RRC-SR-83

STATE OF WISCONSIN

RETIREMENT RESEARCH COMMITTEE

STAFF REPORT NO. 83

2000 COMPARATIVE STUDY OF

MAJOR PUBLIC EMPLOYEE RETIREMENT SYSTEMS

Prepared by:

Wisconsin
Legislative Council

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

Retirement Research Committee
Room 316 - 110 E. Main Street
Madison, WI 53703
(608) 267-0507

STATE OF WISCONSIN

RETIREMENT RESEARCH COMMITTEE

STAFF REPORT NO. 83

2000 COMPARATIVE STUDY OF MAJOR PUBLIC EMPLOYEE RETIREMENT SYSTEMS

TABLE OF CONTENTS

I. SURVEY OF STATEWIDE PLANS

Pension System Descriptions — Pages 1 & 2

Chart I - Public Retirement Systems Surveyed — Pages 3 & 4

II. NORMAL AND EARLY RETIREMENT PROVISIONS

Age and Service Requirements — Pages 5 & 6

Chart II - Normal and Early Retirement Requirements — Pages 7 & 8

III. CONTRIBUTION AND VESTING REQUIREMENTS

Descriptions — Pages 9 & 10

Chart III - Contribution and Vesting Requirements — Pages 11 & 12

IV. RETIREMENT BENEFIT CALCULATIONS

Calculation Provisions — Pages 13 & 14

Chart IV - Final Average Salary Periods-Formulas-Limitations — Pages 15 & 16

V. POST-RETIREMENT ADJUSTMENTS AND TAXES

COLAs and State Taxes — Pages 17 & 18

Chart V - Post-Retirement Increases and State Tax Provisions — Pages 19 & 20

VI. ACTUARIAL AND ACCOUNTING INFORMATION

Information Description — Pages 21 & 22

Chart VI - Actuarial and Accounting Provisions — Pages 23 & 24

I. SURVEY OF STATEWIDE PLANS

Pension System Descriptions

Survey. Since 1982, the Wisconsin Retirement Research Committee (RRC) staff has compared major statewide public employee retirement systems across the country with public pension plans in Wisconsin. These studies have emphasized retirement programs for general employees and teachers. The Wisconsin plans included in the studies are the Wisconsin Retirement System (WRS), the Milwaukee City ERS and the Milwaukee County ERS.

The 2000 comparative study includes 85 public pension plans, which are the same systems that are found in previous studies since 1982. Although this study does not include all major public pension plans, it does include one or more statewide plans from each state. Also, because the same pension plans are always included, the biennial studies may reflect trends in the public pension sector as they occur over time.

Data. The Wisconsin RRC files on public plans across the country include annual reports, employee handbooks, statutes, actuarial reports, and related materials. For most of the plans in the 2000 study, information is current through 1999, although a number of plans have submitted more current data, which has been included. Data in this report may also reflect other sources of information published by the Public Pension Coordinating Council, the National Conference of State Legislatures and the American Association of Retired Persons.

Coverage. The types of employees covered by the plan in this study are designated on Chart I found on pages 3 and 4 of this report as "**S**"=state; "**L**"=local; and "**T**"=teachers. The 85 plans surveyed are categorized in the following table.

Employee Coverage	Plan	Employee Coverage	Plans
State Employees Only	11 plans	State and Local	16 plans
Teachers (& School) Only	27 plans	State and Teacher	3 plans
Local employees Only	8 plans	State, Local & Tchr.	20 plans

Participation. The 85 plans in the 2000 study provide pension coverage for 10,940,985 active employees and 4,337,227 retirees and beneficiaries, for a total of 15,278,212 participants. This total is 10% greater than the 13,891,069 participants in the 1996 study. The number of active participants has grown between the 1996 and the 2000 studies by 8.1%, while the number of retirees has grown by 15.0% in the same time period.

Chart I also shows the ratio of actives to retirees for the 85 systems surveyed. For 74 (87.1%) of the systems, the ratio of actives to retired declined over the four-year period. The average ratio of all systems was 2.89 in the 1996 survey and is 2.52 in 2000. Seventeen of the systems (including Milwaukee City and County) have an actives to retirees ratio of less than two. In 1996, eight systems had a ratio of less than two.

Systems Size. The systems in the 2000 study range in size from the Milwaukee County Plan with 6,286 active participants to Texas's TRS with 766,906 active participants. The sizes of the systems are reflected in the following table.

Active Employees	1996 Study	2000 Study
Less than 50,000	26 funds	27 funds
50,000 - 100,000	25 funds	23 funds
100,000 - 150,000	13 funds	10 funds
150,000 - 200,000	9 funds	12 funds
Over 200,000	12 funds	13 funds
Total	85 funds	85 funds

Social Security. Coverage under the federal social security program was once elective for public employers, but it is now mandatory for those employers who had elected such coverage. Of the 85 plans included in the 2000 study, social security coverage is also provided for participants of 68 of the systems. Of the 17 plans which do not provide social security coverage, ten represent pension plans covering teachers only. The 17 plans in this study without social security coverage include 2,692,588 active employees, or 24.6% of the total active employees in this survey.

Trends. Chart I reflects a continued growth in the total number of participants in the plans surveyed. All plans, except one, had a growth in the number of retirees, and 77.6% of the plans had a growth in active participants. However, the number of retirees is growing at a faster rate than active employees, and this is reflected in declining ratios of active to retired participants for the plans surveyed.

There has been no change in the social security coverage for the plans in the study.

CHART I

PUBLIC RETIREMENT SYSTEMS SURVEYED

	State	Fund Name	Employee Coverage	Active Employees	Beneficiaries & Annuitants	Ratio[1]	S.S. Coverage
1.	Alab.	ERS	S,L	72,881+	25,593+	2.85	Yes
2.	Alab.	TRS	T	128,046+	44,638+	2.87	Yes
3.	Alas.	PERS*	S,L	32,214+	14,185+	2.27	No
4.	Alas.	TRS*	T	9,396-	6,486+	1.45	No
5.	Ariz.	SRS	S.L,T	183,924+	58,784+	3.13	Yes
6.	Arka.	PERS	S,L	42,921+	14,688+	2.92	Yes
7.	Arka.	TRS*	T	59,499+	15,887+	3.75	Yes
8.	Calif.	PERS*	S,L	681,155+	343,341+	1.98+	Yes
9.	Calif.	TRS	T	402,220+	161,457+	2.49+	No
10.	Colo.	PERA	S,L,T	169,382+	54,889+	3.09	No
11.	Conn.	SERS*	S	51,383-	31,631+	1.62	Yes
12.	Conn.	TRS	T	46,553+	20,724+	2.25	No
13.	Dela.	SEPP	S,T	31,740+	15,199+	2.08	Yes
14.	Flor.	FRS	S,L,T	591,916+	190,243+	3.11	Yes
15.	Geor.	ERS	S	73,009-	23,126+	3.16	Yes
16.	Geor.	TRS	T	186,822+	43,731+	4.27	Yes
17.	Hawaii	ERS*	S,L,T	59,191+	28,715+	2.06	Yes
18.	Idaho	PERS	S,L,T	60,388+	22,456+	2.69	Yes
19.	Ill.	SERS	S	80,676+	42,094+	1.92	Yes
20.	Ill.	TRS	T	144,975+	62,122+	2.33+	No
21.	Ill.	MRF*	L	153,910+	69,130+	2.23+	Yes
22.	Ind.	PERF	S,L	141,441+	47,954+	2.95	Yes
23.	Ind.	TRF	T	77,745-	32,048+	2.43	Yes
24.	Iowa	PERS	S,L,T	154,612+	66,681+	2.44	Yes
25.	Kans.	PERS	S,L,T	132,192-	48,713+	2.71	Yes
26.	Kent.	ERS*	S,L	132,337+	46,874+	2.82	Yes
27.	Kent.	TRS	T	52,620-	30,612+	1.72	No
28.	Louis.	SERS	S	66,642-	30,197+	2.21	No
29.	Louis.	TRSL	T	87,361+	49,976+	1.75	No
30.	Maine	SRS	S,L,T	49,862+	27,259+	1.83	No
31.	Mary.	SRPS*	S,L,T	179,586+	80,773+	2.22	Yes
32.	Mass.	SERS	S	85,572+	43,737+	1.96+	No
33.	Mass.	TRS	T	82,242+	31,746+	2.59+	No
34.	Mich.	SERS	S	49,612+	36,346+	1.36	Yes
35.	Mich.	MERS*	L	38,156+	15,325+	2.49	Yes
36.	Mich.	PSERS	T	309,324+	120,913+	2.56	Yes
37.	Minn.	MSRS*	S	47,920-	19,301+	2.48	Yes
38.	Minn.	PERA*	L	137,528+	45,259+	3.04	Yes
39.	Minn.	TRA*	T	70,508+	31,046+	2.21	Yes
40.	Miss.	PERS	S,L,T	148,611+	48,766+	3.05	Yes
41.	Mou.	SERS	S	58,201+	18,582+	3.13	Yes
42.	Mou.	LAGERS*	L	28,490+	8,790+	3.08	Yes
43.	Mou.	PSRS	T	70,092+	25,746+	2.72	No
44.	Mont.	PERS	S,L	28,662+	13,238+	2.17	Yes
45.	Mont.	TRS	T	18,287+	8,358+	2.19	Yes

(Coverage: S - State; L - Local; T - Teachers)
(Fund Name* = more than one plan or tier)
("+" or "-" = higher or lower than 1996 Report)

[1]All ratios of active employees to beneficiaries and annuitants have decreased since 1996, except as indicated by "+".

