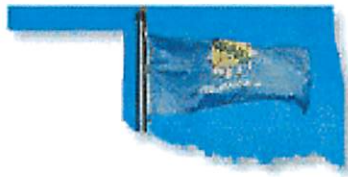


Oklahoma State Pension Commission Retirement System Summary of Actuarial Reports

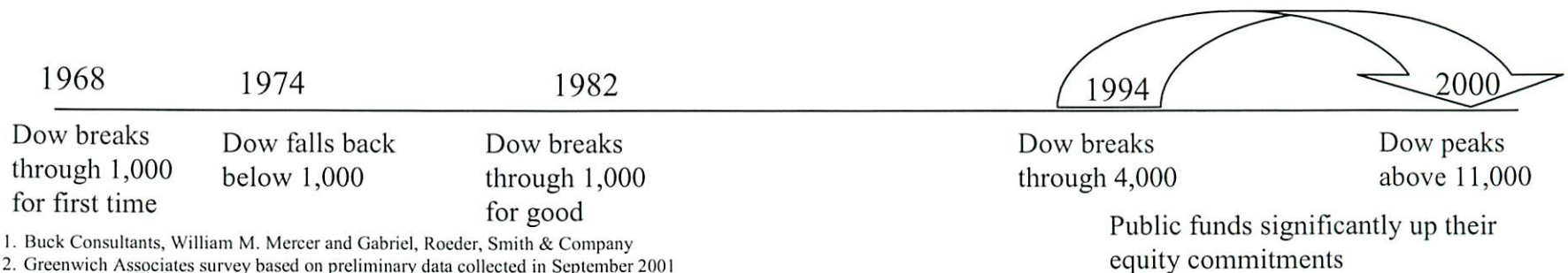


December, 2001



Retirement System Characteristics and Assumptions

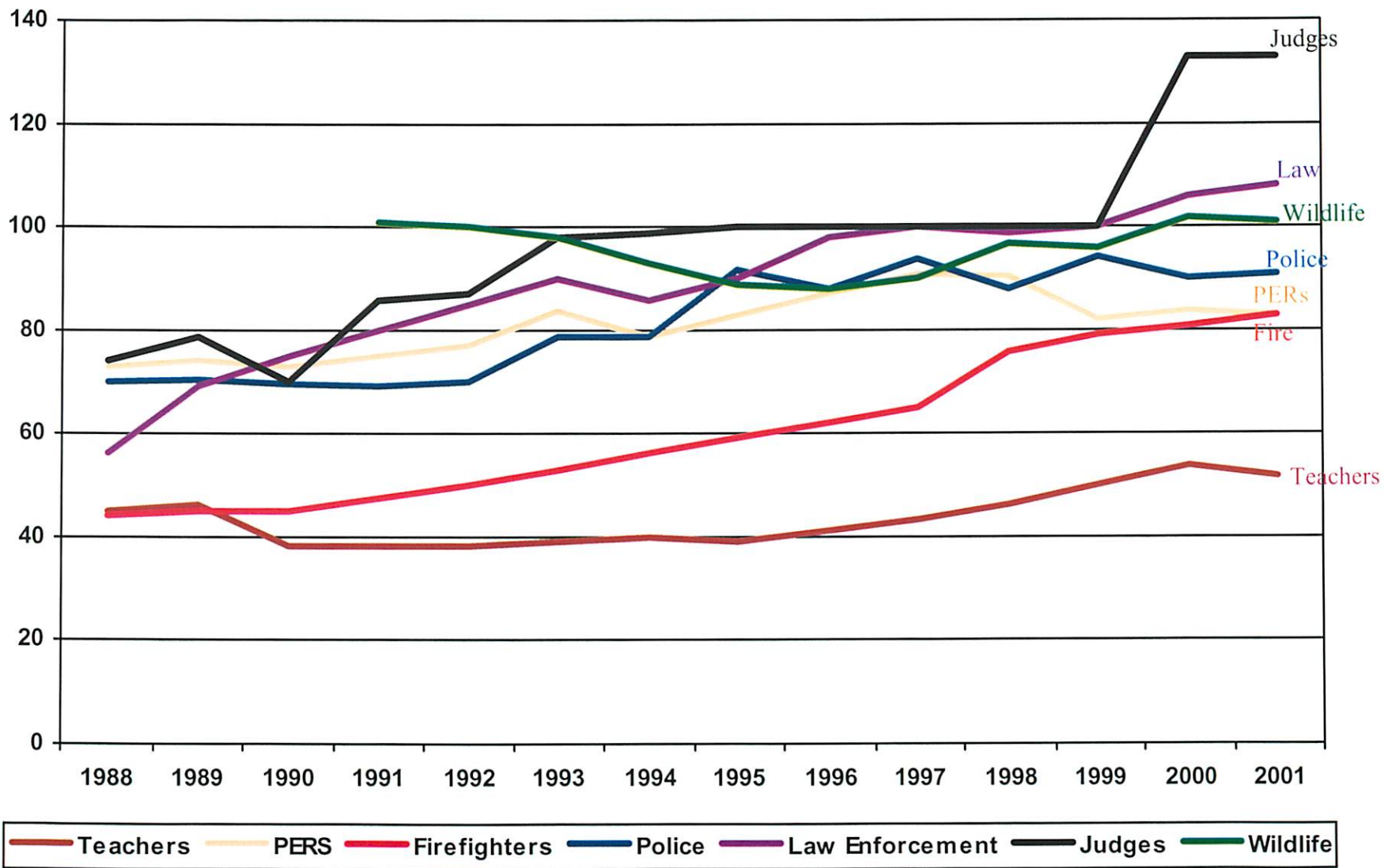
- ✓ **Based on July 1, 2001 Actuarial Valuation Reports from Actuary¹**
 - Retirement System comprised of the seven plans (Teachers, PERS, Police, Firefighters, Law Enforcement, Judges, Wildlife)
 - All plans employ similar funding method – Entry Age Normal
 - Entry age normal is a conservative funding schedule
 - All plans employ similar asset valuation method (smoothed value)
 - Smoothing asset values allows Trustees to focus the investment program on the long term
 - Investment return assumptions range from 7.5% to 8.0%
 - Public Fund assumed investment return median is 8.3%²
 - Therefore, this assumption is more conservative than average public fund
 - All plans have in place long term schedules (15 years and longer) to fully fund all programs.
 - Let's not lose focus of the long term nature of what we're doing



