



Public Fund Survey Summary of Findings for FY 2007

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Overview of the Public Fund Survey

The Public Fund Survey is an online compendium of key characteristics of most of the nation's largest public retirement systems. The Survey is sponsored by the National Association of State Retirement Administrators and the National Council on Teacher Retirement.

Beginning with fiscal year 2001, the Survey contains data on public retirement systems that provide pension and other benefits for 13.2 million active (working) members and 6.5 million annuitants (those receiving a regular benefit, including retirees, disabilitants and beneficiaries). Based on the latest information published in annual financial reports, systems in the Survey hold in trust \$2.79 trillion. The membership and assets of systems included in the Survey represent approximately 85 percent of the entire state and local government retirement system community.

According to a 2007 study by the Government Accountability Office, employees of state and local government comprise 12 percent of the nation's full-time workforce. These are public school teachers and administrators, firefighters, judges, police officers, public health officials, correctional officers,

transportation workers, game wardens, compliance officers, nurses, engineers, inspectors, procurement specialists, computer programmers, custodians, and many others responsible for providing myriad public services.

The source of Survey data is primarily public retirement system annual financial reports. Data also is taken from actuarial valuations, benefits guides, system websites, and input from system representatives. The Survey is updated continuously as new information, particularly annual financial reports, becomes available. This report of findings focuses on fiscal year 2007, which is reported for 94 of the 101 systems in the survey. As other systems report their FY 07 data, results presented in this report may change slightly.

A key objective of the Survey is to increase the transparency and understanding of the public pension community and pension funding levels by providing a factual and objective basis on which to discuss many issues related to retirement benefits for public employees.

The Public Fund Survey is accessible online at www.publicfundsurvey.org.

The Meaning and Implications of Actuarial Funding Ratios

The most recognized measure of a public retirement plan's health is its actuarial funding ratio, derived by dividing the actuarial value of plan assets by the value of its liabilities. Pension benefits for public employees usually are pre-funded, meaning that all or some of the assets needed to fund pension liabilities are accumulated during an employee's working life, then paid out during the participant's years in retirement.

Pre-funding is one way of financing a pension benefit. The opposite of pre-funding is pay-as-you-go, an arrangement under which current benefit obligations are paid with current revenues. In most cases, a pay-as-you-go pension plan eventually becomes too expensive to support with only current receipts and contributions. Investment earnings account for most revenue generated by a pre-funded pension plan, which reduces required contributions from employees and employers (taxpayers).

A pension plan whose assets equal its liabilities is funded at 100% and is considered to be *fully funded*. A plan with assets less than its accrued liabilities is considered *underfunded*.

Underfunding is a matter of degree, not of kind. That is, simply because a plan is underfunded is not necessarily a sign of fiscal or actuarial distress; many pension plans remain underfunded for decades without causing fiscal stress for the plan sponsor.

As an illustration, the status of a plan whose funding level declines from 101 percent in year one to 99 percent the following year, changes from overfunded to underfunded. Yet despite this diametric shift in terminology, the reality of the plan's funding condition has changed little.

The critical factor in assessing the current and future health of a pension plan is whether or not funding its liabilities creates fiscal stress for the pension plan sponsor.

Although a pension plan that is fully funded is preferable to one that is underfunded, other factors held equal, a plan's funded status is simply a snapshot in a long-term, continuous financial process. A plan's funding level is akin to a single frame of a movie that spans decades. Because public pensions are "going concerns," operating essentially as perpetual entities, there is nothing particularly important about being fully funded at any particular point. Likewise, the fact that a plan is underfunded does not necessarily present a fiscal or actuarial challenge to the plan sponsor. Even

with no changes to funding policies or plan design, most underfunded plans are positioned to pay promised benefits for decades. Public pension liabilities typically extend years into the future, during which the pension fund can accumulate the assets needed to fund liabilities.

Attaining full funding of a pension plan has been likened to a mortgage. At the end of the process, when fully paid, the mortgage would be considered fully funded. Although at any point during the 30-year mortgage, the outstanding liability may be considered an unfunded liability, more relevant considerations are a) whether the creditor has the resources to continue making payments until the obligation is resolved; and b) whether the obligation is indeed being amortized.

Likewise, more pertinent considerations with regard to funding a public pension plan are the ability of the plan sponsor to continue to pay promised benefits and to make required contributions without causing fiscal stress; and whether the plan's unfunded liability is being amortized.

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 revenue to amortize the shortfall between assets and accrued liabilities. The degree of underfunding and its associated cost to the plan sponsor are key considerations in assessing a plan's overall condition.

Other factors indicative of a pension plan's health include:

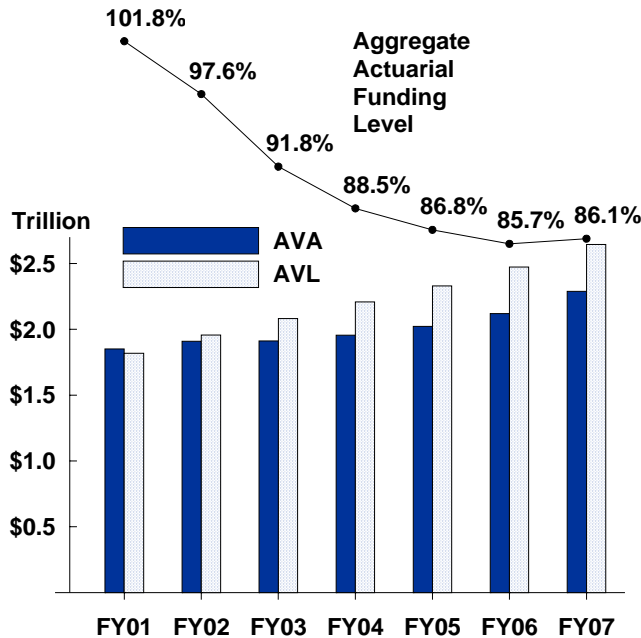
- the length of the funding amortization period
- required current and future contribution rates
- the plan's demographics
- the reasonableness of the plan's actuarial assumptions
- the sustainability of the plan design
- the plan's governance structure
- the fiscal health of the plan sponsor
- the commitment of the plan sponsor to continue to fund the plan

Information about many of these factors is readily available in annual reports and other material published by most public retirement systems.

Past and Current Funding Levels

For the first time since FY 01, aggregate public pension funding levels rose in FY 07, from 85.7 percent to 86.1 percent. Figure A summarizes aggregate assets and liabilities and the resulting actuarial funding ratio for plans in the Public Fund Survey. The bar graph reflects assets and liabilities for 114 plans for which data is available for all seven years, excluding the four plans that report a funding level only on the basis of the aggregate cost actuarial method (which does not identify an unfunded liability; plans that use this method are always funded at 100 percent).

Figure A: Change in aggregate actuarial assets, liabilities, and funding levels, FY 01 to FY 07



After declining sharply from FY 01 to FY 04, then more slowly for another two years, the funding level in FY 07 is higher for the first time since FY 01. This experience illustrates the gradual, long-term nature of funding a public pension plan and stands in sharp contrast to the drastic changes in funding level and required costs of corporate pensions.