CHART I

PUBLIC RETIREMENT SYSTEMS SURVEYED

	State	Fund Name	Employee Coverage	Active Employees	Beneficiaries & Annuitants	Ratio[1]	S.S. Coverage
46.	Nebra.	SERS*	S,L	18,782+	4,075-	4.61+[2]	Yes
47.	Nebra.	TRS	T, Sch.	34,047+	9,911+	3.44	Yes
48.	Nevada	PERS*	S,L,T	77,252+	21,022+	3.67	No
49.	N.H.	NHRS	S,L,T	43,492+	14,367+	3.03	Yes
50.	N.J.	PERS*	S,L	240,388-	101,032+	2.38	Yes
51.	N.J.	TPAF*	T	122,408+	51,191+	2.39	Yes
52.	N.M.	PERA*	S,L	53,941+	16,708+	3.23	Yes
53.	N.M.	ERA	T	60,090+	21,186+	2.84	Yes
54.	N.Y.	ERS*	S,L	494,545-	270,333+	1.83	Yes
55.	N.Y.	TRS*	T	224,986+	100,839+	2.23	Yes
56.	N.C.	TSERS	S,T	278,558+	97,820+	2.85	Yes
57.	N.C.	LGERS	L	108,904+	26,975+	4.04	Yes
58.	N.D.	PERS	S,L	16,375+	4,879+	3.36	Yes
59.	N.D.	TRF	T	10,025+	4,827+	2.20+	Yes
60.	Ohio	PERS	S,L	360,532+	129,656+	2.78	No
61.	Ohio	STRS	T	191,868+	95,796+	2.00	No
62.	Okla.	PERS	S,L	44,116-	19,663+	2.24	Yes
63.	Okla.	TRS	T	81,851+	33,033+	2.48	Yes
64.	Oreg.	PERS	S,L,T	154,609+	79,749+	1.94	Yes
65.	Penn.	SERS	S	108,035-	88,043+	1.23	Yes
66.	Penn.	PSERS	T	223,495+	132,869+	1.68	Yes
67.	R.I.	ERS	S,T	25,998+	14,808+	1.76	Yes
68.	S.C.	SCRS*	S,L,T	193,213+	63,636+	3.04	Yes
69.	S.D.	SRS	S,L,T	34,180+	14,928+	2.29	Yes
70.	Tenn.	CRS	S,L,T	189,592+	71,812+	2.64	Yes
71.	Texas	ERS	S	152,167-	47,310+	3.22	Yes
72.	Texas	TRS	T	766,906+	179,393+	4.28	No
73.	Texas	MRS*	L	82,846+	18,377+	4.51	Yes
74.	Utah	SRS*	S,L,T	93,450-	28,235+	3.31	Yes
75.	Verm.	SRS*	S	7,058-	3,394+	2.08	Yes
76.	Verm.	TRS*	T	10,006-	3,485+	2.87	Yes
77.	Virg.	SRS*	S,L,T	286,597+	90,246+	3.18	Yes
78.	Wash.	PERS	S,L	191,840+	57,633+	3.33+	Yes
79.	Wash.	TRS	T	64,079+	31,828+	2.01	Yes
80.	W.V.	PERS	S,L	39,123-	17,975+	2.18+	Yes
81.	W.V.	TRS*	T	42,878-	23,478+	1.83	Yes
82.	Wyom.	WRS*	S,L,T	32,574+	13,578+	2.40	Yes
83.	Milw.	City	L	13,790-	9,434+	1.46	Yes
84.	Milw.	County*	L	6,286+	6,527+	.96+	Yes
85.	Wis.	WRS	S,L,T	250,299+	102,817+	2.43	Yes
	Totals:	(85 Funds)		10,940,985	4,337,227	2.52	

[1]All ratios of active employees to beneficiaries and annuitants have decreasesd since 1996, except as indicated by "+".

[2]Ratio affected by lump sum option that allows retirees to "roll-over" retirement fund balances to other plans.

II. NORMAL AND EARLY RETIREMENT PROVISIONS

Age and Service Requirements

Normal Retirement. Nearly all of the plans in this study are defined benefit plans in which the benefits are calculated by a formula and payable when the normal retirement requirements have been met. Most plans require a minimum age or years of service, or both, in order to qualify for normal retirement (benefits payable without actuarial discount). Most plans in this study have adopted multiple combinations of age and service that qualify for full benefits without actuarial discount. These requirements are reflected in Chart II found on pages 7 and 8 of this report.

Social Security Normal. The normal retirement age under social security is 65, but this age is scheduled to increase to 66 and 67 over time. Most of the plans in this study allow normal retirement at 65 or earlier with some minimum years of service. The three Minnesota plans are the only plans in this study which provide that the normal retirement age shall keep pace with the social security normal retirement age as it gradually increases in the future to age 67 by 2027.

Age 62 Normal. Age 62 is the earliest age at which social security benefits are payable, but with an actuarial discount reflecting the longer pay-out period. This study shows that 57 of the 85 systems permit normal retirement at 62 or earlier, with 10 or less years of service. Of the plans in this study, 81 permit normal retirement at age 62 or earlier, with long service, and only 4 systems are restricted to the age 65 normal retirement without an earlier "normal retirement" option. The most common normal retirement of the plans in this study is age 60 with from any to 30 years of service.

"X" Years and Out. Many public retirement systems have adopted "X years and out" provisions which allow participants to retire at any age (or a minimum age) after "X" years of service. The most common provision is 30 years of service (combined with a minimum age of 55. Of the 85 plans included in this study, 63 (74.1%) have an "X years and out" provision. The total number of plans with "X years and out" provisions has increased by four during the past four years, as noted in the following table.

	1996 Study	2000 Study
35 years/55 or any age	7 plans	8 plans
30 years/55 or any age	34 plans	32 plans
28 years/55 or any age	2 plans	3 plans
27 years/55 or any age	2 plans	2 plans
25 years/55 or any age	13 plans	14 plans
20 years/55 or any age	1 plan	4 plans
Total*	59 plans	63 plans

(*Some plans have more than one "X years and out" provision)

Also, 4 more plans permit normal retirement at 55 with from any to 10 years of service.

"Rule of Y". In addition to the "X years and out" provisions, some plans in the study have adopted a "rule" which permits normal retirement when age plus years of service equals a specified number. Plans with "rule" provisions have increased by five over the last four years, as noted in the following table.

	1996 Study	2000 Study
Rule of 90	4 plans	5 plans
Rule of 88	1 plan	1 plan
Rule of 85	3 plans	5 plans
Rule of 80	4 plans	6 plans
Rule of 75	1 plan	1 plan
Total	13 plans	18 plans

In addition, six states have qualified "rules": 2 rules of 80 with a minimum age of 55; 3 rules of 85 with a minimum age of 55; and 1 rule of 75 with a minimum age of 60.

Early Retirement. Ninety percent of the plans in the 2000 study permit retirement before the normal age and service requirements have been met, but subject to actuarial discount. The most common age for allowing early retirement is age 55 with some minimum service, followed by age 50. There has been little change in the last five comparative studies relative to early retirement. Nine plans do not provide early retirement; all allow normal retirement at age 60 or less with long service.

Actuarial Discount. The actuarial discount applied for early retirement is intended to compensate for some or all of the longer pay-out period. Some systems use a reduction table based upon age which reflects the "actuarial adjustment" that is required to compensate the system for the longer pay-out period. Most plans, however, use a specified percent reduction for each year under normal.

The actuarial discount requirements have undergone little change over the last six years as noted in the following table:

	1996 Study	2000 Study
Plans using discount rates less than 3%	0 plans	1 plan
Plans using discount rates of 3% to 5.9%	20 plans	16 plans
Plans using discount rates of 6% or more	18 plans	20 plans
Plans that vary discount rate on serv. or age	18 plans	18 plans
Plans that use an actuarial discount table	16 plans	17 plans
Plans that change formula multiplier by age	4 plans	2 plans
Plans that are money purchase	2 plans	2 plans
Plans that do not provide early retirement	7 plans	9 plans

Trends. The 2000 study indicates a resumption of a trend noted in previous studies to permit normal retirement at earlier ages -- particularly for career employees with long service. Since the 1996 study, 35 plans have reduced their normal retirement provisions by reducing the minimum age or the number of years of service required, or both.

