

# **Public Fund Survey Summary of Findings for FY 2004**

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September 2005**

# Table of Contents

|  |            |
|--|------------|
| Background and Methodology                               | <i>i</i>   |
| The Meaning and Implications of Actuarial Funding Ratios | 1          |
| Funding Levels and Changes from Prior Years              | 2          |
| Changes in Membership                                    | 6          |
| Prefunding, Public Pension Plans, and Social Security    | 7          |
| Contributions, Benefit Payments, and Expenses            | 7          |
| Retirement Multipliers                                   | 8          |
| Contribution Rates                                       | 9          |
| The Long Timeline of Changing Contribution Rates         | 10         |
| Actuarial Assumptions                                    | 11         |
| Asset Allocation   | 14         |
| System Summary   | Appendix A |
| Actuarial Funding Summary                                | Appendix B |

## Background and Methodology

The Public Fund Survey is an online compendium of key characteristics of 103 public retirement systems that administer pension and other benefits for a combined 12.6 million active public employees and 5.8 million retirees and other annuitants, and that hold more than \$2.1 trillion in trust for these participants. The membership and assets of systems included in the survey are estimated to represent approximately 88% of the nation's total public retirement system community. The survey is sponsored by the National Association of State Retirement Administrators and the National Council on Teacher Retirement.

All survey data pertains to defined benefit plans, including several hybrid plans. More information on hybrid plans is discussed in the section of this report titled, *Retirement Multipliers*. According to the U.S. Bureau of Labor Statistics, 88 percent of state and local government employees have a defined benefit as their primary retirement benefit.

Most data in the survey is maintained on a fiscal year basis and is updated as new information, particularly system annual financial reports, becomes available. In addition to annual financial reports, survey data also is taken from actuarial valuations, benefits guides, system websites, and input from system staff.

The information presented in this report reflects the latest available information. For more than 90 percent of the systems in the survey, the data is updated through FY 04. Producing a retirement system annual report typically requires a minimum of five months following the end of a fiscal year. About three-fourths of the systems in this survey have a fiscal year-end date of June 30; most others have a fiscal year that ends December 31. Because FY 04 annual financial data for some systems is unavailable as of this writing, the data presented in this summary may change slightly.

All data collected in the survey is classified as either "system" data or "plan" data. Every system in the survey has at least one plan; some systems have more than one. In cases of systems with multiple plans, separate plans typically are established for different employee groups, such as local government employees, public safety personnel, judges, and elected officials. In some cases, retirement systems combine all employee groups into a single plan, but may provide different benefit levels for different groups. The survey covers 103 systems and 127 plans. Smaller plans for narrow employee groups, such as legislators and judges, typically are not included in the Public Fund Survey.

## Public Fund Survey Summary of Findings

### **The Meaning and Implications of Actuarial Funding Ratios**

Perhaps the most recognized measure of a public retirement plan's health is its actuarial funding level, the ratio of assets to liabilities for benefits accrued to-date. A pension plan whose assets equal its liabilities is funded at 100% and is considered *fully funded*; any shortfall of assets is an *unfunded liability*, and a plan with an unfunded liability is considered *underfunded*.

*Underfunded* normally does not mean that a plan is unable to pay the benefits for which it is presently obligated; in fact, substantially all underfunded public pension plans are able to meet their current obligations.

All plans, underfunded and fully funded alike, that are open to newly hired workers, rely on future contributions and investment returns. A key difference between underfunded and fully funded plans is that underfunded plans require contributions both to finance benefits currently being accrued as well as to eliminate the shortfall between their assets and their accrued liabilities. Because fully funded plans have no such shortfall, they require contributions only to finance benefits currently being accrued.

"Fully funded" can be mistakenly interpreted to mean that no future contributions to the plan will be required. In fact, "fully funded" means that the actuarial value of assets on hand equal the plan's actuarial accrued liabilities – contributions and investment earnings still will be required to cover the benefit obligations as they accrue going forward.

Although the actuarial funding level is a useful indicator of a plan's health, its utility and meaning should not be overstated: calculating an actuarial funding ratio involves many financial and demographic assumptions, of which most, if not all, will be incorrect to one degree or another in the short-term. Moreover, the actuarial calculation itself is only a snapshot of an arrangement of complex, long-term financial and demographic projections, based on the theoretical supposition that the plan's liabilities are subject to settlement as of the actuarial valuation date. Yet, except in the rare case of a plan termination, all of a plan's obligations do not come due at once. Rather, these obligations extend continuously many years into the future. This future period provides the plan, fully funded or not, with time to continue accruing assets (usually through a combination of contributions and investment earnings) needed to meet future obligations.

Attaining full funding of a pension plan has been likened to a mortgage, in which the homeowner has a long period, such as 30 years, to amortize the obligation. At the end of the thirty-year period, the mortgage would be considered fully funded. Although at any point during the thirty-year period, the outstanding mortgage may be considered an unfunded liability, more relevant considerations are a) whether the homeowner has the resources to continue to meet his or her mortgage payments until the obligation is resolved; and b) whether the obligation is being amortized.

Likewise, more pertinent considerations with regard to funding a public pension plan may be whether: a) the amount needed to fund the benefit and to amortize the unfunded liability is causing fiscal stress, and b) the plan's unfunded liability is diminishing, or there is a plan in place to reduce the unfunded liability. Public pension accounting standards require disclosure of trend data that reveal the current funding condition and the direction in which the plan appears to be headed.

Public Fund Survey Summary of Findings

**Funding Levels and Changes from Prior Years**

Figure A summarizes aggregate assets and liabilities for the 127 plans included in the Public Fund Survey for fiscal years 01 through 04. The combined funding level for these plans is 87.8%, down from last year's level of 91.2%. Actuarial liabilities grew to \$2.399 trillion, up from 6.7 percent from the previous year's level of \$2.248 trillion. Actuarial assets grew 2.7 percent, from \$2.051 trillion to \$2.106 trillion.

**Figure A: Change in aggregate actuarial assets, liabilities, and funding levels, FY 01 to FY 04 (trillions)**

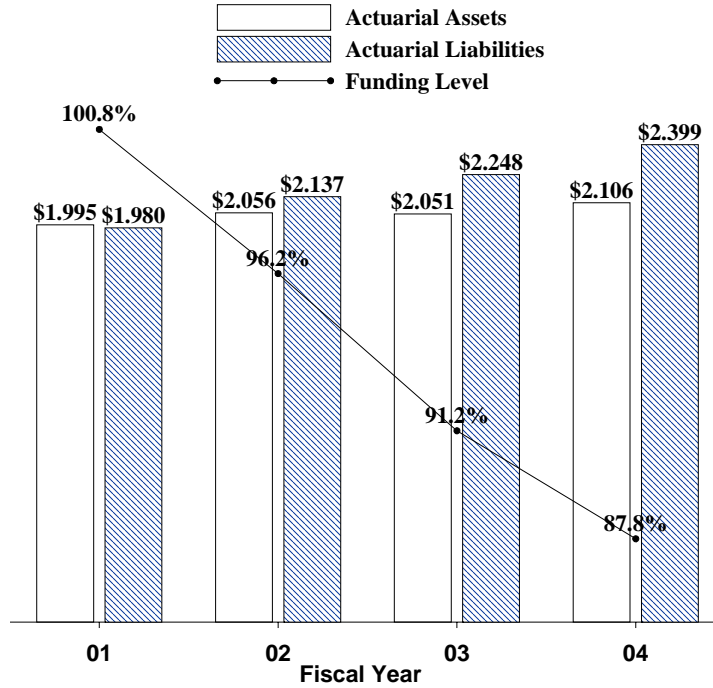
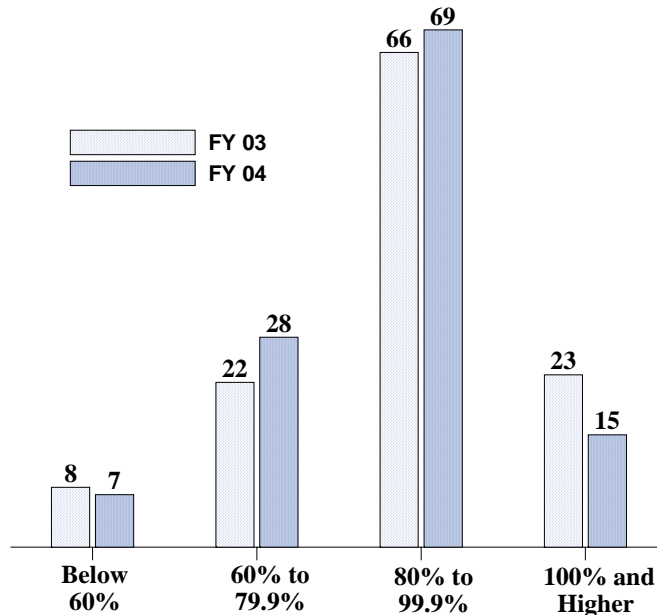


Figure B summarizes the change in the distribution of funding levels from FY 03 to FY 04. (Eight plans in the survey use the aggregate cost actuarial funding method, which does not identify an unfunded liability. These plans are not reflected in Figure B.)

**Figure B: Change in Distribution of Actuarial Funding Levels, FY 03 to FY 04**



## Public Fund Survey Summary of Findings

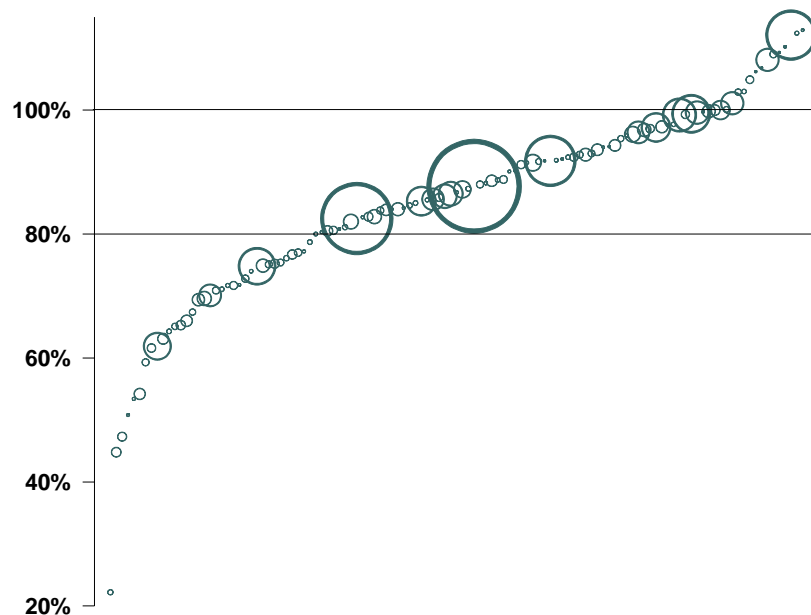
Despite the decline in funding levels, 84 of the 119 plans (71%) have an actuarial funding ratio of 80% or higher, a threshold often cited by actuaries as a benchmark of a pension plan's actuarial health. The average funding level of all plans in the survey is 85.2%; the median is 86.7%.

