	Table
44	Montana	PERS	S, L	65/any; 60/5; any/30	50/5; any/25	Table
45	Montana	TRS	T	60/5; any/25	50/5	6%; 3.6% a year
46	Nebraska	SERS	S	55		Money purchase
47	Nebraska	TRS	T	65/5; 55/R85	60/5; any/35; 55/R80	3% a year
48	Nevada	PERS	S, L, T	65/5; 60/10; any/30	Any/5	4% a year
49	New Hampshire	NHRS	S, L, T	60/any	50/10; R70/20	1.5%; 3%; 4%; 6.67% a year
50	New Jersey	PERS	S, L	60/any	Any/25	3% a year
51	New Jersey	TRS	T	60/any	Any/25	3% a year
52	New Mexico	PERA	S, L	65/5 to 60/20; any/25	None	
53	New Mexico	ERA	T	65/5; any/25; 60/R75	R75	2.4%/7.2% a year
54	New York	ERS	S, L	62/5; 55/30	55/5	6%/3% a year
55	New York	TRS	T	62/5; 55/30	55/5	6%/3% a year
56	North Carolina	TSERS	S, T	65/5; 60/25; any/30	60/5; 50/20	3% a year
57	North Carolina	LGERS	L	65/5; 60/25; any/30	60/5; 50/20	3% a year
58	North Dakota	PERS	S, L	65/any; R85	55/3	6% a year
59	North Dakota	TRF	T	65/3; R85	55/3	6% a year
60	Ohio	PERS	S, L	60/5; any/30	55/25	Table
61	Ohio	STRS	T	65; any/30	60/5; 55/25	Table
62	Oklahoma	PERS	S, L	62/6; R90	55/10	Table
63	Oklahoma	TRS	T	62/10; R90	55/10; any/30	Table
64	Oregon	PERS	S, L, T	60/any; any/30	55	8% a year
65	Pennsylvania	SERS	S	60/3; any/35	Any/10	Table
66	Pennsylvania	PSERS	T	62; 60/30; any/35	55/25	3% a year
67	Rhode Island	ERS	S, T	60/10; any/28	None	
68	South Carolina	SCRS	S, L, T	65/any; any/28	60; 55/25	5%; 4% a year
69	South Dakota	SRS	S, L, T	65/3; 55/R85	55/3	3% a year
70	Tennessee	CRS	S, L, T	60/5; any/30	55/10; any/25	4.8% a year
71	Texas	ERS	S	60/5; R80	None	
72	Texas	TRS	T	65/5; 60/20; R80	55/5; any/30	Table
73	Texas	MRS	L	60/10; any/20 or 25 option		Money purchase
74	Utah	SRS	S, L, T	65/4; any/30	Any/25; 60/20; 62/10	3% a year; 7% before age 65
75	Vermont	SRS	S	62/any; any/30	55/5	6% a year
76	Vermont	TRS	T	62/any; any/30	55/10	6% a year
77	Virginia	SRS	S, L, T	65/5; 50/30	50/10; 55/5	6%; 4.8% a year
78	Washington	PERS	S, L	65/5	55/20	Table
79	Washington	TRS	T	65/5	55/20	Table
80	West Virginia	PERS	S, L	60/5; 55/R80	55/10; any/30	6% a year
81	West Virginia	TRS	T	60/5; 55/30; any/35	Any/30	Actuarial reduction
82	Wyoming	WRS	S, L, T	60/any; R85	50/4; any/25	5% a year
83	Milwaukee	City	L	60/any; 55/30	55/15	Table
84	Milwaukee	County	L	60/any; R75	55/15	5% a year
85	Wisconsin	WRS	S, L, T	65/any; 57/30	55	Varies by amount of service

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

x/y = Age/Service

PART III
CONTRIBUTION AND VESTING REQUIREMENTS

A. INTRODUCTION

Chart 3, on pages 18 and 19, shows the vesting period, the employee contribution rate, and the employer contribution rate for each of the 85 plans in the report. The contribution rates are shown as a percentage of salary.

B. VESTING

The term "vesting" refers to an employee's right, after satisfying some minimum service requirement, to receive a pension benefit regardless of whether the employee remains in a job covered by the pension plan. Vesting requirements for the plans included in the 2002 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:

	2000 Report	2002 Report
Immediate vesting	2 plans	2 plans
Vesting after 3 years	6 plans	6 plans
Vesting after 4 years	5 plans	5 plans
Vesting after 5 years	42 plans	47 plans
Vesting after 8 years	4 plans	4 plans
Vesting after 10 years	25 plans	20 plans
Graded or varying	1 plan	1 plan
TOTAL	85 plans	85 plans

In 2002, a total of 60 plans, or 71% of the 85 plans in the report, require five years or less years of service to vest. This is an increase of 6 plans since the 2000 Report. The trend appears to be towards vesting periods of 5 years or less, perhaps reflecting federal vesting requirements that apply to private sector pension plans. The number of plans in 2002 that require 10 years of service to vest has decreased by 5 plans from the 2000 Report and by 20 plans from the 1990 report.

B. EMPLOYEE CONTRIBUTIONS

Large private sector corporations that provide pension plans frequently do not require employee contributions to the primary plan, but frequently also provide supplemental profit-sharing or savings plans which 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, as will be discussed below, 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.