CHART II
NORMAL AND EARLY RETIREMENT REQUIREMENTS

	State	Fund Name	Coverage	Normal Retirement (Age/Yrs.)	Early Retirment (Age/Yrs.)	Reduction
1.	Alab.	ERS	S,L	60/10; Any/25	None	--
2.	Alab.	TRS	T	60/10; Any/25	None	--
3.	Alas.	PERS	S,L	60/5; Any/30	55/5	6%@ year
4.	Alas.	TRS	T	60/8; Any/20	55/8	Table
5.	Ariz.	SRS	S,L,T	65; 62/10; R80	50/5	Table
6.	Arkan.	PERS	S,L	65/5; Any/28; 55/35	55/5	6% @ year
7.	Arkan.	TRS	T	60/5; Any/28	Any/25	6% @ year
8.	Calif.	PERS	S,L	60/5	50/5	Multiplier varies
9.	Calif.	TRS	T	50/30	55/5	3% to 6% @ year
10.	Colo.	PERA	S,L,T	65/5; 50/30; 55/R80	50/25; 55/20; 60/5	6%; 3%; 4%
11.	Conn.	SERS	S	62/10; 60/25; 70/5	55/10	3% @ year
12.	Conn.	TRS	T	60/20; Any/35	Any/25; 55/20; 60/10	Table
13.	Dela.	SEPP	S,T	62/5; 60/15; Any/30[1]	55/15; Any/25	2.4% year
14.	Flor.	FRS	S,L,T	62/10; Any/25	Any/10	5% year
15.	Geor.	ERS	S	65/10; Any/30	60/10; Any/25	7% year
16.	Geor.	TRS	T	60/10; Any/30	Any/25	7% year
17.	Hawaii	ERS	S,L,T	62/10; 55/30	55/20	6% year
18.	Idaho	PERS	S,L,T	65/5	55/5;R90	3% year; 5.75%
19.	Ill.	SERS	S	60/8; Any/35; R85	55/25	6% year
20.	Ill.	TRS	T	62/5; 60/10; 55/35	55/20	6% year
21.	Ill.	MRF	L	60/8; Any/35	55/8	3% @ year
22.	Ind.	PERF	S,L	65/10; 60/15; 55/R85	50/15	Table
23.	Ind.	TRF	T	65/10; 60/15; 55/R85	50/15	1.2%/5% @ year
24.	Iowa	PERS	S,L,T	65; 62/20; R88	55/4	3% @ year
25.	Kans.	PERS	S,L,T	65, 62/10; R85	55/10	2.4%/7.27% @ year
26.	Kent.	ERS	S,L	65/4; Any/27	55/5; Any/25	5%/4% @ year
27.	Kent.	TRS	T	55/5; Any/27	55/5	5% @ year
28.	Louis.	SERS	S	60/10; 55/25; Any/30	50/10; Any/20	Table
29.	Louis.	TRSL	T	60/10; 55/25; Any/30	60/10; Any/20	Multiplier varies
30.	Maine	SRS	S,L,T	60/10; Any/25	None	--
31.	Mary.	SRS	S,L,T	62/5 to 65/2; Any/30	55/15	6% @ year; max 42%
32.	Mass.	SERS	S,L	55/10; Any/20	None	--
33.	Mass.	TRS	T	55/10; Any/20	None	--
34.	Mich.	SERS	S	60/10; 55/30	55/15	6% @ year
35.	Mich.	MERS	L	60/10[2]	50/25; 55/15	6% @ year
36.	Mich.	PSERS	T	60/10; 55/30; Any/30[3]	55/15	6% @ year
37.	Minn.	MSRS	S	Soc. Sec. Normal, R90	55/3	Table
38.	Minn.	PERA	L	Soc. Sec. Normal, R90	55/3	3%; 4-6% @ year
39.	Minn.	TRA	T	Soc. Sec. Normal, R90	55/3	3%; 4-5.5% @ year
40.	Miss.	PERA	S,L,T	60/4; Any/25	None	--
41.	Mou.	SERS	S	62/5; R80	57/5	6% @ year
42.	Mou.	LAGERS	L	60/5; R80 option	55/5	6% @ year
43.	Mou.	PSRS	T	60/5; R80; 55/25; Any/30	55/5	Table
44.	Mont.	PERS	S,L	65/Any; 60/5; Any/30	50/5, Any/25	Table
45.	Mont.	TRS	T	60/5; Any/25	50/5	6%; 3.6% @ year

(x/y) = Age/Service

[1]Any/28 for retirements on or after January 1, 2001.
[2]Municipality may elect: 60/8; 60/6; 55/15, 20, 25, 30; 50/25 or 30; Any/21 to 30.
[3]Any/30 is for MIP members only.

CHART II
NORMAL AND EARLY RETIREMENT REQUIREMENTS

	State	Fund Name	Coverage	Normal Retirement (Age/Years)	Early Retirement (Age/Yrs.)	Reduction
46.	Nebr.	SERS	S	55	--	Money Purchase
47.	Nebr.	TRS	T, Sch	65/5	60/5; Any/35; 55 (R80)	3% @ year
48.	Nevada	PERS	S,L,T	65/5; 60/10; Any/30	Any/5	4% @ year
49.	N.H.	NHRS	S,L,T	60/Any	50/10; R70/20	1.5%; 3%; 4%; 6.67% @ year
50.	N.J.	PERS	S,L	60/Any	55/25	3% @ year
51.	N.J.	TRS	T	60/Any	55/25	3% @ year
52.	N.M.	PERA	S,L	65/5 to 60/20; Any/25[4]	None	--
53.	N.M.	ERA	T	65/5; Any/25; 60/R75	R75	2.4%/7.2% @ year
54.	N.Y.	ERS	S,L	62/5; 55/30	55/5	6%/3% @ year
55.	N.Y.	TRS	T	62/5; 55/30	55/5	6%/3% @ year
56.	N.C.	TSERS	S,T	65/5; 60/25; Any/30	60/5; 50/20	3% @ year
57.	N.C.	LGERS	L	65/5; 60/25; Any/30	60/5; 50/20	5%/3% @ year
58.	N.D.	PERS	S,L	65/Any; R85	55/3	6% @ year
59.	N.D.	TRF	T	65/3; R85	55/3	6% @ 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.	Okla.	PERS	S,L	62/6; R90	55/10	Table
63.	Okla.	TRS	T	62/10; R90	55/10; Any/30	Table
64.	Oreg.	PERS	S,L,T	58/Any	55; Any/30	8% @ year
65.	Penn.	SERS	S	60/3; Any/35	Any/10	Table
66.	Penn.	PSERS	T	62 (1); 60/30; Any/35	55/25	3% @ year
67.	R.I.	ERS	S,T	60/10; Any/28	None	--
68.	S.C.	SCRS	S,L,T	65/Any; Any/30	60; 55/25	5%; 4% @ year
69.	S.D.	SRS	S,L,T	65/3; 55/R85	55/3	3% @ year
70.	Tenn.	CRS	S,L,T	60/5; Any/30	55/10; Any/25	4.8% @ 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% @ year
75.	Vert.	SRS	S	62/Any; Any/30	55/5	6% @ year
76.	Vert.	TRS	T	62/Any; Any/30	55/10	6% @ year
77.	Virg.	SRS	S,L,T	65/5; 50/30	50/10; 55/5	7.2%; 6%; 4.8% @ year
78.	Wash.	PERS	S,L	65/5	55/20	Table
79.	Wash.	TRS	T	65/5	55/20	Table
80.	W.V.	PERS	S,L	60/5; 55/R80	55/10, Any/30	6% @ year
81.	W.V.	TRS	T	60/5; 55/30; Any/35	Any/30	Act. Red.
82.	Wyom.	WRS	S,L,T	60/Any; R85	50/4; Any/25	5% @ year
83.	Milw.	City	L	60/Any; 55/30	55/15	Table
84.	Milw.	County	L	60/Any; 55/30; R75	55/15	5% @ year
85.	Wis.	WRS	S,L,T	65/Any; 57/30	55	Varies by Service

(x/y)= Age/Service

[4]Also 61/17; 62/14; 63/11; 64/8.

III. CONTRIBUTION AND VESTING REQUIREMENTS

Descriptions

Vesting. The term "vesting" relates to an employee's right, after satisfying some minimum service requirement, to receive a pension benefit regardless of whether the employee remains in covered employment. The vesting requirements for the plans included in the 2000 study are found in Chart III on pages 11 and 12. The changes in requirements for vesting over a four-year period are shown in the following table.

	1996 Study	2000 Study
Vesting immediate	1 plan	2 plans
Vesting after 3 years	3 plans	6 plans
Vesting after 4 years	5 plans	5 plans
Vesting after 5 years	38 plans	42 plans
Vesting after 8 years	4 plans	4 plans
Vesting after 10 years	30 plans	25 plans
Graded or varying	4 plans	1 plan
Total	85 plans	85 plans

Over 64% of the plans now require five or less years of service to vest, an increase of eight plans (9.4%) since 1996. The trend appears to be towards five-year vesting or shorter, perhaps reflecting federal vesting requirements that apply to private sector pension plans. The current 25 plans (29.4%) that still require 10 or more years to vest represents a reduction of 5 from 1996 and of 11 from 1990.

Employee Contributions. Major corporations usually provide pension plans that are non-contributory relative to their primary plan, but often also provide a supplemental profit-sharing or savings plan which permits employee contributions with some employer matching. In contrast, most public employee pension plans require employee contributions for the primary pension, and any secondary savings plan such as a 457 deferred compensation plan is usually funded only from employee contributions.

The 2000 study of employee contribution requirements expressed as a percent of payroll is found in Chart III. The requirements are compared with the 1996 survey in the following table.

Employee Contributions	1996 Study	2000 Study
Employee rate of 0 - 5%	30 plans	34 plans
Employee rate over 5%	38 plans	35 plans
Rate varies by age or group	6 plans	6 plans
Plan is non-contributory	11 plans	10 plans
Total	85 plans	85 plans

This summary reflects little change over the four years in the plan that are non-contributory; the plan is by design financed only by employer contributions in a manner similar to the private sector. This may indicate that "pick-up" arrangements achieve most of the advantages of adopting a non-contributory status.

Employer "Pick-Up". Internal Revenue Code 414(h) provisions authorize employers to "pick-up" the employee contributions or employees may continue to make contributions but on a tax-sheltered basis. Under both approaches, "take-home" pay is greater because of federal/state tax-sheltering.

