2001 Survey of State and Local Government Employee Retirement Systems

Survey Report

By Jennifer D. Harris
Executive Director
Public Retirement Institute

For the members of the

Public Pension Coordinating Council

Government Finance Officers Association
National Association of State Retirement Administrators
National Conference on Public Employee Retirement Systems
National Council on Teacher Retirement

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FOREWORD

This report presents summary statistical analysis of state and local government employee retirement systems surveyed by the Public Pension Coordinating Council in the summer of 2001. The Public Pension Coordinating Council is a confederation of three national associations serving state and local government retirement plans:

- The National Association of State Retirement Administrators
- The National Conference on Public Employee Retirement Systems
- The National Council on Teacher Retirement.

(The Government Finance Officers Association also assisted in funding this survey.) The Council's central goals are to coordinate the legislative efforts of the organizations, to promote and recognize excellence in plan design and administration, and to conduct periodic surveys of state and local retirement systems.

The survey was fielded and analyzed by the Public Retirement Institute. The Institute is a non-profit organization dedicated to providing reliable data on state and local government retirement systems. The organization is funded by membership of retirement systems as well as its associate members:

- Gabriel, Roeder, Smith & Company
- Aeltus Investments Inc.

PRI thanks the Council for the opportunity to work on this project. Also PRI thanks its associate members for supporting the collection of good data on these retirement systems.

The Public Pension Coordinating Council's Survey Report is available on-line from the Council's web site (http://ppcc.grsnet.com). In addition, the site allows viewers to access individual system/plan responses, to query the database, and to download the survey database for further analysis.

SUMMARY OF RESULTS

This report presents summary analyses of state and local government retirement systems surveyed by the Public Pension Coordinating Council (PPCC) in 2001. The purpose of the survey was to obtain in-depth information about the current practices of public retirement systems regarding their administration, membership, benefits, contributions, funding, and investments. This executive summary presents the major findings from the 2001 survey and compares them with results from the 1999 survey.[1] In most instances, the data reflect fiscal year 2000 and 1998 values, respectively. Summary statistics for the Council's 1997, 1999, and 2001 surveys are presented in Tables I-1 through I-7 at the end of this summary.

Survey Background

Table I-1 shows that, in 2001, 152 public employee retirement systems responded to the PPCC's survey, representing 263 retirement plans. These plans covered 67 percent of the 13.9 million active plan members reported by the U.S. Bureau of the Census and held 68 percent of the $2.3 trillion in state and local retirement system assets reported by the Federal Reserve. The respondents reflected each of the major geographic regions, system size categories, types of employees, and administrating jurisdictions, suggesting that they are generally representative of state and local systems in the U.S. While the number of respondents was lower for the 2001 survey than for the two prior surveys, they continue to represent the vast majority of active members covered by state and local retirement systems.

System Administration

State and local retirement systems exist within an administrative framework that is structured by state and local laws and overseen by retirement boards of elected, appointed, and ex-officio members. Retirement boards generally have substantial authority over the system, and are usually involved in decisions regarding investment policy, benefit provision, and actuarial assumptions.

Table I-2 shows that nearly half of the matched respondent systems have between five and eight retirement board members, and about one-third have between nine and eleven board members. The table also shows that there was almost no change in the size of retirement boards between 1998 and 2000.

The system's daily activities are usually directed by a chief administrative officer and conducted by system staff. Staff sizes vary by size of system and appear to exhibit

[1]No single report can present all facets of entities as complex as retirement systems. To assist pension professionals conduct their own analyses, the Public Pension Coordinating Council makes the 2001 survey data available on the Internet. Please see http://ppcc.grsnet.com.

economies of scale. Table I-2 shows that smaller systems (i.e., those with fewer than 1,000 active members) have very small staffs averaging about one full-time equivalent employee, while large systems (i.e., those with 100,000 or more active members) have staffs averaging over 200 employees. Staff sizes generally increased between 1998 and 2000 for all membership size categories.[2]

Annual administrative expenses in 2000 ranged from an average of $111,000 for small systems with less than 1,000 active members to $24.7 million for large systems with more than 100,000 active members. The comparison of matched cases in Table I-2 suggests that administrative expenses generally increased between 1998 and 2000. However, it is unclear how investment expenses were treated during the two years. Since investment expenses can be very large, the possibility of inconsistent treatment makes comparisons of administrative expenses between 1998 and 2000 problematic.

Retirement Benefits

Retirement benefits are typically calculated for members of public employee retirement plans using formulas that include the employees' years of service, age at retirement, and final average salary (FAS). Often the formula is expressed as an annual unit benefit percentage (e.g., 2.0 percent) multiplied by years of service and final average salary. The FAS is often computed as the average annual salary of the highest (or last) three or five years of service.

