



## 2002 Wilshire Report on State Retirement Systems: Funding Levels and Asset Allocation

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August 12, 2002

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### Summary of Findings

- State pension assets grew only 1% from 2000 to 2001, to \$1.74 trillion, while liabilities grew 10% to \$1.62 trillion. (Exhibit 1)
- The ratio of assets-to-liabilities, or funding ratio, for all plans combined declined from 116% in 2000 to 107% in 2001. (Exhibit 1)
- 51% of state retirement systems are underfunded; the average underfunded plan has a ratio of assets-to-liabilities equal to 83%. (Exhibit 1)
- The fiscal health of retirement plans varies widely. West Virginia has the lowest funding level at 45%, and Florida has the highest at 140%. (Exhibit 4)
- Illinois has the largest dollar unfunded liability, \$20.8 billion, equal to 85% of its state budget. (Appendices D and E)
- Four states – Nevada, West Virginia, Oklahoma, and Oregon – have unfunded liabilities that exceed state budgets. (Appendix E)
- Because state pension plans report with a significant time lag, the funding ratios given in this study do not fully reflect the current bear market in stocks and, consequently, unfunded liabilities will increase markedly when June 30, 2002 reports become available. Wilshire forecasts a significant 10 to 15% decline in funding ratios at the next reporting cycle. The likely result is that the percentage of underfunded state retirement systems will grow from 51% to 75%.
- State pension portfolios have a 64% average allocation to equities – including real estate and private equity – and a 36% allocation to fixed income. (Appendix G)

- Asset allocation varies widely by state retirement system with two South Carolina systems having the lowest equity allocations, equal to 22% of assets, and Colorado having the highest equity allocation, equal to 87% of assets. (Appendix G) (Note: South Carolina systems were only recently given statutory permission to invest in equity.)
- Wilshire forecasts a long-term return on state pension assets equal to 7.1% per annum, which is 0.7% below the average actuarial interest rate assumption of 7.8% and 0.9% below the median actuarial interest rate assumption of 8.0%.
- Benefit payments total \$69 billion for all systems combined, exceeding contributions of \$41 billion. As a result, states in aggregate incur a net cash outflow equal to 1.2% of assets.

## Financial Overview

This is our seventh report on the financial condition of all state-sponsored defined benefit retirement systems and is based upon data gathered from the most recent financial and actuarial reports provided by 93 retirement systems sponsored by the 50 states and the District of Columbia.

### *The Data*

Financial data on public retirement systems lack the timeliness and uniform disclosure governing pension plans sponsored by publicly traded companies, making it impossible to conclude a study with data that is both current and consistent across systems. For this reason, our study methodology involves collecting data during the first half of each calendar year with the objective of acquiring as many reports as possible with a June 30 valuation date from the previous year. Even for systems with the desire to report in a timely manner, it often takes six months to a year for actuaries to determine liability values. The schedule below shows the distribution of valuation dates for the 93 state retirement systems. While the highest frequency date is June 30, 2001, approximately half the systems have an earlier valuation date.

<u>Valuation Date</u>	<u>% of Retirement Systems</u>
After June 30, 2001	3%
June 30, 2001	42
Between June 30, 00-01	12
June 30, 2000	29
Before June 30, 2000	<u>14</u>
	100%

The consequence of this delayed reporting is that our findings do not reflect the continued decline in asset values over the last 12 months, though later we do offer estimates for June 30, 2002 based upon asset returns collected by Wilshire through its TUCS (Trust Universe Comparison Service) database and our estimates for liability growth since June 30, 2001.

*Assets versus Liabilities*

Exhibit 1 shows asset and liability totals for all major state retirement systems and compares them with the same totals from the prior year, 2000, and from five years earlier, 1996.

**Exhibit 1**  
**Financial Overview of State Retirement Systems**  
**as Disclosed in Annual Reports\***  
**(dollars in billions)**

	<u>1996</u>	<u>2000</u>	<u>2001</u>	<u>Percent Change</u>	
				<u>96-01</u>	<u>00-01</u>
I. Total Assets	\$825	\$1,721	\$1,740	111%	1%
Total Liabilities	<u>897</u>	<u>1,481</u>	<u>1,622</u>	81%	10%
Difference	\$(72)	\$240	\$118		
Assets as % of Liabilities	92%	116%	107%		
II. Percentage of Underfunded Systems:	68%	31%	51%		
Their Unfunded Liabilities (U.L.)	\$99	\$50	\$94		
U.L. as % of Underfunded Systems Liabilities	18%	19%	17%		

\* Most annual reports use a June 30 fiscal year. Liabilities are reported actuarial accrued liabilities and assets are at market value as of the same valuation date as liabilities.

Exhibit 1 tells a story of rapidly improving financial health for state retirement systems from 1996 through 2000 but recent deterioration from 2000 to 2001. In 1996, pension assets were below liabilities by \$72 billion, and the ratio of assets-to-liabilities, the most common measure of pension fund health, was 92%. Strong financial markets helped assets grow to exceed liabilities by \$240 billion in 2000 and the ratio of assets-to-liabilities grew to 116%. Unfortunately, this report documents the beginning of a reversal in these past trends. Since our last report, assets have grown only 1% while liabilities have grown 10%. The result has been a decline in the difference between assets and liabilities from \$240 billion to \$118 billion and a decline in the ratio of assets-to-liabilities from 116% to 107%.

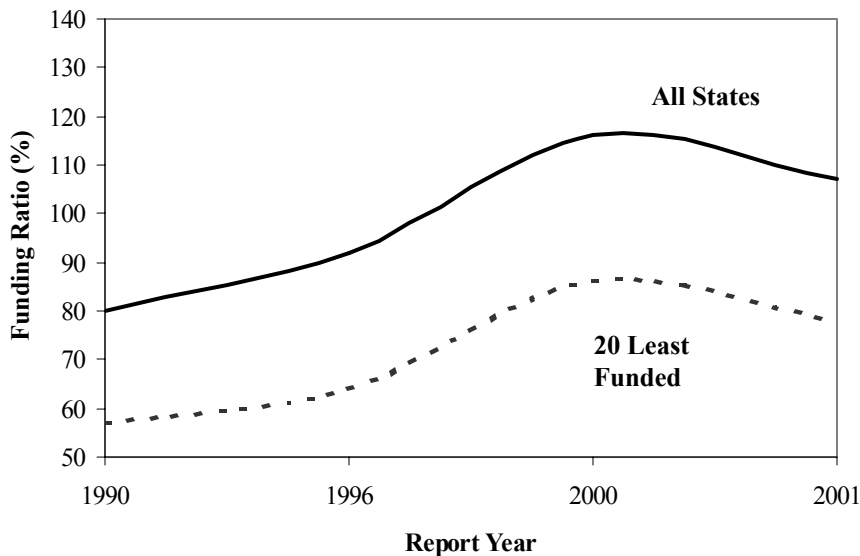
Aggregate statistics such as these can mask underlying problems. Assets in well-funded state retirement systems are not transferable to underfunded systems. Therefore, in Section II of Exhibit 1, we present statistics only for those state retirement systems where assets fall short of liabilities.

The financial picture for underfunded systems has similarly declined. The total unfunded liability grew to \$94 billion from \$50 billion in 2000, and has almost reached 1996 levels. These unfunded liabilities equal 17% of total liabilities of underfunded plans or, viewed another way, the average underfunded plan has an 87% funded ratio. The total number of underfunded

systems also grew to 47 out of 93 plans, or 51% of state plans compared to 31% of state plans in 2000.

A comparison of the funding status of the combined state retirement systems versus the 20 least funded state retirement systems is displayed in Figure 1. It shows that the least funded state retirement systems are following the same trends as the overall state systems, reflecting deteriorating health in 2001 versus 2000.

**Figure 1**  
**Changing State Funding Levels**



#### *Comparison to Corporate Pension Plans*

It is also noteworthy to draw some comparisons with corporate pension plans. Exhibit 2 contrasts the aggregate financial status of state retirement systems with the defined benefit pension plans sponsored by S&P 500 companies. Importantly, pension data for corporations is timelier than the public sector, with almost 90% of companies reporting as of December 31, 2001. As noted earlier, pension data for state systems is older with reporting dates at least six months earlier and, for some systems, one to two years earlier. This timing delay for state fund reporting puts corporate funds at a disadvantage when compared to state funds. State investment returns have averaged minus 5% per year and state pension liabilities continue to grow at a fairly high rate since states last reported.

**Exhibit 2**  
**State versus Corporate Pension Funds**  
**(in billions of dollars)**

	<b>State Retirement Systems</b>	<b>S&amp;P 500 Corporate Plans</b>
Median Valuation Date	Dec 31, 2000	Dec 31, 2001
I. Total Assets	\$1,740	\$1,024
Total Liabilities	<u>1,622</u>	<u>1,001</u>
Difference	\$ 118	\$23
Assets as % of Liabilities	107%	102%
II. Underfunded Plans:	47 of 93 (51%)	214 of 339 (63%)
Their Unfunded Liabilities (U.L.)	\$94	\$64
U.L. as % of Underfunded Systems' Liabilities	17%	14%

Section I in Exhibit 2 shows that the funding ratio of 107% for states is slightly better than the corporate total of 102%, though this difference is due entirely to a lag in reporting by state plans. Even so, it appears that states, which have traditionally been less funded than corporations, have caught up.

Section II of Exhibit 2 examines only those retirement plans that have funding ratios less than 100%. At year-end 2001, 63% of S&P 500 corporate plans were underfunded with \$64 billion in combined unfunded liabilities. By comparison, 47 of the 93 state retirement systems, or 51%, were underfunded with combined unfunded liabilities of \$94 billion.

*Actuarial Assumptions, Liabilities, and Cash Flow*

A great deal of recent attention has been given to actuarial assumptions, particularly the interest rate assumption, given the general feeling by investors that future returns on stocks and bonds will be less than in the past. Our study shows that the average actuarial interest rate used by state retirement systems is 7.77% and the median is 8.00%. (See Appendix A.) By contrast, Wilshire's long-term forecast for returns on state fund assets is 7.1%, well below the average actuarial assumption.