Four plans in the survey during FY 04 were recipients of pension bond proceeds. Three of these plans were in Illinois—the Teachers', State, and Universities plans—and the other was the San Diego County plan. The bond proceeds were enough to raise the funding level of the Illinois Teachers and Universities plans above the 60 percent threshold.

The number of plans with a funding level below 80 percent rose from 30 to 35, or 29 percent of all plans in the survey. The farther a plan's funding level is below 100 percent, the higher its cost will be to amortize its unfunded liability. While the fiscal and liability structure of every plan sponsor and pension plan are unique, a funding level below 80 percent may create fiscal stress for the plan sponsor(s) as a result of higher contribution rates needed to amortize the unfunded liability.

Figure C plots the size of each plan's liabilities roughly proportionate to the size of each plan's circle. The larger the plan, the larger is its circle. For example, the largest circle, located near the middle of the chart, represents the California Public Employees' Retirement Fund plan, the nation's largest public pension plan. The large circle located at the upper right-hand corner is the Florida Retirement System, which currently is funded at 112.1 percent.

**Figure C: Actuarial funding ratios for 119 public pension plans**



Appendix B provides a listing of these plans and the eight not shown here that use the aggregate cost actuarial method.

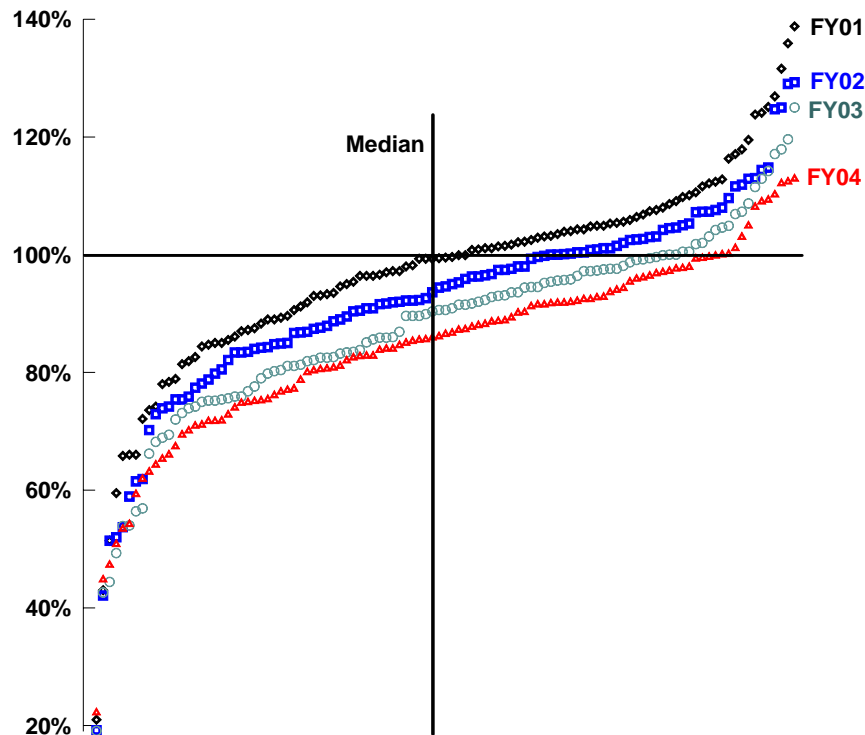
As is evident in Figure C, most of the largest plans, which cover a significant percentage of the total liabilities included in the survey, are funded above 80 percent. The largest five plans in the survey—California PERF, California Teachers, Texas Teachers, the Florida Retirement System, and New York State Teachers—are funded above 80 percent. (The New York State & Local ERS plan is not counted because it uses the aggregate cost method, which does not identify an unfunded liability.) These five plans

## Public Fund Survey Summary of Findings

by themselves comprise nearly one-fourth of all liabilities in the survey. Plans with a funding ratio above 90 percent have combined liabilities equaling 42 percent of the survey total.

Due chiefly to the continued actuarial recognition (through phasing-in of market gains and losses) of the decline in equity values from April 2000 through March 2003, the aggregate FY 04 actuarial funding level declined for the third consecutive fiscal year. Figure D summarizes the change in funding levels since FY 01 for the 106 plans for which four years of actuarial valuation data are available (this figure excludes plans that use the aggregate cost valuation method). The median decline from FY 01 to FY 04 is 12.6%.

**Figure D: Change in actuarial funding ratios for 107 plans  
FY 01 to FY 04**

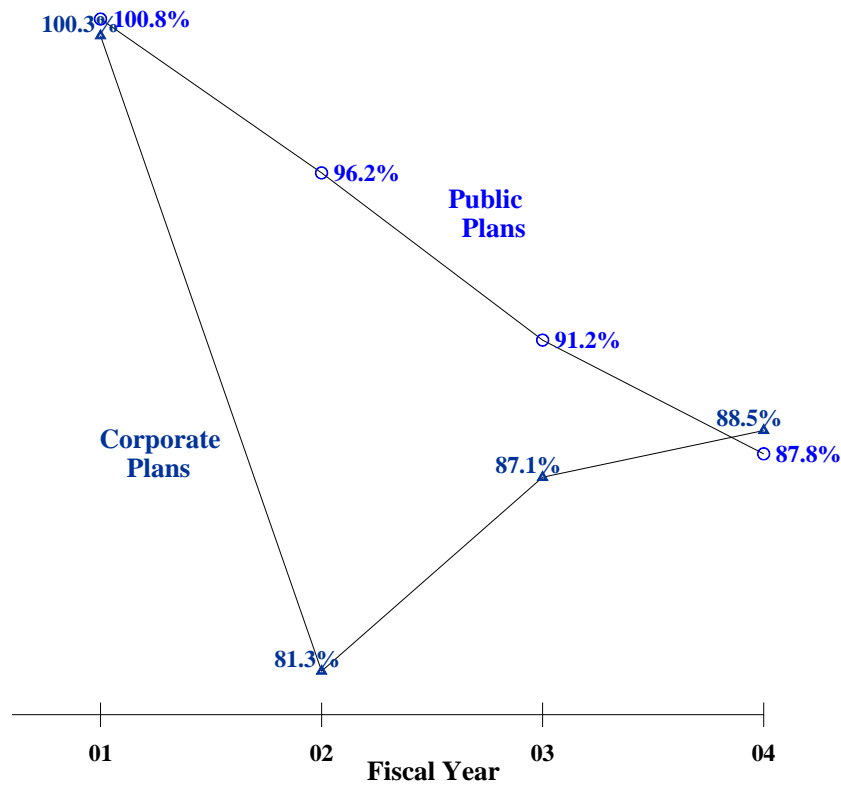


## Public Fund Survey Summary of Findings

Figure E compares the change in aggregate funding ratios between corporate pension plans and state and local government plans for the period FY 01 to FY 04. The corporate plans shown are those of the 362 corporations in the S&P 500 that sponsor a defined benefit plan, as measured by Standard & Poor's. Corporate pension assets are measured on a market value basis, while most public pension plans use an actuarial valuation method that "smoothes" the value of their assets over a period of several years. (See Figure L.) Measuring assets by market value leads to greater volatility in the funding level than a method that smoothes investment gains and losses over several years.

Not all plans conduct an actuarial valuation every year. For the 108 plans that did report new valuation results in their FY 04 financial report, the annual median rate of growth in actuarial liabilities was 6.4 percent. This relatively slow rate of liability growth appears to be a result chiefly of a reduction in the number of benefit enhancements approved, especially since the decline in equity markets began in 2000. In the absence of investment returns that consistently exceed the predominant 8.0 percent rate of return assumption (see Figure M), and significant increases in contributions, restraining liability growth will be essential to improving actuarial funding levels.

**Figure E: Comparison of public and corporate pension funding ratios  
FY 01 to FY 04**



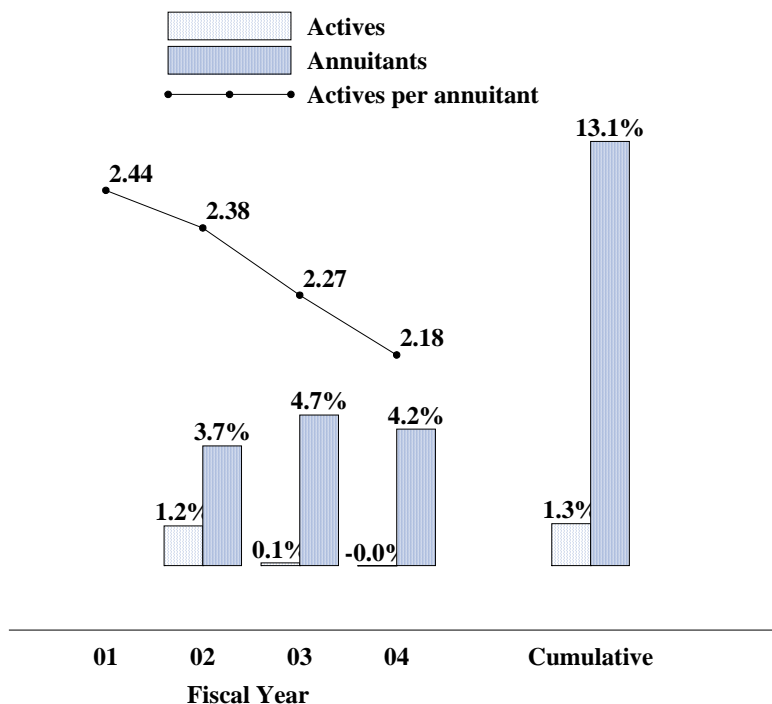
## Public Fund Survey Summary of Findings

### Changes in Membership

The survey measures two major classes of members: Actives, who are working and contributing (or their employer is contributing on their behalf); and Annuitants, which includes any member receiving a regular benefit from the system, chiefly retired members, beneficiaries and disabilitants.