State and local government employees are not universally covered under the Federal Old Age, Survivors, Disability and Health Insurance (OASDI) programs, commonly referred to as Social Security. Estimates made by the U.S. Department of Labor indicate that approximately 76 percent of current state and local government full-time employees are

[2] A Note on Reading the Tables

In addition to providing summary statistics for each of the past three PPCC surveys, Tables I-1 through I-7 highlight changes that occurred between the 1999 and 2001 surveys. To do this properly requires that the respondents providing information for both years be selected (or "matched") and that the comparisons be carried out only on the matched responses. This ensures that the results reflect actual trends rather than differences in the mix of survey respondents between the two years.

In Tables I-1 through I-7, the matched responses are reported in the two columns headed "MATCHED CASES." The column headed "% Change" to the right of the matched cases columns shows the percent change in the average (i.e., mean) or total values calculated for the matched cases. The number to the right of the "% Change" column indicates the number of matched cases used in the analysis.

The columns headed "TOTAL CASES" show the total responses (including matched cases) for each of the past three surveys. Comparisons made among these columns will reflect differences resulting from both trends over time and the mix of systems responding to the survey in the different years. Although such comparisons may be interesting, they should not be used as the basis for evaluating trends.

covered by Social Security, although the coverage varies by different employee groups.[3] Although state and local plans typically do not specifically integrate Social Security income into their benefit formulas, they often offer a higher annual benefit percentage to plan members who are not covered by Social Security than to those who are covered. This partially offsets the lower overall retirement income these members receive as a result of not being covered by Social Security.

The average annual benefit percentage earned for each year of service changed very little among the matched respondents between 1998 and 2000. Table I-3 shows that, for active members covered under Social Security, the average unit benefit grew from 2.06 percent of FAS in 1998 to 2.11 percent in 2000. For members not covered under Social Security, the average benefit percentage grew from 2.39 percent to 2.43 percent during the two years.

In order to reduce the impact of inflation on retirement benefits, state and local retirement plans often provide postemployment cost-of-living adjustments (COLAs) to plan members during retirement. In some instances, these adjustments are made automatically based on a fixed rate or some percentage of the Consumer Price Index. In other instances, the adjustments are ad hoc and awarded at the discretion of the plan's governing body. Table I-3 shows the average annual postemployment COLA among the matched respondents rose from 2.92 percent in 1998 to 3.05 percent in 2000.

Actuarial Valuations

The majority of respondents accumulate the moneys needed to pay retirement benefits through a reserve funding approach which, in most cases, is based on an actuarial valuation conducted annually using the entry age cost method.

There were minor changes in the actuarial valuation methods used by matched respondents between 1998 and 2000. Table I-4 shows that the percent of respondents using the frozen entry age cost method fell from 7.3 percent to 6.4 percent, while the percent using the entry age normal cost method increased from 57.7 to 62.7 percent.

Table I-4 also shows that actuarial assumptions for investment return increased slightly from 7.90 percent to 7.95 percent between the two years. The distribution of assumptions regarding investment returns remained within a narrow band, with two-thirds of the respondents assuming returns between 8.0 percent and 8.9 percent, and about one-quarter assuming returns between 7.0 percent and 7.9 percent. Only five percent of the respondents assumed investment returns less than 7.0 percent or greater than 9.0 percent.

Assumptions regarding total salary increases fell slightly during the period. Table I-4 shows that the average assumed rate of total salary increase (including inflation and step/merit increases) fell from 5.74 percent in 1998 to 5.62 percent in 2000.[4]

[3]U.S. Department of Labor, Bureau of Labor Statistics, *Employee Benefits in State and Local Governments, 1994* (Washington, DC: U.S. Government Printing Office, 1996), p. 80 (latest available).
[4] Specifically, this assumption is for an individual aged 40 with 10 years of service.

Assumptions regarding inflation also fell during the period, from 4.35 percent to 4.14 percent.

Plan Liabilities, Assets, and Funding

Over time retirement plans accumulate substantial pension obligations that accrue as a result of employee service. This is a normal part of the reserve funding process. To fund these obligations, state and local retirement plans accumulate contributions from employers (and often employees) and income earned on investments. These moneys are added to the plan's pool of assets and are used to pay benefits that are currently due or will become due in the future.

Pension obligations measured using the actuarial accrued liability (AAL) increased substantially during the period.[5] Table I-5 shows that, for the matched respondents, the AAL grew at a rapid pace of 17.2 percent, from $1.07 trillion in 1998 to $1.25 trillion in 2000. Fortunately, plan assets grew at an even faster pace. The actuarial value of assets for the matched respondents grew 25.9 percent, from $1.02 trillion in 1998 to $1.28 trillion in 2000. As a result, the unfunded actuarial accrued liability (excluding overfunded amounts) fell 8 percent from $69.5 billion to $63.8 billion.

As a consequence of the increase in plan assets, the AAL funding ratio (i.e., ratio of assets to AAL) also grew from 95.5 percent to 102.7 percent over the period. This reflects a long-term trend in the improved funding of state and local retirement plans that began in the 1970s.