For the first time we've collected data on contributions, benefit payments, participants, and the division of liabilities between active and retired participants. (See Appendices A and H.) Contributions – employer and employee – totaled \$41 billion or 14% of payroll, while benefit payments totaled \$69 billion. Since benefits exceeded contributions, the states overall experienced a net cash outflow equal to 1.2% of assets.

The 93 state systems examined in this report cover 16.3 million participants, 62% of which are active workers. Similarly, 57% of total liabilities cover active workers.

## Funding Ratios for States and Individual State Retirement Systems

### *Funding Ratio Comparisons by Retirement System*

Appendices A, B, G and H provide detailed asset and liability information by state retirement system. Appendix A contains an alphabetical listing of the 93 state retirement systems together with detailed information on assets, liabilities, actuarial assumptions, and reporting dates as provided in their annual reports. Appendix B contains a ranking of the retirement systems from the best to worst funded.

Exhibit 3 reports the five best and five worst funded state-sponsored retirement systems using two criteria: assets as a percent of liabilities and the total dollar difference between assets and liabilities. For purposes of identifying the different employee status of the systems, PERS denotes state employees' systems, STRS denotes teachers' systems, and RS designation refers to a combined statewide system.

### **Exhibit 3 Comparison of System Funding Levels (dollars amounts in billions)**

	<b>Best</b>		<b>Worst</b>	
<b>Assets to Liabilities</b>	Florida RS	140%	West Virginia STRS	21%
	Arizona PERS	136	Indiana STRS	43
	New Jersey PERS	135	Oklahoma STRS	52
	Pennsylvania STRS	134	Illinois STRS	60
	Georgia PERS	134	Illinois PERS	64
<b>Assets minus Liabilities</b>	California PERS	\$36.7	Illinois STRS	\$(15.9)
	Florida RS	27.6	Indiana STRS	(7.5)
	New York STRS	22.0	Oklahoma STRS	(5.5)
	California STRS	19.7	Oregon PERS	(5.4)
	Wisconsin RS	13.6	Illinois PERS	(5.0)

### *Funding Comparisons by State*

Exhibit 4 shows the five states with the best and worst funding ratios and unfunded liabilities. Individual retirement systems from the same state are combined for the purposes of this presentation. A complete ranking of states is provided in Appendix C, a graphic display of state unfunded liabilities is shown in Appendix D, and funding ratios are found in Appendix F.

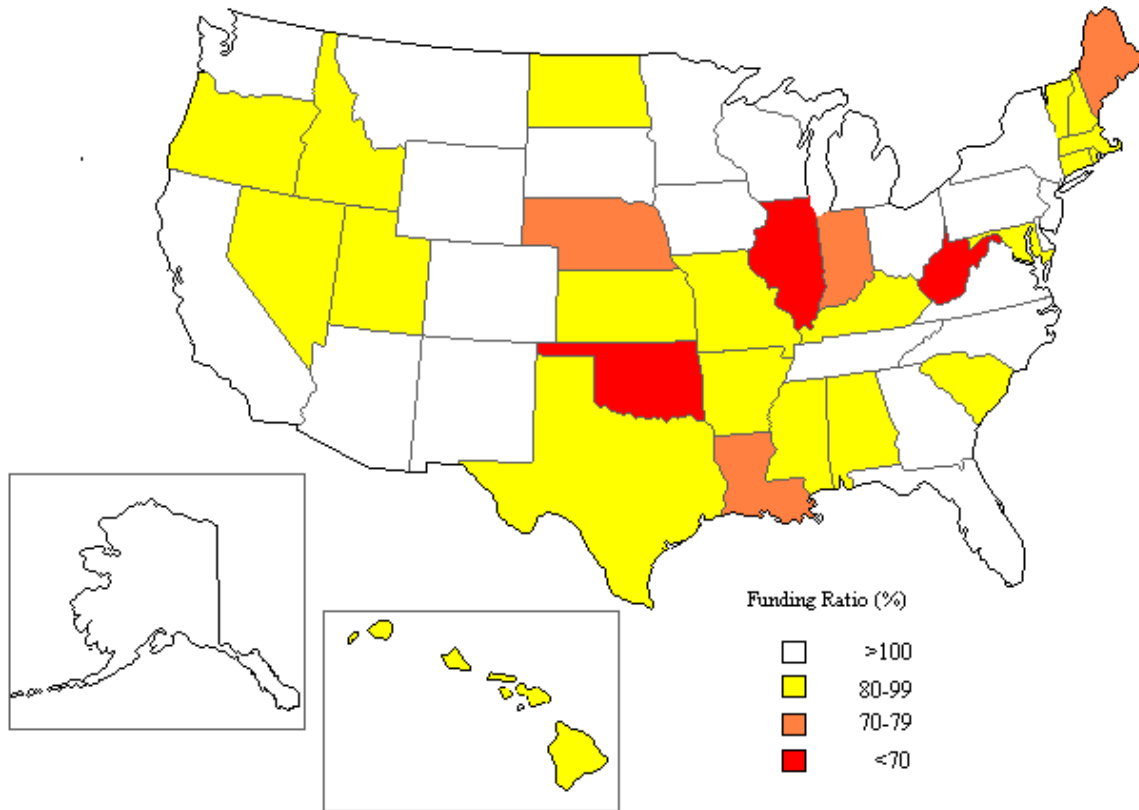
**Exhibit 4**  
**Comparison of State Funding Levels**  
**(dollars amounts in billions)**

	<b>Best</b>		<b>Worst</b>	
<b>Assets to Liabilities</b>	Florida	140%	West Virginia	45%
	Arizona	136	Illinois	61
	North Carolina	130	Oklahoma	61
	New Jersey	128	Indiana	70
	Wisconsin	126	Maine	72
<b>Assets Minus Liabilities</b>	California	\$56.3	Illinois	\$(20.8)
	Florida	27.6	Oklahoma	(6.9)
	New York	25.3	Indiana	(6.6)
	New Jersey	18.4	Louisiana	(6.1)
	Pennsylvania	14.6	Oregon	(5.4)

Clearly, there is wide range of funding ratios among states

The map in Figure 3 colors states according to their retirement systems' combined funding ratio. The states shown in white have retirement system assets that equal or exceed their liabilities. States shown in red have assets that are less than 70% of their liabilities.

**Figure 3**  
**State Funding Levels: Assets as a % of Liabilities**



In Exhibit 5 we give greater meaning to the state unfunded or overfunded liabilities by dividing by the dollar value of state budgets. A value of 100% (-100%) would indicate that an unfunded (overfunded) liability equals the entire value of the state budget. Appendix E depicts graphically the values for all states.

**Exhibit 5**  
**Liabilities minus Assets divided by State Budget**

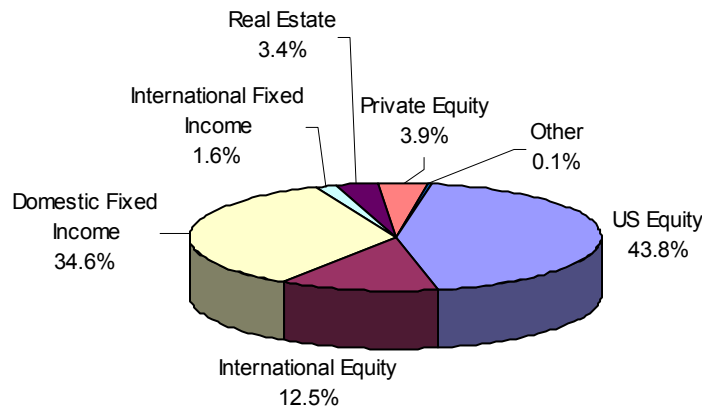
<b>Best (overfunded)</b>		<b>Worst (underfunded)</b>	
Florida	-137%	Nevada	179%
Wisconsin	-123	West Virginia	170
Wyoming	-116	Oklahoma	144
Arizona	-96	Oregon	102
New Jersey	-89	Louisiana	97

## Asset Allocation

In this section we examine the asset allocation strategies employed by state retirement systems.

Appendix G contains asset allocation information on the state retirement systems collected from the most recent annual reports. Included are allocations to the major asset classes. The average asset allocation across all state retirement systems is shown below in Figure 4.

**Figure 4: Average Asset Allocation for State Plans**



Appendix G also provides Wilshire's expected long-term return and risk for each system's investment portfolio based upon their asset allocation.

Portfolio expected return and risk is calculated using assumptions for the major asset classes together with each retirement system's actual asset allocation, as reported in Appendix G. Exhibit 6 gives Wilshire's long-term return and risk assumptions for each asset class. We view these assumptions as fairly mainstream among investment professionals.

### Exhibit 6 Asset Class Assumptions

	<u>Expected Return</u>	<u>Risk</u>
U.S. Equity	8.00%	17.0%
International Equity	8.00	20.0
Private Equity	11.00	32.0
Real Estate	6.75	14.0
U.S. Bonds	5.25	7.0
International Bonds	5.00	13.0
Cash	3.25	3.0

Exhibit 7 contains summary statistics on asset allocation for state retirement systems. The median allocation is 44% to domestic equities and 13.7% to international equities. However, as the lowest and highest columns suggest, there is considerable variability in allocations among individual systems. The median state pension fund has an expected return, by Wilshire's estimate, of 7.1%. This is 0.7% less than the current average interest rate assumption of 7.8%.

In addition, Exhibit 7 shows the median asset allocation for U.S. corporate pension plans. The median corporate allocation to equity investments is higher than that of state retirement systems.

**Exhibit 7**  
**Summary Asset Allocation Statistics**  
**For State Retirement Systems and Corporate Plans**

	<b>State Retirement Systems</b>			<b>Corporate Plans*</b>
	<u>Lowest %</u>	<u>Median %</u>	<u>Highest %</u>	<u>Median %</u>
Domestic Equity	21.7%	44.0%	63.3%	46.8%
International Equity	0.0	13.7	23.0	14.4
Private Equity	0.0	1.2	15.5	3.9
Real Estate	0.0	2.4	11.3	3.4
Domestic Bonds	10.2	34.0	78.3	29.7**
International Bonds	0.0	0.0	19.0	—
Other	0.0	0.0	2.3	1.8
<b>Expected Returns</b>	<b>5.8%</b>	<b>7.1%</b>	<b>7.8%</b>	<b>7.3%</b>

\* Source: Greenwich Associates Market Dynamics Report

\*\* Report did not differentiate between Domestic and International bonds

Figure 5 plots the expected return and risk for each of the 93 state retirement systems. Points in the upper right are more aggressive retirement systems while points in the lower left represent more conservative retirement systems.