The distribution of changes in membership and the median change for each group are shown in Figure F. For the 93 retirement systems for which FY 04 membership data is available, growth in the number of annuitants once again easily outpaced growth among actives. In FY 04, the total number of annuitants increased by 4.2 percent, compared with essentially no change in the number of actives, continuing a pattern from previous years. Since FY 01, the number of annuitants among plans in the survey has grown by a cumulative 13.1 percent, compared with an increase in actives of just 1.3 percent.

**Figure F: Annual percentage change in active members and annuitants, and the number of actives per annuitant, FY 01 to FY 04**



One result of the higher rate of growth among annuitants is a declining ratio of active participants to annuitants. While this change, by itself, does not necessarily present a problem for retirement systems, over time it can affect retirement system operations, the plan's actuarial condition, and a pension fund asset allocation.

For example, compared with active participants, annuitants generally require a higher level of retirement system service and attention; annuitants tend to make more inquiries, require resolution or explanation of benefit issues, etc.

To the extent that a pension plan is underfunded, a declining ratio of actives to annuitants complicates the effort to moving toward full funding. This is because fewer actives relative to annuitants usually translates into fewer contributions relative to benefit payments, contributions that are needed to help the plan reduce its unfunded liability.

Also, fewer contributions coupled with increasing benefit payments can require a more conservative asset allocation, as a higher percentage of plan assets are needed to meet immediate and near-term obligations.

## **Prefunding, Public Pension Plans and Social Security**

Most public pension plans are designed to be prefunded. A prefunded plan accumulates assets needed for benefits during a participant's working years, so that when the employee qualifies for retirement, the assets needed to fund those benefits, on an actuarial basis, are available. By contrast, a pay-as-you-go plan uses current receipts (typically from contributions made employers and working employees) to fund current benefits.

A plan that is fully funded or nearly fully funded, will be less affected by a declining ratio of actives to annuitants, primarily because the plan has the actuarial assets needed to pay its liabilities, and is less reliant on contributions from new working participants.

Policymakers, the media, and the public must recognize two key differences between the pay-as-you-go U.S. Social Security system and prefunded public pension plans. First, because public pension plans are prefunded (or at least partially prefunded), the declining ratio of actives to annuitants is much less important than in the pay-as-you-go Social Security plan. In fact, the cause of Social Security's projected shortfall is that the ratio of working (contributing) Americans to those receiving a benefit has been declining for years, and is projected to begin declining at an increasing rate later in this decade, once Baby Boomers begin to retire. In 2017, the Social Security Administration projects that current receipts will no longer be sufficient to meet the plan's current obligations.

At that point, Social Security will begin to draw on the Social Security Trust Fund, a fund that has been accumulating the surplus of Social Security tax receipts since the mid-1980's. Unfortunately, this brings us to the second key difference between Social Security and public pension funds: the Social Security Trust Fund has been spent. By contrast, public pension funds have real assets of more than \$2 trillion (see Figure M, detailing public pension funds' asset allocation).

As a result of these two differences, efforts to compare Social Security and public pensions are invalid or irrelevant.

## **Contributions, Benefit Payments, and Administrative and Investment Expenses**

For plans in the Public Fund Survey during FY 04:

- Total contributions rose approximately 12.5 percent, from \$62 billion to \$70 billion. Much of this increase occurred among several large plans whose employer contribution rates had been unusually low in previous years, such as CalPERS, the New York State & Local ERS, and the New Jersey Division of Pensions and Benefits. A portion of this increase is due to normal payroll growth, which typically is in the range of 4.0 percent to 4.5 percent; and higher contribution rates. This increase in contributions does not include the approximately \$7.5 billion in bond proceeds distributed to three Illinois systems and the San Diego County system.
- Total benefit payments rose by around 8 percent, from \$104 billion to \$112 billion. Primary sources of this increase include normal growth in the number of annuitants, especially retirees; and cost-of-living adjustments made to existing annuitants.
- Median investment expenses were 23 basis points, ranging from a low of less than one basis point to 94 basis points.
- Median administrative expenses (not including investment management expenses) were eight basis points. The combined total median figures for investment and administrative expenses result in a median cost to administer the retirement systems included in the survey of less than one-third of one percent of assets.

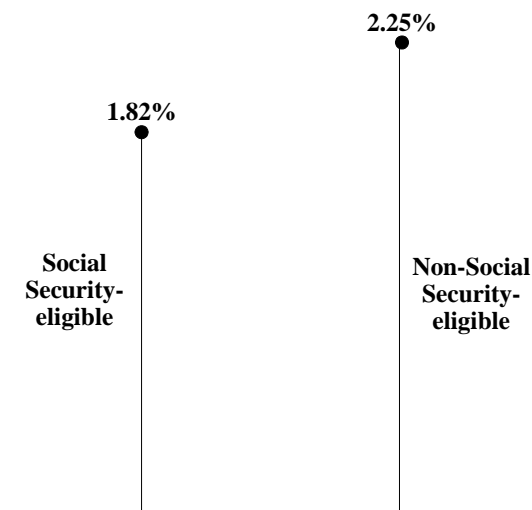
## Public Fund Survey Summary of Findings

### Retirement Multipliers

A retirement multiplier is a standard feature of a defined benefit plan, factored along with a participant's years of service and salary to calculate a retirement benefit. Figure G summarizes median retirement multipliers on the basis of Social Security eligibility, indicating a median multiplier for Social Security-eligible participants of 1.82% and 2.25% for those not eligible for Social Security. (Approximately 25% of public employees, including many school teachers and a majority of firefighters and police officers, do not participate in Social Security, making their public pension benefit their primary means of retirement income.)

These multipliers pertain to general employees and teachers; law enforcement personnel and firefighters generally have higher retirement multipliers because their jobs are higher-risk and their careers usually are shorter. These median figures are substantially unchanged from FY 03.

**Figure G: Median Plan Retirement Multipliers**



Several plans in the survey administer hybrid benefit structures. Hybrid pension plans in the public sector take of one of two forms. One resembles a cash balance plan, in which the pension benefit is based on combination of service credit (as in a defined benefit plan) and contributions and investment earnings (as in a defined contribution plan). Benefits administered by the Texas County & District Retirement System, the Texas Municipal Retirement System, and the Nebraska State Employees Retirement System fall into this category.

The other form of hybrid pension plan used in the public sector melds a traditional DB plan, but with a modest retirement multiplier (such as 1.0%), with a traditional defined contribution plan. Plans in Indiana, Washington state, Oregon, and optional plans in Florida, Ohio, Wisconsin and South Dakota offer this type of hybrid.

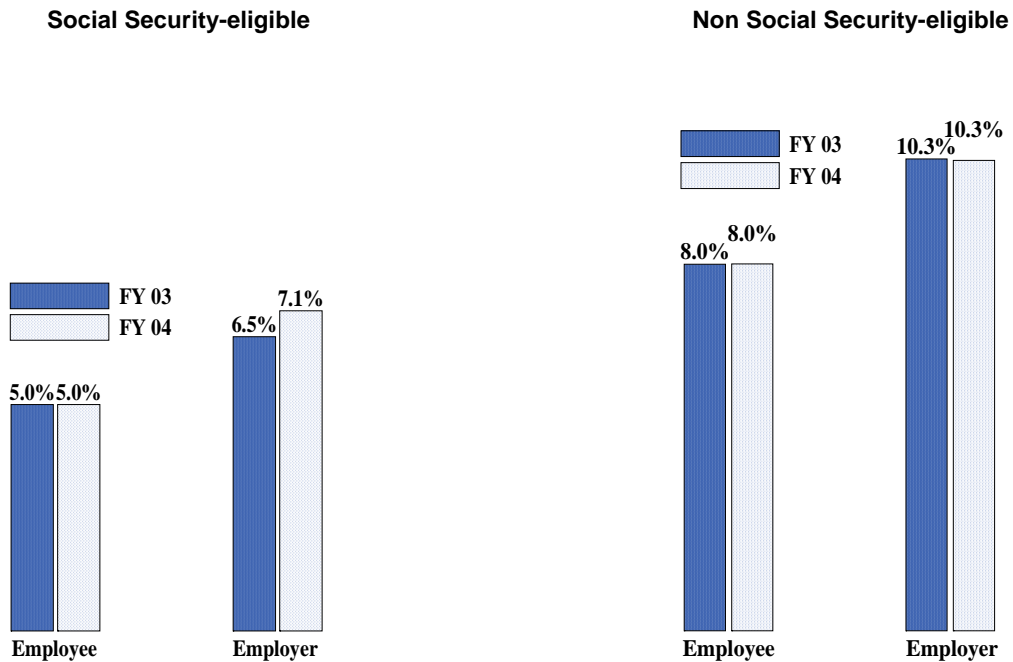
All of these hybrid plans offer two key features of a DB plan: they provide a benefit that is assured for life; and the employer, not the employee, bears all or some of the investment risk. Multipliers for hybrid plans are not factored into the median figures depicted in the chart above.

**Contribution Rates**

Neatly characterizing contribution rates for the public pension plan community is difficult: there is no typical arrangement for contribution rates, with the possible exception that in most cases, employers and employees alike contribute to the pension plan. Many plans establish a fixed contribution rate for employees, and five percent of pay is a popular rate. Ten plans in the survey are non-contributory for employees. Contribution rates are variously determined by statute, actuarial requirements, or trustee or legislative fiat. Some rates change from one year to the next; others are fixed by statute. Some plans base contribution rates on the employee’s age at their point of entry into the plan. Some plans hold employee contribution rates steady and allow employer rates to vary based on actuarial requirements. Some plans allow both employer and employee rates to vary based on actuarial requirements. Agent plans usually have different rates for each of hundreds or even thousands of employers. Some rates are graduated based on the employee’s salary.

Figure H identifies median contribution rates for employees and employers, for fiscal years 03 and 04, distinguished by participants’ eligibility for Social Security. These rates pertain to general employees and teachers and do not include public safety personnel. Because most law enforcement officers and firefighters receive higher pension benefits than other employee groups, their contribution rates usually are substantially higher than those for other groups of public employees. Also, because pension benefits usually are higher for participants who are not eligible for Social Security, contribution rates for these participants are higher than for those who do participate in Social Security.