1. Buck Consultants, William M. Mercer and Gabriel, Roeder, Smith & Company
2. Greenwich Associates survey based on preliminary data collected in September 2001



Funded Status History – Actuarial Value of Assets



Source: R.V. Kuhns & Associates, Buck Consultants, William M. Mercer and Gabriel, Roeder, Smith & Company



Funded Status

Funded Status - Actuarial Value of Assets

Valuation Date	7/01/1998	7/01/1999	7/01/2000	7/01/2001
Teachers	46%	50%	54%	51%
PERS	91%	82%	84%	83%
Firefighters	76%	79%	81%	83%
Police	89%	94%	90%	91%
Law Enforcement	99%	104%	106%	108%
Judges	100%	100%	133%	133%
Wildlife	97%	96%	102%	101%

Funded Status - Market Value of Assets

Valuation Date		7/01/1999	7/01/2000	7/01/2001
Teachers		57%	59%	49%
PERS		93%	92%	78%
Firefighters		84%	87%	76%
Police		106%	97%	86%
Law Enforcement		116%	114%	104%
Judges		142%	146%	128%
Wildlife		104%	113%	94%

Source: R.V. Kuhns & Associates, Buck Consultants, William M. Mercer and Gabriel, Roeder, Smith & Company



Actuarial Accrued Liability and Assets(1999-2001)