Public pensions are designed to moderate year-to-year changes in funding levels and required costs in the face of events such as investment market volatility. This is accomplished with actuarial smoothing methods, which phase in investment gains and losses over several years; amortization periods that average 25 years, which enable plans to set and pursue long-term funding and investment policies; use of a discount rate that is consistent with historic and projected long-term

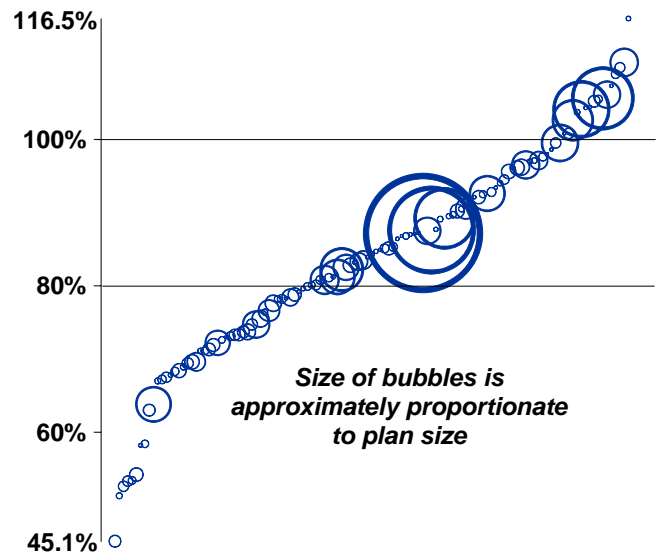
investment returns; and required employee contributions, which provide a steady and reliable stream of revenue with which to defray the cost of benefits and to meet current benefit obligations.

Per federal law, corporate pensions are limited to two-year smoothing periods; must be funded above 90 percent and on track to attain full funding within a few years; must use a risk-free discount rate to measure funding levels and make contributions; and typically do not require employees to make contributions. As a result of these factors, corporate pension funding levels and required costs vacillate significantly, which has led many corporations to abandon their pension plan in lieu of defined contribution plans.

Figure B plots funding levels of the 121 individual plans in the Survey that do not use the aggregate cost actuarial valuation method. The size of each circle on the chart is roughly proportionate to the plan's size: larger plans are indicated by larger bubbles; smaller plans, by smaller bubbles.

Seventy-five of the 121 plans (62 percent, up from 59 percent in FY 06), are funded at or above 80 percent, an informal threshold of actuarial health. Notably, plans funded above 80 percent comprise three-fourths of the assets of all plans in the survey, indicating that as a group, larger plans constitute a larger portion of plans funded above the 80 percent level. The median funding level is 84.3 percent.

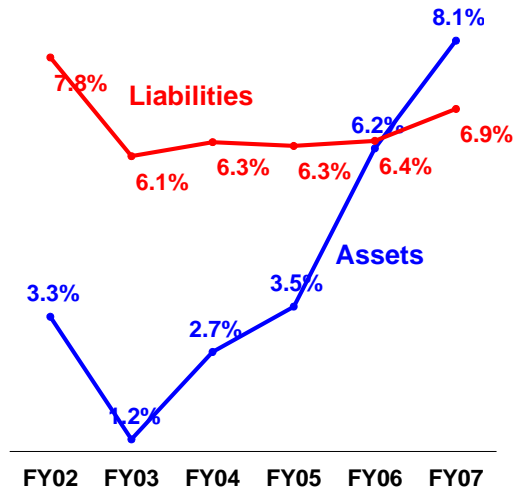
Figure B: Actuarial funding ratios for 121 public pension plans



Managing liability growth is key to attainment of full funding. When liability growth exceeds growth in assets, funding levels decline; when asset growth exceeds liability growth, funding levels rise. As Figure

C shows, for the first time since inception of the Survey, growth in actuarial assets exceeded growth in liabilities, an experience consistent with this year's uptick in aggregate actuarial funding levels. The modest rate of growth in assets from FY 04 through FY 06 occurred despite double-digit investment returns in fund market values during these years due to most plans' use of actuarial smoothing methods.

Figure C: Median change from prior year in actuarial value of assets and liabilities



Median liability growth has been below the average implicit assumption of 8.0 percent since inception of the survey, an experience attributable chiefly to plan sponsors (e.g., state legislatures) not approving benefit enhancements (with some exceptions).

The direction of aggregate near-term future funding levels is unclear

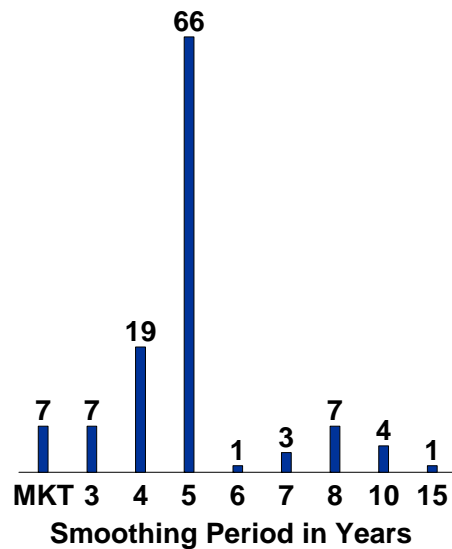
Predicting the direction of aggregate public pension funding levels over the next three years or so is difficult in the current environment due to several factors, including recent volatility in investment returns, actuarial valuation dates that lag many plans' fiscal year-end dates, and actuarial smoothing periods that extend as long as 15 years.

- **Market volatility** - Because investment earnings comprise a majority of projected public pension revenues, compared with other actuarial assumptions, investment returns are a major determinant of public pension funding levels.
- **Lagging actuarial valuation dates** - Forty percent of plans in the Survey have a valuation date that lags the fiscal year-end date—meaning that these plans have not yet incorporated investment experience from FY 07, among other actuarial factors, into their actuarial valuation.

- **Smoothing periods** - The length of smoothing periods used to determine the actuarial value of assets affects the funding ratio in the short-term; plans using a shorter smoothing period recognize recent investment gains and losses more quickly compared to those using longer smoothing periods, which phase in investment gains and losses over longer periods. As shown in Figure D, most plans calculate the actuarial value of their assets over five years, although the number of plans using longer periods has grown, particularly since 2005.

Any comparison of actuarial funding levels among plans must recognize these and other actuarial variables. Because of the dramatic volatility in investment returns in recent years, combined with varying smoothing periods and valuation dates, the direction of plans' funding levels also will vary through 2010.

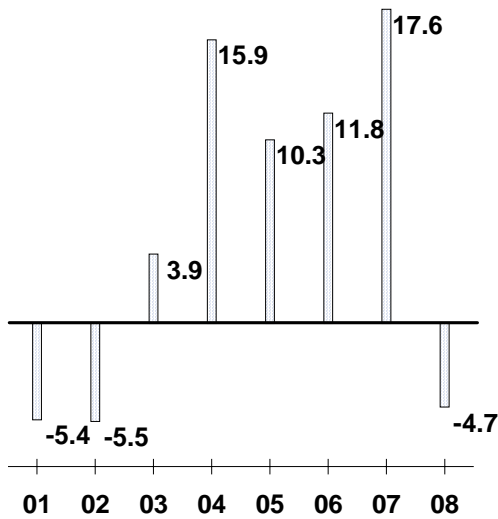
Figure D: Distribution of smoothing periods used to calculate actuarial value of plan assets



In the absence of unusually strong investment returns, in 2009 and 2010, funding levels over the next three to five years are likely be lower due to the sharp decline in asset values experienced during the June to October 2008 period.

Figure E plots median public pension fund investment returns for the period FY 01 to FY 08. Figure E illustrates the volatility in public pension investment returns: median returns in three of the last eight years have been negative, but four of the years shown have produced strong, double-digit median returns.