The column in Chart 3 entitled "Employee Contribution" shows the employee contribution rates, expressed as a percentage of payroll, for the 85 plans covered in the report. These requirements are compared with employee contributions in the 2000 Report in the following table:

Employee Contribution Rates	2000 Report	2002 Report
5% or less	34 plans	35 plans
More than 5%	35 plans	34 plans
Rate varies (usually by age or employee classification)	6 plans	6 plans
Plan is noncontributory	10 plans	10 plans
TOTAL	85 plans	85 plans

C. EMPLOYER "PICK-UP" OF EMPLOYEE CONTRIBUTIONS

Section 414 (h) of the U.S. Internal Revenue Code provides that employers may "pick-up" the required employee contribution and the amount of the contribution is not included in employee gross income. Alternatively this section provides that employees may pay the contribution without paying federal income taxes on the amount of the contribution. In many cases, the exclusion of the retirement contribution from gross income for federal tax purposes also results in an exclusion from gross income for state income tax purposes. This increases the take-home pay of the employee over what would occur if the contributions to the retirement plan were made on an "after-tax" basis.

The 1986 Report found that 37 plans had adopted the provisions of Section 414 (h) of the Internal Revenue Code. By the time of the 1996 Report, nearly all of the 75 contributory plans had adopted these provisions. In addition, Chart 3 shows whether employee contributions are actually paid by the employee or are picked up by the employer. In labor negotiations between public employers and employees, the decision may be made to have the employer pick up the employee contribution rather than increase employee wages. This is because both employers and employees pay Social Security taxes on employee wages, but do not make these payments with respect to employee retirement contributions. In addition, this practice may be attractive to employers because employer pick-up of retirement contributions does not get added into employee base wages and have an effect on future wage negotiations.

D. EMPLOYER CONTRIBUTIONS

As has been noted in previous reports, the employer contribution information in Chart 3 is perhaps 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. Medical and other nonpension costs are 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.

When comparing the employee contributions found in the 2000 Report with those found in the 2002 Report, employer contribution rates increased for 27 plans and decreased for 20 plans.

E. TRENDS

The trend in public employee pension plan vesting is towards vesting periods of 5 years or less than 5 years. Only 25 of the 85 plans covered in the 2002 Report had vesting requirements that were greater than 5 years. The employee contribution rates were relatively stable between the 2000 Report and the 2002 Report. Only 6 plans experienced employee contribution rate changes of 1% or more between the 2000 Report and the 2002 Report. Employer contribution rates fluctuated considerably between the 2000 Report and the 2002 Report, with 47 of the 85 plans showing changes. However, there was no clear direction shown in these changes as employer contribution rates increased for 27 plans and decreased for 20 plans between 2000 and 2002.

F. THE WRS

No vesting period is required for employees in the WRS. The employee contribution rate for general employees for 2002 is 5%. However, for the reasons discussed above, in practice, approximately 99.5% of contributions to the WRS are paid by employers. The employer contribution rate for 2002, excluding unfunded liability, was 3.8%.

CHART III
CONTRIBUTION AND VESTING REQUIREMENTS

	State	Fund Name	Social Security	Employee Contribution	IRC 414 (h)	Employer Contribution	Vesting Period
1	Alabama	ERS	Yes	5%	*ER	3.95%	10 years
2	Alabama	TRS	Yes	5%	*ER	5.02%	10 years
3	Alaska	PERS	No	6.75%	*EE	6.77%	5 years
4	Alaska	TRS	No	8.65%	*EE	11%	8 years
5	Arizona	SRS	Yes	2%	*EE	2%	Immediate
6	Arkansas	PERS	Yes	Non-contributory		10%	5 years
7	Arkansas	TRS	Yes	Non-contributory		12%	5 years
8	California	PERS	Yes	5%	EE	7.413%	5 years
9	California	TRS	No	8%	*ER	10.225%	5 years
10	Colorado	PERA	No	8%	*EE	10.04%	5 years
11	Connecticut	SERS	Yes	Non-contributory		2.32%	5 years
12	Connecticut	TRS	No	6%	EE	7.64%	10 years
13	Delaware	SEPP	Yes	3% above $6,000	*EE	7.44%	5 years
14	Florida	FRS	Yes	Non-contributory		6.19%	6 years
15	Georgia	ERS	Yes	1.25%	*EE	10.41%	10 years
16	Georgia	TRS	Yes	5%	*EE	11.29%	10 years
17	Hawaii	ERS	Yes	Non-contributory		11.38%	10 years
18	Idaho	PERS	Yes	5.86%	*EE	9.77%	5 years
19	Illinois	SERS	Yes	4%	*ER	10.04%	8 years
20	Illinois	TRS	No	9%	*ER	13.09%	5 years
21	Illinois	MRF	Yes	4.5%	*EE	5.51%	8 years
22	Indiana	PERF	Yes	3%	*ER	5.1%	10 years
23	Indiana	TRF	Yes	3%	*ER	9%	10 years
24	Iowa	PERS	Yes	3.7%	*EE	5.75%	4 years
25	Kansas	PERS	Yes	4%	*ER	4.38%	10 years
26	Kentucky	ERS	Yes	5%	*ER	3.76%	5 years
27	Kentucky	TRS	No	9.105%	*ER	9.105%	5 years
28	Louisiana	SERS	No	7.5%	*EE	14.1%	10 years
29	Louisiana	TRSL	No	8%	*ER	13.1%	5 years
30	Maine	SRS	No	7.65%	*ER	16.30%	5 years
31	Maryland	SRS	Yes	2%/5% over SS base	ER	4.73%	5 years
32	Massachusetts	SERS	No	5-9% + 2% above $30,000		16%	10 years
33	Massachusetts	TRS	No	9%		16%	10 years
34	Michigan	SERS	Yes	Non-contributory		3.68%	10 years
35	Michigan	MERS	Yes	Varies by plan	*	Varies by plan	6, 8, or 10 yrs.
36	Michigan	PSERS	Yes	0; 3.9%; or 3-4.3%	*EE	6.12%	10 years
37	Minnesota	MSRS	Yes	4%	*EE	4%	3 years
38	Minnesota	PERA	Yes	8.75%/5.1%	*EE	11.43%	3 years
39	Minnesota	TRA	Yes	5%	*EE	5%	3 years
40	Mississippi	PERS	Yes	7.25%	*EE	9.75%	4 years