**Figure 5  
Return and Risk for  
State Retirement Systems**

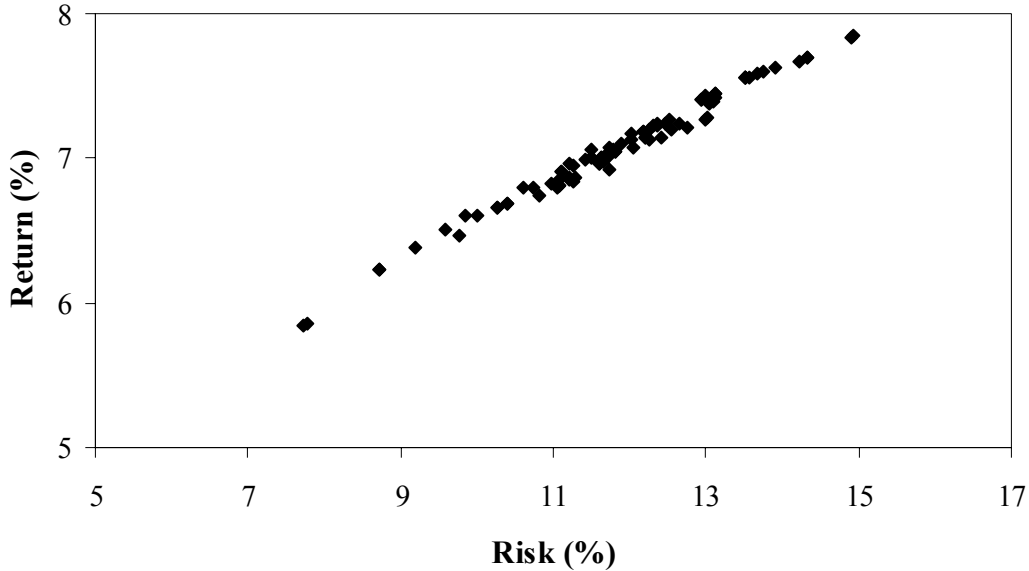


Exhibit 8 shows the five state systems with the highest return, highest risk asset allocations followed by the five state systems with the lowest return, lowest risk.

**Exhibit 8  
High and Low Expected Portfolio Returns for State Systems**

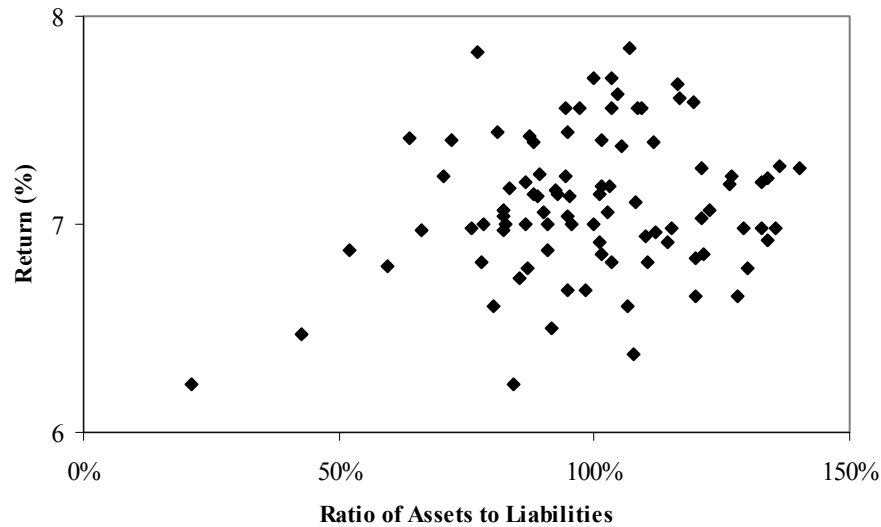
	<u>System</u>	<u>Equities*</u>	<u>Expected Return</u>
<b>Highest Return</b>	Colorado RS	78.3%	7.8%
	Louisiana STRS	78.9	7.8
	Minnesota SRS	74.9	7.7
	Minnesota STRS	74.9	7.7
	Virginia RS	75.0	7.7
<b>Lowest Return</b>	South Carolina Police	21.7%	5.8%
	South Carolina RS	22.3	5.9
	West Virginia STRS	35.6	6.2
	West Virginia PERS	35.6	6.2
	Tennessee PERS	40.7	6.4

\*Sum of U.S., non-U.S., and private equity.

Figure 5 addresses the relationship between asset allocation and funding. Expected return, a proxy for the investment aggressiveness, is plotted on the vertical scale. Funding ratio is shown

on the horizontal scale. All 93 state systems are plotted in the Figure, but there is no relationship between asset allocation and funding.

**Figure 5**  
**Asset Allocation and Funding Ratio**



In summary, state retirement systems have a broad spectrum of asset allocations that is unrelated to the size of their liabilities.

*Asset and Liability Estimates for June 30, 2002*

A great deal has happened in the financial markets over the past 12 months that is not reflected in these numbers. Wilshire performance data on large public retirement systems show a median investment return of -5.8% over the period June 30, 2001 to June 30, 2002. Our estimate for the market value of state pension assets at June 30, 2002 is \$1,616 billion, as calculated below:

Assets at June 30, 2001:	\$1,740 billion
Plus estimated contributions:	46
Minus estimated benefit payments:	(70)
Plus investment gain or (loss):	<u>(100)</u>
Equals estimated assets at June 30, 2002:	\$1,616 billion

We estimate that pension liabilities will grow by \$103 billion, or 6%, over the same period, as calculated below:

Liabilities at June 30, 2001:	\$1,622 billion
Plus estimated interest costs:	127
Plus estimated normal costs:	46
Minus estimated benefit payments:	<u>(70)</u>
Equals estimated liabilities at June 30, 2002:	\$1,725 billion

Combined with the continued growth in liabilities, assets are likely to again fall below liabilities. We estimate that the ratio of assets-to-liabilities for all state retirement systems combined will fall from the 107% to 94% at June 30, 2002.

**Appendix A : Actuarial Summary**  
(\$ in millions)

<u>Retirement System</u>	<u>Actuarial</u>	<u>Funding</u>	<u>Interest</u>	<u>Market</u>	<u>Actuarial</u>	<u>Actuarial</u>	<u>Active</u>
	<u>Valuation</u>		<u>Rate (%)</u>	<u>Value of</u>		<u>Value of</u>	<u>Liabilities as</u>
	<u>Date</u>	<u>Method</u>	<u>Assumption</u>	<u>Assets</u>	<u>Liabilities</u>	<u>Assets</u>	<u>% of Total</u>
							<u>Liabilities</u>
Alabama ERS	9/30/00	EAN	8.00	\$8,172	\$7,673	\$8,008	58%
Alabama Teachers	6/30/01	EAN	8.00	15,815	17,239	17,475	57%
Alaska PERS	6/30/00	PUC	8.25	6,273	5,191	5,246	54%
Alaska Teachers	6/30/00	PUC	8.25	3,626	3,351	3,339	32%
Arizona SRS	6/30/00	PUC	8.00	22,942	16,854	20,291	53%
Arkansas PERS	6/30/01	EAN	8.00	4,112	4,111	4,342	68%
Arkansas Teachers	6/30/01	EAN	8.00	7,643	8,561	8,166	63%
California PERS	6/30/00	EAN	8.25	172,751	136,014	162,482	51%
California Teachers	6/30/00	EAN	8.00	112,782	93,124	102,225	61%
Colorado State & School	12/31/00	EAN	8.75	28,431	26,625	27,909	50%
Connecticut PERS	6/30/00	PUC	8.75	8,284	11,512	7,196	43%
Connecticut Teachers	6/30/00	EAN	8.50	11,949	11,798	9,606	55%
Delaware PERS	6/30/01	EAN	8.50	5,242	4,701	4,936	60%
DC PERS	10/1/99	AGG	7.25	984	1,139	929	-
DC Teachers	10/1/99	AGG	7.25	729	803	691	-
Florida RS	7/1/99	EAN	8.00	96,141	68,575	77,795	60%
Georgia PERS	6/30/98	EAN	7.00	13,033	9,736	9,323	-
Georgia Teachers	6/30/00	EAN	7.50	41,808	34,876	35,676	64%
Hawaii ERS	6/30/01	EAN	8.00	8,761	10,507	9,516	50%
Idaho PERS	7/1/01	EAN	8.00	6,715	7,068	6,693	61%
Illinois PERS	6/30/01	PUC	8.25	8,720	13,687	8,720	54%
Illinois Teachers	6/30/01	PUC	8.50	23,316	39,167	23,316	52%
Indiana PERS	7/1/00	EAN	7.25	8,786	7,948	8,420	70%
Indiana Police and Fire	7/1/00	EAN	7.50	1,502	1,451	1,339	76%
Indiana Teachers	6/30/00	EAN	7.50	5,578	13,115	5,578	70%
Iowa PERS	6/30/01	EAN	7.50	15,929	15,553	15,112	59%
Kansas PERS	12/31/00	PUC	8.00	9,665	11,140	9,835	59%
Kentucky PERS	6/30/01	EAN	8.25	6,155	6,085	7,663	51%
Kentucky Counties	6/30/01	EAN	8.25	5,609	4,900	6,911	55%
Kentucky Teachers	6/30/01	PUC	7.50	12,510	14,642	13,299	-
Louisiana PERS	6/30/01	PUC	8.25	6,084	8,653	6,418	-
Louisiana Teachers	6/30/01	PUC	8.25	11,855	15,390	12,062	41%
Maine PERS	6/30/00	EAN	8.00	2,191	2,661	2,205	39%
Maine Teachers	6/30/00	EAN	8.00	3,171	4,792	3,283	53%
Maryland PERS	6/30/01	EAN	8.00	10,533	11,349	11,426	-
Maryland Teachers	6/30/01	EAN	8.00	17,757	20,127	19,183	-
Massachusetts PERS	1/1/01	EAN	8.25	14,386	15,170	13,922	59%
Massachusetts Teachers	1/1/01	EAN	8.25	14,921	18,170	14,390	66%
Michigan SERS	9/30/00	EAN	8.00	11,569	9,678	10,612	51%
Michigan Police	9/30/00	EAN	8.00	1,213	1,041	1,113	34%
Michigan Teachers	9/30/00	EAN	8.00	40,312	37,139	36,893	48%
Minnesota SRS	6/30/01	EAN	8.50	7,458	7,216	7,964	58%
Minnesota Teachers	7/1/01	EAN	8.50	15,902	15,904	16,834	43%
Mississippi PERS	6/30/01	EAN	8.00	15,446	18,755	16,460	57%