<i>* Dollars in Millions As of Valuation Date (7/1)</i>	Actuarial Accrued Liability (AAL)	Actuarial Value of Assets (AVA)	Funded Ratio	Market Value of Assets (MV)	Funded Ratio
2001 Total	\$21,660.5	\$14,603.6	67%	\$13,861.1	64%
Teachers	11,591.0	5,959.0	51%	5,732.0	49%
PERS	6,190.2	5,110.2	83%	4,815.3	78%
Firefighters	1,734.9	1,438.5	83%	1,318.1	76%
Police	1,443.4	1,319.0	91%	1,238.8	86%
Law Enforcement	508.4	538.3	106%	528.5	104%
Judges	139.1	184.9	133%	178.0	128%
Wildlife	53.5	53.7	100%	50.4	94%
2000 Total	\$19,357.5	\$13,450.5	69%	\$14,231.1	74%
Teachers	10,009.0	5,373.0	54%	5,890.0	59%
PERS	5,694.7	4,785.6	84%	4,815.3	85%
Firefighters	1,665.3	1,355.7	81%	1,443.4	87%
Police	1,354.5	1,222.1	90%	1,319.3	97%
Law Enforcement	457.4	495.1	108%	521.3	114%
Judges	128.0	169.7	133%	186.9	146%
Wildlife	48.6	49.3	101%	54.9	113%
1999 Total	\$17,950.9	\$11,934.0	66%	\$13,462.6	75%
Teachers	9,458.6	4,708.0	50%	5,387.0	57%
PERS	5,179.8	4,261.6	82%	4,831.2	93%
Firefighters	1,563.0	1,235.8	79%	1,312.3	84%
Police	1,160.0	1,094.4	94%	1,224.1	106%
Law Enforcement	425.9	442.6	104%	493.2	116%
Judges	119.1	148.8	125%	168.6	142%
Wildlife	44.5	42.8	96%	46.2	104%

Source: R.V. Kuhns & Associates, Buck Consultants, William M. Mercer and Gabriel, Roeder, Smith & Company



Funded Status

Liability Situation - Public Funds

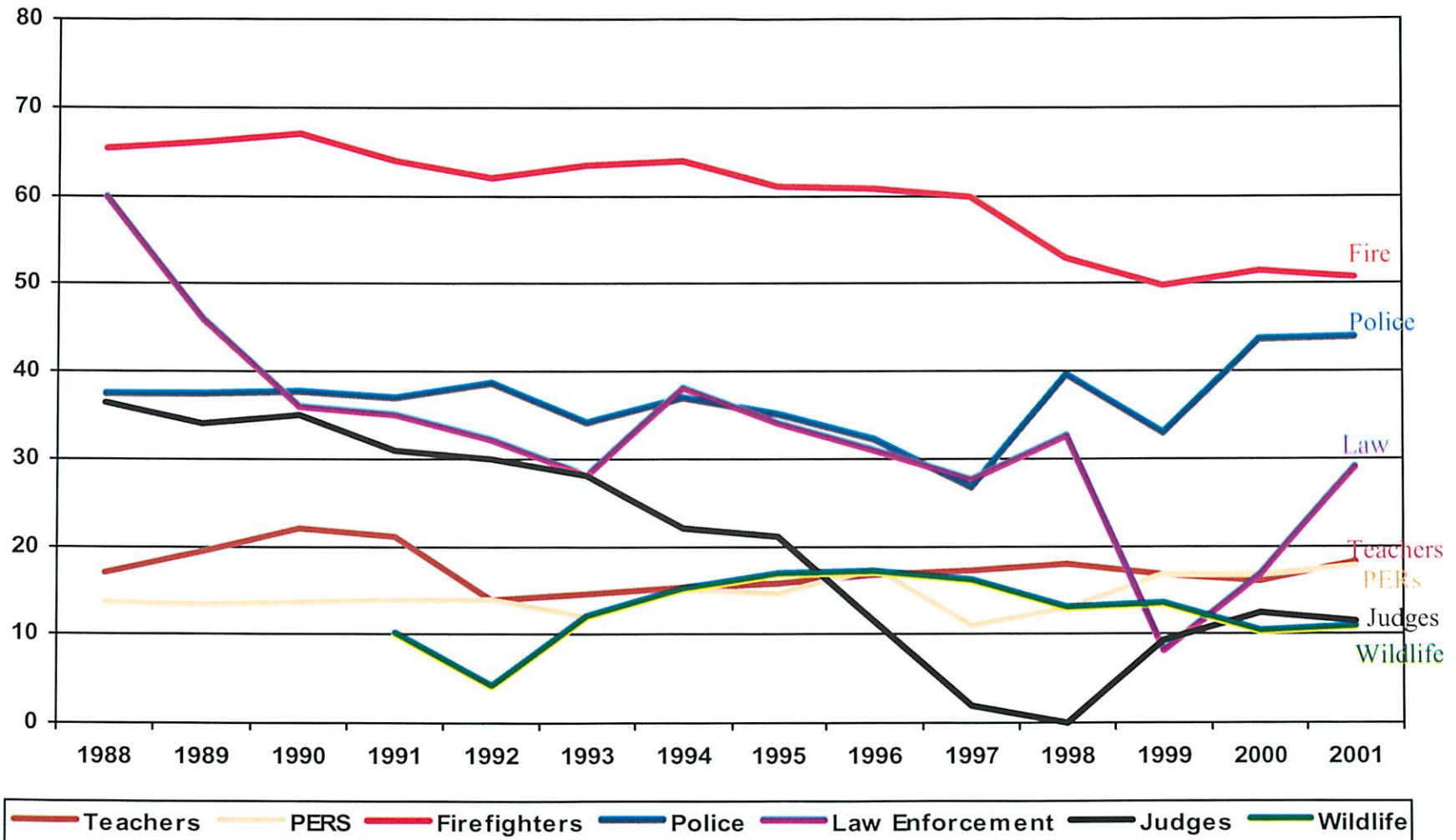
Public Funds (341)