**Figure H: Median contribution rates, FY 03 and FY 04**



Although Figure H indicates little change from FY 03 to FY 04, rates have risen at some plans for both employees and employers, but not by enough to change the median. Also, policymakers and trustees in some plans have expressed their intention to increase contribution rates in future years, including FY 05.

### **The Long Timeline of Changing Contribution Rates**

For a number of reasons, a significant time lag usually exists between declining investment returns, lower funding levels, and higher contribution rates. Most plans phase in investment gains and losses over several years (see Figure L), which delays the effects of a market decline on a plan's funding condition. Also, retirement systems normally require at least six months following the end of a fiscal year to produce an annual financial report. This lag can be extended further because many plans either have an actuarial valuation that lags their fiscal year, or they have an actuarial valuation conducted only every other year. Once the effect of a market decline begins to take its toll on a plan's funding level, and the extent of higher contribution rates is fully measured, the issue often enters the political arena, as state legislators or other policymakers become responsible for approving higher contribution rates.

To illustrate this timeline, while the median public pension fund experienced a negative investment return for the year-ended June 30, 2001, because of the use of actuarial smoothing methods, not only did the typical public fund experience a positive actuarial return that year, but, because of previous years' returns, the typical public pension fund experienced an actuarial return *greater* than the predominant actuarial assumption of 8.0 percent !

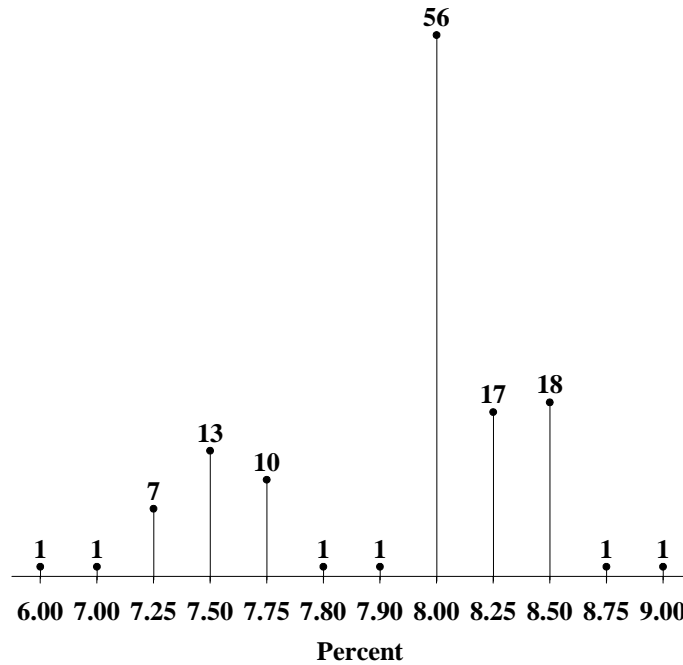
Thus, despite the fact that by June 30, 2001 (the end of FY 01 for most plans), domestic equity returns had been in decline for 15 months, actuarial investment returns remained well above assumed levels. It was not until after June 30, 2002, 27 months into the equity market slide, that the effect of negative investment returns began to be actuarially recognized by most public pension funds. This fact was first officially reported in FY 02 financial reports that were published in January 2003, nearly three years after the onset of the equity market decline.

A plan with an actuarial valuation date that lags the fiscal year-end date will be even further behind. When the political process of securing a consensus to raise contribution rates, incorporating them into the budget process, and giving political subdivisions (school districts, cities, etc.) notice of the higher rates into their budgets, are added, the period from lower investment returns to actual higher contribution rates can take several years.

The FY 05 Summary of Findings report is likely to identify contribution rates higher than those shown here.

Public Fund Survey Summary of Findings

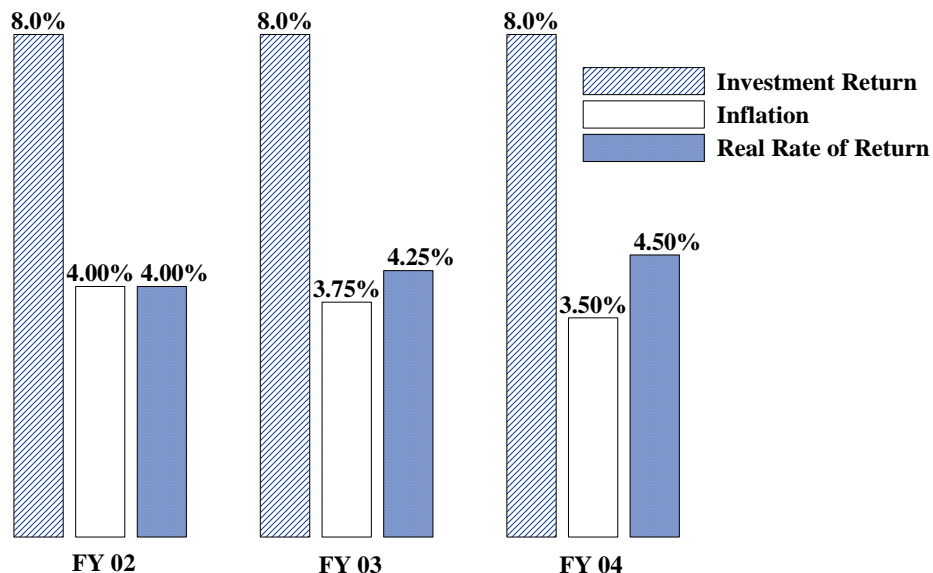
Figure J: Distribution of Assumed Rates of Investment Return, FY 03 and FY 04



As with the inflation assumption, several plans lowered their assumption for investment return, although 8.0 percent remains both the median assumption and by far the most popular.

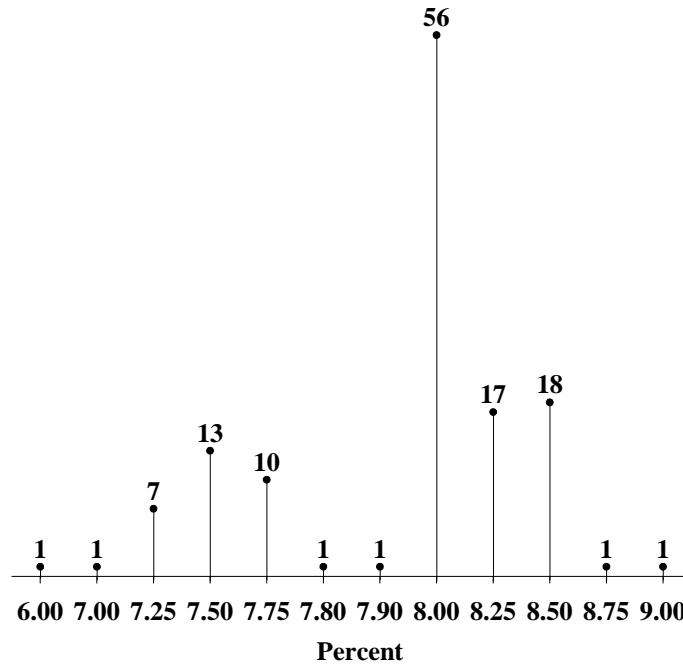
The real rate of return is the difference between the assumption for investment return and the assumption for the underlying inflation rate. Figure K shows the result of lower assumed rates of inflation, resulting in a median real rate of return of 4.50 percent, up 0.25 percent from FY 03 and 0.50 percent from FY 02. It is perhaps ironic that the median assumption for the real rate of investment return has risen while interest rates are relatively low and many investment experts believe that returns on equities, at least in the near term, are likely to fall short of historic levels.

Figure K: Median Assumed Rates of Investment Return, Inflation, and Real Rate of Return



Public Fund Survey Summary of Findings

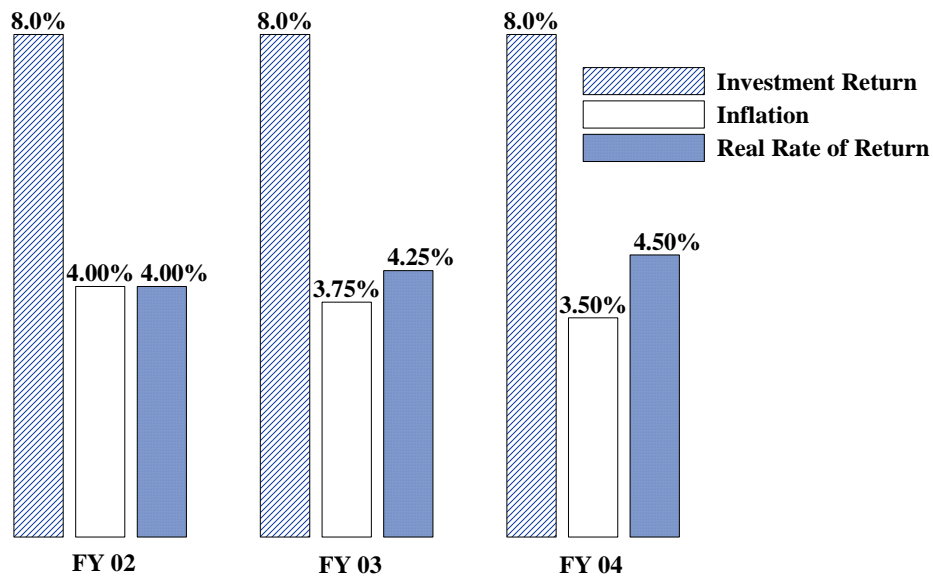
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Figure K: Median Assumed Rates of Investment Return, Inflation, and Real Rate of Return



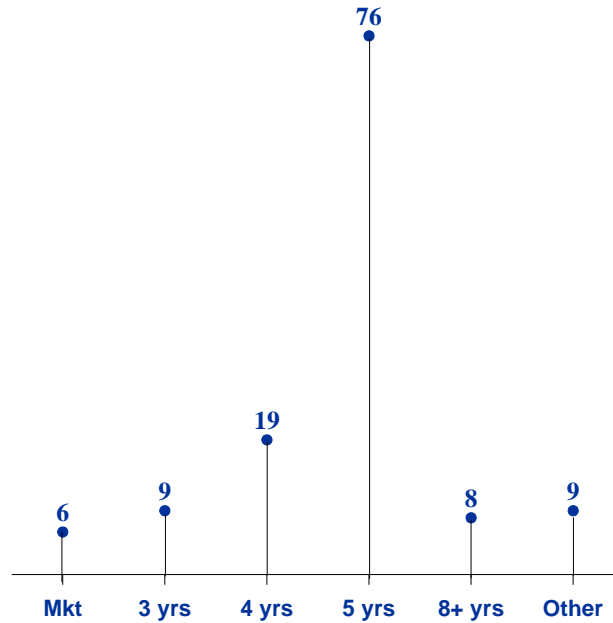
## Public Fund Survey Summary of Findings

### Actuarial Smoothing Periods

Figure L summarizes the use of actuarial smoothing periods used by plans in the Public Fund Survey. Plans use a smoothing period to reduce year-to-year volatility in funding levels and required contribution rates.