## Appendix A (cont.)

<u>Retirement System</u>	<u>Actuarial</u>	<u>Funding</u>	<u>Interest</u>	<u>Market</u>	<u>Actuarial</u>	<u>Actuarial</u>	<u>Active</u>
	<u>Valuation</u>		<u>Rate (%)</u>	<u>Value of</u>		<u>Value of</u>	<u>Liabilities as</u>
	<u>Date</u>	<u>Method</u>	<u>Assumption</u>	<u>Assets</u>	<u>Liabilities</u>	<u>Assets</u>	<u>% of Total</u>
							<u>Liabilities</u>
Missouri PERS	6/30/01	EAN	8.50	\$5,467	\$6,330	\$5,918	58%
Missouri Teachers	6/30/01	EAN	8.00	20,184	21,282	21,146	55%
Missouri School-Other	6/30/01	EAN	8.00	1,610	1,636	1,686	65%
Montana PERS	6/30/00	EAN	8.00	3,492	2,849	3,394	51%
Montana Teachers	7/1/00	EAN	8.00	2,384	2,648	2,248	69%
Nebraska RS	6/30/01	FEA	8.00	4,550	5,976	4,879	-
Nevada PERS	6/30/01	EAN	8.00	13,373	16,664	14,031	59%
New Hampshire PERS	6/30/01	AGG	9.00	1,326	1,638	1,293	54%
New Hampshire Teachers	6/30/01	AGG	9.00	1,419	1,499	1,356	61%
New Jersey PERS	6/30/00	PUC	8.75	28,370	20,958	24,563	58%
New Jersey Police & Fire	6/30/00	PUC	8.75	19,112	16,592	17,530	49%
New Jersey State Police	6/30/00	PUC	8.75	2,010	1,513	1,752	48%
New Jersey Teachers	6/30/00	PUC	8.75	35,408	27,405	30,203	56%
New Mexico PERA	6/30/01	EAN	8.00	8,113	7,997	8,426	46%
New Mexico Teachers	6/30/00	EAN	8.00	7,540	7,461	6,836	55%
New York PERS	4/1/01	AGG	8.00	96,463	93,475	93,475	-
New York Police & Fire	4/1/01	AGG	8.00	17,580	17,319	17,319	-
New York Teachers	6/30/00	AGG	8.00	89,247	67,202	83,422	-
North Carolina PERS	12/31/00	EAN	7.25	46,548	35,758	40,268	-
North Dakota PERS	6/30/01	EAN	8.00	1,174	1,047	1,154	64%
North Dakota Teachers	7/1/01	EAN	8.00	1,291	1,468	1,415	-
Ohio PERS	12/31/98	EAN	7.75	41,443	37,714	38,360	61%
Ohio Teachers	6/30/01	EAN	8.25	7,861	8,852	8,791	56%
Oklahoma PERS	7/1/01	EAN	7.50	4,815	6,190	5,110	50%
Oklahoma Teachers	6/30/01	EAN	8.00	6,050	11,591	5,959	53%
Oregon PERS	12/31/00	EAN	8.00	37,406	42,784	41,740	64%
Pennsylvania PERS	12/31/01	EAN	8.50	24,706	23,659	27,505	63%
Pennsylvania Teachers	6/30/00	EAN	8.50	53,362	39,823	49,293	60%
Rhode Island ERS	6/30/99	FEA	8.25	2,243	2,715	2,216	-
Rhode Island Teachers	6/30/99	FEA	8.25	3,304	4,211	3,259	-
South Carolina RS	7/1/00	EAN	7.25	17,616	19,623	17,414	61%
South Carolina Police	7/1/00	EAN	7.25	2,043	2,096	2,009	60%
South Dakota PERS	6/30/01	EAN	8.00	4,940	4,688	4,521	56%
Tennessee SETHEPP	7/1/99	FEA	7.50	19,866	18,420	18,327	-
Texas ERS	8/31/00	EAN	8.00	19,904	16,613	17,503	61%
Texas LECOSRF	8/31/00	EAN	8.00	701	548	619	67%
Texas Teachers	8/31/01	EAN	8.00	79,428	84,217	86,352	59%
Utah Non-contributory	12/31/01	EAN	8.00	9,999	10,817	11,190	63%
Vermont PERS	6/30/01	EAN	8.25	1,135	1,186	1,133	-
Vermont Teachers	6/30/01	EAN	8.50	1,139	1,254	1,117	-
Virginia RS	6/30/00	EAN	8.00	39,786	34,165	35,367	62%
Washington PERS 1	12/31/99	EAN	7.50	11,303	11,636	10,456	45%
Washington PERS 2	12/31/99	AGG	7.50	12,531	11,472	11,385	91%
Washington Teachers 1	6/30/99	EAN	7.50	9,002	9,529	8,696	48%
Washington Teachers 2	6/30/99	AGG	7.50	3,006	2,908	2,908	95%

**Appendix A (cont.)**

<u>Retirement System</u>	<u>Actuarial Valuation Date</u>	<u>Funding Method</u>	<u>Interest Rate (%) Assumption</u>	<u>Market Value of Assets</u>	<u>Actuarial Liabilities</u>	<u>Actuarial Value of Assets</u>	<u>Active Liabilities as % of Total Liabilities</u>
West Virginia PERS	7/1/01	EAN	8.00	\$2,681	\$3,178	\$2,681	-
West Virginia Teachers	7/1/01	EAN	8.00	1,091	5,189	1,091	-
Wisconsin RS	12/31/99	FEA	8.00	65,136	51,550	49,404	59%
Wyoming RS	1/1/01	EAN	8.00	4,773	3,933	4,534	29%
<b>Totals</b>	12/31/00 (Median)		7.77% (Avg.)	\$1,740,691 (Sum)	\$1,622,469 (Sum)	\$1,646,056 (Sum)	57% (Avg.)

Note : EAN = Entry Age Normal  
 AGG = Aggregate Cost  
 FEA = Frozen Entry Age  
 PUC = Projected Unit Credit

**Appendix B : Funding Ratio Ranking by System  
(\$ in millions)**

<b><u>Retirement System</u></b>	<b>Ratio of Assets (at market value) to <u>Liabilities</u></b>	<b>Rank Out of 93 <u>Systems</u></b>	<b>Assets minus <u>Liabilities</u></b>	<b>Rank Out of 93 <u>Systems</u></b>
Florida RS	1.40	1	\$27,566	2
Arizona SRS	1.36	2	6,088	10
New Jersey PERS	1.35	3	7,412	9
Pennsylvania Teachers	1.34	4	13,539	6
Georgia PERS	1.34	5	3,297	14
New Jersey State Police	1.33	6	497	32
New York Teachers	1.33	7	22,045	3
North Carolina PERS	1.30	8	10,790	7
New Jersey Teachers	1.29	9	8,003	8
Texas LECOSRF	1.28	10	153	39
California PERS	1.27	11	36,737	1
Wisconsin RS	1.26	12	13,586	5
Montana PERS	1.23	13	643	29
Wyoming RS	1.21	14	840	25
California Teachers	1.21	15	19,658	4
Alaska PERS	1.21	16	1,082	22
Georgia Teachers	1.20	17	6,932	11
Texas ERS	1.20	18	3,291	15
Michigan SERS	1.20	19	1,891	19
Michigan Police	1.17	20	172	38
Virginia RS	1.16	21	5,621	12
New Jersey Police & Fire	1.15	22	2,520	18
Kentucky Counties	1.14	23	709	28
North Dakota PERS	1.12	24	127	41
Delaware PERS	1.12	25	541	30
Indiana PERS	1.11	26	838	26
Ohio PERS	1.10	27	3,729	13
Washington PERS 2	1.09	28	1,059	23
Michigan Teachers	1.09	29	3,173	16
Alaska Teachers	1.08	30	275	34
Tennessee SETHEPP	1.08	31	1,446	21
Colorado State & School	1.07	32	1,806	20
Alabama ERS	1.07	33	499	31
South Dakota PERS	1.05	34	252	36
Pennsylvania PERS	1.04	35	1,047	24
Indiana Police and Fire	1.04	36	51	46
Washington Teachers 2	1.03	37	98	43
Minnesota SRS	1.03	38	242	37
New York PERS	1.03	39	2,988	17
Iowa PERS	1.02	40	376	33
New York Police & Fire	1.02	41	261	35
New Mexico PERA	1.01	42	116	42
Connecticut Teachers	1.01	43	151	40
Kentucky PERS	1.01	44	70	45