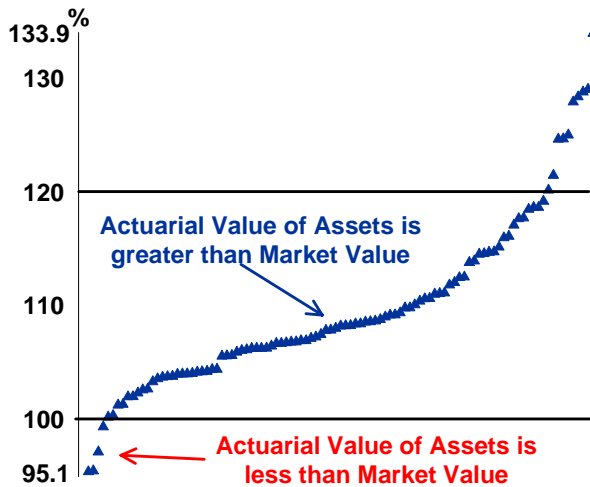
Figure E: Median annual public pension fund investment returns (in percent) for years ended 6/30, 2001 to 2008



Source: Callan Associates

Figure F shows the distribution of plans' market values as a percentage of their actuarial value. The disparity between actuarial and market value reflects most plans' use of an actuarial smoothing period. (Plans that do not use a smoothing period are not included in the chart)

Figure F: Distribution of plan market value of assets as a percentage of actuarial value of assets



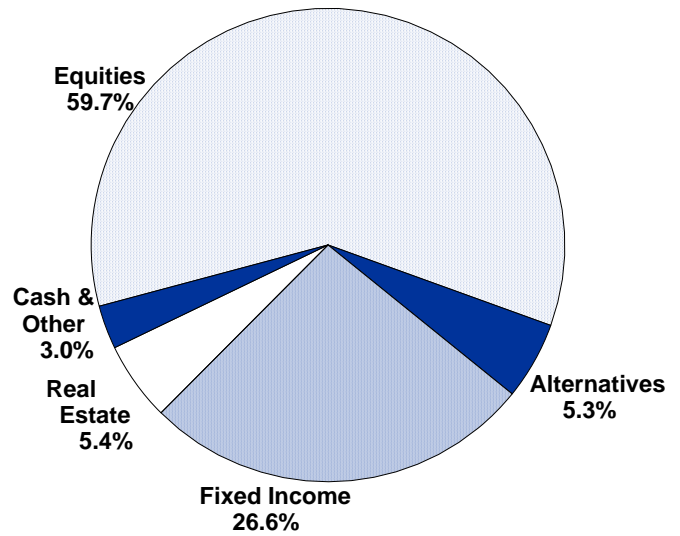
As of FY 07, plans in the Survey had some \$200 billion in unrecognized investment gains as a result of deferring actuarial recognition. Some of these gains were eliminated by the negative returns experienced in FY 08, and any gains remaining after 6/30/08 were wiped out by the July to October 2008 market decline. These unrecognized gains did, however, serve as a buffer to offset the effects of the market decline.

As a result of the market decline, in FY 07 and so far in FY 08, most plans are likely to have an actuarial value of assets that is greater than the market value.

Asset Allocation and Investment Expenses

Average asset allocations for the 97 systems for which this data is available, are summarized in Figure G. The effective date for most of these funds is either 6/30/07 or 12/31/07. Notable changes from the prior year are increases in real estate and alternatives, which have been increasing slowly but steadily each of the past few years, and a reduction in the allocation to Fixed Income.

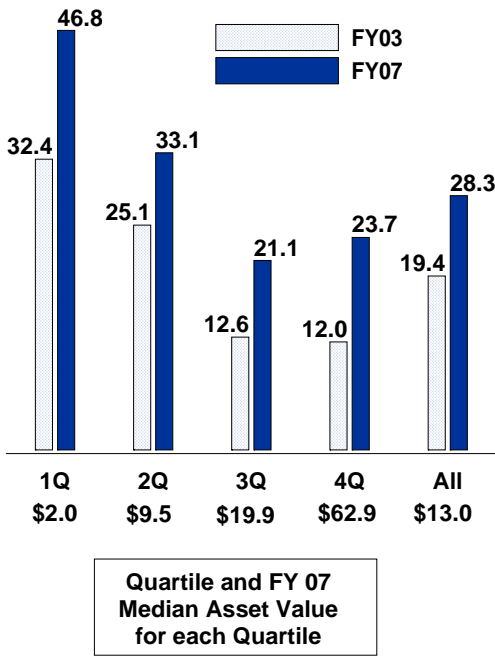
Figure G: Average Asset Allocation, FY 07



Investment management expenses paid by public funds have been rising in recent years, as evidenced in Figure H, which compares FY 03 and FY 07 median investment expenses, by quartile, for the 90 funds in the Survey for which this data is available. Median costs in each quartile are significantly higher in FY 07 than they were in FY 03, perhaps due to increased use of real estate and alternative assets, such as private equities and hedge funds.

Larger funds generally are able to negotiate lower asset management fees than smaller funds and individual investors; however, perhaps because larger funds are more likely to be invested in pricier alternative classes, expenses for the largest quartile are higher than those for the third quartile of funds.

Figure H: FY 03 and FY 07 median investment management expenses, by quartile



Membership Changes

The Survey tracks two groups of members: actives, who are working and currently receiving service credit in their retirement plan; and annuitants, which includes any member receiving a regular benefit from the system: retirees, beneficiaries and disabled.

Figure I summarizes changes in these membership groups from FY 01 to FY 07. A notable trend affecting state and local government pension plans in recent years has been the rate of growth in annuitants that significantly outpaces growth among actives. The ratio of actives to annuitants has declined from 2.45 in FY 01 to 2.05 in FY 07. The number of annuitants has increased since FY 01 by more than one-fourth.

By itself, a declining ratio of actives to annuitants does not pose a problem, because most public pensions are largely pre-funded. However, to the extent that a plan is underfunded, a low or declining ratio of actives to annuitants can complicate a plan’s ability to move toward full funding, as fewer active, contributing workers, relatively, are available to amortize the plan’s unfunded liability. An extreme example of this is evident in the case of pension plans that are closed. The cost of such plans, as a percentage of payroll, rises, often precipitously when spread among a diminishing pool of active participants.

A declining ratio of actives to annuitants also can have financial and operational effects. For example, fewer active members creates a larger negative cash flow (contributions minus benefit payments and administrative expenses). At a certain point, a negative external cash flow can require a pension fund to maintain a larger percentage of its assets in more liquid securities, or to make other adjustments to its asset allocation which may reduce long-term investment returns. In addition, as a group, annuitants tend to require more time and attention than actives from the retirement system staff.

Figure I: Percentage change over prior year in active members and annuitants, FY 01 to FY 07

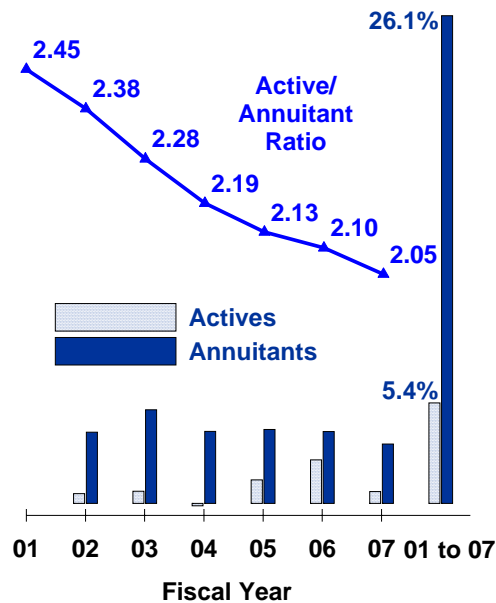
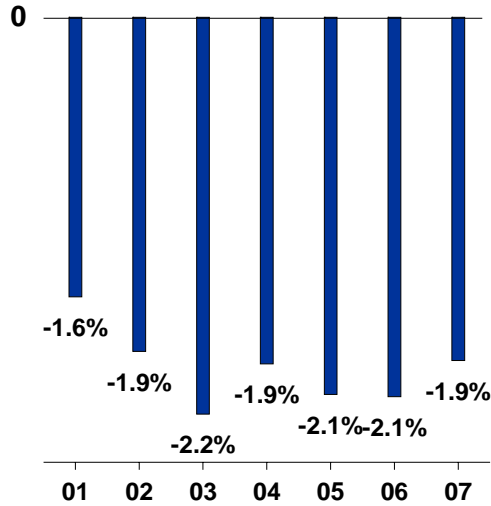


Figure J displays the median external cash flow among systems in the Public Fund Survey. External cash flow is the difference between a fund’s revenue from non-investment earnings sources, and the fund’s required expenditures, primarily benefits and administrative expenses. Eighty-three of the 94 plans (88 percent) whose external cash flow was measured in FY 07, had a negative external cash flow.