As the above statistics indicate, many of the respondent plans have improved their funding status. Table I-5 shows that the percent of matched respondents with AAL funding ratios below 70 percent fell from 12.6 percent in 1998 to 8.8 percent in 2000. Moreover, the percent of matched respondents with funding ratios over 90 percent grew from 67.6 percent to 70.3 percent.

Employer and Employee Contributions

Public employee retirement plans hire actuaries to calculate the employer contributions necessary to systematically fund the pension liabilities. In most instances, this contribution includes an amount representing the benefits that will accrue to members during the plan year (referred to as the "normal cost") and an amount that amortizes the unfunded actuarial accrued liability over a period of time, usually ranging from 20 to 30 years. Typically the required contribution is expressed as a percent of the employer's payroll.

[5]The actuarial accrued liability (AAL) is calculated as the present value of total projected benefits for past and present employees based on the actuarial cost method used to fund the plan. For about two-thirds of the respondents, the AAL is based on the entry age actuarial method, which includes projections of members' future salary and future service, and results in a contribution rate that is intended to remain level as a percentage of payroll over time.

For the survey respondents, Table I-6 shows the dollar amount of employer contributions fell marginally from $22.9 billion in 1998 to $21.6 billion in 2000. However, as a percent of payroll, average employer contributions declined significantly from 11.4 percent to 10.6 percent. This is likely a result of the increase in plans that are fully funded, thus reducing the contributions necessary to amortize the unfunded liability.

Seventy-four percent of the total survey respondents reported that employers were making their full annual required contributions in 2000, and 78 percent reported that employers were making at least 90 percent of their required contributions. Among the matched cases, the percent of plans with employers making their required contributions fell slightly from 90.2 percent to 88.6 percent from 1998 to 2000.

Investments

In order to reduce the need for future employer and employee contributions, public employee retirement systems earn additional income by investing their funds. These investments are made within a framework of state and local laws that regulate investment decisions. For the majority of the survey respondents, investment restrictions take the form of the "prudent person" standard, requiring that investments be made with the "care, skill and diligence" of a prudent individual. In some cases, the prudent person standard is supplemented with "legal lists" specifying the allowed types of investments and the maximum percent of assets that can be invested in certain securities.

Between 1998 and 2000, asset allocation shifted somewhat away from domestic equity securities and toward international equities. As shown in Table I-7, while investments in domestic stocks declined from 46.4 percent to 44.8 percent of the portfolio, investments in international equities increased from 12.3 percent to 15.5 percent. In addition, investments in real estate (including real estate equities and mortgages, but excluding government agency mortgage securities such as GNMAs) grew from 4.1 percent to 4.2 percent.

The annual rate of investment return decreased during the period. Table I-7 shows the average annual rate of return fell from 15.04 percent in 1998 to 6.52 percent in 2000. This reflects the performance of the stock market during the period. As a result of the increased return during these years, the systems' three-year average rates of return decreased from 15.25 percent to 11.46 percent.

Larger retirement plans tend to invest a larger percent of their portfolios in equity securities and, as a result, are proportionately affected by equity returns. This effect is not reflected in the investment returns described above because the averages were calculated using "unweighted cases." In other words, each respondent's return had the same weight in calculating the average regardless of the amount of assets the system held. This methodology tends to underweight the investment returns earned by the larger systems.

To provide a better estimate of the overall rates of return on state and local retirement system investments, "dollar-weighted" returns for one- and three-year periods are included in Table I-7. Using this methodology, state and local investment returns decreased from 17.80 percent in 1998 to 4.56 percent in 2000, and three-year returns decreased from 16.92 percent to 12.40 percent during the same period.

Conclusion

Generally, the results of the PPCC's 2001 survey strongly suggest that state and local government employee retirement systems are well funded and in sound financial health. While pension liabilities grew during the period, pension assets did as well, resulting in a decline in the unfunded actuarial accrued liabilities. In addition, benefit formulas have remained stable, and there have been slight declines in assumed total salary increases due to declines in inflation. Finally, the systems experienced investment returns consistent with changes in the market.