CalPERS earlier this year increased its actuarial smoothing period from three years to 15, and the Arizona State Retirement System increased its smoothing period from five years to 10. As Figure L indicates, five years remains the predominant method, six plans use the market value of assets, and eight plans use periods of eight years or longer.

**Figure L: Distribution of Periods Used to Smooth Asset Values**

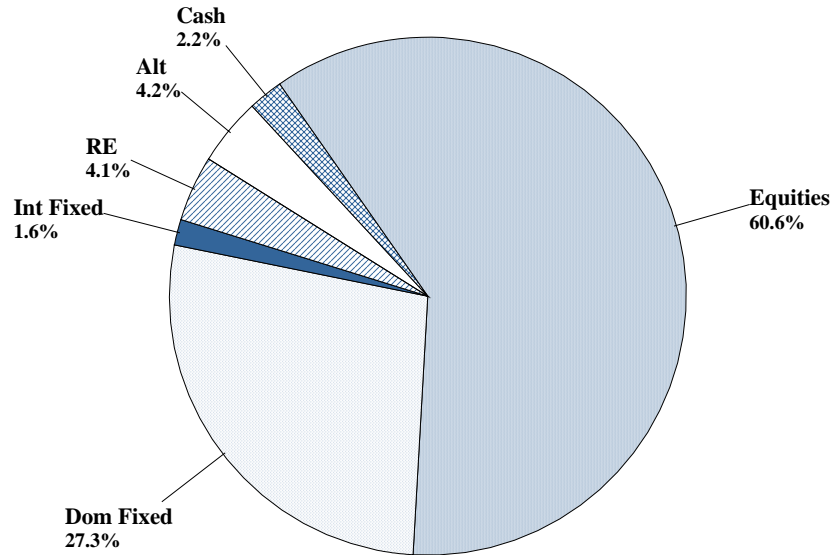


## Public Fund Survey Summary of Findings

### Asset Allocation

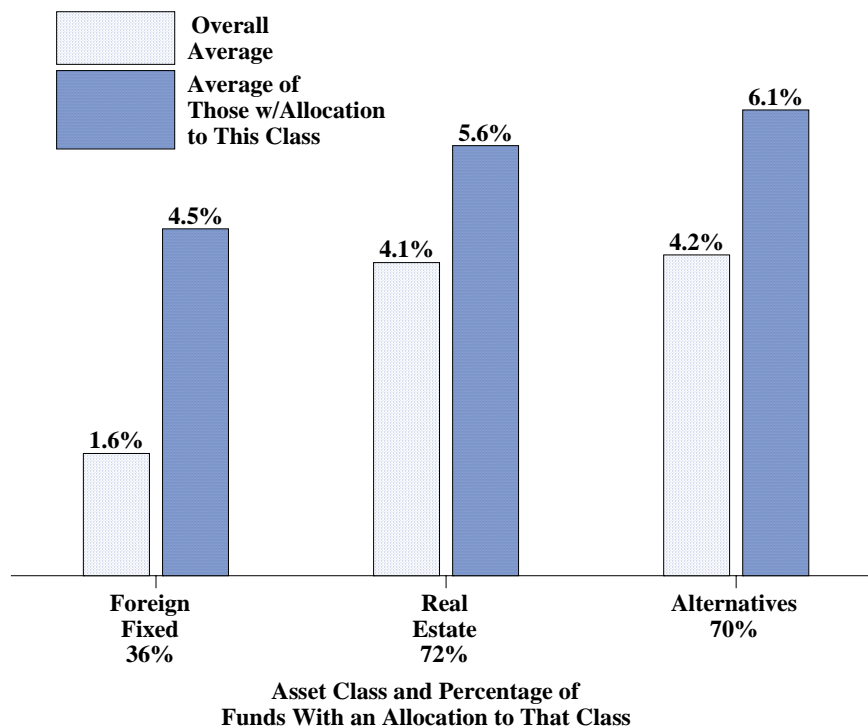
Figure M shows the FY 04 asset allocation for the 94 systems for which this data is available.

**Figure M: Average Asset Allocations for 94 systems based on most recent annual financial report**



Because not every fund is invested in every asset class, this pie chart does not fully reflect the reality of public funds' asset allocation. Figure M looks more closely at three asset classes—Foreign Fixed Income, Real Estate, and Alternatives—to compare the Public Fund Survey universe with the average allocation of only those funds that have allocated assets to the respective class. For example, 36 percent of funds in the Public Fund Survey have an allocation to Foreign Fixed Income. Of those, the average allocation to that class is 4.5 percent.

**Figure N: Allocations to Targeted Asset Classes**



## Appendix A System Summary

| State | System Name  | Asset Market Value (\$000s) | Active Members | Annuitants | For Fiscal Year-Ended |
|-------|--|-----------------------------|----------------|------------|-----------------------|
| AK    | Alaska Public Employees Retirement System                  | 8,177,306                   | 34,065         | 18,431     | 6/30/2004             |
| AK    | Alaska Teachers Retirement System                          | 3,911,515                   | 9,873          | 8,312      | 6/30/2004             |
| AL    | Retirement Systems of Alabama                              | 24,870,460                  | 212,079        | 86,413     | 9/30/2004             |
| AR    | Arkansas Public Employees Retirement System                | 4,306,846                   | 42,826         | 19,872     | 6/30/2004             |
| AR    | Arkansas Teachers Retirement System                        | 8,122,004                   | 71,462         | 22,320     | 6/30/2004             |
| AZ    | Arizona State Retirement System                            | 21,431,099                  | 205,573        | 75,563     | 6/30/2004             |
| AZ    | Phoenix Employees' Retirement System                       | 1,444,743                   | 8,960          | 3,743      | 6/30/2004             |
| AZ    | Arizona Public Safety Personnel Retirement System          | 4,309,735                   | 15,852         | 7,663      | 6/30/2004             |
| CA    | California Public Employees Retirement System              | 168,436,158                 | 806,644        | 415,178    | 6/30/2004             |
| CA    | California State Teachers Retirement System                | 116,158,454                 | 444,680        | 193,245    | 6/30/2004             |
| CA    | San Francisco City and County Retirement System            | 11,907,358                  | 32,121         | 18,490     | 6/30/2004             |
| CA    | San Diego County Employees Retirement Association          | 5,508,639                   | 17,717         | 10,770     | 6/30/2004             |
| CA    | Los Angeles County Employees Retirement Association        | 29,481,183                  | 86,237         | 48,595     | 6/30/2004             |
| CA    | Contra Costa County Employees' Retirement Association      | 3,718,616                   | 9,358          | 6,118      | 12/31/2004            |
| CO    | Colorado Public Employees Retirement Association           | 32,481,423                  | 176,840        | 67,900     | 12/31/2004            |
| CO    | Denver Public Schools Retirement System                    | 2,555,931                   | 7,223          | 5,869      | 12/31/2004            |
| CT    | Connecticut State Employees Retirement System              | 7,093,403                   | 54,287         | 32,354     | 6/30/2002             |
| CT    | Connecticut Teachers Retirement Board                      | 10,853,462                  | 49,946         | 24,297     | 6/30/2004             |
| DC    | District of Columbia Retirement Board                      | 2,613,375                   | 10,750         | 2,774      | 9/30/2004             |
| DE    | Delaware Public Employees Retirement System                | 5,521,227                   | 39,266         | 19,540     | 6/30/2004             |
| FL    | Florida Retirement System                                  | 102,409,371                 | 633,642        | 226,424    | 6/30/2004             |
| GA    | Georgia Teachers Retirement System                         | 42,588,078                  | 208,927        | 61,590     | 6/30/2004             |
| GA    | Georgia Employees Retirement System                        | 14,241,611                  | 129,060        | 42,589     | 6/30/2004             |
| HI    | Hawaii Employees Retirement System                         | 8,565,405                   | 62,573         | 32,297     | 6/30/2004             |
| IA    | Iowa Public Employees Retirement System                    | 17,249,917                  | 160,034        | 76,961     | 6/30/2004             |
| ID    | Idaho Public Employee Retirement System                    | 7,648,490                   | 63,385         | 26,043     | 6/30/2004             |
| IL    | Illinois Teachers Retirement System                        | 31,544,729                  | 157,990        | 76,905     | 6/30/2004             |
| IL    | Illinois State Employees Retirement System                 | 9,990,187                   | 70,621         | 54,298     | 6/30/2004             |
| IL    | Illinois State Universities Retirement System              | 12,586,305                  | 72,992         | 38,487     | 6/30/2004             |
| IL    | Chicago Public School Teachers Pension and Retirement Fund | 10,321,555                  | 37,362         | 19,266     | 6/30/2004             |
| IL    | Illinois Municipal Retirement Fund                         | 18,299,304                  | 168,536        | 79,628     | 12/31/2004            |
| IN    | Indiana State Teachers Retirement Fund                     | 6,751,775                   | 73,510         | 37,068     | 6/30/2004             |
| IN    | Indiana Public Employees Retirement Fund                   | 12,290,352                  | 154,624        | 58,750     | 6/30/2004             |
| KS    | Wichita Retirement Systems                                 | 772,718                     | 1,023          | 1,061      | 12/31/2003            |
| KS    | Kansas Public Employees Retirement System                  | 10,427,143                  | 148,145        | 59,124     | 6/30/2004             |
| KY    | Kentucky Retirement Systems                                | 13,581,473                  | 142,883        | 64,567     | 6/30/2004             |
| KY    | Kentucky Teachers Retirement System                        | 13,076,191                  | 71,950         | 35,803     | 6/30/2004             |
| LA    | Louisiana Teachers Retirement System                       | 11,893,397                  | 84,308         | 52,900     | 6/30/2004             |
| LA    | Louisiana State Employees Retirement System                | 6,608,025                   | 64,149         | 34,780     | 6/30/2004             |
| MA    | Massachusetts State Employees' Retirement System           | 14,834,328                  | 80,122         | 51,418     | 12/31/2003            |
| MA    | Massachusetts Teachers Retirement Board                    | 15,973,000                  | 84,255         | 39,755     | 12/31/2003            |
| MD    | Maryland State Retirement and Pension System               | 30,166,724                  | 185,861        | 94,880     | 6/30/2004             |
| ME    | Maine State Retirement System                              | 8,093,522                   | 52,029         | 31,460     | 6/30/2004             |
| MI    | Michigan Public School Employees Retirement System         | 36,772,485                  | 321,263        | 145,588    | 9/30/2004             |
| MI    | Michigan State Employees Retirement System                 | 9,462,368                   | 34,776         | 45,619     | 9/30/2004             |
| MI    | Municipal Employees' Retirement System of Michigan         | 4,619,496                   | 36,772         | 19,273     | 12/31/2004            |
| MN    | Minnesota Teachers Retirement Association                  | 15,095,804                  | 72,008         | 37,649     | 6/30/2004             |
| MN    | Minnesota Public Employees Retirement Association          | 14,209,066                  | 151,470        | 61,190     | 6/30/2004             |
| MN    | Minnesota State Retirement System                          | 8,065,589                   | 51,440         | 25,228     | 6/30/2004             |
| MN    | Minneapolis Teachers Retirement Fund Association           | 763,089                     | 5,023          | 3,764      | 6/30/2004             |
| MN    | St. Paul Teachers' Retirement Fund Association             | 871,903                     | 4,568          | 2,361      | 6/30/2004             |
| MN    | Duluth Teachers Retirement Fund Association                | 258,832                     | 1,178          | 1,137      | 6/30/2004             |