External cash flows for the Survey as a whole are expected to become increasingly negative over time. This is a normal development as a pension plan matures. The FY 07 cash flow figure was affected by larger asset values than the prior year (making it smaller than it would be otherwise), which increases the fund size from which benefit payments are drawn. FY 08 figures are likely to be affected by lower asset values and continuing decline in the ratio of active members to annuitants.

Figure J: Median external cash flow, FY 01 to FY 07



Contribution rates

According to the U.S. Census, from 1982 to 2006, contributions from employees and employers accounted for approximately 12 and 24 percent, respectively, of public pension fund revenues. While employer contributions for the public pension community have been volatile, contributions from employees are steady, reliable, and predictable, rising by roughly six percent annually, reflecting the sum of wage inflation and employee growth.

Figure K: Median employee and employer contribution rates, Social Security-eligible workers, FY 01 to FY 07

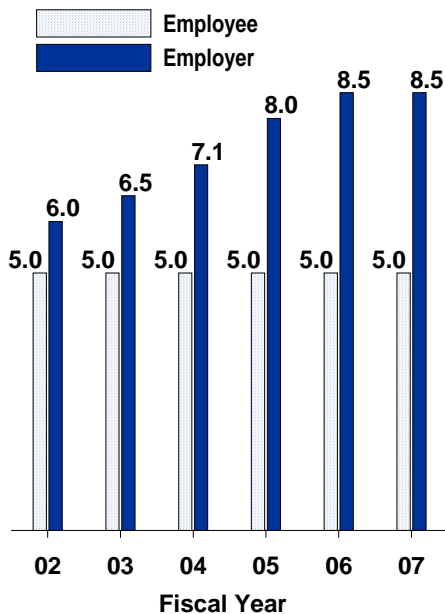


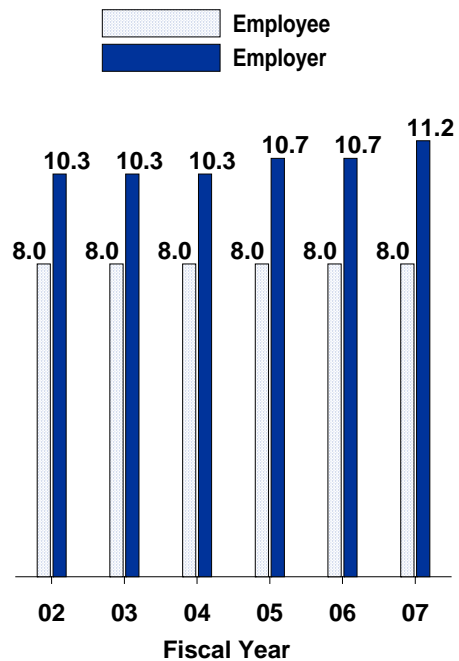
Figure K plots median contribution rates for employers and employees since FY 02 for general employees and school teachers who also participate in Social Security.

This data does not include public safety personnel, such as firefighters and police officers, or narrow employee groups, such as legislators or judges.

After rising each of the previous four fiscal years, median employer contribution rates for workers who also participate in Social Security held steady at 8.5 percent. The median and modal employee contribution rate for this group remained five percent.

Approximately one-fourth of all employees of state and local government do not participate in Social Security, including nearly one-half of public school teachers, a majority of firefighters and police officers, and most or substantially all public employees in seven states: Alaska, Colorado, Louisiana, Maine, Massachusetts, Ohio, and Nevada. Contribution rates usually are higher for non-Social Security eligible employers and workers, because benefits usually are higher to compensate for the absence of Social Security.

Figure L: Median employee and employer contribution rates, non-Social Security-eligible workers, FY 01 to FY 07



Median employer contribution rates for non-Social Security-eligible workers rose in FY 07 to 11.2 percent of pay, up from 10.7 percent each of the prior two years.

Employers and employees participating in non-Social Security plans each save the 6.2 percent contribution used to fund Social Security; these workers and their employers are required to pay the 1.45 percent Medicare contribution.

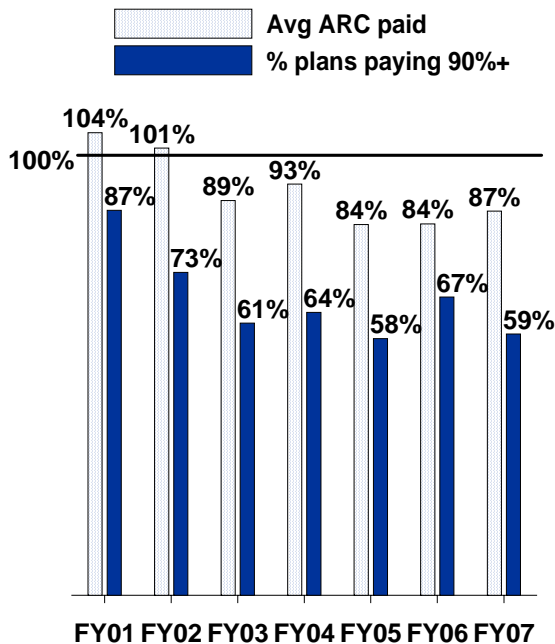
Annual Required Contribution

A plan’s annual required contribution, or ARC, is the amount needed to fund benefits accrued in the current period (the normal cost) plus the amount necessary to retire the plan’s unfunded liability over a designated period (known as the amortization period). A Government Accountability Office study published in January 2008 found, “[T]he percentage of governments contributing less than the full ARC has risen in recent years. This continues a trend in recent years of about half of governments making full contributions.”

Survey findings confirm the GAO finding. Figure M plots ARC history for plans in the Survey on the basis of two measures: the overall average ARC paid, and the percentage of plans receiving at least 90 percent of the ARC.

The overall average ARC paid by public plan sponsors has not returned to the levels of FY 01 and 02. Also, at 59 percent, the percentage of plan sponsors paying at least 90 percent of their ARC was lower in FY 07 than in any of the years measured.

Figure M: Average annual required contribution paid and percentage of plans paying at least 90 percent of their ARC, FY 01 to 07



The GAO study, mentioned above, also noted that many of the plan sponsors failing to pay their ARC also had plans in relatively poorer funding condition. The GAO stated, “[T]he failure of some [plan sponsors] to consistently make the annual required contributions undermines [funding] progress and is

cause for concern, particularly as state and local governments will likely face increasing fiscal pressure in the coming decades. While unfunded liabilities do not generally put benefits at risk in the near-term, they do shift costs and risks to the future.”