## Appendix B (cont.)

<u>Retirement System</u>	Ratio of Assets (at market value) to	Rank Out of 93	Assets minus	Rank Out of 93
	<u>Liabilities</u>	<u>Systems</u>	<u>Liabilities</u>	<u>Systems</u>
New Mexico Teachers	1.01	45	\$79	44
Arkansas PERS	1.00	46	1	47
Minnesota Teachers	1.00	47	-2	48
Missouri School-Other	0.98	48	-26	49
South Carolina Police	0.97	49	-53	51
Washington PERS 1	0.97	50	-333	57
Vermont PERS	0.96	51	-51	50
Idaho PERS	0.95	52	-353	58
Missouri Teachers	0.95	53	-1,098	70
Massachusetts PERS	0.95	54	-784	63
New Hampshire Teachers	0.95	55	-80	52
Washington Teachers 1	0.94	56	-527	62
Texas Teachers	0.94	57	-4,789	88
Maryland PERS	0.93	58	-816	64
Utah Non-contributory	0.92	59	-818	65
Alabama Teachers	0.92	60	-1,424	72
Vermont Teachers	0.91	61	-115	53
DC Teachers	0.91	62	-74	27
Montana Teachers	0.90	63	-264	55
South Carolina RS	0.90	64	-2,007	77
Arkansas Teachers	0.89	65	-918	68
Ohio Teachers	0.89	66	-991	69
Maryland Teachers	0.88	67	-2,370	79
North Dakota Teachers	0.88	68	-177	54
Oregon PERS	0.87	69	-5,378	90
Kansas PERS	0.87	70	-1,475	74
DC PERS	0.86	71	-155	86
Missouri PERS	0.86	72	-863	66
Kentucky Teachers	0.85	73	-2,132	78
West Virginia PERS	0.84	74	-497	61
Hawaii ERS	0.83	75	-1,746	76
Rhode Island ERS	0.83	76	-472	60
Mississippi PERS	0.82	77	-3,309	84
Maine PERS	0.82	78	-470	59
Massachusetts Teachers	0.82	79	-3,249	82
New Hampshire PERS	0.81	80	-312	56
Nevada PERS	0.80	81	-3,291	83
Rhode Island Teachers	0.78	82	-907	67
Oklahoma PERS	0.78	83	-1,375	71
Louisiana Teachers	0.77	84	-3,535	85
Nebraska RS	0.76	85	-1,426	73
Connecticut PERS	0.72	86	-3,228	81
Louisiana PERS	0.70	87	-2,569	80
Maine Teachers	0.66	88	-1,621	75
Illinois PERS	0.64	89	-4,967	89
Illinois Teachers	0.60	90	-15,851	93

**Appendix B (cont.)**

<b><u>Retirement System</u></b>	<b>Ratio of Assets (at market value) to <u>Liabilities</u></b>	<b>Rank Out of 93 <u>Systems</u></b>	<b>Assets minus <u>Liabilities</u></b>	<b>Rank Out of 93 <u>Systems</u></b>
Oklahoma Teachers	0.52	91	-\$5,541	91
Indiana Teachers	0.43	92	-7,537	92
West Virginia Teachers	0.21	93	-4,098	87
<b>Totals</b>	0.99 (Avg.)		\$118,223 (Sum)	

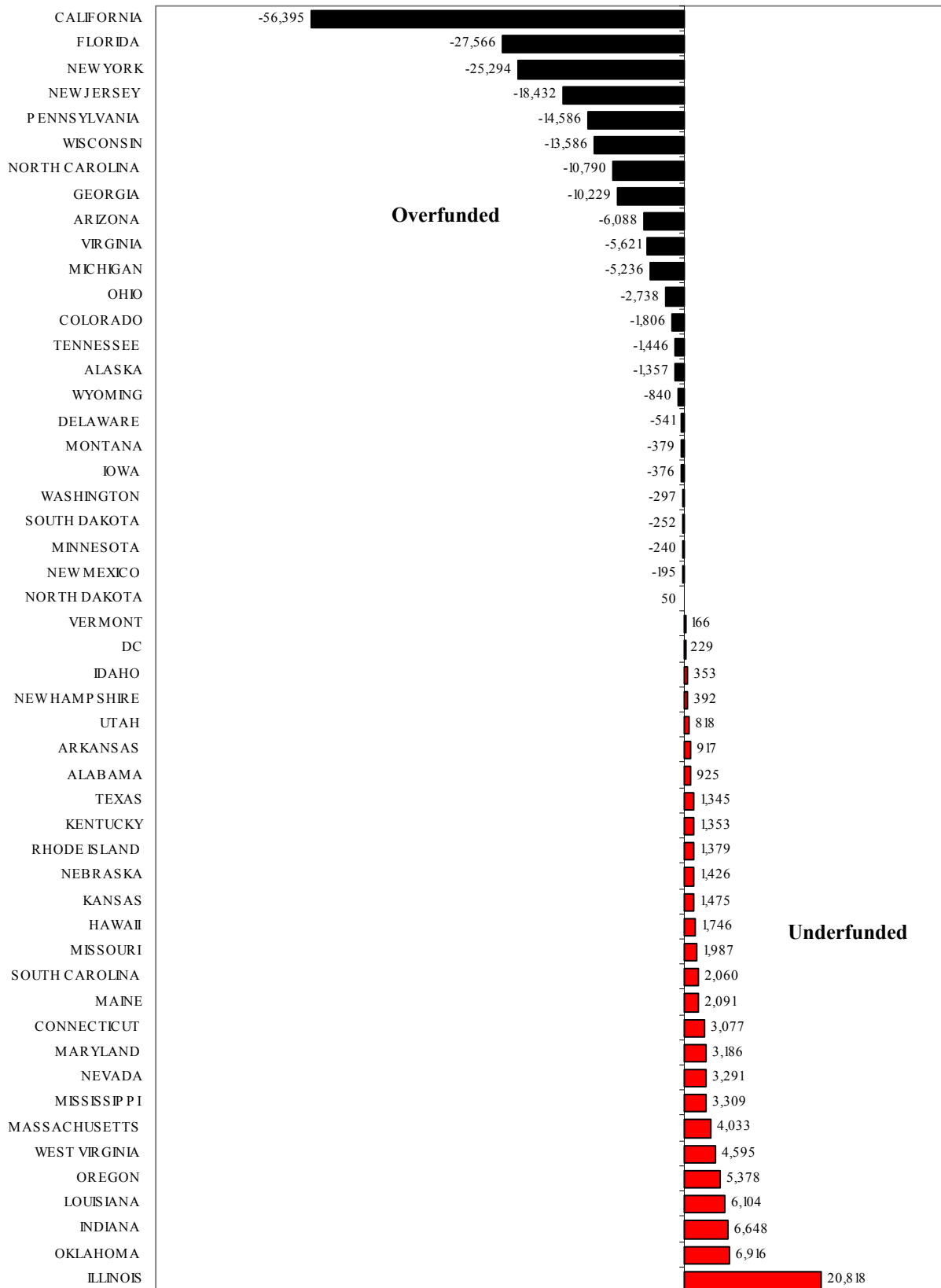
**Appendix C : Funding Ratio Ranking by State  
(\$ In millions)**

<u>State</u>	<b>Ratio of Assets (at market value) to</b>		<b>Assets minus</b>	
	<u>Liabilities</u>	<u>Rank</u>	<u>Liabilities</u>	<u>Rank</u>
Florida	1.40	1	\$27,566	2
Arizona	1.36	2	6,088	9
North Carolina	1.30	3	10,790	7
New Jersey	1.28	4	18,432	4
Wisconsin	1.26	5	13,586	6
California	1.25	6	56,395	1
Pennsylvania	1.23	7	14,586	5
Georgia	1.23	8	10,229	8
Wyoming	1.21	9	840	16
Virginia	1.16	10	5,621	10
Alaska	1.16	11	1,357	15
New York	1.14	12	25,294	3
Delaware	1.12	13	541	17
Michigan	1.11	14	5,236	11
Tennessee	1.08	15	1,446	14
Montana	1.07	16	379	18
Colorado	1.07	17	1,806	13
Ohio	1.06	18	2,738	12
South Dakota	1.05	19	252	21
Iowa	1.02	20	376	19
New Mexico	1.01	21	195	23
Minnesota	1.01	22	240	22
Washington	1.01	23	297	20
Texas	0.99	24	-1,345	31
North Dakota	0.98	25	-50	24
Alabama	0.96	26	-925	30
Idaho	0.95	27	-353	26
Kentucky	0.95	28	-1,353	32
Missouri	0.93	29	-1,987	37
Vermont	0.93	30	-166	25
Arkansas	0.93	31	-917	29
Utah	0.92	32	-818	28
South Carolina	0.91	33	-2,060	38
Maryland	0.90	34	-3,186	42
DC	0.88	35	-229	40
Massachusetts	0.88	36	-4,033	45
New Hampshire	0.88	37	-392	27
Oregon	0.87	38	-5,378	47
Connecticut	0.87	39	-3,077	41
Kansas	0.87	40	-1,475	35
Hawaii	0.83	41	-1,746	36
Mississippi	0.82	42	-3,309	44
Nevada	0.80	43	-3,291	43

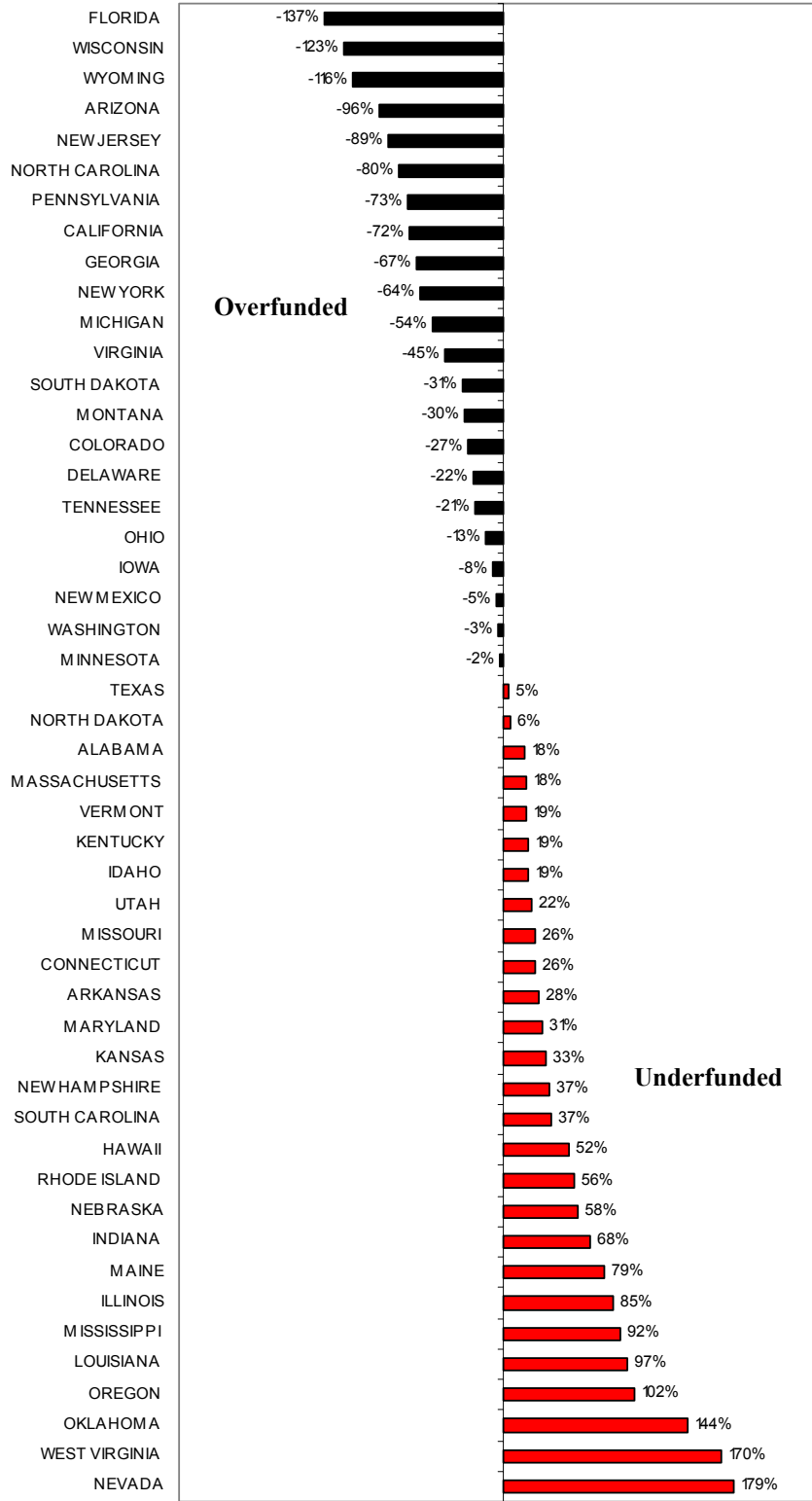
### Appendix C (cont.)