41	Missouri	SERS	Yes	Non-contributory		11.59%	5 years
42	Missouri	LAGERS	Yes	0%-4%	*ER	Varies by plan	5 years
43	Missouri	PSRS	No	10.5%	*EE	10.5%	5 years
44	Montana	PERS	Yes	6.9%	*EE	6.9%	5 years
45	Montana	TRS	Yes	7.150%	*EE	7.47%	5 years
46	Nebraska	SERS	Yes	4.3% on 1st $19,954; 4.8% on remainder	*EE	156% of EE rate	2 years
47	Nebraska	TERS	Yes	7.25%	*EE	101% of EE rate + .7%	5 years
48	Nevada	PERS	No	9.75%		18.75%	5 years
49	New Hampshire	NHRS	Yes	5%	*EE	4.14%	10 years
50	New Jersey	PERS	Yes	5%	*EE	0%	10 years
51	New Jersey	TPAF	Yes	5%	*EE	0%	10 years
52	New Mexico	PERA	Yes	7.42%	*ER	16.59%	5 years
53	New Mexico	ERA	Yes	7.6%	*EE	8.65%	5 years
54	New York	ERS	Yes	3%	*EE	1.2%	5 years
55	New York	TRS	Yes	3%	*EE	.36%	5 years
56	North Carolina	TSERS	Yes	6%	*EE	0%	5 years
57	North Carolina	LGERS	Yes	6%	*EE	4.8% + UAAL	5 years
58	North Dakota	PERS	Yes	4%	*ER	4.12%	3 years
59	North Dakota	TRF	Yes	7.75%	*ER	7.75%	3 years
60	Ohio	PERS	No	8.5%	*ER	13.31%	5 years
61	Ohio	STRS	No	9.3%	*ER	14%	5 years
62	Oklahoma	PERS	Yes	3% to 3.5%	*EE	10%	8 years
63	Oklahoma	TRS	Yes	7%	*ER	3.54%	10 years
64	Oregon	PERS	Yes	6%	*ER	11.82%	5 years
65	Pennsylvania	SERS	Yes	6.25%	*EE	0%	5 years
66	Pennsylvania	PSERS	Yes	7.5%	*EE	0%	5 years
67	Rhode Island	ERS	Yes	8.75% (9.5% teachers)	*ER	5.59%	10 years
68	South Carolina	SCRS	Yes	6%	*EE	7.8%	5 years
69	South Dakota	SRS	Yes	6%	*EE	6%	3 years
70	Tennessee	CRS	Yes	Non-contributory		6.19%	5 years
71	Texas	ERS	Yes	6%	*EE	6%	5 years
72	Texas	TRS	No	6.4%	*ER	6%	5 years
73	Texas	MRS	Yes	3, 5, 6, or 7%	*EE	3% to 14%	5 years
74	Utah	SRS	Yes	Non-contributory		14.16%	4 years
75	Vermont	SRS	Yes	3.35%	*ER	7.3%	5 years
76	Vermont	TRS	Yes	3.54%	*ER	4.88%	5 years
77	Virginia	SRS	Yes	5%	*ER	5.72%	5 years
78	Washington	PERS	Yes	0.65%	*EE	1.32%	5 years
79	Washington	TRS	Yes	1.27%	*EE	.15%	5 years
80	West Virginia	PERS	Yes	4.5%	*ER	9.5%	5 years
81	West Virginia	TRS	Yes	6%	*	15%	5 years
82	Wyoming	WRS	Yes	5.57%	*ER	5.68%	4 years
83	Milwaukee	City	Yes	5.5%	*ER	.01%	4 years
84	Milwaukee	County	Yes	Non-contributory		1.3%	10 years
85	Wisconsin	WRS	Yes	5%	*ER	4%	Immediate

* = IRC 414 (h) (2) provisions: EE = employee paid; ER = employer paid

PART IV
RETIREMENT BENEFIT CALCULATIONS

A. INTRODUCTION

Chart 4, on pages 24 and 25, shows the retirement benefit formulas in effect for 2002 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 first begin public service currently.

As is shown in Chart 4, 83 of the 85 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:

Years of Service x Formula Multiplier x Final Average Salary = Retirement Annuity

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

2 of the 85 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.

B. "BASIC" PLANS IN WHICH EMPLOYEES ARE NOT COVERED BY SOCIAL SECURITY

Employees of 17 of the 85 plans (identified by a “*” in the column entitled "Formula Multiplier") 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 2.67% for each year of service. The average formula multiplier for these 17 plans is approximately 2.39% for each year of service.

4 of these 17 plans increased their formula multipliers since the 2000 Report was prepared.