The 1986 comparative study noted that 37 plans had adopted 414(h) provisions. By 1996, nearly all of the contributory plans had done so, thus there has been little change during the past four years. The 2000 study shows that nearly all of the 75 contributory systems have adopted 414(h) provisions, presumably reflecting perceived advantages of tax-sheltering by both employees and employers. This study also shows whether payments are actually made by the employer or employee.

Employer Contributions. As noted in previous studies, the employer contribution information found in Chart III is perhaps of less reliability than other information found in this report. Employer contributions are often stated in annual reports as dollars rather than as a percent of payroll. Also, employer costs often vary significantly from year to year and from one covered group to another. In addition, employer costs may be paid from several sources such as school districts and the state, or from several separate appropriations. Lastly, employer costs are often designated under several categories reflecting normal cost, amortization, administrative costs, unfunded post-retirement increases. This study uses contribution rates specified in actuaries' reports and separates medical and other non-pension costs from the costs reported.

The employer contribution information found in Chart III are intended to reflect actual contributions made by the employer. Some of the plans in this study received employer contributions at rates less than those determined by actuarial valuation as necessary to fully fund accruing benefits and to amortize unfunded accrued liabilities over a specified time period.

Trends. The trend in vesting is towards five years or shorter, although over 29% of the plans still require 10 years to vest. Employee contribution rates have been relatively stable over the four-year period from 1996-2000. Most of the contributory plans have adopted IRC 414(h) provisions to give the advantages of tax-sheltering.

Employer contribution rates fluctuated considerably between the 1996 and 2000 surveys. These fluctuations may reflect favorable investment returns, changes in the economic actuarial assumptions that are noted in Section VI of this report, employer contribution delays or "holidays" in some plans, and benefit changes in others.

CHART III

CONTRIBUTION AND VESTING REQUIREMENTS

	State	Fund	Soc. Sec.	Employee Contribution	IRC 414 (h)	Total Employer Contribution (State/Local)	Vesting Period)
1.	Alab.	ERS	Yes	5%	*ER	4.08%	10 yrs.
2.	Alab.	TRS	Yes	5%	*ER	6.38%	10 yrs.
3.	Alas.	PERS	No	6.75%	*EE	6.56%	5 yrs.
4.	Alas.	TRS	No	8.65%	*EE	10.55%	8 yrs.
5.	Ariz.	SRS	Yes	2.17%	*EE	2.17%	Immediate
6.	Arka.	PERS	Yes	Non-Contributory	-	10%/6%	5 yrs.
7.	Arka.	TRS	Yes	Non-Contributory	-	12%	10 yrs.
8.	Calif.	PERS	Yes	5%/Non-Contributory[1]	-	1.49/0%	5/10 yrs.
9.	Calif.	TRS	No	7%[2]	*ER	0%	5 yrs.
10.	Colo.	PERA	No	8%	*EE	9.3%	5 yrs.
11.	Conn.	SERS	Yes	Non-Contributory	-	13.65%	5 yrs.
12.	Conn.	TRS	No	6%	*	7.64%	10 yrs.
13.	Dela.	SEPP	Yes	3% above $6,000	*EE	1.67%	5 yrs.
14.	Flor.	FRS	Yes	Non-Contributory	-	9.21%	10 yrs.
15.	Geor.	ERS	Yes	1.25%	*ER	14.50%	10 yrs.
16.	Geor.	TRS	Yes	5%	*EE	11.29%	10 yrs.
17.	Hawaii	ERS	Yes	Non-Contributory	-	.98%	10 yrs.
18.	Idaho	PERS	Yes	5.86%	*EE	9.77%	5 yrs.
19.	Ill.	SERS	Yes	4%	*ER	10.1%	8 yrs.
20.	Ill.	TRS	No	9%	*ER	11.66%	5 yrs.
21.	Ill.	MRF	Yes	4.5%	*EE	8.16%	8 yrs.
22.	Ind.	PERF	Yes	3%	*ER	5.0%	10 yrs.
23.	Ind.	TRF	Yes	3%	*ER	9.28%	10 yrs.
24.	Iowa	PERS	Yes	3.7%	*EE	5.75%	4 yrs.
25.	Kans.	PERS	Yes	4%	*ER	5.4%/3.28%	10 yrs.
26.	Kent.	ERS	Yes	5%	*ER	1.56%/2.37%	5 yrs.
27.	Kent.	TRS	No	9.105%	*ER	9.105%	5 yrs.
28.	Louis.	SERS	No	7.5%	*EE	11.9%	10 yrs.
29.	Louis.	TRSL	No	8%	*ER	14.2%	10 yrs.
30.	Maine	SRS	No	7.65%	*ER	16.0%	5 yrs.
31.	Mary.	SRS	Yes	2%/5% over S.S. base	*	7.98%	5 yrs.
32.	Mass.	SERS	No	5-9% + 2% above $30,000	-	16.0%	10 yrs.
33.	Mass.	TRS	No	8%	-	16.0%	5 yrs.
34.	Mich.	SERS	Yes	Non-Contributory	-	5.46%	10 yrs.
35.	Mich.	MERS	Yes	Varies by Plan	*	Varies by Plan	6, 8 or 10 yrs.
36.	Mich.	PSERS	Yes	0; 3.9%; or 3-4.3%	*EE	6.63%	10 yrs.
37.	Minn.	MSRS	Yes	4%	*EE	4%	3 yrs.
38.	Minn.	PERA	Yes	8.75%/4.75%	*EE	11.43%/5.18%[3]	3 yrs.
39.	Minn.	TRA	Yes	5%	*EE	5%	3 yrs.
40.	Miss.	PERS	Yes	7.25%	*EE	9.75%	4 yrs.
41.	Mou.	SERS	Yes	Non-Contributory	-	11.59%	5 years
42.	Mou.	LAGERS	Yes	0%-4%	*ER	Varies by Plan	5 years
43.	Mou.	PSRS	No	10.5%	*EE	10.5%	5 years
44.	Mont.	PERS	Yes	6.9%	*EE	6.9%	5 years
45.	Mont.	TRS	Yes	7.044%	*EE	7.47%	5 years

(* = IRC 414 (h)(2) provisions: EE = employee paid; ER = employer paid)
(%/% = state vs. local rates)

[1] On monthly compensation above $513.
[2] For employees covered by social security, 7% on monthly compensation above $133.33.
[3] Basic/coordinated plan rates.

CHART III
CONTRIBUTION AND VESTING REQUIREMENTS

	State	Fund	Soc. Sec.	Employee Contribution	IRC 414 (h)	Employer Contributions (State/Local)	Vesting Period
46.	Nebra.	SERS	Yes	4.3%	*EE	156% of EE Rate	5 years
47.	Nebra.	TERS	Yes	7.73%	*EE	7.32%	5 years
48.	Nevada	PERS	No	0%/9.75%[3]	--	18.75%/9	5 years
49.	N.H.	NHRS	Yes	5%	*EE	3.86%/4.05%	10 years
50.	N.J.	PERS	Yes	3%	*EE	0%/0%	10 years
51.	N.J.	TPAF	Yes	4.5%	*EE	0%/0%	10 years
52.	N.M.	PERA	Yes	7.42%/7%-15.65%	*ER	16.59%/7%-11.65%	5 years
53.	N.M.	ERA	Yes	7.6%	*ER	8.65%	5 years
54.	N.Y.	ERS	Yes	3%[4]	*EE	.9%	5 years
55.	N.Y.	TRS	Yes	3%[4]	*EE	.43%	5 years
56.	N.C.	TSERS	Yes	6%	*EE	8.15%	5 years
57.	N.C.	LGERS	Yes	6%	*EE	4.8% + UAAL	5 years
58.	N.D.	PERS	Yes	4%	*ER	4.12%	3 years
59.	N.D.	TRF	Yes	7.75%	*ER	7.75%	3 years
60.	Ohio	PERS	No	8.5%	*ER	9.01%/9.25%	5 years
61.	Ohio	STRS	No	9.3%	*ER	14%	5 years
62.	Okla.	PERS	Yes	3% to 3.5%	*ER	10%	8 years
63.	Okla.	TRS	Yes	7%	*ER	5.8%	10 years
64.	Oreg.	PERS	Yes	6%	*ER	7.39%/7.055%[5]	5 years
65.	Penn.	SERS	Yes	5%	*EE	1.39%	10 years
66.	Penn.	PSERS	Yes	5.77%	*EE	1.64%	10 years
67.	R.I.	ERS	Yes	8.75% [9.5% teachers]	*ER	5.16%/6.85%	10 years
68.	S.C.	SCRS	Yes	6%	*EE	7.70%	5 years
69.	S.D.	SRS	Yes	5%	*EE	5%	3 years
70.	Tenn.	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%	10 years
74.	Utah	SRS	Yes	Non-Contributory	-	14.16%/10.74%	4 years
75.	Vert.	SRS	Yes	2.75%	*ER	1.22%	5 years
76.	Vert.	TRS	Yes	3.4%	*ER	2.72%	5 years
77.	Virg.	SRS	Yes	5%	*ER	5.22%/7.84%	5 years
78.	Wash.	PERS	Yes	4.65%	*EE	6%	5 years
79.	Wash.	TRS	Yes	6.03%	*EE	11.93%	5 years
80.	W.V.	PERS	Yes	4.5%	*ER	5.8%	5 years
81.	W.V.	TRS	Yes	6%	*	17.95%	5 years
82.	Wyom.	WRS	Yes	5.57%	*ER	5.68%	4 years
83.	Milw.	City	Yes	5.5%	*ER	0.68%	4 years
84.	Milw.	County	Yes	Non-Contributory	-	1.3%	10 years
85.	Wis.	WRS	Yes	5%	*ER	4%	Immediate

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

[3]Employer-pay/employee-employer pay.
[4]Tier 3 and 4 members only, for first 10 years.
[5]Schools (9.28%.