<u>State</u>	<b>Ratio of Assets (at market value) to</b>		<b>Assets minus</b>	
	<b><u>Liabilities</u></b>	<b><u>Rank</u></b>	<b><u>Liabilities</u></b>	<b><u>Rank</u></b>
Rhode Island	0.80	44	-\$1,379	33
Nebraska	0.76	45	-1,426	34
Louisiana	0.75	46	-6,104	48
Maine	0.72	47	-2,091	39
Indiana	0.70	48	-6,648	49
Oklahoma	0.61	49	-6,916	50
Illinois	0.61	50	-20,818	51
West Virginia	0.45	51	-4,595	46
<b>Totals</b>	0.98		\$118,223	
	(Avg.)		(Sum)	

## Appendix D : State Unfunded Liabilities (in millions)

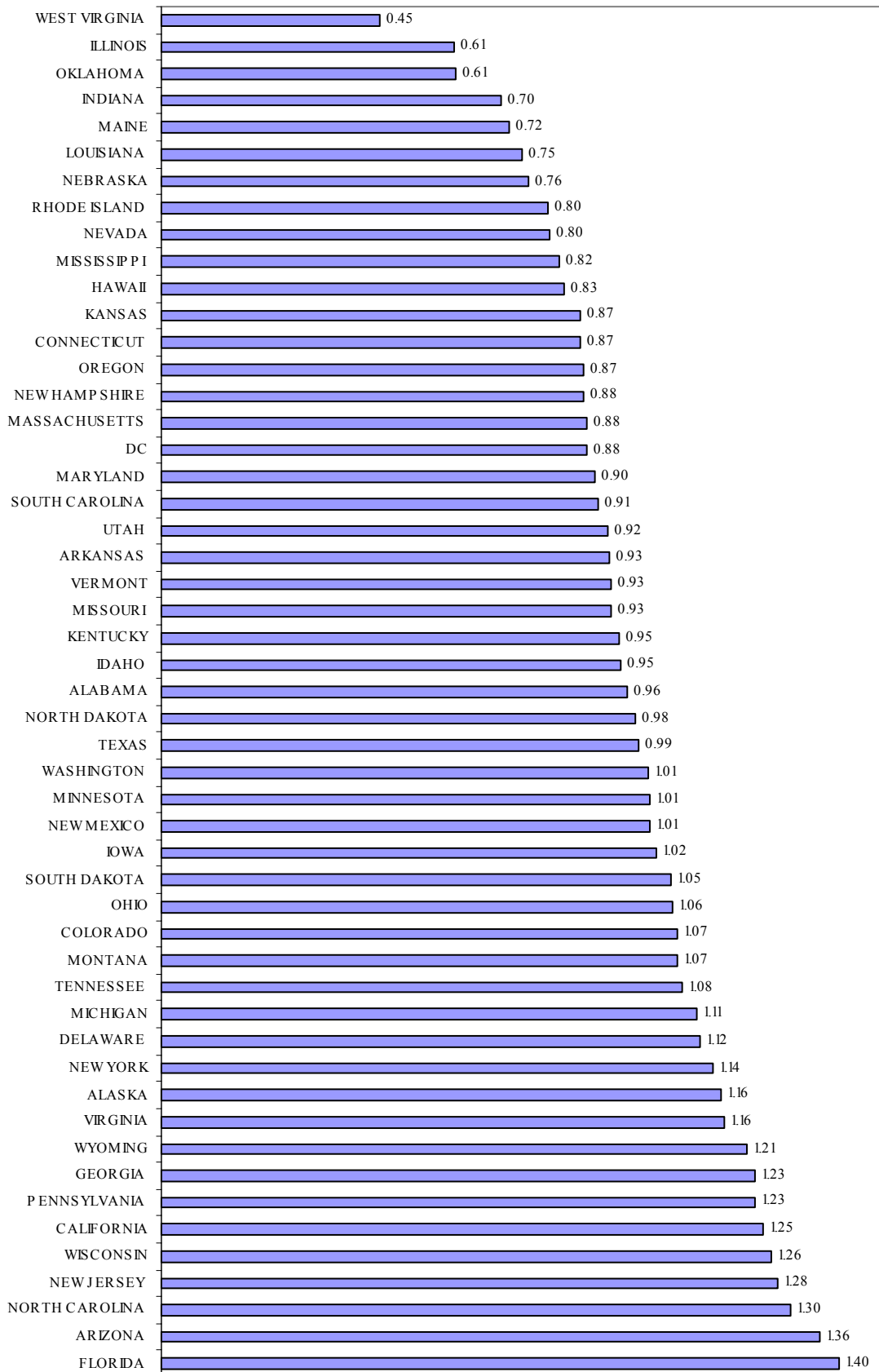


## Appendix E : Unfunded Liabilities as % of State Budget Expenditures



Note : State Budget Expenditures per “The Fiscal Survey of the States,” (May 2002) ; National Governors Association, National Association of State Budget Officers.

## Appendix F : State Funding Ratios



**Appendix G : Asset Allocation (Rank by Risk Level)  
(% of Total Assets)**

<u>Retirement System</u>	<u>Report Date</u>	<u>US equity</u>	<u>Non-US equity</u>	<u>US Fixed Income</u>	<u>Non US FI</u>	<u>Real Estate</u>	<u>Private Equity</u>	<u>Other</u>	<u>Expected Return</u>	<u>Risk</u>
Colorado State & School	12/31/2000	53.2	13.9	10.2	2.2	8.4	11.2	0.9	7.8	14.9
Louisiana Teachers*	6/30/2001	54.3	11.9	14.3	4.1	2.6	12.6	0.0	7.8	14.9
Minnesota SRS	6/30/2001	47.9	13.9	25.1	0.0	0.0	13.1	0.0	7.7	14.3
Minnesota Teachers	6/30/2001	47.9	13.9	25.1	0.0	0.0	13.1	0.0	7.7	14.3
Virginia RS	6/30/2001	48.0	15.0	25.0	0.0	0.0	12.0	0.0	7.7	14.2
Pennsylvania PERS	12/31/2001	40.3	20.5	17.8	0.0	10.3	10.0	1.1	7.6	13.9
Michigan Police	9/30/2001	41.3	6.7	27.0	0.0	9.5	15.5	0.0	7.6	13.7
Michigan SERS	9/30/2001	40.8	6.6	27.4	0.0	9.7	15.5	0.0	7.6	13.7
Michigan Teachers	9/30/2001	41.2	6.5	28.2	0.0	9.1	15.0	0.0	7.6	13.6
Washington PERS 1	6/30/2000	38.5	17.2	25.7	0.0	6.9	11.7	0.0	7.6	13.5
Washington PERS 2	6/30/2000	38.5	17.2	25.7	0.0	6.9	11.7	0.0	7.6	13.5
Washington Teachers 1	6/30/2000	38.5	17.2	25.7	0.0	6.9	11.7	0.0	7.6	13.5
Washington Teachers 2	6/30/2000	38.5	17.2	25.7	0.0	6.9	11.7	0.0	7.6	13.5
Illinois PERS	6/30/2001	45.0	19.0	26.0	0.0	4.0	6.0	0.0	7.4	13.1
New Hampshire PERS	6/30/2001	46.9	7.9	22.6	3.5	9.5	9.6	0.0	7.4	13.1
New Hampshire Teachers	6/30/2001	46.9	7.9	22.6	3.5	9.5	9.6	0.0	7.4	13.1
North Dakota Teachers	6/30/2001	41.0	23.0	16.0	5.0	11.0	4.0	0.0	7.4	13.1
South Dakota PERS	6/30/2001	50.0	16.4	24.2	0.0	5.7	3.7	0.0	7.4	13.0
Arizona SRS	6/30/2001	59.0	14.9	26.1	0.0	0.0	0.0	0.0	7.3	13.0
Delaware PERS	6/30/2001	44.9	11.5	30.4	2.8	0.0	10.4	0.0	7.4	13.0
Oregon PERS	6/30/2001	36.9	15.3	27.1	3.7	5.3	11.6	0.0	7.4	13.0
Florida RS	6/30/1999	63.3	8.1	24.7	0.0	3.8	0.0	0.0	7.3	13.0
Connecticut PERS	6/30/2001	38.5	12.1	34.4	0.0	2.3	12.7	0.0	7.4	12.9
Connecticut Teachers	6/30/2001	38.5	12.1	34.4	0.0	2.3	12.7	0.0	7.4	12.9
Missouri PERS	6/30/2001	49.9	22.9	24.9	0.0	0.0	0.0	2.3	7.2	12.8
Texas Teachers	8/31/2001	55.6	7.5	31.9	0.0	0.0	4.5	0.5	7.2	12.7
New York Teachers	6/30/2001	57.6	8.3	28.4	0.0	4.4	1.3	0.0	7.2	12.5
California Teachers	6/30/2001	38.9	22.4	29.2	0.0	5.1	4.4	0.0	7.3	12.5
Louisiana PERS	6/30/2001	44.5	15.6	27.0	6.4	0.7	5.9	0.0	7.2	12.5
New Mexico Teachers	6/30/2000	56.0	13.0	31.0	0.0	0.0	0.0	0.0	7.1	12.4
Pennsylvania Teachers	6/30/2001	44.3	16.4	29.4	2.1	3.3	4.5	0.0	7.2	12.4
Arkansas Teachers	6/30/2001	41.4	12.1	36.9	0.0	0.7	8.9	0.0	7.2	12.4
California PERS	6/30/2001	40.4	17.8	25.9	3.2	8.1	4.6	0.0	7.2	12.3
Idaho PERS	6/30/2001	43.7	21.9	30.5	0.4	0.6	1.7	1.2	7.1	12.3
Wisconsin RS	12/31/1999	42.5	16.7	25.6	6.4	4.0	4.7	0.0	7.2	12.3
Maryland PERS	6/30/2001	46.6	19.1	28.4	0.7	5.0	0.2	0.0	7.1	12.2
Maryland Teachers	6/30/2001	46.6	19.1	28.4	0.7	5.0	0.2	0.0	7.1	12.2
Hawaii ERS	6/30/2001	46.5	14.2	22.5	6.7	7.3	2.9	0.0	7.2	12.2
New York PERS	3/31/2001	44.6	11.8	34.6	0.0	3.1	5.9	0.0	7.2	12.2
New York Police & Fire	3/31/2001	44.6	11.8	34.6	0.0	3.1	5.9	0.0	7.2	12.2
Mississippi PERS	6/30/2001	52.5	13.7	33.8	0.0	0.0	0.0	0.0	7.1	12.1
Utah Non-contributory	12/31/2001	40.9	13.9	25.7	5.9	8.4	5.2	0.0	7.2	12.0
Ohio Teachers	6/30/2001	46.3	13.5	27.7	0.0	11.3	1.2	0.0	7.1	12.0
Alaska Teachers	6/30/2001	41.2	17.3	26.9	4.8	7.3	2.6	0.0	7.1	11.9
Massachusetts PERS	1/1/2001	42.5	19.9	26.1	5.6	5.9	0.0	0.0	7.0	11.8
Massachusetts Teachers	1/1/2001	42.5	19.9	26.1	5.6	5.9	0.0	0.0	7.0	11.8