Table I-1
Analysis of Trends in Survey Respondents

	TOTAL CASES			MATCHED CASES			
	1997 Survey (FY 1996)	1999 Survey (FY 1998)	2001 Survey (FY 2000)	1999 Survey (FY 1998)	2001 Survey (FY 2000)	% Change	# Matched Cases
Number of Systems	261	246	152	131	131	NA	131
Number of Plans	379	371	263	220	220	NA	220
Number of Active Members (mil.)	11.0	10.9	9.3	8.7	9.1	4.6%	131
Active Members Reported by Census (mil.)	11.9	12.8	13.9	12.8	13.9	8.6%	NA
% of Active Members Reported by Census	92%	85%	67%	68.0%	65.5%	NA	NA
Fair Value of Investments ($ bil.)	$1,312	$1,765	$1,575	$1,334	$1,564	17.2%	129
Assets Reported by Federal Reserve ($ bil.)	$1,514	$2,262	$2,332	$2,262	$2,332	3.1%	NA
% of Assets Reported by Federal Reserve	87%	78%	68%	59.0%	67.1%	NA	NA
Distribution of Systems by Major Census Region							
Northeast	18%	12%	15%	13.7%	13.7%	NA	18
Midwest	28%	33%	35%	35.9%	35.9%	NA	47
South	33%	31%	27%	26.0%	26.0%	NA	34
West	25%	23%	23%	24.4%	24.4%	NA	32
Distribution of Systems by Number of Active Members							
< 1,000	36%	35%	26%	23.7%	23.7%	NA	31
1,000 to 49,999	41%	42%	45%	43.5%	43.5%	NA	57
50,000 to 99,999	10%	9%	11%	12.2%	12.2%	NA	16
100,000+	13%	14%	18%	20.6%	20.6%	NA	27
Distribution of Systems by Market Value of Assets							
< $100 million	31%	26%	21%	19.8%	19.8%	NA	26
$100 to $999 million	30%	31%	26%	24.4%	24.4%	NA	32
$1.0 to $9.9 billion	26%	26%	29%	28.2%	28.2%	NA	37
$10.0 billion +	13%	17%	24%	27.5%	27.5%	NA	36
Distribution of Systems by Type of Employees							
General	59%	57%	57%	57.3%	57.3%	NA	75
Teachers/School	12%	13%	13%	14.5%	14.5%	NA	19
Police/Fire	19%	22%	21%	21.4%	21.4%	NA	28
Other	10%	7%	9%	6.9%	6.9%	NA	9
Distribution of Systems by Administrative Jurisdiction							
Independent	18%	21%	24%	25.2%	25.2%	NA	33
State Government	26%	28%	35%	38.2%	38.2%	NA	50
Local Government	44%	41%	34%	29.0%	29.0%	NA	38
Special District & Other	11%	10%	7%	7.6%	7.6%	NA	10

Table I-2
Analysis of Trends in System Administration

	---------- TOTAL CASES ----------			--------- MATCHED CASES ---------			
	1997 Survey (FY 1996)	1999 Survey (FY 1998)	2001 Survey (FY 2000)	1999 Survey (FY 1998)	2001 Survey (FY 2000)	% Change	# Matched Cases
Distribution of Systems by Number of Board Members							
No Board	3.1%	3.7%	3.9%	4.7%	4.7%	0.0% *	
1 to 4 members	1.5%	0.8%	0.0%	0.8%	0.0%	-0.8% *	
5 to 8 members	45.6%	51.6%	46.1%	46.9%	47.7%	0.8% *	
9 to 11 members	29.1%	28.5%	31.6%	30.5%	31.3%	0.8% *	
12 members +	14.2%	12.6%	15.1%	17.2%	16.4%	-0.8% *	
Not Applicable or No Response	6.5%	2.8%	3.3%	NA	NA	NA	128
Average Staff Size by Number of Active Members							
< 1,000 Active Members	1.20	1.34	1.25	1.13	1.52	34.5%	19
1,000 to 49,999	15.40	15.27	15.94	14.65	16.54	12.9%	49
50,000 to 99,999	67.90	89.97	96.94	87.55	96.23	9.9%	13
100,000+	243.60	247.16	257.19	244.68	255.90	4.6%	26
Average # of Staff per 1,000 Active Members	2.50	2.59	2.35	1.81	2.13	17.7%	107
Average Administrative Expenses (in $000s) by Number of Active Members							
< 1,000 Active Members	$223	$119	$111	$100	$107	7.0%	23
1,000 to 49,999	$1,868	$1,451	$1,499	$1,347	$1,412	4.8%	53
50,000 to 99,999	$5,263	$7,026	$7,510	$6,659	$7,754	16.4%	16
100,000+	$18,460	$19,522	$24,670	$19,536	$24,670	26.3%	27

NOTE: A '*' signifies that the % change is calculated as the change in percent (i.e., x2000% - x1998%) rather than percentage change (i.e., x2000 / x1998 - 1).