## Appendix A System Summary

| State  | System Name  | Asset Market Value (\$000s) | Active Members | Annuitants | For Fiscal Year-Ended |
|--------|--|-----------------------------|----------------|------------|-----------------------|
| MN     | Minneapolis Employees Retirement Fund                    | 1,282,717                   | 552            | 4,981      | 6/30/2004             |
| MO     | Missouri State Employees Retirement System               | 5,914,931                   | 56,362         | 25,179     | 6/30/2004             |
| MO     | Missouri Public Schools Retirement System                | 24,038,650                  | 119,677        | 49,675     | 6/30/2004             |
| MO     | Missouri Local Government Employees Retirement System    | 2,840,490                   | 32,568         | 10,786     | 6/30/2004             |
| MO     | St. Louis Public School Retirement System                | 1,060,577                   | 6,074          | 3,700      | 12/31/2004            |
| MO     | MoDOT & Patrol Employees' Retirement System              | 1,353,437                   | 9,002          | 6,731      | 6/30/2004             |
| MS     | Mississippi Public Employees Retirement System           | 16,187,236                  | 157,197        | 65,364     | 6/30/2004             |
| MT     | Montana Public Employees Retirement Board                | 3,649,645                   | 33,520         | 17,579     | 6/30/2004             |
| MT     | Montana Teachers Retirement System                       | 2,354,844                   | 18,257         | 9,970      | 6/30/2004             |
| NC     | North Carolina Retirement Systems                        | 59,294,798                  | 423,523        | 157,938    | 6/30/2004             |
| NC     | Charlotte Firefighters' Retirement System                | 263,340                     | 897            | 435        | 6/30/2004             |
| ND     | North Dakota Public Employees Retirement System          | 1,309,271                   | 17,768         | 5,798      | 6/30/2004             |
| ND     | North Dakota Teachers Fund for Retirement                | 1,374,680                   | 9,826          | 5,373      | 6/30/2004             |
| NE     | Nebraska Retirement Systems                              | 5,564,386                   | 45,149         | 12,348     | 6/30/2004             |
| NH     | New Hampshire Retirement System                          | 4,391,286                   | 50,420         | 17,790     | 6/30/2004             |
| NJ     | New Jersey Division of Pension and Benefits              | 71,648,847                  | 492,231        | 205,468    | 6/30/2004             |
| NM     | New Mexico Public Employees Retirement Association       | 9,416,789                   | 47,684         | 21,262     | 6/30/2004             |
| NM     | New Mexico Educational Retirement Board                  | 6,911,545                   | 62,901         | 24,947     | 6/30/2004             |
| NV     | Nevada Public Employees Retirement System                | 16,010,187                  | 90,242         | 28,768     | 6/30/2004             |
| NY     | New York City Teachers Retirement System                 | 26,077,990                  | 97,986         | 58,133     | 6/30/2003             |
| NY     | New York State and Local Retirement Systems              | 120,799,006                 | 539,600        | 313,597    | 3/31/2004             |
| NY     | New York State Teachers Retirement System                | 80,276,246                  | 254,515        | 121,246    | 6/30/2004             |
| NY     | New York City Employees Retirement System                | 34,177,327                  | 173,434        | 128,025    | 6/30/2004             |
| OH     | Ohio Police & Fire Pension Fund                          | 7,441,072                   | 28,328         | 23,413     | 12/31/2002            |
| OH     | Ohio State Teachers Retirement System                    | 54,498,417                  | 196,992        | 111,853    | 6/30/2004             |
| OH     | Ohio School Employees Retirement System                  | 8,565,455                   | 123,139        | 60,569     | 6/30/2004             |
| OH     | Ohio Public Employees Retirement System                  | 65,206,891                  | 353,584        | 145,263    | 12/31/2004            |
| OK     | Oklahoma Public Employees Retirement System              | 5,126,418                   | 42,998         | 22,990     | 6/30/2004             |
| OK     | Oklahoma Teachers Retirement System                      | 6,951,778                   | 81,683         | 39,593     | 6/30/2004             |
| OR     | Oregon Employees Retirement System                       | 45,156,981                  | 160,808        | 98,686     | 6/30/2004             |
| PA     | Pennsylvania Public School Employees Retirement System   | 48,537,099                  | 247,000        | 146,000    | 6/30/2004             |
| PA     | Pennsylvania State Employees Retirement System           | 26,641,399                  | 108,405        | 98,727     | 12/31/2004            |
| RI     | Rhode Island Employees Retirement System                 | 5,440,275                   | 36,820         | 20,392     | 6/30/2003             |
| SC     | South Carolina Retirement Systems                        | 23,782,739                  | 209,479        | 93,217     | 6/30/2004             |
| SD     | South Dakota Retirement System                           | 5,518,226                   | 35,408         | 17,029     | 6/30/2004             |
| TN     | Tennessee Consolidated Retirement System                 | 25,586,516                  | 198,917        | 83,121     | 6/30/2004             |
| TX     | Teacher Retirement System of Texas                       | 84,441,267                  | 718,266        | 240,627    | 8/31/2004             |
| TX     | Texas Employees Retirement System                        | 19,567,749                  | 133,349        | 60,089     | 8/31/2004             |
| TX     | Houston Firefighters Relief and Retirement Fund          | 1,980,903                   | 3,663          | 2,051      | 6/30/2004             |
| TX     | Texas County & District Retirement System                | 12,436,226                  | 104,545        | 28,496     | 12/31/2004            |
| TX     | Texas Municipal Retirement System                        | 11,934,597                  | 92,154         | 27,273     | 12/31/2004            |
| TX     | Austin Employees' Retirement System                      | 1,375,032                   | 7,489          | 3,137      | 12/31/2004            |
| UT     | Utah Retirement Systems                                  | 16,084,094                  | 97,404         | 34,577     | 12/31/2004            |
| VA     | Virginia Retirement System                               | 40,041,757                  | 317,203        | 113,717    | 6/30/2004             |
| VA     | Educational Employees' Supplementary Retirement System c | 1,528,120                   | 17,738         | 6,729      | 6/30/2004             |
| VT     | Vermont Teachers Retirement System                       | 1,245,650                   | 10,315         | 4,386      | 6/30/2004             |
| VT     | Vermont State Employees Retirement System                | 1,040,928                   | 8,079          | 3,833      | 6/30/2004             |
| WA     | Washington Department of Retirement Systems              | 44,978,924                  | 286,490        | 110,852    | 6/30/2004             |
| WI     | Wisconsin Retirement System                              | 62,126,000                  | 265,150        | 121,582    | 12/31/2003            |
| WV     | West Virginia Consolidated Public Retirement Board       | 4,784,380                   | 56,679         | 45,809     | 6/30/2004             |
| WY     | Wyoming Retirement System                                | 5,309,586                   | 37,306         | 17,480     | 12/31/2004            |
| Totals |  | \$2,116,461,873             | 12,641,014     | 5,801,894  |                       |