**Appendix G (cont.)**

<u>Retirement System</u>	<u>Report Date</u>	<u>US equity</u>	<u>Non-US equity</u>	<u>US Fixed Income</u>	<u>Non_US FI</u>	<u>Real Estate</u>	<u>Private Equity</u>	<u>Other</u>	<u>Expected Return</u>	<u>Risk</u>
Montana Teachers	6/30/00	49.1	7.4	36.3	0.9	2.5	3.8	0.0	7.1	11.8
Montana PERS	6/30/01	42.3	7.1	42.4	0.0	0.3	8.0	0.0	7.1	11.7
Georgia PERS	6/30/99	61.0	0.0	39.0	0.0	0.0	0.0	0.0	6.9	11.7
Vermont PERS	6/30/01	44.0	17.0	19.0	9.0	9.0	0.0	2.0	7.0	11.7
Alaska PERS	6/30/01	43.8	17.3	26.8	4.8	7.3	0.0	0.0	7.0	11.7
Nebraska RS	6/30/01	49.0	14.0	37.0	0.0	0.0	0.0	0.0	7.0	11.7
Rhode Island ERS	6/30/99	48.0	14.0	34.5	0.5	3.0	0.0	0.0	7.0	11.6
Rhode Island Teachers	6/30/99	48.0	14.0	34.5	0.5	3.0	0.0	0.0	7.0	11.6
New Jersey PERS	6/30/01	48.0	15.0	35.0	2.0	0.0	0.0	0.0	7.0	11.6
New Jersey Police & Fire	6/30/01	48.0	15.0	35.0	2.0	0.0	0.0	0.0	7.0	11.6
New Jersey State Police	6/30/01	48.0	15.0	35.0	2.0	0.0	0.0	0.0	7.0	11.6
New Jersey Teachers	6/30/01	48.0	15.0	35.0	2.0	0.0	0.0	0.0	7.0	11.6
Maine PERS	6/30/01	49.6	12.9	37.5	0.0	0.0	0.0	0.0	7.0	11.6
Maine Teachers	6/30/01	49.6	12.9	37.5	0.0	0.0	0.0	0.0	7.0	11.6
Iowa PERS	6/30/01	34.0	14.0	37.9	1.1	6.0	7.0	0.0	7.1	11.5
DC PERS	9/30/01	38.9	15.5	41.1	0.0	0.0	4.5	0.0	7.0	11.5
DC Teachers	9/30/01	38.9	15.5	41.1	0.0	0.0	4.5	0.0	7.0	11.5
Arkansas PERS	6/30/01	40.1	9.4	43.4	0.0	0.0	6.8	0.3	7.0	11.4
Vermont Teachers	6/30/01	41.0	15.0	14.0	19.0	10.0	0.0	1.0	6.9	11.3
Georgia Teachers	6/30/01	56.9	0.0	41.7	0.0	1.4	0.0	0.0	6.8	11.3
Ohio PERS	12/31/99	35.2	20.6	34.0	0.0	10.1	0.2	0.0	6.9	11.3
Wyoming RS	12/31/00	52.0	6.4	41.6	0.0	0.0	0.0	0.0	6.9	11.2
North Dakota PERS	6/30/01	38.0	13.0	34.0	5.0	6.0	4.0	0.0	7.0	11.2
Oklahoma Teachers	6/30/01	48.1	11.0	39.6	1.3	0.0	0.0	0.0	6.9	11.2
Kentucky PERS	6/30/01	40.0	10.0	45.0	0.0	0.0	5.0	0.0	6.9	11.1
Kentucky Counties	6/30/01	40.0	10.0	45.0	0.0	0.0	5.0	0.0	6.9	11.1
New Mexico PERA	6/30/01	44.0	14.2	41.6	0.0	0.2	0.0	0.0	6.9	11.1
Indiana PERS	6/30/01	52.1	4.7	43.1	0.0	0.0	0.0	0.0	6.8	11.1
Indiana Police and Fire	6/30/01	52.1	4.7	43.1	0.0	0.0	0.0	0.0	6.8	11.1
North Carolina PERS	12/31/00	54.7	0.0	43.4	0.0	1.7	0.2	0.0	6.8	11.1
Oklahoma PERS	6/30/01	44.8	12.3	42.9	0.0	0.0	0.0	0.0	6.8	11.0
Kentucky Teachers	6/30/01	52.8	0.0	44.8	0.0	2.4	0.0	0.0	6.7	10.8
Kansas PERS	6/30/01	41.0	13.0	34.0	7.0	5.0	0.0	0.0	6.8	10.7
Illinois Teachers	6/30/01	26.3	19.2	34.3	7.4	10.0	2.8	0.0	6.8	10.6
Missouri Teachers	6/30/01	38.5	13.7	47.8	0.0	0.0	0.0	0.0	6.7	10.4
Missouri School-Other	6/30/01	38.5	13.7	47.8	0.0	0.0	0.0	0.0	6.7	10.4
Texas ERS	8/31/01	36.2	14.9	48.9	0.0	0.0	0.0	0.0	6.7	10.3
Texas LECOSRF	8/31/01	36.2	14.9	48.9	0.0	0.0	0.0	0.0	6.7	10.3
Alabama ERS	9/30/01	39.9	6.6	47.7	0.6	5.1	0.0	0.0	6.6	10.0
Nevada PERS	6/30/01	33.2	9.3	36.1	10.5	9.9	1.1	0.0	6.6	9.9
Indiana Teachers	6/30/00	44.4	0.0	55.6	0.0	0.0	0.0	0.0	6.5	9.8
Alabama Teachers	9/30/01	35.9	7.0	51.6	0.6	4.9	0.0	0.0	6.5	9.6
Tennessee SETHEEPP	6/30/01	31.4	9.3	54.5	3.6	1.2	0.0	0.0	6.4	9.2
West Virginia PERS	6/30/99	28.0	7.6	64.4	0.0	0.0	0.0	0.0	6.2	8.7

**Appendix G (cont.)**

<u>Retirement System</u>	<u>Report Date</u>	<u>US equity</u>	<u>Non-US equity</u>	<u>US Fixed Income</u>	<u>Non_US FI</u>	<u>Real Estate</u>	<u>Private Equity</u>	<u>Other</u>	<u>Expected Return</u>	<u>Risk</u>
West Virginia Teachers	6/30/99	28.0	7.6	64.4	0.0	0.0	0.0	0.0	6.2	8.7
South Carolina RS	6/30/01	22.3	0.0	77.7	0.0	0.0	0.0	0.0	5.9	7.8
South Carolina Police	6/30/01	21.7	0.0	78.3	0.0	0.0	0.0	0.0	5.8	7.7
<b>Average</b>		43.8	12.5	34.6	1.6	3.4	3.9	0.1	7.1	11.9
<b>High</b>		63.3	23.0	78.3	19.0	11.3	15.5	2.3	7.8	14.9
<b>Low</b>		21.7	0.0	10.2	0.0	0.0	0.0	0.0	5.8	7.7
<b>Median</b>		44.0	13.7	34.0	0.0	2.4	1.2	0.0	7.1	11.8

\* Data Revision : November 2002

Louisiana Teachers	6/30/01	45.5	11.5	18.4	5.3	3.0	16.3	0.0	7.8	14.6
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**Appendix H : Other Financial Data**  
**(\$ in millions)**