IV. RETIREMENT BENEFIT CALCULATIONS

Calculation Provisions

Benefit Formulas. Chart IV on pages 15 and 16 shows current benefit formulas of the plans surveyed. The formulas represent those applying to ***general employees*** and ***teachers***, and may not apply to elected officials, protective employees and others who may have higher multipliers and earlier normal retirement. As Chart IV indicates, 83 of the plans are defined benefit plans in which benefits are calculated by one or more formulas. Typically,

- Multiplier x years of service x final average salary (FAS)

The multiplier indicates a percentage of FAS that is earned for each year of service. The FAS is the average rate of salary for a specified time period expressed in months or years.

Basic. Members of 17 of the plans (indicated by * before the formula) do not have social security coverage for their employment. Such systems may have a higher formula to reflect the lack of social security coverage. The 17 systems have multipliers ranging between 2% and 2.5% for each year of service. The average multiplier for 30-year employees in the 17 plans is 2.31% per year of service. Five "basic" plans improved their benefits over the four-year period.

Coordinated. Members of 68 plans in this study also receive social security coverage for their public employment. These "coordinated plans" reflect a wide range of multipliers, which may also vary by years of service, by specific effective dates or by the age at retirement. The formulas noted in Chart IV, assuming a career employee with 30 years of service and FAS of $40,000, are compared in the following table.

Formula Multiplier	1994 Study	1996 Study	2000 Study
1.1% to 1.3%	5 plans	4 plans	3 plans
1.3+% to 1.5%	7 plans	6 plans	3 plans
1.5+% to 1.7%	16 plans	18 plans	18 plans
1.7+% to 1.9%	9 plans	8 plans	12 plans
1.9+% to 2.1%	20 plans	20 plans	19 plans
2.1+%	4 plans	4 plans	7 plans
Employer Plan Election	2 plans	2 plans	2 plans
Money Purchase	3 plans	3 plans	2 plans
Formula & Annuity	2 plans	3 plans	2 plans
Total	68 plans	68 plans	68 plans

The trend to improve benefit formulas appears to have continued during the last four years. This study indicates that 27 coordinated plans provided improvements in their formulas. Most were changes of .1% or less, although some plans increased their multipliers by as much as .5%. The current average multiplier of the 68 coordinated plans is approximately 1.84%.

FAS. Most of the plans provide that benefits shall be based upon a final average salary (FAS) representing the highest earnings over a specified number of years or months. The FAS periods used by the plans surveyed are compared to the 1996 survey in the following table.

FAS Period	1996 Study	2000 Survey
1-year FAS Period	0 plans	1 plan
2-year FAS Period	2 plans	2 plans
3-year FAS Period	52 plans	53 plans
3-1/2 year FAS Period	1 plan	1 plan
4-year FAS Period	7 plans	6 plans
5-year FAS Period	17 plans	17 plans
2 FAS Periods	3 plans	3 plans
Money Purchase Plans	3 plans	2 plans
Total	85 plans	85 plans

At least 12 of the 85 plans place a specific cap on earnings that may be included in the FAS calculations. These caps either limit gross earnings or annual salary increases that may be considered during the FAS period. These caps are in addition to those that may be applicable under secs. 401 (a) 17 and 415 (b), Internal Revenue Code.

Benefit Limitations. Chart IV also notes that 37 of the plans have established a limit on pension benefits which may be expressed as a percent of FAS, or as a maximum number of creditable years, or maximum salary levels. The majority of plans surveyed provide no maximum benefit limitation. The following table shows the limitations in the 85 plans.

	1996 Study	2000 Survey
No Specified Limitation	48 plans	46 plans
FAS Limit at 100%	18 plans	20 plans
FAS Limit under 100%	16 plans	16 plans
Service Credit Cap	3 plans	1 plan
90-100% of high year	0 plan	2 plans
	85 plans	85 plans

Trends. The FAS periods for only five formula plans appear to have changed between 1996-2000. Benefit limitations appear to be moving toward 100% of compensation.

The trend to improve formula benefits has continued: 32 of 85 plans have increased the formula multiplier between 1996 and 2000. These improvements continue to narrow the difference in benefits between "basic" and "coordinated" plans.

CHART IV
FINAL AVERAGE SALARY PERIODS-FORMULAS-LIMITATIONS

State	Fund	FAS Period	Benefit Formula Percentage [x FAS x Service]	Limitation
1. Alab.	ERS	3 H/10	2.0125%	None
2. Alab.	TRS	3 H/10	2.0125%	None
3. Alas.	PERS	5 HC	*2% [1st 10 yrs.]; 2.25% [2nd 10]; 2.5% [added yrs.]	None
4. Alas.	TRS	3 HC	*2% [1st 20 yrs.]; 2.5% [added yrs.]	None
5. Ariz.	SRS	3 HC/10+	2.1%	None
6. Arka.	PERS	3 HC+	1.72% + .33 x yrs. to age 62	100% FAS
7. Arka.	TRS	3 H	1.305%	None
8. Calif.	PERS	1 H	2% at 60; 2.418% at 63	None
9. Calif.	TRS	3 HC	*2%	100% FAS
10. Colo.	PERA	3 H + (cap)	*2.5%	100% FAS
11. Conn.	SERS	3 H (cap)	1.33% + 0.5% over $20,640	None
12. Conn.	TRS	3 H	*2%	75% FAS
13. Dela.	SEPP	3 H	1.8%	None
14. Flor.	FRS	5 H	1.6%	100% FAS
15. Geor.	ERS	2 HC + (cap)	1.7%	90% High yr.
16. Geor.	TRS	2 HC (cap)	2%	40 yrs. max.
17. Hawaii	ERS	3 HC	1.25%	None
18. Idaho	PERS	3 1/2 HC +	2%	100% FAS
19. Ill.	SERS	4 HC/10+	1.67%	75% FAS
20. Ill.	TRS	4 HC/10(cap)	*2.2%	75% FAS
21. Ill.	MRF	4 HC/10+(cap)	1.67% [1st 15 yrs.]; 2% [added yrs.]	75% FAS
22. Ind.	PERF	5 H	1.1% + "EE" M.P. Annuity	None
23. Ind.	TRF	5 H	1.1% + "EE" M.P. Annuity	None
24. Iowa	PERS	3 H	2% [1st 30 yrs.]; 1% [next 5 yrs.]	65% FAS
25. Kans.	PERS	3 H	1.75%	None
26. Kent.	ERS	5 H	2.2%	None
27. Kent.	TRS	5 H	*2% [service before 7/1/83]; 2.5%	100% FAS
28. Louis.	SERS	3 HC +	*2.5%	100% FAS
29. Louis.	TRSL	3 HC + (cap)	*2%/2.5% [age- and service-related]	100% FAS
30. Maine	SRS	3 H (cap)	*2%	100% FAS
31. Mary.	SRS	3 HC	Larger of 2 formulas, plus 1.4% for service after 7/1/98	100% FAS
32. Mass.	SERS	3 HC	*.5%-2.5% [age-related]	80% FAS
33. Mass.	TRS	3 HC	*.5%-2.5% [age-related]	80% FAS
34. Mich.	SERS	3 HC +	1.5%	None
35. Mich.	MERS	5/3 HC +	1.5% to 2.5% [employer option]	None[1]
36. Mich.	PSERS	5/3 HC +	1.5%	None
37. Minn.	MSRS	5 HC +	1.7%	None
38. Minn.	PERA	5 HC +	1.7%[2]	100% FAS
39. Minn.	TRA	5 HC	1.7%[2]	100% FAS
40. Miss.	PERS	4 HC (cap)	1.875% [1st 25 yrs.]; 2% [added yrs.]	100% FAS
41. Mou.	SERS	3 HC +	1.7% [and .8% to age 62 if R80 met]	None
42. Mou.	LAGERS	5/3 HC +	1%-1.6% [employer option]	None
43. Mou.	PSRS	5 HC	*2.5%	100% FAS
44. Mont.	PERS	3 HC +	1.765%	None
45. Mont.	TRS	3 HC	1.67%	None

(* No Social Security)
(+ High years in FAS actually expressed in months)

[1] For 2.25% and 2.5% multipliers: 80% FAS.
[2] Post-6/30/89 hires.