**Appendix B  
Plan Summary**

| State | Plan Name                       | Actuarial<br>Funding<br>Ratio (%) | Actuarial Values (\$000s) |             |                                    | Actuarial<br>Valuation<br>Date | For FYE    |
|-------|---------------------------------|-----------------------------------|---------------------------|-------------|------------------------------------|--------------------------------|------------|
|       |                                 |                                   | Assets                    | Liabilities | Unfunded<br>Liability<br>(Surplus) |                                |            |
| AK    | Alaska PERS                     | 72.8                              | 7,687,281                 | 10,561,653  | 2,874,372                          | 6/30/2003                      | 6/30/2004  |
| AK    | Alaska Teachers                 | 64.3                              | 3,752,285                 | 5,835,609   | 2,083,324                          | 6/30/2003                      | 6/30/2004  |
| AL    | Alabama Teachers                | 93.6                              | 18,110,470                | 19,357,735  | 1,247,265                          | 6/30/2003                      | 9/30/2004  |
| AL    | Alabama ERS                     | 95.4                              | 8,100,846                 | 8,493,369   | 392,523                            | 9/30/2002                      | 9/30/2004  |
| AR    | Arkansas Teachers               | 83.8                              | 8,424,000                 | 10,050,000  | 1,626,000                          | 6/30/2004                      | 6/30/2004  |
| AR    | Arkansas PERS                   | 88.7                              | 4,438,000                 | 5,005,000   | 567,000                            | 6/30/2004                      | 6/30/2004  |
| AZ    | Arizona SRS                     | 96.8                              | 22,572,000                | 22,935,000  | 363,000                            | 6/30/2003                      | 6/30/2004  |
| AZ    | Arizona Public Safety Personnel | 92.4                              | 4,774,313                 | 5,167,333   | 393,020                            | 6/30/2004                      | 6/30/2004  |
| AZ    | Phoenix ERS                     | 84.2                              | 1,417,774                 | 1,684,795   | 267,021                            | 6/30/2004                      | 6/30/2004  |
| CA    | California PERF                 | 87.7                              | 158,596,000               | 180,922,000 | 22,326,000                         | 6/30/2003                      | 6/30/2004  |
| CA    | California Teachers             | 82.5                              | 114,094,000               | 138,254,000 | 24,160,000                         | 6/30/2004                      | 6/30/2004  |
| CA    | LA County ERS                   | 87.2                              | 26,564,328                | 30,474,025  | 3,909,697                          | 6/30/2003                      | 6/30/2004  |
| CA    | San Francisco City & County     | 109.0                             | 11,173,636                | 10,249,896  | (923,740)                          | 6/30/2003                      | 6/30/2004  |
| CA    | San Diego County                | 81.1                              | 5,166,759                 | 6,369,490   | 1,202,731                          | 6/30/2002                      | 6/30/2004  |
| CA    | Contra Costa County             | 85.5                              | 3,538,722                 | 4,141,390   | 602,668                            | 12/31/2003                     | 12/31/2004 |
| CO    | Colorado State & School         | 70.1                              | 28,594,699                | 40,783,531  | 12,188,832                         | 12/31/2004                     | 12/31/2004 |
| CO    | Colorado Municipal              | 77.2                              | 1,990,652                 | 2,576,988   | 586,336                            | 12/31/2004                     | 12/31/2004 |
| CO    | Denver Schools                  | 88.2                              | 2,611,524                 | 2,960,990   | 349,466                            | 1/1/2005                       | 12/31/2004 |
| CT    | Connecticut SERS                | 61.6                              | 7,893,700                 | 12,806,100  | 4,912,400                          | 6/30/2002                      | 6/30/2002  |
| CT    | Connecticut Teachers            | 65.3                              | 9,846,700                 | 15,070,500  | 5,223,800                          | 6/30/2004                      | 6/30/2004  |
| DC    | DC Teachers*                    | 100.0                             | 917,800                   | 917,800     | 0                                  | 10/1/2003                      | 9/30/2004  |
| DC    | DC Police & Fire*               | 100.0                             | 1,427,800                 | 1,427,800   | 0                                  | 10/1/2002                      | 9/30/2004  |
| DE    | Delaware State Employees        | 103.0                             | 5,387,560                 | 5,229,927   | (157,633)                          | 6/30/2004                      | 6/30/2004  |
| FL    | Florida RS                      | 112.1                             | 106,707,426               | 95,185,433  | (11,521,993)                       | 7/1/2004                       | 6/30/2004  |
| GA    | Georgia ERS                     | 97.0                              | 12,797,389                | 13,191,307  | 393,918                            | 6/30/2004                      | 6/30/2004  |
| GA    | Georgia Teachers                | 101.1                             | 42,372,661                | 41,905,676  | (466,985)                          | 6/30/2003                      | 6/30/2004  |
| HI    | Hawaii ERS                      | 71.7                              | 8,797,133                 | 12,271,331  | 3,474,198                          | 6/30/2004                      | 6/30/2004  |
| IA    | Iowa PERS                       | 88.6                              | 16,951,943                | 19,128,411  | 2,176,468                          | 6/30/2004                      | 6/30/2004  |
| ID    | Idaho PERS                      | 91.7                              | 7,420,200                 | 8,154,800   | 1,214,600                          | 7/1/2003                       | 6/30/2004  |
| IL    | Illinois Municipal              | 94.3                              | 18,315,988                | 19,424,667  | 1,108,679                          | 12/31/2004                     | 12/31/2004 |
| IL    | Illinois SERS                   | 54.2                              | 9,990,187                 | 18,442,665  | 8,452,478                          | 6/30/2004                      | 6/30/2004  |
| IL    | Illinois Teachers               | 61.9                              | 31,544,729                | 50,947,451  | 19,402,722                         | 7/1/2004                       | 6/30/2004  |
| IL    | Chicago Teachers                | 85.9                              | 10,392,193                | 12,105,680  | 1,713,487                          | 6/30/2003                      | 6/30/2004  |
| IL    | Illinois Universities           | 66.0                              | 12,586,300                | 19,078,600  | 6,492,300                          | 6/30/2004                      | 6/30/2004  |
| IN    | Indiana PERF                    | 102.9                             | 9,293,952                 | 9,034,573   | (259,379)                          | 7/1/2003                       | 6/30/2004  |
| IN    | Indiana Teachers                | 44.8                              | 6,804,395                 | 15,197,926  | 8,393,531                          | 6/30/2004                      | 6/30/2004  |
| KS    | Kansas PERS                     | 75.2                              | 10,853,462                | 14,439,546  | 3,586,084                          | 12/31/2003                     | 6/30/2004  |
| KS    | Wichita Employees               | 106.8                             | 374,171                   | 350,444     | (23,727)                           | 12/31/2003                     | 12/31/2003 |
| KS    | Wichita Fire & Police           | 106.2                             | 361,687                   | 340,524     | (21,163)                           | 12/31/2002                     | 12/31/2003 |
| KY    | Kentucky ERS                    | 70.9                              | 7,167,473                 | 10,112,600  | 2,945,127                          | 6/30/2004                      | 6/30/2004  |
| KY    | Kentucky County                 | 75.1                              | 7,541,441                 | 10,041,709  | 2,500,268                          | 6/30/2004                      | 6/30/2004  |
| KY    | Kentucky Teachers               | 69.4                              | 14,414,000                | 20,784,200  | 6,370,200                          | 6/30/2004                      | 6/30/2004  |
| LA    | Louisiana SERS                  | 59.3                              | 6,071,631                 | 10,237,574  | 4,165,943                          | 6/30/2004                      | 6/30/2004  |
| LA    | Louisiana Teachers              | 63.1                              | 11,409,404                | 18,067,486  | 6,658,082                          | 6/30/2004                      | 6/30/2004  |
| MA    | Massachusetts SERS              | 83.9                              | 15,930,753                | 18,996,053  | 3,065,300                          | 12/31/2003                     | 12/31/2003 |
| MA    | Massachusetts Teachers          | 69.6                              | 17,074,000                | 24,519,000  | 7,445,000                          | 1/1/2002                       | 12/31/2003 |
| MD    | Maryland PERS                   | 91.2                              | 11,514,655                | 12,621,578  | 1,106,923                          | 6/30/2003                      | 6/30/2004  |
| MD    | Maryland Teachers               | 92.8                              | 20,155,415                | 21,724,178  | 1,568,763                          | 6/30/2004                      | 6/30/2004  |
| ME    | Maine State and Teacher         | 67.4                              | 6,041,952                 | 8,963,272   | 2,921,320                          | 6/30/2002                      | 6/30/2004  |
| ME    | Maine Local                     | 110.2                             | 1,551,943                 | 1,407,729   | (144,214)                          | 6/30/2002                      | 6/30/2004  |
| MI    | Michigan Municipal              | 78.7                              | 4,459,500                 | 5,667,700   | 1,208,200                          | 12/31/2003                     | 12/31/2004 |
| MI    | Michigan Public Schools         | 86.5                              | 38,726,000                | 44,769,000  | 6,043,000                          | 9/30/2003                      | 9/30/2004  |
| MI    | Michigan SERS                   | 88.8                              | 10,441,000                | 11,761,000  | 1,320,000                          | 9/30/2003                      | 9/30/2004  |
| MN    | Minnesota State Employees       | 100.1                             | 7,884,984                 | 7,878,363   | (6,621)                            | 6/30/2004                      | 6/30/2004  |
| MN    | Minnesota Teachers              | 100.0                             | 17,519,909                | 17,518,784  | (1,125)                            | 6/30/2004                      | 6/30/2004  |
| MN    | Minnesota PERF                  | 76.7                              | 11,477,961                | 14,959,465  | 3,481,504                          | 6/30/2004                      | 6/30/2004  |
| MN    | Minneapolis Teachers            | 50.8                              | 877,764                   | 1,729,551   | 715,069                            | 7/1/2004                       | 6/30/2004  |
| MN    | Duluth Teachers                 | 91.8                              | 276,949                   | 301,704     | 12,642                             | 7/1/2004                       | 6/30/2004  |
| MN    | Minneapolis ERF                 | 92.1                              | 1,513,389                 | 1,643,140   | 129,751                            | 7/1/2004                       | 6/30/2004  |
| MN    | St. Paul Teachers               | 71.8                              | 898,860                   | 1,251,460   | 352,600                            | 6/30/2004                      | 6/30/2004  |
| MO    | Missouri State Employees        | 84.6                              | 6,118,214                 | 7,230,011   | 1,111,797                          | 6/30/2004                      | 6/30/2004  |
| MO    | Missouri Teachers               | 82.0                              | 21,501,572                | 26,225,259  | 4,723,687                          | 6/30/2004                      | 6/30/2004  |
| MO    | Missouri Non-Teachers           | 82.7                              | 1,837,308                 | 2,221,210   | 383,902                            | 6/30/2004                      | 6/30/2004  |
| MO    | Missouri Local                  | 95.9                              | 2,808,907                 | 2,929,172   | 120,265                            | 2/29/2004                      | 6/30/2004  |
| MO    | Missouri DOT and Highway Patrol | 53.4                              | 1,331,588                 | 2,492,919   | 1,161,331                          | 6/30/2004                      | 6/30/2004  |