<b>Retirement System</b>	<b>Contributions</b>		<b>Payroll</b>	<b>Contr. as % of</b>		<b>Participants</b>		<b>Benefit Payments</b>	<b>Payout Ratio*</b>
	<b>Dollars</b>	<b>%Employer</b>		<b>Payroll</b>	<b>Payroll</b>	<b>Number</b>	<b>%Actives</b>		
Alabama ERS	264	49.6	2,319	11.4	111,710	69.8	417	-2.1%	
Alabama Teachers	510	55.3	4,305	11.8	194,316	66.9	847	-2.1%	
Alaska PERS	137	50.4	1,321	10.4	59,294	54.3	273	-2.3%	
Alaska Teachers	92	56.5	483	19.0	18,329	51.3	215	-3.7%	
Arizona SRS	211	36.5	5,894	3.6	361,450	53.1	922	-3.4%	
Arkansas PERS	101	100.0	1,070	9.4	66,688	63.8	136	-0.9%	
Arkansas Teachers	250	72.4	1,557	16.1	89,537	68.6	326	-1.0%	
California PERS	2,205	19.2	28,098	7.8	1,292,381	58.5	6,028	-2.4%	
California Teachers	3,727	50.6	18,224	20.5	428,741	100.0	4,032	-0.3%	
Colorado State & School	768	55.1	4,583	16.8	280,746	53.5	1,173	-1.4%	
Connecticut PERS	-	-	2,652	-	-	-	-	-	
Connecticut Teachers	-	-	2,502	-	-	-	-	-	
Delaware PERS	81	55.6	1,339	6.0	56,186	68.0	199	-2.3%	
DC PERS	66	74.2	214	30.8	12,329	38.2	3	5.8%	
DC Teachers	24	0.0	265	9.1	11,169	54.1	3	2.5%	
Florida RS	3,134	99.0	18,998	16.5	805,630	73.5	2,324	0.8%	
Georgia PERS	384	84.4	2,056	18.7	291,556	36.7	439	-0.4%	
Georgia Teachers	1,177	68.6	7,219	16.3	281,442	69.0	1,212	-0.1%	
Hawaii ERS	62	12.9	2,444	2.5	93,068	64.5	549	-5.6%	
Idaho PERS	251	51.4	2,008	12.5	91,963	67.6	287	-0.5%	
Illinois PERS	582	67.9	3,686	15.8	130,567	62.8	595	-0.1%	
Illinois Teachers	1,466	56.1	6,431	22.8	285,172	52.9	1,603	-0.6%	
Indiana PERS	330	61.5	3,539	9.3	205,794	71.7	293	0.4%	
Indiana Police and Fire	108	76.9	352	30.7	11,497	84.6	28	5.2%	
Indiana Teachers	747	86.5	3,193	23.4	113,924	68.2	539	3.7%	
Iowa PERS	447	60.0	4,550	9.8	319,418	48.4	624	-1.1%	
Kansas PERS	397	48.6	4,877	8.1	234,787	64.6	649	-2.6%	
Kentucky PERS	245	50.6	1,673	14.6	97,790	54.2	331	-1.4%	
Kentucky Counties	199	35.2	1,862	10.7	143,961	60.7	237	-0.7%	
Kentucky Teachers	489	57.3	2,214	22.1	91,840	59.1	684	-1.6%	
Louisiana PERS	390	62.8	1,783	21.9	127,399	50.6	489	-1.6%	
Louisiana Teachers	628	63.9	2,583	24.3	209,407	70.7	886	-2.2%	
Maine PERS	-	-	-	-	26,408	55.0	362	-	
Maine Teachers	-	-	-	-	39,427	69.8	-	-	
Maryland PERS	302	74.2	-	-	158,104	56.8	449	-1.4%	
Maryland Teachers	121	13.2	-	-	150,760	61.9	795	-3.8%	
Massachusetts PERS	289	0.0	-	-	133,920	65.1	680	-2.7%	
Massachusetts Teachers	313	0.0	-	-	119,429	72.7	686	-2.5%	
Michigan SERS	118	94.9	2,291	5.2	87,884	51.6	744	-6.3%	
Michigan Police	24	100.0	117	20.5	4,543	47.0	83	-5.7%	
Michigan Teachers	1,002	62.9	8,985	11.2	463,641	68.7	2,408	-4.0%	
Minnesota SRS	173	51.4	1,989	8.7	94,565	55.9	313	-1.9%	
Minnesota Teachers	285	49.1	2,812	10.1	112,813	63.0	869	-3.7%	
Mississippi PERS	753	58.4	4,140	18.2	316,812	48.0	20	4.7%	

## Appendix H (cont.)

<u>Retirement System</u>	<u>Contributions</u>		<u>Contr. as</u>		<u>Participants</u>		<u>Benefit</u>	<u>Payout</u>
	<u>Dollars</u>	<u>%Employer</u>	<u>Payroll</u>	<u>% of</u>	<u>Number</u>	<u>%Actives</u>	<u>Payments</u>	<u>Ratio*</u>
				<u>Payroll</u>				
Missouri PERS	241	99.2	1,802	13.4	91,348	64.4	234	0.1%
Missouri Teachers	660	49.2	2,982	22.1	106,125	68.5	785	-0.6%
Missouri School-Other	76	50.0	814	9.3	61,688	73.8	58	1.1%
Montana PERS	130	50.0	806	16.1	64,728	53.4	143	-0.4%
Montana Teachers	94	51.1	538	17.5	37,520	49.1	115	-0.9%
Nebraska RS	159	50.3	-	-	62,697	57.7	143	0.4%
Nevada PERS	716	91.6	3,169	22.6	113,243	73.2	487	1.7%
New Hampshire PERS	68	39.7	-	-	35,811	72.2	101	-2.5%
New Hampshire Teachers	48	25.0	-	-	22,236	79.7	76	-2.0%
New Jersey PERS	317	0.3	8,061	3.9	395,104	63.0	1,240	-3.7%
New Jersey Police & Fire	230	0.4	2,419	9.5	68,316	61.6	774	-3.2%
New Jersey State Police	13	0.0	188	6.9	4,598	57.8	70	-3.2%
New Jersey Teachers	374	0.5	6,572	5.7	193,415	65.8	1,354	-3.2%
New Mexico PERA	336	59.5	1,329	25.3	69,653	69.9	323	0.2%
New Mexico Teachers	292	52.4	1,796	16.3	97,800	61.4	347	-0.7%
New York PERS	483	34.4	-	-	864,106	62.6	3,566	-3.2%
New York Police & Fire	51	96.1	-	-	60,510	55.6	701	-3.7%
New York Teachers	281	54.4	-	-	340,473	67.4	2,916	-3.2%
North Carolina PERS	1,224	52.3	9,045	13.5	483,978	66.5	1,709	-1.0%
North Dakota PERS	35	51.4	438	8.0	25,167	67.1	42	-0.6%
North Dakota Teachers	52	50.0	342	15.2	16,412	62.4	61	-0.7%
Ohio PERS	1,774	52.7	9,017	19.7	522,017	67.9	1,627	0.3%
Ohio Teachers	283	31.8	1,974	14.3	182,436	63.4	419	-1.7%
Oklahoma PERS	178	73.6	1,317	13.5	69,800	62.6	257	-1.6%
Oklahoma Teachers	390	44.4	2,991	13.0	123,034	68.6	569	-3.0%
Oregon PERS	1,009	63.3	6,196	16.3	293,606	71.7	1,625	-1.6%
Pennsylvania PERS	318	24.2	4,872	6.5	203,810	53.8	1,245	-3.8%
Pennsylvania Teachers	738	21.4	8,940	8.3	419,000	55.8	2,113	-2.9%
Rhode Island ERS	-	-	-	-	24,318	55.0	-	-
Rhode Island Teachers	-	-	-	-	19,901	64.7	-	-
South Carolina RS	938	53.3	6,085	15.4	395,761	49.8	1,018	-0.4%
South Carolina Police	150	62.7	717	20.9	38,322	64.7	108	1.9%
South Dakota PERS	118	47.5	1,030	11.5	60,593	57.6	177	-1.2%
Tennessee SETHEPP	367	63.2	4,132	8.9	-	-	676	-1.5%
Texas ERS	579	49.9	4,734	12.2	-	-	943	-2.0%
Texas LECOSRF	0	NA	1,266	0.0	-	-	17	-2.7%
Texas Teachers	1,501	9.1	23,365	6.4	998,192	79.9	3,863	-3.0%
Utah Non-contributory	346	96.8	2,844	12.2	120,212	67.9	319	0.3%
Vermont PERS	39	61.9	380	10.3	19,547	63.4	42	-0.3%
Vermont Teachers	35	53.9	403	8.7	17,225	59.6	44	-0.8%
Virginia RS	1,270	94.8	9,970	12.7	427,414	71.1	1,379	-0.3%
Washington PERS 1	273	73.3	1,184	23.1	83,978	33.5	626	-3.1%
Washington PERS 2	205	49.8	5,546	3.7	188,007	89.5	108	0.8%
Washington Teachers 1	241	75.9	984	24.5	49,742	37.7	581	-3.5%
Washington Teachers 2	88	85.2	1,819	4.8	11,241	77.1	10	2.3%

## Appendix H (cont.)

<u>Retirement System</u>	<u>Contributions</u>		<u>Payroll</u>	<u>Contr. as % of</u>		<u>Participants</u>		<u>Benefit</u>	<u>Payout</u>
	<u>Dollars</u>	<u>%Employer</u>		<u>Payroll</u>	<u>Payroll</u>	<u>Number</u>	<u>%Actives</u>	<u>Payments</u>	<u>Ratio*</u>
West Virginia PERS	134	67.1	973	13.8	61,778	54.9	144	-0.4%	
West Virginia Teachers	287	81.0	867	33.1	52,299	46.1	257	2.7%	
Wisconsin RS	947	45.9	8,826	10.7	463,147	54.7	1,894	-1.5%	
Wyoming RS	107	49.5	921	11.6	54,345	62.9	154	-1.0%	
<b>Totals</b>	\$41,047	53.6%	\$316,282	13.9%	\$16,341,050	62.1%	\$69,212	-1.2%	
	(Sum)	(Avg.)	(Sum)	(Avg.)	(Sum)	(Avg.)	(Sum)	(Avg.)	

\*Payout Ratio = (contributions minus benefit payments) / assets