CHART IV
FINAL AVERAGE SALARY PERIODS-FORMULAS-LIMITATIONS

State	Fund	FAS Period	Benefit Formula Percentage [x FAS x Service]	Limitation
46. Nebr.	SERS	-	Money Purchase	None
47. Nebr.	SRS	3 HC	1.9%	None
48. Nevada	PERS	3 HC +	*2.5%	75% FAS
49. N.H.	NHRS	3 H (cap)	1.67% to 65; 1.515% after 65	None
50. N.J.	PERS	3 H	1.67%	None
51. N.J.	TPHF	3 H	1.67%	None
52. N.M.	PERS	3 HC +	3%	75% FAS
53. N.M.	ERA	5 HC	2.35%	None
54. N.Y.	ERS	3 HC (cap) +	1.67% [under 20 yrs.]; 2% [1st 30 yrs.] + 1.5% [added yrs.] [over 20 yrs.]	None
55. N.Y.	TRS	3 HC (cap)	1.67% [under 20 yrs.]; 2% [1st 30 yrs.] + 1.5% [added yrs.] [over 20 yrs.]	None
56. N.C.	TSERS	4 HC	1.8%	None
57. N.C.	LGERS	4 HC	1.77%	None
58. N.D.	PERS	3 H/10 +	1.89%	100% FAS
59. N.D.	TRF	3 H	1.88%	100% FAS
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.][3]	100% FAS
62. Okla.	PERS	3 H/10	2%	None
63. Okla.	TRS	5 HC	2%	None
64. Oreg.	PERS	3 H/10	1.67%	None
65. Penn.	SERS	3 H	2%	100% High yr.
66. Penn.	PSERS	3 H	2%	None
67. R.I.	ERS	3 HC	1.7% [1st 10 yrs.]; 1.9% [2nd 10 yrs.], 3% [21-35 yrs.]	80% FAS
68. S.C.	SCRS	3 HC +	1.82%	None
69. S.D.	SRS	3 HC/10 +	1.625% [service before 7/1/2002]; 1.3%	None
70. Tenn.	CRS	5 HC	1.5% + .25% FAS over SSIL	90% FAS
71. Texas	ERS	3 H +	2.25%	100% FAS
72. Texas	TRS	3 H	*2.2%	None
73. Texas	MRS	-	Money Purchase Options	None
74. Utah	SRS	3 HC (cap)	2%	None
75. Vert.	SRS	3 HC	1.67% [service after 1/1/91]	50% FAS
76. Vert.	TRS	3 HC	1.67% [service after 1/1/91]	50% FAS
77. Virg.	SRS	3 HC	1.7%	100% FAS
78. Wash.	PERS	5 HC +	2%	None
79. Wash.	TRS	5 HC +	2%	None
80. W.V.	PERS	3 HC/10	2%	None
81. W.V.	TRS	5 H/15	2%	None
82. Wyom.	WRS	3 HC +	2.125% [1st 15 yrs.]; 2.25% [added yrs.]	None
83. Milw.	City	3 H	2%	70% FAS
84. Milw.	County	5 HC	2%	80% FAS
85. Wis.	WRS	3 H	1.6%	65% FAS

(* No Social Security)
(+ High years in FAS actually expressed in months)

[3] If 35 years or more service, multiplier is 2.5% for first 30 years.

V. POST-RETIREMENT ADJUSTMENTS AND TAXES

COLAs and State Taxes

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 effected by inflation and taxes. Since 1975, social security benefits have been automatically adjusted each year according to changes in the Consumer Price Index (CPI). The automatic adjustments in the most recent 10-year period are as follows:

CPI Year	% Increase	Payable %
1991	3.7%	1/1/1992
1992	3.0%	1/1/1993
1993	2.6%	1/1/1994
1994	2.8%	1/1/1995
1995	2.6%	1/1/1996
1996	2.9%	1/1/1997
1997	2.1%	1/1/1998
1998	1.3%	1/1/1999
1999	2.4%	1/1/2000
2000	3.5%	1/1/2001

To the degree that social security is part of total retirement planning (80% of the plans in this study), at least that part of income keeps pace with inflation by compounding 30% over the 10-year period above. Although social security benefits were once tax-free, effective January 1, 1994, up to 50% of such benefits are subject to federal tax if recognized income during retirement falls within specified levels -- $25,000 to $34,000, if single and $32,000 to $44,000 if filing a joint return. If income exceeds these levels, then 85% of social security benefits are taxable.

Information compiled by the American Association of Retired Persons and the National Conference of State Legislatures shows that the 50 states have different policies on taxing social security benefits as follows:

- 26 states allow full exemption of social security benefits from personal income tax.
- 1 state allows partial exemption of social security benefits from personal income tax.
- 14 states impose personal income taxes on social security benefits
- 9 states have very limited or no personal income tax.

COLA Plans. The inflation of the 1970's caused many public pension plans to adopt post-retirement adjustment plans (COLAs) to protect annuity purchasing power. The types of plans are noted in Chart V on pages 19 and 20. The following table compares the 1996 study and 2000 study.

	1996 Survey	2000 Survey
CPI Plan Plus/Minus Cap	37 plans	40 plans
Automatic Annual Increase	20 plans	20 plans
Investment Surplus	3 plans	3 plans
Ad Hoc or Money Purchase	25 plans	22 plans
Total	85 plans	85 plans

Changes in the type and number of post-retirement adjustment plans have been made during the past four years: Thirteen plans have changed their method of post-retirement increases: seven to CPI-based increases, five to automatic increases and one to ad hoc increases.

Pension Plan Taxes. The taxability of public pension benefits at the state level was affected by the 1989 Federal Supreme Court decision in Davis v. Michigan. This decision noted that federal law (The Public Salary Tax Act of 1939) requires that federal and military retirees be treated at least as favorably as state and local retirees under state law.

Comparative studies in the 1980's noted that well over 50% of the 85 plans were in states with no state income tax law, or were totally exempted from state income taxes. These results were drastically altered by the Supreme Court case. The current study is compared with the 1990 and 1996 studies are shown in the following table.

	1990 Study	1996 Study	2000 Study
No state income tax law**	15 plans	13 plans	11 plans
Benefits totally exempt	21 plans	21 plans	22 plans
Benefits partially exempt	31 plans	23 plans	24 plans
Benefits most or totally taxed	15 plans	25 plans	25 plans
Exempt for some	3 plans	3 plans	3 plans
Total	85 plans	85 plans	85 plans

Trends. The majority of plans in this study enacted some type of automatic post-retirement adjustment plan during the 1970's and 1980's. Most of these "COLA plans" are based upon changes in the CPI, with some type of annual limit to control costs. Some of these COLA plans are pre-funded during the working career, while others are not.

The 1996 study reflected that most states have now reacted to the Michigan-Davis Supreme Court Case, and have made necessary changes to state income tax laws to comply. However, during the past four years, there has been an increase of six in the number of plans that are totally, or partially, exempt from state income taxes. While the majority of plans in the studies before 1989 were exempt from state taxes, the majority are now partially or totally subject to state income taxes.

(**Includes plans in New Hampshire and Tennessee which have very limited income taxes.)

CHART V

POST-RETIREMENT INCREASES AND STATE TAX PROVISIONS

	State	Fund	Soc. Sec.	Annual Post-Retirement Increases	State Taxation of PERS Benefits
1.	Alab.	ERS	Yes	Ad Hoc Only	Benefits Exempt
2.	Alab.	TRS	Yes	Ad Hoc Only	Benefits Exempt
3.	Alas.	PERS	No	75% of CPI if 65, 9% cap; 50% of CPI if 60 or ret. 5 yrs - 6% cap	No Income Tax Law
4.	Alas.	TRS	No	75% of CPI if age 65, 9% cap; 50% of CPI if 60 or ret. 8 yrs.	No Income Tax Law
5.	Ariz.	SRS	Yes	Excess earnings-4% cap	Exempt to $2,500
6.	Arka.	PERS	Yes	CPI-3% cap**	Exempt to $6,000
7.	Arka.	TRS	Yes	CPI-3% cap*	Exempt to $6,000
8.	Calif.	PERS	Yes	Automatic 2%**	Benefits Taxable
9.	Calif.	TRS	No	Automatic 2% *	Benefits Taxable
10.	Colo.	PERA	No	Automatic 3.5%**	Exempt to $20,000/$24,000[1]
11.	Conn.	SERS	Yes	60% of CPI up to 6%, 75% of CPI over 6%	Benefits Taxable
12.	Conn.	TRS	No	Excess earnings: 100% of CPI; 1.5% to 6%	Benefits Taxable
13.	Dela.	SEPP	Yes	Ad Hoc Only	Exempt to $5,000
14.	Flor.	FRS	Yes	Automatic 3%**	No Income Tax Law
15.	Geor.	ERS	Yes	CPI-1.5% semi-annual cap**	Benefits Taxable[2]
16.	Geor.	TRS	Yes	CPI-1.5% semi-annual cap*	Exempt to $12,000
17.	Hawaii	ERS	Yes	Automatic 2.5%*	Benefits Exempt
18.	Idaho	PERS	Yes	CPI-1% minimum to 6% max. (conditional)	Benefits Taxable
19.	Ill.	SERS	Yes	Automatic 3%**	Benefits Exempt
20.	Ill.	TRS	No	Automatic 3%**	Benefits Exempt
21.	Ill.	MRF	Yes	Automatic 3%*	Benefits Exempt
22.	Ind.	PERF	Yes	Ad Hoc Only	Benefits Taxable
23.	Ind.	TRF	Yes	Ad Hoc Only	Benefits Taxable
24.	Iowa	PERS	Yes	CPI-3% cap	Exempt to $5,000
25.	Kans.	PERS	Yes	Ad Hoc Only	Benefits Exempt
26.	Kent.	ERS	Yes	CPI-5% cap	Benefits Exempt
27.	Kent.	TRS	No	Automatic 1.5%	Benefits Taxable[2]
28.	Louis.	SERS	No	Ad Hoc	Benefits Exempt
29.	Louis.	TRSL	No	CPI-2% cap	Benefits Exempt
30.	Maine	SRS	No	CPI-4% cap**	Exempt to $6,000
31.	Mary.	SRS	Yes	Automatic 3% cap*	Exempt to $15,900
32.	Mass.	SERS	No	CPI-3% cap on 1st $12,000-conditional	Benefits Exempt
33.	Mass.	TRS	No	CPI-3% cap on 1st $12,000-conditional	Benefits Exempt
34.	Mich.	SERS	Yes	Automatic 3% ($300 cap)*	Benefits Exempt
35.	Mich.	MERS	Yes	3 plans-ad hoc; 2.5% present retirees; 2.5% future retirees	Benefits Exempt
36.	Mich.	PSERS	Yes	Automatic 3%*	Benefits Exempt
37.	Minn.	MSRS	Yes	CPI-2.5% cap plus invest. surplus**	Mostly taxable[2]
38.	Minn.	PERA	Yes	CPI-2.5% cap plus invest. surplus**	Mostly taxable[2]
39.	Minn.	TRA	Yes	CPI-2.5% cap plus invest. surplus**	Mostly taxable[2]
40.	Miss.	PERS	Yes	CPI-2.5% cap* plus invest return up to 1.5%	Benefits Exempt
41.	Mou.	SERS	Yes	80% CPI: 5% max.**	Exempt to $6,000
42.	Mou.	LAGERS	Yes	CPI - 4% cap	Exempt to $6,000
43.	Mou.	PSRS	No	CPI - 5% cap**	Exempt to $6,000
44.	Mont.	PERS	Yes	Automatic 1.5% if ret. 3 yrs.	Exempt to $3,600
45.	Mont.	TRS	Yes	Ad Hoc-Excess investment earnings	Exempt to $3,600