Table I-3
Analysis of Trends in Plan Benefits

	---------- TOTAL CASES ----------			--------- MATCHED CASES ---------			
	1997 Survey (FY 1996)	1999 Survey (FY 1998)	2001 Survey (FY 2000)	1999 Survey (FY 1998)	2001 Survey (FY 2000)	% Change	# Matched Cases
Average Annual Unit Benefit (1st 10 Years of Service)							
Members Covered Under Social Security	2.00%	2.08%	2.14%	2.06%	2.11%	0.05% *	119
Members Not Covered Under Social Security	2.36%	2.38%	2.48%	2.39%	2.43%	0.04% *	91
Average Annual Unit Benefit							
Members Covered Under Social Security							
General	1.84%	1.89%	1.91%	1.83%	1.85%	0.02% *	59
Teachers/School	1.77%	1.75%	1.85%	1.73%	1.85%	0.12% *	18
Police/Fire	2.37%	2.37%	2.35%	2.28%	2.36%	0.08% *	25
Other	2.47%	2.76%	2.82%	2.90%	2.92%	0.02% *	16
Average Annual Unit Benefit							
Members Not Covered Under Social Security							
General	2.24%	2.24%	2.28%	2.22%	2.25%	0.03% *	27
Teachers/School	2.09%	2.14%	2.10%	2.09%	2.10%	0.01% *	13
Police/Fire	2.40%	2.43%	2.58%	2.43%	2.50%	0.07% *	41
Other	3.20%	3.14%	3.33%	3.18%	3.18%	0.00% *	8
% Plans Providing Postemployment COLAs^	63%	77%	80%	80%	82%	1.50% *	210
Average Annual COLA for 1998 (%) (Excludes plans that do not provide COLAs)	2.62%	3.13%	3.01%	2.92%	3.05%	0.13% *	150
Average Percent of Members Covered Under Social Security (Cases weighted by number of members)							
General	84%	85%	82%	85.5%	82.8%	-2.7% *	90
Teachers/School	47%	52%	56%	61.5%	54.5%	-7.0% *	30
Police/Fire	35%	36%	39%	43.2%	41.4%	-1.8% *	66
Other	60%	65%	75%	43.6%	52.2%	8.6% *	27
All Plans	71%	73%	74%	77.6%	73.9%	-3.7% *	213

NOTE: A '*' signifies that the % change is calculated as the change in percent (i.e., x2000% - x1998%) rather than percentage change (i.e., x2000 / x1998 - 1).

^ In previous surveys, this was asked over the previous 5 years. In the 2001 survey, this was asked over the previous 3 years.

Table I-4
Analysis of Trends in Actuarial Methods and Assumptions

	---------- TOTAL CASES ----------			--------- MATCHED CASES ---------			
	1997 Survey (FY 1996)	1999 Survey (FY 1998)	2001 Survey (FY 2000)	1999 Survey (FY 1998)	2001 Survey (FY 2000)	% Change	# Matched Cases
Distribution of Plans by Frequency of Actuarial Analysis							
Every Year	80%	74%	79%	74.5%	84.1%	9.6% *	
Every Two Years	13%	12%	11%	13.2%	10.9%	-2.3% *	
Every Three of More Years	2%	2%	2%	1.8%	1.8%	0.0% *	
Not Applicable or No Response	4%	12%	8%	10.5%	3.2%	NA	220
Distribution of Plans by Actuarial Cost Method							
Entry Age	60%	62%	59%	57.7%	62.7%	5.0% *	
Frozen Entry Age	8%	7%	6%	7.3%	6.4%	-0.9% *	
Projected Unit Credit	12%	10%	11%	12.3%	12.3%	0.0% *	
Aggregate	10%	10%	11%	12.7%	11.8%	-0.9% *	
Other	6%	3%	5%	10.0%	3.2%	-6.8% *	
Not Applicable or No Response	4%	8%	7%	NA	NA	NA	220
Average Actuarial Assumptions for							
Investment Return	7.84%	7.88%	7.91%	7.90%	7.95%	0.05% *	209
Total Salary Increase	5.87%	5.73%	5.56%	5.74%	5.62%	-0.12% *	189
Inflation	4.41%	4.36%	3.97%	4.35%	4.14%	-0.21% *	189
Distribution of Plans by Actuarial Assumption for Investment Return							
< 7.0%	3%	2%	3%	2.9%	1.9%	-1.0% *	
7.0% to 7.9%	34%	29%	23%	27.3%	23.9%	-3.4% *	
8.0% to 8.9%	57%	60%	65%	67.0%	71.3%	4.3% *	
9.0%+	3%	2%	2%	2.9%	2.9%	0.0% *	
Not Applicable or No Response	4%	7%	7%	NA	NA	NA	209
Distribution of Plans by Actuarial Assumption for Total Salary Increase^							
<5.00%	11%	16%	20%	19.0%	23.8%	4.8% *	
5.0% to 5.9%	31%	30%	27%	33.3%	31.7%	-1.6% *	
6.0% to 6.9%	31%	30%	27%	36.0%	33.9%	-2.1% *	
7.0%+	14%	10%	8%	11.6%	10.6%	-1.0% *	
Not Applicable or No Response	14%	14%	18%	NA	NA	NA	189

NOTE: A '*' signifies that the % change is calculated as the change in percent (i.e., x2000% - x1998%) rather than percentage change (i.e., x2000 / x1998 - 1).