Assumptions for Inflation and Investment Return

Among the many actuarial assumptions used to calculate a plan’s liabilities, rates of inflation, investment return, and the real rate of return have a major effect on plan costs. The assumed inflation rate affects projected wage growth, which is a major driver of benefit levels. Inflation also is part of the investment return assumption: the difference between the inflation and investment return assumptions is the real rate of investment return.

The real rate of return, which is the difference between the inflation rate and the nominal investment return assumption, reflects investment returns after removing the cost of inflation.

Figure N: Comparison of distribution of inflation assumptions, FY 01 and FY 07

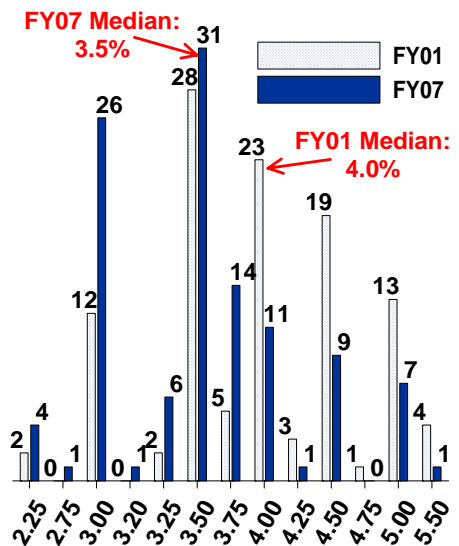
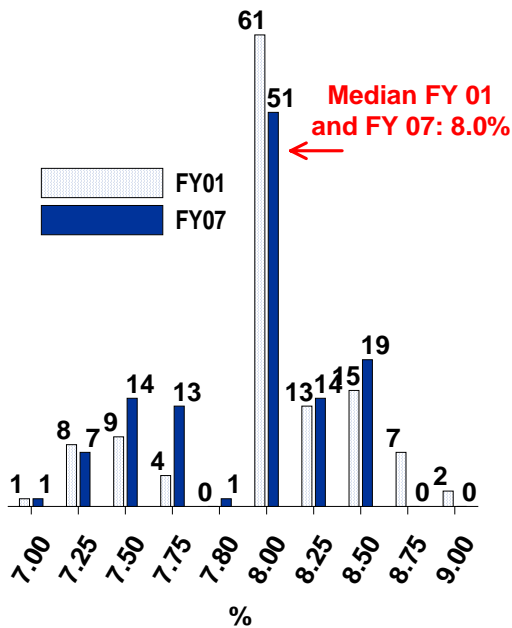


Figure N compares the distribution of inflation assumptions among plans in the Public Fund Survey in FY 01 and FY 07. Many plans have reduced their inflation assumptions in recent years, resulting in a shift of the median and modal inflation assumption to 3.5%, down from 4.0% in FY 01.

Figure O compares the distribution of investment return assumptions. As with inflation assumptions, investment return assumptions for many plans have declined in recent years, although the median and modal assumption remains unchanged at 8.0 percent.

Figure O: Distribution of investment return assumptions, FY 07

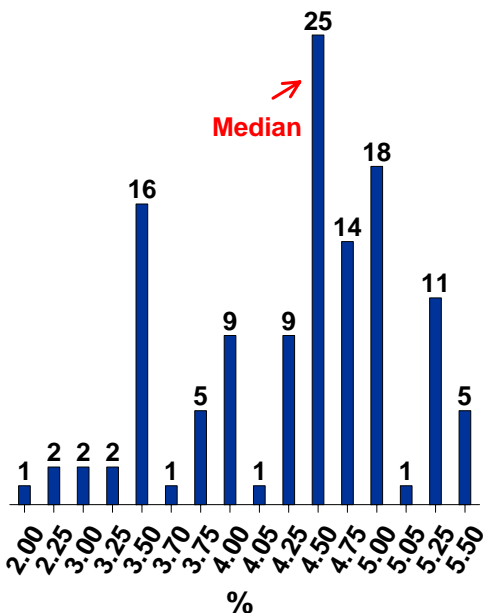


Conclusion

The actuarial condition of the public pension community improved in FY 07, due chiefly to continued modest growth in liabilities combined with a fourth consecutive year of strong investment earnings. The direction of funding levels over the next couple of years is likely to vary by plan depending on a variety of actuarial factors and methods. In the wake of the decline in global equity markets since October 2007, the outlook for funding levels in FY 10 and years beyond will depend on funds' investment performance and level of plan sponsor support for making annual required contributions.

As shown in Figure P, largely because many plans have reduced their nominal inflation assumption, the median assumption for the real rate of return has increased from 4.0 percent in FY 01 to 4.50 percent in FY 07.

Figure P: Distribution of real rate of return assumptions, FY 07



Appendix A

State	System	Market Value of Assets (\$000s)	Active Members	Annuitants	As of (Fiscal Year-End)
AK	Alaska Public Employees Retirement System	7,439,387	32,009	22,992	6/30/2007
AK	Alaska Teachers Retirement System	3,806,494	9,256	9,669	6/30/2007
AL	Retirement Systems of Alabama	23,274,437	208,685	75,498	9/30/2007
AR	Arkansas Teachers Retirement System	11,636,935	69,226	24,153	6/30/2007
AR	Arkansas Public Employees Retirement System	5,970,244	43,630	22,409	6/30/2007
AZ	Arizona State Retirement System	27,069,558	224,766	83,603	6/30/2007
AZ	Arizona Public Safety Personnel Retirement System	5,531,794	18,624	7,633	6/30/2007
AZ	Phoenix Employees' Retirement System	1,930,535	9,564	4,289	6/30/2007
CA	California Public Employees Retirement System	251,907,000	824,553	457,342	6/30/2007
CA	California State Teachers Retirement System	172,377,918	455,693	215,641	6/30/2007
CA	Los Angeles County Employees Retirement Association	40,908,106	92,096	51,392	6/30/2007
CA	San Francisco City and County Retirement System	16,952,043	30,190	20,605	6/30/2007
CA	San Diego County Employees Retirement Association	8,260,774	17,733	12,504	6/30/2007
CA	Contra Costa County Employees' Retirement Association	5,199,117	9,421	6,896	12/31/2007
CO	Colorado Public Employees Retirement Association	41,150,362	186,842	78,244	12/31/2007
CO	Denver Employees Retirement Plan	2,040,172	9,303	6,590	12/31/2007
CO	Denver Public Schools Retirement System	3,006,971	7,303	6,168	12/31/2007
CT	Connecticut Teachers Retirement Board	12,227,995	53,546	28,042	6/30/2007
CT	Connecticut State Employees Retirement System	8,146,302	48,919	36,705	6/30/2005
DC	District of Columbia Retirement Board	4,371,373	10,577	3,142	9/30/2007
DE	Delaware Public Employees Retirement System	7,325,323	42,465	21,699	6/30/2007
FL	Florida Retirement System	134,315,241	680,302	263,198	6/30/2007
GA	Georgia Teachers Retirement System	53,133,101	218,141	76,133	6/30/2007
GA	Georgia Employees Retirement System	16,479,404	113,127	47,485	6/30/2007
HI	Hawaii Employees Retirement System	11,462,417	65,251	35,324	6/30/2007
IA	Iowa Public Employees Retirement System	23,217,167	165,241	84,949	6/30/2007
ID	Idaho Public Employee Retirement System	11,257,958	65,800	29,619	6/30/2007
IL	Illinois Municipal Retirement Fund	24,223,495	177,783	87,687	12/31/2007
IL	Illinois Teachers Retirement System	41,909,317	160,317	89,236	6/30/2007
IL	Illinois State Universities Retirement System	15,985,730	72,092	43,395	6/30/2007
IL	Illinois State Employees Retirement System	12,078,909	67,699	55,265	6/30/2007
IL	Chicago Public School Teachers Pension and Retirement I	12,772,609	32,968	23,623	6/30/2007
IN	Indiana Public Employees Retirement Fund	17,155,566	153,139	60,868	6/30/2007
IN	Indiana State Teachers Retirement Fund	8,980,794	73,350	39,849	6/30/2007
KS	Kansas Public Employees Retirement System	14,183,073	151,449	65,765	6/30/2007
KY	Kentucky Retirement Systems	14,228,184	147,849	76,829	6/30/2007
KY	Kentucky Teachers Retirement System	15,492,519	75,144	39,506	6/30/2007
LA	Louisiana Teachers Retirement System	16,148,730	79,796	59,530	6/30/2007
LA	Louisiana State Employees Retirement System	9,351,148	60,444	36,742	6/30/2007
MA	Massachusetts State Employees' Retirement System	20,494,694	84,677	50,412	12/31/2006
MA	Massachusetts Teachers Retirement Board	15,973,000	84,255	39,755	12/31/2003
MD	Maryland State Retirement and Pension System	39,444,781	196,262	108,355	6/30/2007
ME	Maine Public Employees Retirement System	10,972,415	52,060	33,586	6/30/2007
MI	Michigan Public School Employees Retirement System	48,362,943	295,984	162,844	9/30/2007
MI	Municipal Employees' Retirement System of Michigan	6,066,337	37,672	22,737	12/31/2007
MI	Michigan State Employees Retirement System	12,103,057	30,864	46,886	9/30/2007
MN	Minnesota Public Employees Retirement Association	19,422,403	160,512	68,743	6/30/2007
MN	Minnesota Teachers Retirement Association	19,938,882	77,694	46,538	6/30/2007
MN	Minnesota State Retirement System	10,955,687	53,917	28,327	6/30/2007
MN	St. Paul Teachers' Retirement Fund Association	1,156,017	3,982	2,738	6/30/2007
MN	Duluth Teachers Retirement Fund Association	318,974	1,227	1,150	6/30/2007