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

68 of the 85 plans in this report are "coordinated" with the Social Security system, such that employees earn Social Security benefits for their employment. There are a wide range of formula multipliers in effect for these 68 plans, which sometimes vary by number of years of service, by date of employment, or by age at retirement. For 2002, the average formula multiplier for the 62 coordinated plans that are not money purchase plans or plans in which the employer determines the formula multiplier is approximately 1.86%. Since the 2000 Report, 26 of the plans coordinated with Social Security have increased their formula multipliers.

The formula benefits, as shown in Chart 4, assuming an employee with 30 years of service and a final average annual salary of $40,000 are summarized and compared with the data found in the 1996 and to 2000 Reports in the following table:

Formula Multiplier	1996 Report	2000 Report	2002 Report
1.1% to 1.3%	4 plans	3 plans	1 plan
Over 1.3% to 1.5%	6 plans	3 plans	4 plans
Over 1.5% to 1.7%	18 plans	18 plans	13 plans
Over 1.7% to 1.9%	8 plans	12 plans	11 plans
Over 1.9% to 2.1%	20 plans	19 plans	22 plans
Over 2.1%	4 plans	7 plans	11 plans
Employer determines formula multiplier	2 plans	2 plans	2 plans
Formula benefit plus money purchase	3 plans	2 plans	2 plans
Money purchase plan	3 plans	2 plans	2 plans
TOTAL	68 plans	68 plans	68 plans

C. 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 2000 Report, there has been little change in how any of the plans calculate final average salary. The most common method is to use a 3-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 3 highest years within a 10-year period.) 53 of the 85 plans in the report use a 3-year final average salary. The next most prevalent calculation of final average salary is a 5-year period--19 of the 85 plans used a 5-year period in 2002. In addition, at least 10 of the 85 plans limit, or "cap," the amount of earnings that are included in final average salary.

D. 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 a maximum percentage of highest salary. The majority of plans surveyed in the report impose no maximum benefit limitation. The following table summarizes benefit limits imposed by the 85 plans in 2002 as compared with what was found in the 2000 Report:

	2000 Report	**2002 Report**
No specified limitation	46 plans	46 plans
Maximum 100% of FAS	20 plans	17 plans
Maximum < 100% of FAS	16 plans	18 plans
Cap on amount of creditable service	1 plan	2 plans
Cap at 90% or more of creditable service	2 plans	2 plans
TOTAL	85 plans	85 plans

E. TRENDS

The trend noticed in previous reports to increase formula multipliers is also evidenced in the 2002 Report. 30 (including both "basic" and "coordinated" plans) of the 85 plans increased their formula multipliers between 2000 and 2002. 32 of the 85 plans increased their formula multipliers between 1996 and 2000. In contrast, little change has been noticed in how final average salary is computed or in the number of plans that cap retirement benefits.

F. THE WRS

The WRS is primarily a defined benefit plan. However, it also has "money purchase" feature that also 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 1.86% average formula multiplier for the 62 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 3 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

	State	Fund Name	FAS Period	Formula Multiplier	Limitation
1	Alabama	ERS	3 H/10	2.0125%	None
2	Alabama	TRS	3 H/10	2.0125%	None
3	Alaska	PERS	5 HC	*2% (1st 10 yrs.); 2.25% (2nd 10); 2.5% (added yrs.)	None
4	Alaska	TRS	3 H	*2% (1st 20 yrs.); 2.5% (added yrs.)	None
5	Arizona	SRS	3 HC/10	2.1% (1st 20 yrs.); 2.15% (next 5 yrs.); 2.2%	80% FAS
6	Arkansas	PERS	4 H	1.72% + .33% x yrs. to age 62	100% FAS
7	Arkansas	TRS	3 H	1.39%	None
8	California	PERS	1 H	2% at 60; 2.418% at 63	65 yrs. max.
9	California	TRS	3 HC	*2% at 60; 2.4% at 63	100% FAS
10	Colorado	PERA	3 H	*2.5%	100% FAS
11	Connecticut	SERS	3 H (cap)	1.33% + 0.5% over $23,190	None
12	Connecticut	TRS	3 H	*2%	75% FAS
13	Delaware	SEPP	3 H	1.85%	None
14	Florida	FRS	5 H	2.0%	100% FAS
15	Georgia	ERS	2 HC	2.0%	90% high yr.
16	Georgia	TRS	2 HC (cap)	2%	40 yrs. max.
17	Hawaii	ERS	3 H	1.25%	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	2.2%	None
27	Kentucky	TRS	5 H	*2.5%	100% FAS
28	Louisiana	SERS	3 HC +	*2.5%	100% FAS
29	Louisiana	TRSL	3 HC + (cap)	*2%/2.5% (age- and service-related)	100% FAS
30	Maine	SRS	3 H (cap)	*2%	None
31	Maryland	SRS	3 HC	1.4%	100% FAS
32	Massachusetts	SERS	3 HC	*.5%-2.5% (age-related)	80% FAS
33	Massachusetts	TRS	3 HC	*.5%-2.5% (age-related)	80% FAS
34	Michigan	SERS	3 HC	1.5%	None
35	Michigan	MERS	5/3 HC	1.5% to 2.5% (employer option)	80% FAS for multipliers over 2.25%
36	Michigan	PSERS	5/3 HC	1.5%	None
37	Minnesota	MSRS	5 HC	1.7%	None
38	Minnesota	PERA	5 HC	1.7%	100% FAS
39	Minnesota	TRA	5 HC	1.7%	100% FAS
40	Mississippi	PERS	4 HC (cap)	2% (1st 25 yrs.); 2.5% (added yrs.)	100% FAS