^ At age 40 with 10 years of service

Table I-5
Analysis of Trends in Plan Liabilities, Assets, and Funding

	TOTAL CASES			MATCHED CASES			
	1997 Survey (FY 1996)	1999 Survey (FY 1998)	2001 Survey (FY 2000)	1999 Survey (FY 1998)	2001 Survey (FY 2000)	% Change	# Matched Cases
Total Actuarial Accrued Liability (AAL) ($ bil.)	$1,248.5	$1,403.5	$1,490.7	$1,065.3	$1,248.3	17.2%	181
Total Actuarial Value of Assets (AVA) ($ bil.)	$1,094.1	$1,349.5	$1,574.6	$1,017.7	$1,281.5	25.9%	181
Unfunded Actuarial Accrued Liability (UAAL)	$170.5	$104.5	$69.7	$69.5	$63.8	-8.2%	79
UAAL values shown exclude overfunded amounts.							
Average AAL Funding Ratio (dollar-weighted)	88.7%	95.2%	103.8%	95.5%	102.7%	7.1% *	181
Distribution of Plans by AAL Funding Ratio							
< 50.0%	6%	4%	4%	6.0%	4.4%	-1.6% *	
50.0% to 69.9%	10%	6%	5%	6.6%	4.4%	-2.2% *	
70.0% to 89.9%	24%	16%	18%	19.8%	20.9%	1.1% *	
90.0% to 109.9%	39%	38%	37%	47.3%	42.3%	-5.0% *	
110.0%+	12%	18%	25%	20.3%	28.0%	7.7% *	
Not Applicable or No Response	9%	19%	12%	NA	NA	NA	182

NOTE: A '*' signifies that the % change is calculated as the change in percent (i.e., x2000% - x1998%) rather than percentage change (i.e., x2000 / x1998 - 1).

Table I-6
Analysis of Trends in Employer and Employee Contributions

	---------- TOTAL CASES ----------			--------- MATCHED CASES ---------			
	1997 Survey (FY 1996)	1999 Survey (FY 1998)	2001 Survey (FY 2000)	1999 Survey (FY 1998)	2001 Survey (FY 2000)	% Change	# Matched Cases
Actual Employers' Contributions ($ bil.)	$31.2	$30.0	$27.0	$22.9	$21.6	-5.7%	192
Actual Employees' Contributions ($ bil.)	$17.1	$17.8	$18.0	$13.1	$15.0	14.5%	194
Average Actual Employers' Contributions as a % of Covered Payroll	13.60%	11.62%	13.88%	11.4%	10.6%	-0.8% *	167
Average Actual Employees' Contributions as a % of Covered Payroll	5.51%	5.41%	6.86%	5.4%	5.4%	0.0% *	166
Distribution of Plans by Actual Employers' Contributions as a % of Payroll							
< 5.0%	10%	13%	16%	16.8%	21.6%	4.8% *	
5% to 9.9%	28%	28%	28%	37.1%	37.1%	0.0% *	
10% to 14.9%	24%	16%	15%	18.6%	19.2%	0.6% *	
15.0% to 19.9%	11%	13%	8%	18.0%	10.8%	-7.2% *	
20.0%+	13%	9%	14%	9.6%	11.4%	1.8% *	
Not Applicable or No Response	14%	21%	19%	NA	NA	NA	167
Distribution of Plans by Actual Employers' Contribution as a % of Employers' Annual Required Contribution							
< 70.0%	3%	4%	9%	3.8%	6.0%	2.2% *	
70.0% to 79.9%	1%	1%	2%	1.1%	1.6%	0.5% *	
80.0% to 89.9%	3%	2%	1%	1.1%	1.1%	0.0% *	
90.0% to 99.9%	3%	4%	4%	3.8%	2.7%	-1.1% *	
100.0%+	78%	73%	74%	90.2%	88.6%	-1.6% *	
Not Applicable or No Response	12%	16%	11%	NA	NA	NA	184

NOTE: A '*' signifies that the % change is calculated as the change in percent (i.e., x2000% - x1998%) rather than percentage change (i.e., x2000 / x1998 - 1).

Table I-7
Analysis of Trends in Investments

	---------- TOTAL CASES ----------			--------- MATCHED CASES ---------			
	1997 Survey (FY 1996)	1999 Survey (FY 1998)	2001 Survey (FY 2000)	1999 Survey (FY 1998)	2001 Survey (FY 2000)	% Change	# Matched Cases
Investment Distribution ($ bil.)							
Short-term Securities	$36.2	$37.5	$34.9	$24.3	$32.1	32.1%	
Domestic Stocks	$525.5	$824.9	$713.7	$536.8	$625.0	16.4%	
Domestic Bonds	$429.2	$492.7	$414.0	$330.9	$358.6	8.4%	
Real Estate Mortgages	$15.8	$10.2	$12.7	$5.8	$9.8	69.0%	
Real Estate Equities	$41.1	$60.3	$63.4	$47.4	$58.6	23.6%	
International Equities	$131.5	$206.9	$242.7	$142.3	$216.3	52.0%	
International Fixed-Income	$31.0	$34.7	$28.5	$27.8	$27.9	0.4%	
Other*	$41.5	$55.7	$76.1	$41.7	$67.0	60.7%	
Total Investments ($ bil.)	$1,251.8	$1,722.9	$1,586.1	$1,157.0	$1,395.3	20.6%	113
Investment Distribution (% - dollar-weighted)							
Short-term Securities	2.9%	2.2%	2.2%	2.1%	2.3%	0.2% *	
Domestic Stocks	42.0%	47.9%	45.0%	46.4%	44.8%	-1.6% *	
Domestic Bonds	34.3%	28.6%	26.1%	28.6%	25.7%	-2.9% *	
Real Estate Mortgages	1.3%	0.6%	0.8%	0.5%	0.7%	0.2% *	
Real Estate Equities	3.3%	3.5%	4.0%	4.1%	4.2%	0.1% *	
International Equities	10.5%	12.0%	15.3%	12.3%	15.5%	3.2% *	
International Fixed-Income	2.5%	2.0%	1.8%	2.4%	2.0%	-0.4% *	
Other*	3.3%	3.2%	4.8%	3.6%	4.8%	1.2% *	
Total Investments (%)	100.0%	100.0%	100.0%	100.0%	100.0%	NA	113
1-Year Annual Rate of Return (unweighted)	13.66%	14.41%	6.38%	15.04%	6.52%	-8.52% *	102
3-Year Annual Rate of Return (unweighted)	11.28%	13.36%	11.23%	15.25%	11.46%	-3.79% *	89
1-Year Annual Rate of Return (dollar-weighted)	NA	17.59%	4.84%	17.80%	4.56%	-13.24% *	101
3-Year Annual Rate of Return (dollar-weighted)	NA	14.44%	12.28%	16.92%	12.40%	-4.52% *	88