Appendix A

State	System	Market Value of Assets (\$000s)	Active Members	Annuitants	As of (Fiscal Year-End)
MN	Minneapolis Employees Retirement Fund	1,282,717	552	4,981	6/30/2004
MO	Missouri Public Schools Retirement System	31,964,843	126,402	57,367	6/30/2007
MO	Missouri State Employees Retirement System	8,129,174	54,763	29,129	6/30/2007
MO	Missouri Local Government Employees Retirement System	4,082,057	30,607	12,649	6/30/2007
MO	MoDOT & Patrol Employees' Retirement System	1,825,204	8,639	7,155	6/30/2007
MO	St. Louis Public School Retirement System	1,150,961	5,010	4,084	12/31/2007
MS	Mississippi Public Employees Retirement System	21,912,350	163,619	73,720	6/30/2007
MT	Montana Public Employees Retirement Board	4,977,947	33,456	19,119	6/30/2007
MT	Montana Teachers Retirement System	3,209,275	18,188	10,971	6/30/2007
NC	North Carolina Retirement Systems	73,473,088	496,235	194,596	6/30/2007
ND	North Dakota Public Employees Retirement System	1,939,135	18,725	6,872	6/30/2007
ND	North Dakota Teachers Fund for Retirement	2,029,777	9,599	6,077	6/30/2007
NE	Nebraska Retirement Systems	8,036,562	52,373	15,390	6/30/2007
NH	New Hampshire Retirement System	5,795,605	50,802	21,248	6/30/2007
NJ	New Jersey Division of Pension and Benefits	89,193,906	519,886	230,227	6/30/2007
NM	New Mexico Educational Retirement Board	8,219,290	61,829	28,539	6/30/2006
NM	New Mexico Public Employees Retirement Association	13,290,538	60,712	24,384	6/30/2007
NV	Nevada Public Employees Retirement System	22,701,360	103,693	35,687	6/30/2007
NY	New York State and Local Retirement Systems	156,625,243	601,480	342,245	3/31/2007
NY	New York State Teachers Retirement System	104,912,949	270,045	133,356	6/30/2007
NY	New York City Employees Retirement System	42,514,329	175,332	127,714	6/30/2007
NY	New York City Teachers Retirement System	37,142,791	104,850	65,168	6/30/2007
OH	Ohio Public Employees Retirement System	70,116,505	382,177	161,348	12/31/2007
OH	Ohio State Teachers Retirement System	72,935,433	174,110	122,934	6/30/2007
OH	Ohio School Employees Retirement System	11,546,062	123,013	63,529	6/30/2007
OH	Ohio Police & Fire Pension Fund	11,895,472	28,609	24,683	12/31/2007
OK	Oklahoma Teachers Retirement System	9,651,042	88,133	43,506	6/30/2007
OK	Oklahoma Public Employees Retirement System	6,640,477	44,712	25,233	6/30/2007
OR	Oregon Employees Retirement System	62,891,942	164,548	103,368	6/30/2007
PA	Pennsylvania Public School Employees Retirement System	67,340,997	263,000	256,000	6/30/2007
PA	Pennsylvania State Employees Retirement System	35,516,198	109,610	107,130	12/31/2007
RI	Rhode Island Employees Retirement System	7,329,177	35,737	22,388	6/30/2006
SC	South Carolina Retirement Systems	28,048,780	211,922	110,703	6/30/2007
SD	South Dakota Retirement System	8,158,169	37,311	18,719	6/30/2007
TN	Tennessee Consolidated Retirement System	32,365,969	206,150	89,893	6/30/2007
TX	Teacher Retirement System of Texas	112,128,800	799,934	265,307	8/31/2007
TX	Texas Employees Retirement System	24,460,276	133,036	71,059	8/31/2007
TX	Texas County & District Retirement System	16,910,164	116,858	34,362	12/31/2007
TX	Texas Municipal Retirement System	14,715,861	98,440	34,510	12/31/2007
TX	Austin Employees' Retirement System	1,698,197	8,358	3,653	12/31/2007
TX	Houston Firefighters Relief and Retirement Fund	2,966,082	3,819	2,309	6/30/2007
UT	Utah Retirement Systems	20,950,656	102,009	40,510	12/31/2007
VA	Virginia Retirement System	56,890,203	339,215	130,500	6/30/2007
VA	Educational Employees' Supplementary Retirement System	2,015,738	19,371	8,029	6/30/2007
VT	Vermont Teachers Retirement System	1,647,173	10,675	5,192	6/30/2007
VT	Vermont State Employees Retirement System	1,392,418	8,411	4,399	6/30/2007
WA	Washington Department of Retirement Systems	60,116,556	293,001	121,117	6/30/2007
WI	Wisconsin Retirement System	71,470,524	263,122	131,674	12/31/2005
WV	West Virginia Consolidated Public Retirement Board	8,710,758	59,446	43,187	6/30/2007
WY	Wyoming Retirement System	6,600,812	39,872	19,527	12/31/2007
Total		2,789,636,934	13,174,795	6,537,737	