41	Missouri	SERS	3 HC	1.7% (and .8% to age 62 if R80 met)	None
42	Missouri	LAGERS	5/3 HC	1%-2% (employer option)	None
43	Missouri	PSRS	3 HC	*2.5%; 2.55% with 31 or more yrs. service	100% FAS
44	Montana	PERS	3 HC	1.785%; 2% with at least 25 yrs. of service	None
45	Montana	TRS	3 HC	1.67%	None
46	Nebraska	SERS		Money purchase	None
47	Nebraska	SRS	3 HC	2%	None
48	Nevada	PERS	3 HC	*2.67% for credit after 7/1/01	75% FAS
49	New Hampshire	NHRS	3 H (cap)	1.67% to 65; 1.515% after 65	None
50	New Jersey	PERS	3 H	1.82%	None
51	New Jersey	TPHF	3 H	1.82%	None
52	New Mexico	PERS	3 HC	3%	75% FAS
53	New Mexico	ERA	5 HC	2.35%	None
54	New York	ERS	3 HC (cap)	1.66% (under 20 yrs.); 2% (over 20 yrs.)	None
55	New York	TRS	3 HC (cap)	1.66% (under 20 yrs.); 2% (over 20 yrs.)	None
56	North Carolina	TSERS	4 HC	1.82%	None
57	North Carolina	LGERS	4 HC	1.82%	None
58	North Dakota	PERS	3 H/10	2%	None
59	North Dakota	TRF	3 H	2%	None
60	Ohio	PERS	3 H	*2.2% (1st 30 yrs.); 2.5% (added yrs.)	100% FAS
61	Ohio	STRS	3 H	*2.2% (1st 30 yrs.); 2.5% (added yrs.)	100% FAS
62	Oklahoma	PERS	3 H/10	2%	None
63	Oklahoma	TRS	5 HC	2%	None
64	Oregon	PERS	3 H	1.67%	None
65	Pennsylvania	SERS	3 H	2.5%	100% high yr.
66	Pennsylvania	PSERS	3 H	2.5%	None
67	Rhode Island	ERS	3 HC	1.7% (1st 10 yrs.); 1.9% (2nd 10 yrs.); 3% (21-34 yrs.); 2% (35+)	80% FAS
68	South Carolina	SCRS	3 HC	1.82%	None
69	South Dakota	SRS	3 HC/10	1.625% (service before 7/1/02); 1.55% service after 7/1/02	None
70	Tennessee	CRS	5 HC	1.5% + .25% FAS over SSIL	90% FAS
71	Texas	ERS	3 H	2.3%	100% FAS
72	Texas	TRS	3 H	*2.3%	None
73	Texas	MRS		Money purchase options	None
74	Utah	SRS	3 H	2%	None
75	Vermont	SRS	3 HC	1.67%	50% FAS
76	Vermont	TRS	3 HC	1.67%	50% FAS
77	Virginia	SRS	3 HC	1.7%	100% FAS
78	Washington	PERS	5 HC	2%	None
79	Washington	TRS	5 HC	2%	None
80	West Virginia	PERS	3 HC/10	2%	None
81	West Virginia	TRS	5 H/15	2%	None
82	Wyoming	WRS	3 HC	2.125% (1st 15 yrs.); 2.25% (added yrs.)	None
83	Milwaukee	City	3 H	2%	70% FAS
84	Milwaukee	County	5 HC	2%	80% FAS
85	Wisconsin	WRS	3 H	1.6%	70% FAS

* = No Social Security

PART V
POST-RETIREMENT ANNUITY INCREASES AND TAXES

A. INTRODUCTION

Chart 5, on pages 30 and 31, 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 is shown below:

CPI Year	Date on Which First Payable	Percentage Increase
1994	1/1/1995	2.8%
1995	1/1/1996	2.6%
1996	1/1/1997	2.9%
1997	1/1/1998	2.1%
1998	1/1/1999	1.3%
1999	1/1/2000	2.4%
2000	1/1/2001	3.5%
2001	1/1/2002	2.6%
2002	1/1/2003	1.4%
2003	1/1/2004	2.1%

For those employees in the 68 of the 85 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 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. 27 states completely exempt Social Security benefits from income taxation. 14 states impose income taxes on all or a portion of

Social Security benefits and 9 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. These 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 2000 Report against those found in the 2002 Report:

	2000 Report	**2002 Report**
Adjustments indexed to CPI	40 plans	39 plans
Automatic percentage increase	20 plans	22 plans
Investment surplus	3 plans	3 plans
Ad hoc (any increase must be authorized by Legislature or a decision-making board) or money purchase	22 plans	21 plans
TOTAL	85 plans	85 plans

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. 21 of the 85 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.

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 41 of the 85 plans, pension benefits are subject to state income taxation. In 20 of the 85 plans, pension benefits are totally exempt from state income taxation. In 13 of the 85 plans, pension benefits are partially exempt from state income taxation. 11 of the plans are in states with either no state income tax or a very limited state income tax that does not affect pension benefits.

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 "fixed" 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 "fixed" fund may not be reduced below the level initially paid to a retiree. For 2002, the annuity adjustment in the fixed fund was 3.3%.

WRS retirement benefits are subject to state income taxation except for certain payments under teacher retirement funds made with respect to persons who were employees prior to 1964 or who had retired prior to 1964.