NOTE: A '*' signifies that the % change is calculated as the change in percent (i.e., x2000% - x1998%) rather than percentage change (i.e., x2000 / x1998 - 1).

Dollar-weighted returns are weighted by systems' 2000 investment dollars.

*** Includes alternative investments**

List of Respondents

SYSTEM	STATE
Alaska Public Employees' Retirement System	AK
Alaska Teachers' Retirement System	AK
Employees' Retirement System of Alabama	AL
Arkansas Local Police & Fire Retirement System	AR
Arkansas Teachers' Retirement System	AR
ASG Employees' Retirement Fund	AS
Tucson City Supplemental Retirement System	AZ
California Public Employees' Retirement System	CA
California State Teachers' Retirement System	CA
City of Alameda Police and Fire Retirement System	CA
Contra-Costa County Employee Retirement System	CA
East Bay Municipal Utility District	CA
Kern County Employees' Retirement Assoc.	CA
Long Beach Public Transportation Retirement Plan - Salaried Employees	CA
Long Beach Transit Pension Plan	CA
Los Angeles City Employees' Retirement System	CA
Los Angeles County Employees Retirement Association	CA
Los Angeles County Metropolitan Transportation Authority	CA
Marin County Employees Retirement Association	CA
Mendocino County Employees Retirement Association	CA
Oakland Police and Fire Retirement Systems	CA
San Bernadino County Employees Retirement Assoc.	CA
San Joaquin County Employees Retirement Association	CA
Aurora General Employees' Retirement Plan	CO
Colorado County Officials & Employees' Retirement Assoc.	CO
Denver Employees Retirement Plan	CO
Denver Public Schools Retirement System	CO
Englewood City Pension Systems	CO
Public Employees' Retirement Association of Colorado	CO
Connecticut Teachers' Retirement Board	CT
Milford City Supplemental Uniformed Pension Plan	CT
Milford Pension & Retirement Board	CT
Town of Avon	CT
Town of Suffield Retirement	CT
Boca Raton General Employees' Trust	FL
City of Saint Petersburg Employees Pension Fund	FL
Clair T. Singerman Employees'Retirement System	FL
Florida Retirement System	FL
Fort Lauderdale General Employees' Retirement System	FL
Lynn Haven General Employees' Pension Plan	FL
Lynn Haven Police Pension Fund	FL
Miami Beach Fire and Police Pension Funds	FL
Miami Firefighters & Police Officers' Retirement Trust	FL
Miami Shores General Employees Retirement System	FL
Pembroke Pines Firemen and Policemen Pension Fund	FL
Retirement System for Sworn Police Personnel	FL
Chatham County Employees Retirement Plan	GA