(* = Simple increases based on original benefit)
(** = Compound increases based on current benefit)

[1] Higher limit applicable if 65 or older.
[2] States with exclusions of unearned income, including pensions, to specified levels of tax credits for pension income.

CHART V
POST-RETIREMENT INCREASES AND STATE TAX PROVISIONS

	State	Fund	Soc. Sec.	Annual Post-Retirement Increases	State Taxation of Benefits
46.	Nebr.	SERS	Yes	Money Purchase	Benefits Taxable
47.	Nebr.	TRS	Yes	CPI-Cap of 2%	Benefits Taxable
48.	Nevada	PERS	No	CPI-Cap of 2% to 5% (varies)	No Income Tax Law
49.	N.H.	NHRS	Yes	Ad Hoc**	Benefits Exempt
50.	N.J.	PERS	Yes	60% of CPI*	Exempt to $12,500
51.	N.J.	TPAF	Yes	60% of CPI*	Exempt to $12,500
52.	N.M.	PERA	Yes	Automatic 3%**	Benefits Taxable[1]
53.	N.M.	ERA	Yes	50% of CPI - 4% cap **	Benefits Taxable[1]
54.	N.Y.	ERS	Yes	If age 62 + ret. 5 yrs: 50% of CPI** max: 3% (on first $18,000)	Benefits Taxable
55.	N.Y.	TRS	Yes	If age 62 + ret. 5 yrs.: 50% of CPI** max: 3% (on first $18,000)	Benefits Exempt
56.	N.C.	TSERS	Yes	Ad hoc if surpluses allow	Exempt to $4,000
57.	N.C.	LGERS	Yes	Ad hoc if surpluses allow	Exempt to $4,000
58.	N.D.	PERS	Yes	Ad Hoc Only	Exempt to $5,000
59.	N.D.	TRF	Yes	Ad Hoc Only	Benefits Taxable
60.	Ohio	PERS	No	CPI - 3% cap *	Benefits Taxable[1]
61.	Ohio	STRS	No	CPI - 3% cap *	Benefits Taxable[1]
62.	Okla.	PERS	Yes	Ad Hoc Only	Exempt to $5,500
63.	Okla.	TRS	Yes	Ad Hoc Only	Exempt to $5,500
64.	Oreg.	PERS	Yes	CPI-2% cap ** plus Ad Hoc	Benefit Taxable[1]
65.	Penn.	SERS	Yes	Ad Hoc Only	Benefits Exempt
66.	Penn.	PSERS	Yes	Ad Hoc Only	Benefits Exempt
67.	R.I.	ERS	Yes	Automatic 3%**	Benefits Taxable
68.	S.C.	SCRS	Yes	CPI - 4% cap **	Exempt to $3,000
69.	S.D.	SRS	Yes	Automatic 3.1%**	No Income Tax Law
70.	Tenn.	CRS	Yes	CPI - 3% cap *	Benefits Exempt
71.	Texas	ERS	Yes	Ad Hoc Only	No Income Tax Law
72.	Texas	TRS	No	Ad Hoc Only	No Income Tax Law
73.	Texas	MRS	Yes	70% of CPI maximum (employer option)	No Income Tax Law
74.	Utah	SRS	Yes	CPI - 4% cap *	Benefits Taxable[1]
75.	Vert.	SRS	Yes	50% of CPI-5% cap	Benefits Taxable
76.	Vert.	TRS	Yes	50% of CPI - 5% cap	Benefits Taxable
77.	Virg.	SRS	Yes	CPI to 3% + 1/2 CPI 3% to 7% (5% Max)	Benefits Taxable[1]
78.	Wash.	PERS	Yes	CPI - 3% cap**	No Income Tax Law
79.	Wash.	TRS	Yes	CPI - 3% cap**	No Income Tax Law
80.	W.V.	PERS	Yes	Ad Hoc Only	Exempt to $2,000[1]
81.	W.V.	TRS	Yes	Ad Hoc only	Exempt to $2,000[1]
82.	Wyom.	WRS	Yes	Automatic 3%**	No Income Tax Law
83.	Milw.	City	Yes	2% automatic after 8 yrs. Ret.	Exempt for some
84.	Milw.	County	Yes	2% automatic*	Exempt for some
85.	Wis.	WRS	Yes	Investment earnings**	Exempt for some

(* = Simple increases based on original benefit)
(** = Compound increases based on current benefit)

[1]States with exclusions of unearned income, including pensions, to specified levels of tax credits for pension income.

VI. ACTUARIAL AND ACCOUNTING INFORMATION

Information Description

Actuarial Methods. 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 such benefits to specific time periods. There are a number of accepted actuarial methods that presumably will reach the same goal of fully funding all pension obligations as they become due, but they allocate costs in different ways during the working career or accumulation stage.

Chart VI on pages 23 and 24 notes the actuarial methods used by the 85 plans. This information is compared with the 1996 study in the following table.

	1996 Study	2000 Study
Plans Using entry age normal	65 plans	65 plans
Plans using unit credit	13 plans	14 plans
Plans using aggregate cost	5 plans	5 plans
Plans using attained age	1 plan	0 plans
Money Purchase	1 plan	1 plan
Total	85 plans	85 plans

This survey indicates that 76.4% of the plans use entry age normal, with a goal to provide level normal cost projections over the long-term -- from generation to generation of taxpayers.

Interest Assumption. The interest or earnings assumption adopted by the various plans is one of the key economic assumptions in determining contribution rates. Chart VI notes the interest assumptions used by the 85 plans. The information is compared with previous studies in the following table.

	1994 Study	1996 Study	2000 Study
5% - 7%	2 plans	1 plan	0 plans
7+% - 8%	54 plans	61 plans	57 plans
8+%	28 plans	22 plans	27 plans
Money Purchase	1 plans	1 plan	1 plan
Total	85 plans	85 plans	85 plans

Chart VI shows that 67 plans (78.8%) have adopted an interest assumption equal to or exceeding 8%, with an average assumption of 8.02%--slightly more than the 1996 average of 8% and less than the 1994 average of 8.1%.

Economic Spread. Another economic assumption is the assumption as to inflation or across-the-board salary increases that are over and above merit or seniority adjustments. The difference between the inflationary salary assumption and the interest assumption is often referred to as the "economic spread"-- i.e., the assumed real return on invested assets above the inflation rate.

Chart VI notes the wage inflation assumptions and resulting spreads of the 85 plans in this study. This information is summarized and compared with the 1996 study in the following table.

	1996 Study	2000 Study
0 - 1% Spread	2 plans	0 plans
1+% - 2% spread	8 plans	2 plans
2+% - 3% spread	27 plans	19 plans
3+% spread	37 plans	45 plans
Spread undefined	11 plans	19 plans
Total	85 plans	85 plans

The 2000 study indicates that the average "spread" is 3.58%. In 1996, it was 3.17%, and in 1994, 2.85%. During the 1996-2000 period, 36 plans increased, and 6 plans decreased, their economic spreads.

Funding Ratio. Until 1995, the Governmental Accounting Standards Board (GASB) required public pension plans to disclose the "pension benefit obligation", or PBO, which is a measure of the present value of pension benefits, adjusted for the effects of projected salary increases, but estimated on service earned to date only.

GASB statement #25, issued in November 1994, provides that future funding disclosures, beginning with periods after June 15, 1996, shall be based upon regular actuarial valuations. Included in the requirements is a "schedule of funding progress that reports the actuarial value of assets, the actuarial accrued liability, and the relationship between the two over time . . . ." Thus, this is the first study in which GASB 25 schedules of funding progress can be utilized to compare funding ratios of the plans in the study.

The 2000 study shows that the funded ratios, from the schedules of funding progress, can be compared in the categories in the following table.

Funded Ratio	2000 Study
More Than 100%	33 plans
90% to 100%	22 plans
80%, but less than 90%	14 plans
70%, but less than 80%	5 plans
60%, but less than 70%	1 plan
50%, but less than 60%	1 plan
Under 50%	3 plans
Aggregate Funding	6 plans
Total	85 plans

Trends. During the time period, there were some changes in the actuarial methods used by the 85 plans studied. The Entry Age Normal is the predominant method used by the plans studied.