CHART V

POST-RETIREMENT INCREASES AND STATE TAX PROVISIONS

	State	Fund Name	Social Security	Annual Post-Retirement Increases	State Taxation of PERS Benefits
1	Alabama	ERS	Yes	Ad hoc only	Benefits exempt
2	Alabama	TRS	Yes	Ad hoc only	Benefits exempt
3	Alaska	PERS	No	75% of CPI if 65, 9% cap; 50% of CPI if 60 or retired 5 yrs. - 6% cap	No income tax law
4	Alaska	TRS	No	75% of CPI if age 65, 9% cap; 50% of CPI if 60 or retired 8 yrs.	No income tax law
5	Arizona	SRS	Yes	Excess earnings - 4% cap or CPI cap, whichever is less	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	3.5%	Exempt to $20,000/$24,000
11	Connecticut	SERS	Yes	60% of CPI up to 6%, 75% of CPI over 6%	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 income tax law
15	Georgia	ERS	Yes	CPI - 1.5% semi-annual cap	Benefits taxable
16	Georgia	TRS	Yes	CPI - 1.5% semi-annual cap	Benefits taxable
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	Benefits taxable
23	Indiana	TRF	Yes	Ad hoc only	Benefits taxable
24	Iowa	PERS	Yes	CPI - 3% cap	Exempt to $6,000, $12, 000 married
25	Kansas	PERS	Yes	Ad hoc only	Benefits exempt
26	Kentucky	ERS	Yes	CPI - 5% cap	Benefits taxable
27	Kentucky	TRS	No	1.5% + 1.4% ad hoc for 2002	Benefits taxable
28	Louisiana	SERS	No	Ad hoc - 3% cap	Benefits exempt
29	Louisiana	TRSL	No	CPI - 3% cap	Benefits exempt
30	Maine	SRS	No	CPI - 4% cap	Exempt to $6,000
31	Maryland	SRS	Yes	CPI - 3% cap	Benefits taxable
32	Massachusetts	SERS	No	CPI - 3% cap on 1st $12,000-conditional	Benefits exempt
33	Massachusetts	TRS	No	CPI - 3% cap on 1st $12,000-conditional	Benefits exempt
34	Michigan	SERS	Yes	3% ($300 annual cap)	Benefits exempt
35	Michigan	MERS	Yes	3 plans - depending on employer agreement	Benefits exempt
36	Michigan	PSERS	Yes	3%	Benefits exempt
37	Minnesota	MSRS	Yes	CPI - 2.5% cap plus investment surplus	Benefits taxable
38	Minnesota	PERA	Yes	CPI - 2.5% cap plus investment surplus	Benefits taxable
39	Minnesota	TRA	Yes	CPI - 2.5% cap plus investment surplus	Benefits taxable
40	Mississippi	PERS	Yes	Formula based on years of retirement before and after reaching age 65	Benefits exempt

41	Missouri	SERS	Yes	80% CPI: 5% cap	Benefits taxable
42	Missouri	LAGERS	Yes	CPI - 4% cap	Benefits taxable
43	Missouri	PSRS	N	CPI - 5% cap	Benefits taxable
44	Montana	PERS	Yes	3%	Benefits taxable
45	Montana	TRS	Yes	1.5% plus ad hoc up to 3% of assets available	Benefits taxable
46	Nebraska	SERS	Yes	Money purchase	Benefits taxable
47	Nebraska	TRS	Yes	CPI - 2.5% cap	Benefits taxable
48	Nevada	PERS	No	CPI - cap of 2% to 5% (varies)	No income tax law
49	New Hampshire	NHRS	Yes	Ad hoc	Benefits exempt
50	New Jersey	PERS	Yes	60% of CPI	Exempt to specified amt.
51	New Jersey	TPAF	Yes	60% of CPI	Exempt to specified amt.
52	New Mexico	PERA	Yes	3%	Benefits taxable
53	New Mexico	ERA	Yes	50% of CPI - 4% cap	Benefits taxable
54	New York	ERS	Yes	If age 62 + retired 5 yrs.: 50% of CPI, 3% cap	Benefits taxable
55	New York	TRS	Yes	If age 62 + retired 5 yrs.: 50% of CPI, max. 3% on 1st $18,000	Benefits exempt
56	North Carolina	TSERS	Yes	Ad hoc	Exempt to $4,000
57	North Carolina	LGERS	Yes	Ad hoc	Exempt to $4,000
58	North Dakota	PERS	Yes	Ad hoc	Benefits taxable
59	North Dakota	TRF	Yes	Ad hoc	Benefits taxable
60	Ohio	PERS	No	CPI - 3% cap	Benefits taxable
61	Ohio	STRS	No	CPI - 3% cap	Benefits taxable
62	Oklahoma	PERS	Yes	Ad hoc	Benefits taxable
63	Oklahoma	TRS	Yes	Ad hoc	Benefits taxable
64	Oregon	PERS	Yes	CPI - 2% cap	Benefits taxable
65	Pennsylvania	SERS	Yes	Ad hoc	Benefits exempt
66	Pennsylvania	PSERS	Yes	Ad hoc	Benefits exempt
67	Rhode Island	ERS	Yes	3%	Benefits taxable
68	South Carolina	SCRS	Yes	CPI - 4% cap	Benefits taxable
69	South Dakota	SRS	Yes	3.1%	No income tax law
70	Tennessee	CRS	Yes	CPI - 3% cap	Benefits exempt
71	Texas	ERS	Yes	Ad hoc	No income tax law
72	Texas	TRS	No	Ad hoc	No income tax law
73	Texas	MRS	Yes	30%, 50% or 70% of CPI (employer option)	No income tax law
74	Utah	SRS	Yes	CPI - 4% cap	Benefits taxable
75	Vermont	SRS	Yes	50% of CPI - 5% cap	Benefits taxable
76	Vermont	TRS	Yes	50% of CPI - 5% cap	Benefits taxable
77	Virginia	SRS	Yes	CPI to 3% + 1/2 CPI 3% to 7% (5% cap)	Benefits taxable
78	Washington	PERS	Yes	CPI - 3% cap	No income tax law
79	Washington	TRS	Yes	CPI - 3% cap	No income tax law
80	West Virginia	PERS	Yes	Ad hoc	Exempt to $2,000
81	West Virginia	TRS	Yes	Ad hoc	Exempt to $2,000
82	Wyoming	WRS	Yes	CPI - 3% cap	No income tax law
83	Milwaukee	City	Yes	2% after 8 yrs. retired	Exempt for some
84	Milwaukee	County	Yes	2%	Exempt for some
85	Wisconsin	WRS	Yes	Investment earnings; reductions possible	Exempt for some