Employees' Retirement System of Georgia	GA
Macon Water Authority Employee Pension Plan	GA
Teachers Retirement System of Georgia	GA
Judicial Retirement System of Iowa	IA
Municipal Fire & Police Retirement System of Iowa	IA
Public Employee Retirement System of Idaho	ID
Chicago Policemen's Annuity and Benefit Fund	IL
Chicago Public School Teachers' Pension Fund	IL
Illinois Municipal Retirement Fund	IL
Illinois State Teachers' Retirement System	IL
MWRD Retirement Fund	IL
Park Employees' and Retirement Board Employees' Annuity and Benefit Fund of Chicago	IL
State Employees' Retirement System of Illinois	IL
State Universities Retirement System of Illinois	IL
Village of Bolingbrook Police Pension Retirement System	IL
Village of Mt. Prospect	IL
Indiana State Teachers Retirement Fund	IN
Kansas Public Employees Retirement System	KS
Wichita Employees' Retirement Systems	KS
Kentucky Retirement Systems	KY
Louisiana State Employees' Retirement System	LA
Teachers' Retirement System of Louisiana	LA
Chicopee Contributory Retirement System	MA
Dukes County Contributory Retirement System	MA
Holyoke Contributory Retirement System	MA
Plymouth County Retirement Association	MA
Employees' Retirement System of Montgomery County	MD
State Retirement and Pension System of Maryland	MD
Alpena City Employee's Retirement System	MI
Birmingham Employees Retirement System	MI
Cadillac Police & Fire Retirement System	MI
City of Flint - Department of Finance	MI
City of Grand Rapids General and Police & Fire Retirement System	MI
City of Kingsford Police and Firemen's Retirement System	MI
Gogebic County Employees Retirement System	MI
Kalamazoo County Employees' Retirement Fund	MI
Lansing Board of Water and Light Pension Plans	MI
Manistee Employees Retirement System	MI
Michigan Judges Retirement System	MI
Michigan Public School Employees Ret. System	MI
Michigan State Employees' Retirement System	MI
Michigan State Police Retirement System	MI
Roseville City Employee's Retirement System	MI
Sterling Heights Police and Fire Retirement System	MI
Wayne County Employees' Retirement System	MI
Minnesota Public Employee's Retirement Association	MN
Minnesota State Retirement System	MN
Minnesota Teachers' Retirement Association	MN
City of Arnold, Missouri, Police Pension Plan	MO

Kansas City Firefighters' Pension System	MO
Kansas City Police Employees' Retirement Systems	MO
Kansas City Police Employees' Retirement Systems	MO
Missouri Local Government Employees' Retirement System	MO
Missouri State Employees' Retirement System	MO
Public School Retirement System of the City of St. Louis	MO
Springfield Police and Fire Retirement System	MO
St. Louis City Employees' Retirement System	MO
St. Louis County Library District Employees Pension Plan	MO
Public Employees' Retirement System of Mississippi	MS
Montana Public Employees' Retirement Board	MT
Teachers' Retirement System of Montana	MT
Charlotte Firefighters' Retirement System	NC
Bismarck City Employees' Pension Plans	ND
North Dakota Public Employees' Retirement System	ND
North Dakota Teachers' Fund for Retirement	ND
Douglas County, Nebraska Pension Plan	NE
Nebraska Public Employees Retirement Systems (DB Plan)	NE
Nebraska Public Employees Retirement Systems (DC Plan)	NE
New Hampshire Employees' Retirement Systems	NH
Consolidated Police and Firemen's Pension Fund (CPFP)	NJ
Judicial Retirement System of New Jersey	NJ
New Jersey Police and Firemen's Retirement System	NJ
New Jersey Public Employees' Retirement Systems	NJ
Prison Officers' Pension Fund of New Jersey	NJ
State Police Retirement System of New Jersey	NJ
New Mexico Public Employees Retirement Association	NM
Public Employees' Retirement Systems of Nevada	NV
New York City Fire Department Pension Fund	NY
New York State & Local Retirement Systems	NY
New York State Teachers' Retirement System	NY
City of Cincinnati Retirement System	OH
Ohio State Highway Patrol Retirement System	OH
Public Employees Retirement System of Ohio	OH
School Employees Retirement System of Ohio	OH
Oklahoma Police Pension and Retirement System	OK
Oklahoma Teachers' Retirement System	OK
Tulsa County Employees' Retirement System	OK
Oregon Public Employes' Retirement Systems	OR
Portland Fire & Police Disability and Retirement Fund	OR
Elk County Employees' Retirement Plan	PA
Pennsylvania Public School Employees' Retirement System	PA
Pennsylvania State Employees' Retirement System	PA
State College Borough Employees' Retirement Funds	PA
Employees' Retirement System of Rhode Island	RI
South Carolina Retirement Systems	SC
South Dakota Employees' Retirement Systems	SD
City of Germantown	TN
Shelby County Retirement System	TN
Tennessee Consolidated Retirement System	TN

Employees' Retirement System of Texas	TX
Fire and Police Pension Fund, San Antonio	TX
Fort Worth Employees' Retirement Fund	TX
Houston Firefighters' Relief & Retirement Fund	TX
Teacher Retirement System of Texas	TX
Texas County and District Retirement System	TX
Texas Municipal Retirement System	TX
VIA Metropolitan Transit Retirement Plan	TX
Utah State Retirement Systems	UT
Fairfax County Employees' Retirement System	VA
Fairfax County Police Officers Retirement System	VA
Fairfax County Uniformed Retirement System	VA
Fairfax County Water Authority Retirement Plan	VA
Virginia Retirement System	VA
Virgin Islands Govt. Employees' Ret. System	VI
Burlington Employees' Retirement System	VT
Spokane Employees' Retirement System	WA
Tacoma Employees' Retirement System	WA
Washington State Retirement Systems	WA
Milwaukee County Employees Retirement System	WI
Wisconsin Retirement System	WI
West Virginia Consolidated Public Retirement Board	WV
Wyoming Retirement System	WY