Appendix B

State	Plan Name	Funding Ratio (%)	Actuarial Value of Assets (\$000s)	Actuarial Value of Liabilities (\$000s)	Unfunded Liability (Surplus) (\$000s)	Date of Actuarial Valuation	As of Fiscal Year-End
AK	Alaska PERS	78.2	6,331,065	8,094,043	1,762,978	6/30/2006	6/30/2007
AK	Alaska Teachers	67.8	3,296,934	4,859,336	1,562,402	6/30/2006	6/30/2007
AL	Alabama Teachers	82.8	19,821,133	23,945,100	3,779,131	9/30/2006	9/30/2007
AL	Alabama ERS	81.1	9,287,531	11,457,564	2,170,033	9/30/2006	9/30/2007
AR	Arkansas Teachers	85.3	10,519,000	12,329,000	1,810,000	6/30/2007	6/30/2007
AR	Arkansas PERS	89.1	5,498,000	6,174,000	676,000	6/30/2007	6/30/2007
AZ	Arizona SRS	83.3	25,310,000	30,390,000	5,080,000	6/30/2007	6/30/2007
AZ	Arizona Public Safety Personnel	68.9	4,829,521	7,011,385	2,181,864	6/30/2007	6/30/2007
AZ	Phoenix ERS	83.9	1,816,508	2,166,119	349,611	6/30/2007	6/30/2007
CA	California PERF	87.2	199,033,000	228,131,000	29,098,000	6/30/2006	6/30/2007
CA	California Teachers	87.6	146,419,000	167,129,000	20,710,000	6/30/2007	6/30/2007
CA	LA County ERS	90.5	32,819,725	36,258,929	3,439,204	6/30/2006	6/30/2007
CA	San Francisco City & County	108.9	13,597,646	12,515,463	(1,082,183)	7/1/2006	6/30/2007
CA	San Diego County ERA	89.7	7,250,404	8,082,517	832,113	6/30/2007	6/30/2007
CA	Contra Costa County ERA	84.3	4,460,871	5,293,977	833,106	12/31/2006	12/31/2007
CO	Colorado School	75.5	22,070,769	29,241,428	7,170,659	12/31/2007	12/31/2007
CO	Colorado State	73.3	14,220,681	19,390,296	5,169,615	12/31/2007	12/31/2007
CO	Denver Schools	87.7	2,968,794	3,383,258	414,464	1/1/2008	12/31/2007
CO	Colorado Municipal	81.2	2,892,847	3,563,199	670,352	12/31/2007	12/31/2007
CO	Denver Employees	98.6	1,837,476	1,862,773	25,297	1/1/2007	12/31/2007
CT	Connecticut Teachers	63.0	11,781,338	18,703,793	6,922,455	6/30/2006	6/30/2007
CT	Connecticut SERS	53.3	8,517,677	15,987,547	7,469,870	6/30/2005	6/30/2005
DC	DC Police & Fire	104.3	2,631,828	2,522,400	(109,428)	10/1/2007	9/30/2007
DC	DC Teachers	104.4	1,437,072	1,376,206	(60,866)	10/1/2007	9/30/2007
DE	Delaware State Employees	103.7	6,437,916	6,208,025	(229,891)	6/30/2007	6/30/2007
FL	Florida Retirement System	105.6	125,584,704	118,870,513	(6,714,191)	7/1/2007	6/30/2007
GA	Georgia Teachers	96.5	49,263,027	51,059,681	1,796,654	6/30/2006	6/30/2007
GA	Georgia ERS	94.5	13,461,132	14,242,845	781,713	6/30/2006	6/30/2007
HI	Hawaii ERS	67.5	10,589,773	15,696,546	5,106,773	6/30/2007	6/30/2007
IA	Iowa PERS	90.2	20,759,628	23,026,114	2,266,486	6/30/2007	6/30/2007
ID	Idaho PERS	105.5	10,945,800	10,372,400	(573,400)	7/1/2007	6/30/2007
IL	Illinois Teachers	63.8	41,909,318	65,648,395	23,739,077	7/1/2007	6/30/2007
IL	Illinois Municipal	96.1	23,274,361	24,221,544	947,183	12/31/2007	12/31/2007
IL	Illinois Universities	68.4	15,985,700	23,362,100	7,376,400	6/30/2007	6/30/2007
IL	Illinois SERS	54.2	12,078,909	22,280,916	10,202,007	6/30/2007	6/30/2007
IL	Chicago Teachers	80.1	11,759,699	14,677,184	2,917,485	6/30/2007	6/30/2007
IN	Indiana PERF	97.6	11,177,971	11,450,928	272,957	7/1/2006	6/30/2007
IN	Indiana Teachers	45.1	8,476,559	18,815,812	10,339,253	6/30/2006	6/30/2007
KS	Kansas PERS	69.4	12,189,197	17,552,790	5,363,593	12/31/2006	6/30/2007
KY	Kentucky Teachers	71.9	15,284,955	21,254,974	5,970,019	6/30/2007	6/30/2007
KY	Kentucky County	80.1	7,107,113	8,868,182	1,761,069	6/30/2007	6/30/2007
KY	Kentucky ERS	58.4	5,864,070	10,044,932	4,180,862	6/30/2007	6/30/2007
LA	Louisiana Teachers	71.3	14,812,298	20,772,330	5,960,032	6/30/2007	6/30/2007
LA	Louisiana SERS	67.2	8,345,495	12,421,907	4,076,412	6/30/2007	6/30/2007
MA	Massachusetts SERS	85.1	18,445,225	21,670,810	3,225,585	1/1/2007	12/31/2006
MA	Massachusetts Teachers	69.6	17,074,000	24,519,000	7,445,000	1/1/2002	12/31/2003
MD	Maryland Teachers	78.4	22,814,760	29,112,727	6,297,967	6/30/2007	6/30/2007
MD	Maryland PERS	74.7	13,025,078	17,429,417	4,404,339	6/30/2007	6/30/2007
ME	Maine State and Teacher	71.1	7,504,220	10,547,299	3,043,079	6/30/2006	6/30/2007
ME	Maine Local	107.3	1,846,304	1,720,130	(126,174)	6/30/2006	6/30/2007
MI	Michigan Public Schools	87.5	42,995,000	49,136,000	6,141,000	9/30/2006	9/30/2007
MI	Michigan SERS	85.1	10,890,000	12,799,000	1,909,000	9/30/2006	9/30/2007
MI	Michigan Municipal	76.4	5,493,700	7,187,700	1,694,000	12/31/2006	12/31/2007
MN	Minnesota Teachers	92.1	18,794,389	21,470,315	2,675,926	6/30/2007	6/30/2007
MN	Minnesota PERF	73.3	12,985,324	17,705,627	4,720,303	6/30/2007	6/30/2007
MN	Minnesota State Employees	92.5	8,904,517	9,627,305	722,788	6/30/2007	6/30/2007
MN	Minneapolis ERF	92.1	1,513,389	1,643,140	129,751	7/1/2004	6/30/2004
MN	St. Paul Teachers	73.0	1,015,722	1,391,298	375,576	6/30/2007	6/30/2007
MN	Duluth Teachers	86.8	288,265	332,217	43,952	7/1/2007	6/30/2007
MO	Missouri Teachers	83.5	27,049,004	32,396,722	5,347,718	6/30/2007	6/30/2007
MO	Missouri State Employees	86.8	7,377,289	8,500,429	1,123,140	6/30/2007	6/30/2007
MO	Missouri Local	96.1	3,557,389	3,700,814	143,425	2/28/2007	6/30/2007
MO	Missouri PEERS	83.2	2,481,562	2,982,812	501,250	6/30/2007	6/30/2007
MO	Missouri DOT and Highway Patrol	58.2	1,685,807	2,897,267	1,211,460	6/30/2007	6/30/2007
MO	St. Louis School Employees	87.2	1,003,400	1,150,200	146,800	1/1/2007	12/31/2007