The schedules of funding progress show that 40.5% of the 79 plans not using aggregate funding have funded ratios of 100% or more; 27.8% have funded ratios of 90% to 99.9%. Of the 79 plans, 69 (87.3%) have funded ratios of 80% or more.

CHART VI
ACTUARIAL AND ACCOUNTING PROVISIONS

	State	Fund	Actuarial Method	Interest Assumption	Wage Inflation	Economic Spread	GASB 25 Funding Ratio
1.	Alab.	ERS	Entry Age	8%	4.5%	3.5%	100.1%
2.	Alab.	TRS	Entry Age	8%	4.5%	3.5%	102.5%
3.	Alas.	PERS	Unit Credit	8.25%+	4%	4.25%+	105.9%
4.	Alas.	TRS	Unit Credit	8.25%+	4%	4.25%+	97.7%
5.	Ariz.	SRS	Unit Credit	8%	5%	3.75%+	116.6%
6.	Ark.	PERS	Entry Age	8%+	4.5%-	3.5%+	107.4%
7.	Ark.	TRS	Entry Age	8%	4.5%	3.5%+	98.6%
8.	Calif.	PERS	Entry Age	8.5%-	4.5%-	4%	116.8%
9.	Calif.	TRS	Entry Age	8%-	5.5%-	2.5%	104.0%
10.	Colo.	PERA	Entry Age	8.75%+	5.5%	3.25%+	103.1%
11.	Conn.	SERS	Unit Credit	8.5%	N.D.	-	59.1%
12.	Conn.	TRS	Entry Age	8.5%	5%	3.5%	81.0%
13.	Dela.	SEPP	Entry Age	8.5%	5%	3.5%	140.3%
14.	Flor.	FRS	Entry Age	8%	5%	3%+	113.5%
15.	Geor.	ERS	Entry Age	7%-	N.D.	-	101.6%
16.	Geor.	TRS	Entry Age	7%	N.D.	-	97.2%
17.	Hawaii	ERS	Entry Age	8%	-[1]	-	94.4%
18.	Idaho	PERS	Entry Age	8%	5.25%-	2.75%+	116.5%
19.	Ill.	SERS	Unit Credit	8.5%+	3.5%-	5%+	81.7%
20.	Ill.	TRS	Unit Credit	8.5%+	4%	4.5%	68.2%
21.	Ill.	MRF	Entry Age	7.5%	4%-	3.5%+	104.0%
22.	Ind.	PERF	Entry Age	7.25%	5%	2.25%+	72.7%
23.	Ind.	TRF	Entry Age	7.5%	5%-	2.5%+	48.2%
24.	Iowa	PERS	Entry Age	7.5%	N.D.	-	97.0%
25.	Kans.	PERS	Unit Credit	8%	N.D.	-	86.0%
26.	Kent.	ERS	Entry Age	8.25%+	3.5%-	4.75%	121.6%
27.	Kent.	TRS	Unit Credit	7.5%+	4.0%-	3.5%+	95.7%
28.	Louis.	SERS	Unit Credit	8.25%	N.D.	-	73.5%
29.	Louis.	TRSL	Unit Credit	8.25%	4.5%+	3.7%-	77.9%
30.	Maine	SRS	Entry Age	8%	5.5%-	2.5%+	74.8%
31.	Mary.	SRS	Entry Age	8%+	5%	3%	101.2%
32.	Mass.	SERS	Entry Age	8.25%+	6%	2.25%+	94.5%
33.	Mass.	TRS	Entry Age	8%	6%	2.25%+	83.3%
34.	Mich.	SERS	Entry Age	8%	4%-	4%+	106.9%
35.	Mich.	MERS	Entity Age	8%	4.5%-	3.5%+	90.3%
36.	Mich.	PSERS	Entry Age	8%	4%-	4%+	99.3%
37.	Minn.	MSRS	Entry Age	8.5%	N.D.	-	119.0%
38.	Minn.	PERA	Entry Age	8.5%	N.D.	-	89.9%
39.	Minn.	TRA	Entry Age	8.5%	N.D.	-	105.7%
40.	Miss.	PERS	Entry Age	8%	4%-	4%+	82.6%
41.	Mou.	SERS	Entry Age	8.5%	4.5%	4%	89.6%
42.	Mou.	LAGERS	Entry Age	7%	4%	3%	98.9%
43.	Mou.	PSRS	Entry Age	8%	N.D.-	-	105.1%
44.	Mont.	PERS	Entry Age	8%	6.25%	1.75%	81.3%
45.	Mont.	TRS	Entry Age	8%	6.25%+	1.75%-	77.2%

(N.D. = not defined; salary assumption stated as age/range)
(Assumptions and PBO: + = higher; - = lower than 1996 Report)

[1] Hawaii uses three different salary growth assumptions: general employes, 2.4%; teachers, 5.7%; and police, fire and corrections, 5.0%.

CHART VI
ACTUARIAL AND ACCOUNTING PROVISIONS

	State	Fund	Actuarial Method	Interest Assumption	Wage Inflation	Economic Spread	GASB 25 Funding Ratio
46.	Nebr.	SERS	-	Money Purchase	-	-	-
47.	Nebr.	TRS	Entry Age-FIL	8%+	N.D.	-	103.2%
48.	Nevada	PERS	Entry Age	8%	5%	3%	82.5%
49.	N.H.	NHRS	Aggregate	9%	4%-	5%+	-
50.	N.J.	PERS	Unit Credit	8.75%	5.95%	2.8%	116.1%
51.	N.J.	TPAF	Unit Credit	8.75%	5.95%	2.8%	107.5%
52.	N.M.	PERA	Entry Age	8%	5%	3%	99.1%
53.	N.M.	ERB	Entry Age	8%	3.5%-	4.5%+	91.6%
54.	N.Y.	ERS	Aggregate	8%-	3%-	5%+	-
55.	N.Y.	TRS	Aggregate	8%	4.5%	3.5%	-
56.	N.C.	TSERS	Entry Age	7.25%-	N.D.	-	99.4%
57.	N.C.	LGERS	Entry Age	7.25%-	N.D.	-	99.2%
58.	N.D.	PERS	Entry Age	8%	4.5%	3.5%	115.1%
59.	N.D.	TRF	Entry Age	8%	5%	3%	101.6%
60.	Ohio	PERS	Entry Age	7.75%	4.75-	3%+	101.0%
61.	Ohio	STRS	Entry Age	7.75%+	3.5%	4.25%+	92.0%
62.	Okla.	PERS	Entry Age	7.5%	3%-	4.5%+	84.0%
63.	Okla.	TRS	Entry Age	8%	4%	4%	49.8%
64.	Oreg.	PERS	Entry Age	8%	4%-	4%+	93.3%
65.	Penn.	SERS	Entry Age	8.5%	3%	5.5%	123.7%
66.	Penn.	PSERS	Entry Age	8.5%	4%	4.5%	119.0%
67.	R.I.	ERS	Entry Age-FIL	8.25%+	3.5%-	4.75%+	73.3%
68.	S.C.	SCRS	Entry Age	7.25%	3.75%-	3.5%+	98.9%
69.	S.D.	SRS	Entry Age	8%	N.D.	-	96.0%
70.	Tenn.	CRS	Entry Age-FIL	7.5%-	5.5%-	2%+	100%
71.	Texas	ERS	Entry Age	8%	4%	4%	107.7%
72.	Texas	TRS	Entry Age	8%	3%-	5%+	107.4%
73.	Texas	MRS	Unit Credit	8%	N.D.	-	85.0%
74.	Utah	SRS	Entry Age	8%	4.5%+	3.5%-	101.8%
75.	Vert.	SRS	Entry Age-FIL	8.5%	-	-	91.9%
76.	Vert.	TRS	Entry Age-FIL	8.5%	-	-	87.3%
77.	Virg.	SRS	Entry Age	8%	4%	4%	95.3%
78.	Wash.	PERS	Aggregate	7.5%	4%-	3.5%+	-
79.	Wash.	TRS	Aggregate	7.5%	4%	3.5%+	-
80.	W.V.	PERS	Entry Age	8%	3.5%	4.5%+	93.4%
81.	W.V.	TRS	Entry Age	8%	3.5%	4.5%+	20.1%
82.	Wyom.	WRS	Entry Age	8%	5%+	3%-	105.8%
83.	Milw.	City	Unit credit	8.5%	4.5%-	4%+	144.1%
84.	Milw.	County	Entry Age-FIL	8.5%	5.5%+	3%-	121.4%
85.	Wis.	WRS	Entry Age-FIL	8%	4.8%-	3.2%+	95.8%

(N.D. = not defined; salary assumption stated as age/range)
(Assumptions and PBO: + = higher; - = lower than 1996 report)

Joint Survey Committee on Retirement Systems

Co-Chairs

Senator Robert W. Wirch

Representative Daniel Vrakas

Legislative Members

Senator Richard A. Grobschmidt

Representative Bonnie L. Ladwig

Senator Michael G. Ellis

Representative Jeffrey Plale

Public Members

Jane Hamblen (Assistant Attorney General Appointed by Attorney General)

Laura Iliff (Designated by Insurance Commissioner)

David Stella (Designated by Secretary of Employee Trust Funds)

Vacant as of 5/16/01: Taxpayer Representative (Appointed by the Governor)