PART VI
ACTUARIAL AND ACCOUNTING INFORMATION

A. INTRODUCTION

Chart 6, on pages 36 and 37, 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 2002.

B. ACTUARIAL METHODS

The third column in Chart 6 lists the actuarial methods used by each of the 85 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.

65, or 76.4%, of the 85 plans use the entry age actuarial method; 14, or 16%, of the 85 plans use the unit credit method; 6 of the 85 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 85 plans in the report. This information is compared with previous reports on the following table:

Interest Assumption	1996 Report	2000 Report	2002 Report
From 5% to 7%	1 plan	1 plan	1 plan
Over 7% to 8%	61 plans	56 plans	56 plans
Over 8%	22 plans	27 plans	27 plans
Money purchase plans	1 plan	1 plan	1 plan
TOTAL	85 plans	85 plans	85 plans

The fourth column in Chart 6 shows that 69, or 81%, of the 85 plans have adopted an interest assumption for 2002 that is equal to or greater than 8%. For 2002, the average interest assumption is 8.05%, which is slightly more than the 2000 average of 8.02%.

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 effects of projected salary increases. The pension benefits were estimated only on service earned by employees up to the date of the estimate.

GASB statement #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 2002 Report, and compares them with the 2000 Report.

Funding Ratio	2000 Report	2002 Report
More than 100%	33 plans	28 plans
90% to 100%	22 plans	21 plans
80%, but less than 90%	14 plans	15 plans
70%, but less than 80%	5 plans	7 plans
60%, but less than 70%	1 plan	3 plans
50%, but less than 60%	1 plan	4 plans
Less than 50%	3 plans	1 plan
Aggregate funding	6 plans	6 plans
TOTAL	85 plans	85 plans

F. TRENDS

Since the 2000 Report, no changes were made in the actuarial methods used by the 85 plans. The entry age method is the predominant method used by the plans studied. Funding ratios for each of the plans in the report show that 35% of the 79 plans not using aggregate funding have funded ratios of more than 100%; 27% have funded ratios of 90% to 100%. Of these 79 plans that do not use aggregate funding, 64 (81%) have funded ratios of 80% or more.

G. THE WRS

The actuarial method used by the WRS is entry age, which is the most prevalent method used by the 85 plans in the report. The interest assumption for 2002 is 8%, which is slightly less than the average interest assumption of 8.05%. The "economic spread" used by the WRS is 3.5% which is less than the average economic spread of 3.87%.

For 2002, the funding ratio for the WRS was 97.1%, which was greater than the average funding ratio of 91.6% for the 79 plans that do not use aggregate funding.

CHART VI

ACTUARIAL AND ACCOUNTING PROVISIONS

	State	Fund Name	Actuarial Method	Interest Assumption	Wage Inflation	Economic Spread	GASB 25 Funding Ratio
1	Alabama	ERS	Entry age	8%	4.5%	3.5%	104.9%
2	Alabama	TRS	Entry age	8%	4.5%	3.5%	101.4%
3	Alaska	PERS	Unit credit	8.25%	3.5%	4.25%	75.2%
4	Alaska	TRS	Unit credit	8.25%	3.5%	4.25%	68.2%
5	Arizona	SRS	Unit credit	8%	3%	5%	106%
6	Arkansas	PERS	Entry age	8%	4.5%	3.5%	101%
7	Arkansas	TRS	Entry age	8%	4%	4%	92%
8	California	PERS	Entry age	8.25%	3.75%	4.5%	111.9%
9	California	TRS	Entry age	8%	3.5%	4.5%	98.7%
10	Colorado	PERA	Entry age	8.75%	4.5%	4.25%	98.6%
11	Connecticut	SERS	Unit credit	8.5%	N.D.*		61.6%
12	Connecticut	TRS	Entry age	8.5%	5%	3.5%	81%
13	Delaware	SEPP	Entry age	8.5%	5%	3.5%	109.6%
14	Florida	FRS	Entry age	8%	5%	3%	115%
15	Georgia	ERS	Entry age	7%	3.5%	3.5%	101.7%
16	Georgia	TRS	Entry age	7.25%	N.D.		103.9%
17	Hawaii	ERS	Entry age	8%	4%	4%	84%
18	Idaho	PERS	Entry age	8%	4.75%	3.25%	84.9%
19	Illinois	SERS	Unit credit	8.5%	3.5%	5%	53.7%
20	Illinois	TRS	Unit credit	8.5%	3.5%	4.5%	52%
21	Illinois	MRF	Entry age	7.5%	3%	4.5%	106.4%
22	Indiana	PERF	Entry age	7.25%	N.D.		105%
23	Indiana	TRF	Entry age	7.5%	5.5%	2%	54%
24	Iowa	PERS	Entry age	7.5%	4%	3.5%	93%
25	Kansas	PERS	Unit credit	8%	3.5%	4.5%	84.8%
26	Kentucky	ERS	Entry age	8.25%	6.5%	1.75%	110.7%
27	Kentucky	TRS	Unit credit	7.5%	4%	3.5%	86.6%
28	Louisiana	SERS	Unit credit	8.25%	N.D.		70.2%
29	Louisiana	TRSL	Unit credit	8.25%	4.5%	3.75%	73.9%
30	Maine	SRS	Entry age	8%	5.5%	2.5%	69.4%
31	Maryland	SRS	Entry age	8%	5%	3%	94.7%
32	Massachusetts	SERS	Entry age	8.25%	6%	2.25%	94.5%
33	Massachusetts	TRS	Entry age	8%	6%	2.25%	83.3%
34	Michigan	SERS	Entry age	8%	4%	4%	107.6%
35	Michigan	MERS	Entry age	8%	4.5%	3.5%	86.1%
36	Michigan	PSERS	Entry age	8%	4%	4%	96.5%
37	Minnesota	MSRS	Entry age	8.5%	N.D.		104.5%
38	Minnesota	PERA	Entry age	8.5%	N.D.		85%
39	Minnesota	TRA	Entry age	8.5%	N.D.		105.3%
40	Mississippi	PERS	Entry age	8%	4%	4%	83.4%