Appendix B

State	Plan Name	Funding Ratio (%)	Actuarial Value of Assets (\$000s)	Actuarial Value of Liabilities (\$000s)	Unfunded Liability (Surplus) (\$000s)	Date of Actuarial Valuation	As of Fiscal Year-End
MS	Mississippi PERS	73.7	19,791,564	26,862,636	7,071,072	6/30/2007	6/30/2007
MT	Montana PERS	91.1	3,825,324	4,201,251	375,927	6/30/2007	6/30/2007
MT	Montana Teachers	79.6	3,127,086	3,928,500	801,414	7/1/2007	6/30/2007
NC	North Carolina Teachers/State Employees	106.1	52,420,808	49,391,907	(3,028,901)	12/31/2006	6/30/2007
NC	North Carolina Local Govt	99.5	15,564,789	15,643,377	78,588	12/31/2006	6/30/2007
ND	North Dakota Teachers	79.2	1,750,100	2,209,300	459,200	7/1/2007	6/30/2007
ND	North Dakota PERS	93.4	1,503,100	1,610,200	107,100	6/30/2007	6/30/2007
NE	Nebraska Schools	90.5	6,396,337	7,070,309	673,972	7/1/2007	6/30/2007
NH	New Hampshire Retirement System	67.0	4,862,256	7,259,725	2,397,469	6/30/2007	6/30/2007
NJ	New Jersey Teachers	74.7	36,714,579	49,161,247	12,446,668	6/30/2007	6/30/2007
NJ	New Jersey PERS	76.6	28,933,194	37,793,090	8,859,896	6/30/2007	6/30/2007
NJ	New Jersey Police & Fire	77.6	21,715,926	27,988,827	6,272,901	6/30/2007	6/30/2007
NM	New Mexico PERF	92.8	12,049,358	12,982,072	932,714	6/30/2007	6/30/2007
NM	New Mexico Teachers	68.3	7,813,900	11,436,300	3,622,400	6/30/2006	6/30/2006
NV	Nevada Regular Employees	78.8	17,189,181	21,804,988	4,615,807	6/30/2007	6/30/2007
NV	Nevada Police and Firefighter	71.1	4,169,845	5,866,605	1,696,760	6/30/2007	6/30/2007
NY	NY State & Local ERS	104.1	112,209,000	107,785,000	(4,424,000)	4/1/2006	3/31/2007
NY	New York State Teachers	102.6	78,335,300	76,353,000	(1,982,300)	6/30/2006	6/30/2007
NY	New York City ERS	82.5	38,367,100	46,478,800	8,111,700	6/30/2006	6/30/2007
NY	New York City Teachers	72.2	32,405,600	44,861,700	12,456,100	6/30/2006	6/30/2007
NY	NY State & Local Police & Fire	105.2	19,827,000	18,853,000	(974,000)	4/1/2006	3/31/2007
OH	Ohio Teachers	82.2	66,671,511	81,126,642	14,455,131	6/30/2007	6/30/2007
OH	Ohio PERS	92.6	61,296,000	66,161,000	4,865,000	12/31/2006	12/31/2007
OH	Ohio School Employees	80.8	10,513,000	13,004,000	2,491,000	6/30/2007	6/30/2007
OH	Ohio Police & Fire	78.2	10,158,000	12,988,000	2,830,000	1/1/2007	12/31/2007
OK	Oklahoma Teachers	52.6	8,421,900	16,024,400	7,602,500	6/30/2007	6/30/2007
OK	Oklahoma PERS	72.6	6,110,230	8,413,248	2,303,018	7/1/2007	6/30/2007
OR	Oregon PERS	110.5	56,616,500	51,252,900	(5,363,600)	12/31/2006	6/30/2007
PA	Pennsylvania School Employees	81.2	52,464,700	64,627,300	12,162,600	6/30/2006	6/30/2007
PA	Pennsylvania State ERS	97.1	30,840,000	31,754,000	914,000	12/31/2007	12/31/2007
RI	Rhode Island ERS	53.4	5,651,068	10,575,852	4,924,784	6/30/2006	6/30/2006
RI	Rhode Island Municipal	87.1	945,876	1,085,648	139,772	6/30/2006	6/30/2006
SC	South Carolina RS	69.6	22,293,446	32,018,519	9,725,073	7/1/2006	6/30/2007
SC	South Carolina Police	84.7	2,935,841	3,466,281	530,440	7/1/2006	6/30/2007
SD	South Dakota PERS	97.1	6,526,500	6,718,800	192,300	6/30/2007	6/30/2007
TN	TN State and Teachers	96.2	26,214,995	27,240,151	1,025,156	7/1/2007	6/30/2007
TN	TN Political Subdivisions	89.5	4,897,974	5,475,620	577,646	7/1/2007	6/30/2007
TX	Texas Teachers	89.2	103,419,000	115,964,000	12,545,000	8/31/2007	8/31/2007
TX	Texas ERS	95.6	22,938,947	23,987,165	1,048,218	8/31/2007	8/31/2007
TX	Texas County & District	109.8	16,870,537	15,364,500	(1,506,037)	12/31/2007	12/31/2007
TX	Texas Municipal	73.7	14,203,300	19,278,800	5,075,500	12/31/2007	12/31/2007
TX	Houston Firefighters	87.0	2,325,000	2,671,000	342,000	7/1/2006	6/30/2007
TX	City of Austin ERS	78.3	1,653,500	2,112,800	459,300	12/31/2007	12/31/2007
TX	Texas LECOS	98.0	747,765	762,666	14,901	8/31/2007	8/31/2007
UT	Utah Noncontributory	100.8	16,209,330	16,084,896	(124,434)	12/31/2007	12/31/2007
VA	Virginia Retirement System	80.8	42,669,000	52,822,000	10,153,000	6/30/2006	6/30/2007
VA	Fairfax County Schools	86.4	1,818,530	2,105,552	287,022	12/31/2006	6/30/2007
VT	Vermont Teachers	84.9	1,541,860	1,816,650	274,790	6/30/2007	6/30/2007
VT	Vermont State Employees	100.8	1,318,687	1,307,643	(11,044)	6/30/2007	6/30/2007
WA	Washington PERS 2/3*	100.0	12,274,100	12,274,100	0	9/30/2006	6/30/2007
WA	Washington PERS 1	73.1	9,591,000	13,129,000	3,538,000	9/30/2006	6/30/2007
WA	Washington Teachers Plan 1	79.9	8,275,000	10,359,000	2,084,000	9/30/2006	6/30/2007
WA	Washington LEOFF Plan 1	116.5	5,018,000	4,309,000	(709,000)	9/30/2006	6/30/2007
WA	Washington Teachers Plan 2/3*	100.0	4,411,200	4,411,200	0	9/30/2006	6/30/2007
WA	Washington LEOFF Plan 2*	100.0	3,329,100	3,329,100	0	9/30/2006	6/30/2007
WA	Washington School Ees Plan 2/3*	100.0	1,747,400	1,747,400	0	9/30/2006	6/30/2007
WI	Wisconsin Retirement System	99.5	68,615,100	68,978,600	363,500	12/31/2005	12/31/2005
WV	West Virginia PERS	97.0	4,291,296	4,426,051	134,755	7/1/2007	6/30/2007
WV	West Virginia Teachers	51.3	3,665,993	7,142,711	3,476,718	6/30/2007	6/30/2007
WY	Wyoming Public Employees	94.0	5,654,023	6,015,985	361,962	1/1/2008	12/31/2007
Total		86.1	2,454,817,345	2,850,510,694	395,344,513		

* Plans with an unfunded liability of zero report their funding level on the basis of only the aggregate cost actuarial method, which does not identify an unfunded liability.