**Appendix B  
Plan Summary**

| State  | Plan Name                                 | Actuarial<br>Funding<br>Ratio (%) | Actuarial Values (\$000s) |                 |                                    | Actuarial<br>Valuation<br>Date | For FYE    |
|--------|---|-----------------------------------|---------------------------|-----------------|------------------------------------|--------------------------------|------------|
|        |   |                                   | Assets                    | Liabilities     | Unfunded<br>Liability<br>(Surplus) |                                |            |
| MO     | St. Louis School Employees                | 84.0                              | 902,000                   | 1,074,300       | 172,300                            | 1/1/2004                       | 12/31/2004 |
| MS     | Mississippi PERS                          | 74.9                              | 17,103,285                | 22,847,260      | 5,743,975                          | 6/30/2004                      | 6/30/2004  |
| MT     | Montana PERS                              | 86.7                              | 3,047,287                 | 3,514,085       | 466,798                            | 6/30/2002                      | 6/30/2004  |
| MT     | Montana Teachers                          | 74.0                              | 2,485,700                 | 3,359,200       | 873,500                            | 7/1/2004                       | 6/30/2004  |
| NC     | North Carolina Teachers and State Employe | 108.1                             | 45,117,508                | 41,733,702      | (3,383,806)                        | 12/31/2003                     | 6/30/2004  |
| NC     | North Carolina Local Government           | 99.3                              | 12,364,380                | 12,455,504      | 91,124                             | 12/31/2003                     | 6/30/2004  |
| NC     | Charlotte Firefighters                    | 94.1                              | 274,948                   | 292,341         | 17,393                             | 7/1/2004                       | 6/30/2004  |
| ND     | North Dakota PERS                         | 94.0                              | 1,272,900                 | 1,196,500       | (76,400)                           | 6/30/2004                      | 6/30/2004  |
| ND     | North Dakota Teachers                     | 80.3                              | 1,445,600                 | 1,800,400       | 354,800                            | 7/1/2004                       | 6/30/2004  |
| NE     | Nebraska Schools                          | 87.3                              | 5,118,011                 | 5,864,260       | 746,249                            | 7/1/2004                       | 6/30/2004  |
| NH     | New Hampshire Retirement System           | 71.1                              | 3,901,151                 | 5,355,387       | 1,454,236                          | 6/30/2003                      | 6/30/2004  |
| NJ     | New Jersey PERS                           | 91.5                              | 27,377,224                | 29,924,596      | 2,547,372                          | 6/30/2004                      | 6/30/2004  |
| NJ     | New Jersey Teachers                       | 85.6                              | 34,633,791                | 40,447,690      | 5,813,899                          | 6/30/2004                      | 6/30/2004  |
| NJ     | New Jersey Police & Fire                  | 84.0                              | 18,703,390                | 22,278,239      | 3,574,849                          | 6/30/2004                      | 6/30/2004  |
| NM     | New Mexico PERF                           | 93.0                              | 9,275,676                 | 9,973,755       | 698,079                            | 6/30/2004                      | 6/30/2004  |
| NM     | New Mexico Teachers                       | 75.4                              | 7,488,000                 | 9,927,100       | 2,439,100                          | 6/30/2004                      | 6/30/2004  |
| NV     | Nevada Regular Employees                  | 80.5                              | 13,670,516                | 16,977,008      | 3,306,492                          | 6/30/2004                      | 6/30/2004  |
| NV     | Nevada Police Officer and Firefighter     | 71.7                              | 3,159,795                 | 4,408,373       | 1,248,578                          | 6/30/2004                      | 6/30/2004  |
| NY     | NY State & Local ERS*                     | 100.0                             | 107,610,000               | 107,610,000     | 0                                  | 4/1/2002                       | 3/31/2004  |
| NY     | NY State & Local Police & Fire*           | 100.0                             | 19,412,000                | 19,412,000      | 0                                  | 4/1/2002                       | 3/31/2004  |
| NY     | New York City Teachers                    | 100.0                             | 34,177,750                | 34,181,065      | 3,315                              | 6/30/2002                      | 6/30/2003  |
| NY     | New York City ERS                         | 99.6                              | 42,055,984                | 42,244,146      | 188,162                            | 6/30/2003                      | 6/30/2004  |
| NY     | New York State Teachers                   | 99.4                              | 71,780,400                | 72,209,400      | 429,000                            | 6/30/2003                      | 6/30/2004  |
| OH     | Ohio PERS                                 | 85.3                              | 46,746,000                | 54,774,000      | 8,028,000                          | 12/31/2003                     | 12/31/2004 |
| OH     | Ohio School Employees                     | 77.0                              | 8,667,000                 | 11,251,000      | 2,584,000                          | 6/30/2003                      | 6/30/2004  |
| OH     | Ohio Teachers                             | 74.8                              | 52,253,798                | 69,867,425      | 17,613,627                         | 6/30/2004                      | 6/30/2004  |
| OH     | Ohio Police & Fire                        | 92.8                              | 9,076,469                 | 9,785,766       | 709,297                            | 1/1/2002                       | 12/31/2002 |
| OK     | Oklahoma PERS                             | 76.1                              | 5,412,167                 | 7,114,778       | 1,702,611                          | 7/1/2004                       | 6/30/2004  |
| OK     | Oklahoma Teachers                         | 47.3                              | 6,660,900                 | 14,080,100      | 7,419,200                          | 6/30/2003                      | 6/30/2004  |
| OR     | Oregon PERS                               | 86.1                              | 38,400,000                | 44,600,000      | 3,983,400                          | 12/31/2003                     | 6/30/2004  |
| PA     | Pennsylvania State ERS                    | 96.1                              | 26,900,000                | 27,999,000      | 1,099,000                          | 12/31/2004                     | 12/31/2004 |
| PA     | Pennsylvania School Employees             | 97.2                              | 52,900,500                | 54,443,800      | 1,543,300                          | 6/30/2003                      | 6/30/2004  |
| RI     | Rhode Island ERS                          | 65.1                              | 5,695,359                 | 8,746,641       | 3,051,282                          | 6/30/2003                      | 6/30/2003  |
| RI     | Rhode Island Municipal                    | 99.7                              | 1,527,847                 | 1,532,471       | 4,624                              | 6/30/2003                      | 6/30/2003  |
| SC     | South Carolina RS                         | 82.8                              | 20,197,936                | 24,398,931      | 4,200,995                          | 7/1/2003                       | 6/30/2004  |
| SC     | South Carolina Police                     | 91.5                              | 2,511,369                 | 2,744,849       | 233,480                            | 7/1/2003                       | 6/30/2004  |
| SD     | South Dakota PERS                         | 97.7                              | 4,937,500                 | 5,051,700       | 114,200                            | 6/30/2003                      | 6/30/2004  |
| TN     | TN State and Teachers                     | 99.8                              | 22,099,252                | 22,151,745      | 52,493                             | 7/1/2003                       | 6/30/2004  |
| TN     | TN Political Subdivisions                 | 91.9                              | 3,605,529                 | 3,923,475       | 317,946                            | 7/1/2003                       | 6/30/2004  |
| TX     | Texas Municipal                           | 82.8                              | 11,619,100                | 14,036,900      | 2,417,800                          | 12/31/2004                     | 12/31/2004 |
| TX     | Texas ERS                                 | 97.3                              | 20,036,647                | 20,591,848      | 555,201                            | 8/31/2004                      | 8/31/2004  |
| TX     | Texas LECOS                               | 109.3                             | 679,243                   | 621,457         | (57,786)                           | 8/31/2004                      | 8/31/2004  |
| TX     | Texas Teachers                            | 91.8                              | 88,784,000                | 96,737,000      | 7,953,000                          | 8/31/2004                      | 8/31/2004  |
| TX     | Texas County & District                   | 104.9                             | 12,400,157                | 11,825,100      | (575,057)                          | 12/31/2004                     | 12/31/2004 |
| TX     | Houston Firefighters                      | 112.9                             | 1,863,100                 | 1,650,800       | (212,300)                          | 7/1/2001                       | 6/30/2004  |
| TX     | City of Austin ERS                        | 80.8                              | 1,356,800                 | 1,678,200       | 321,400                            | 12/31/2004                     | 12/31/2004 |
| UT     | Utah Noncontributory                      | 92.4                              | 12,233,337                | 13,237,071      | 1,003,734                          | 12/31/2004                     | 12/31/2004 |
| VA     | Virginia Retirement System                | 96.4                              | 39,243,000                | 40,698,000      | 1,455,000                          | 6/20/2003                      | 6/30/2004  |
| VA     | Fairfax County Schools                    | 90.1                              | 1,597,459                 | 1,772,418       | 174,959                            | 6/30/2003                      | 6/30/2004  |
| VT     | Vermont State Employees                   | 97.6                              | 1,081,359                 | 1,107,634       | 26,275                             | 6/30/2004                      | 6/30/2004  |
| VT     | Vermont Teachers                          | 90.2                              | 1,284,833                 | 1,424,662       | 139,829                            | 6/30/2004                      | 6/30/2004  |
| WA     | Washington PERS 1                         | 80.6                              | 10,227,000                | 12,692,000      | 2,465,000                          | 9/30/2003                      | 6/30/2004  |
| WA     | Washington PERS 2/3*                      | 100.0                             | 10,842,300                | 10,842,300      | 0                                  | 9/30/2003                      | 6/30/2004  |
| WA     | Washington Teachers Plan 1                | 88.0                              | 9,086,000                 | 10,325,000      | 1,239,000                          | 9/30/2003                      | 6/30/2004  |
| WA     | Washington Teachers Plan 2/3*             | 100.0                             | 3,949,000                 | 3,949,000       | 0                                  | 9/30/2003                      | 6/30/2004  |
| WA     | Washington LEOFF Plan 1                   | 112.4                             | 4,803,000                 | 4,275,000       | (528,000)                          | 9/30/2003                      | 6/30/2004  |
| WA     | Washington LEOFF Plan 2*                  | 100.0                             | 2,740,400                 | 2,740,400       | 0                                  | 9/30/2003                      | 6/30/2004  |
| WA     | Washington School Employees Plan 2/3*     | 100.0                             | 1,546,000                 | 1,546,000       | 0                                  | 9/30/2002                      | 6/30/2004  |
| WI     | Wisconsin Retirement System               | 99.2                              | 62,685,300                | 63,211,700      | 526,400                            | 12/31/2003                     | 12/31/2003 |
| WV     | West Virginia PERS                        | 80.0                              | 3,095,660                 | 3,870,201       | 774,541                            | 7/1/2003                       | 6/30/2004  |
| WV     | West Virginia Teachers                    | 22.2                              | 1,427,475                 | 6,440,738       | 5,013,263                          | 6/30/2003                      | 6/30/2004  |
| WY     | Wyoming Public Employees                  | 85.0                              | 4,704,299                 | 5,536,192       | 831,893                            | 1/1/2005                       | 12/31/2004 |
| Totals |   |                                   | 87.8                      | \$2,106,445,628 | \$2,398,889,695                    | \$290,558,636                  |            |

\* Plans using the aggregate cost actuarial method, which does not identify an unfunded liability