41	Missouri	SERS	Entry age	8.5%	4%	4.5%	92.5%
42	Missouri	LAGERS	Entry age	7.5%	4%	3.5%	100.4%
43	Missouri	PSRS	Entry age	8%	N.D.		95.3%
44	Montana	PERS	Entry age	8%	4.5%	3.5%	100%
45	Montana	TRS	Entry age	8%	5%	3%	83.4%
46	Nebraska	SERS		Money purchase			
47	Nebraska	TRS	Entry age-FIL	8%	N.D.		103.2%
48	Nevada	PERS	Entry age	8%	5%	3%	82.4%
49	New Hampshire	NHRS	Aggregate	9%	3.5%	5.5%	
50	New Jersey	PERS	Unit credit	8.75%	5.95%	2.8%	112.5%
51	New Jersey	TPAF	Unit credit	8.75%	5.95%	2.8%	108%
52	New Mexico	PERA	Entry age	8%	4.5%	3.5%	103.1%
53	New Mexico	ERB	Entry age	8%	3.5%	4.5%	91.6%
54	New York	ERS	Aggregate	8%	3%	5%	
55	New York	TRS	Aggregate	8%	3%	5%	99.6%
56	North Carolina	TSERS	Entry age	7.25%	N.D.		99.4%
57	North Carolina	LGERS	Entry age	7.25%	N.D.		99.2%
58	North Dakota	PERS	Entry age	8%	4.5%	3.5%	104.2%
59	North Dakota	TRF	Entry age	8%	3%	5%	91.6%
60	Ohio	PERS	Entry age	7.75%	4%	3.75%	103%
61	Ohio	STRS	Entry age	7.75%	3.5%	4.25%	77.4%
62	Oklahoma	PERS	Entry age	7.5%	3%	4.5%	79.8%
63	Oklahoma	TRS	Entry age	8%	3.5%	4.5%	51.4%
64	Oregon	PERS	Entry age	8%	4.25%	3.75%	86.7%
65	Pennsylvania	SERS	Entry age	8.5%	3%	5.5%	107.2%
66	Pennsylvania	PSERS	Entry age	8.5%	3.5%	5%	104.8%
67	Rhode Island	ERS	Entry age	8.25%	3%	5.25%	77.9%
68	South Carolina	SCRS	Entry age	7.25%	3.75%	3.5%	87.4%
69	South Dakota	SRS	Entry age	8%	N.D.		96.7%
70	Tennessee	CRS	Entry age-FIL	7.5%	N.D.		99.6%
71	Texas	ERS	Entry age	8%	4%	4%	102.5%
72	Texas	TRS	Entry age	8%	3%	5%	96.3%
73	Texas	MRS	Unit credit	8%	N.D.		84.2%
74	Utah	SRS	Entry age	8%	4.5%	3.5%	103%
75	Vermont	SRS	Entry age-FIL	8.5%	N.D.		97.4%
76	Vermont	TRS	Entry age-FIL	8.5%	N.D.		89.5%
77	Virginia	SRS	Entry age	8%	3%	5%	107.3%
78	Washington	PERS	Aggregate	8%	4.5%	3.5%	91%
79	Washington	TRS	Aggregate	8%	4.5%	3.5%	94%
80	West Virginia	PERS	Entry age	8%	3.5%	4.5%	75.4%
81	West Virginia	TRS	Entry age	8%	3.5%	4.5%	21%
82	Wyoming	WRS	Entry age	8%	5%	3%	92.2%
83	Milwaukee	City	Unit credit	8.5%	3.5%	4%	137.2%
84	Milwaukee	County	Entry age	9%	5.5%	3.5%	93.8%
85	Wisconsin	WRS	Entry age-FIL	8%	4.5%	3.5%	97.1%

*N.D. = Not defined.