	Total Funds	Percent of Funds		No Answer/ Uncertain
		Under Funded	Over Funded	
Public Funds	(341)	26%	30%	44%
State	(110)	25%	25%	49%
Municipal	(223)	27%	32%	41%
Over \$5 billion	(72)	25%	28%	47%
\$1,001-5,000 million	(82)	26%	33%	41%
\$251-1,000 million	(107)	26%	29%	45%
\$100-250 million	(76)	28%	29%	43%

Source: Greenwich Associates, Fall 2001



Annual Cost as % of Payroll



* Teachers includes state and legislated employers contributions only

Source: R.V. Kuhns & Associates, Buck Consultants, William M. Mercer and Gabriel, Roeder, Smith & Company



Contributions

Required Employer Contribution

Plan Years Beginning (\$ in Millions)	7/1/95	7/1/96	7/1/97	7/1/98	7/1/99	7/1/00	7/1/01
Teachers	\$434.7	\$446.5	\$446.2	\$456.9	\$455.3	\$451.5	\$556.2
PERS	131.3	110.9	96	107.2	161.8	169.6	188
Firefighters	58.3	59.7	56.1	57	57	62	63.1
Police	30.9	26.5	22.4	39.8	34.7	53	54.9
Law Enforcement	7.8	6.6	6.1	8.7	6.3	4.1	10.7
Judges	2.5	1.2	0	0	0.4	1.1	1
Wildlife	0	0	0	0	0	0	0
Total	\$665.5	\$651.4	\$626.8	\$669.6	\$715.5	\$741.3	\$873.9
Expected Employee Contributions	NA	NA	NA	NA	\$259.6	\$270.8	\$291.2

Actual Employer Contribution

Plan Years Beginning (\$ in Millions)	7/1/95	7/1/96	7/1/97	7/1/98	7/1/99	7/1/00	7/1/01
Teachers	\$177.4	\$276.8	\$263.7	\$244.4	\$275.9	\$328.2	TBD
PERS	135.4	135.4	143.7	149.2	125.9	131.1	TBD
Firefighters	52.0	55.9	58.3	59.0	61.6	65.7	TBD
Police	31.2	33.0	35.4	36.2	37.7	40.0	TBD
Law Enforcement	16.0	17.0	18.0	18.0	19.6	19.2	TBD
Judges	4.5	4.9	0.0	0.0	2.9	1.9	TBD
Wildlife	0.0	0.0	0.0	0.0	0.0	0.0	TBD
Total	\$416.4	\$523.1	\$519.2	\$506.8	\$523.6	\$586.1	TBD
Actual Employee Contributions	NA	NA	NA	NA	\$268.6	\$293.1	TBD

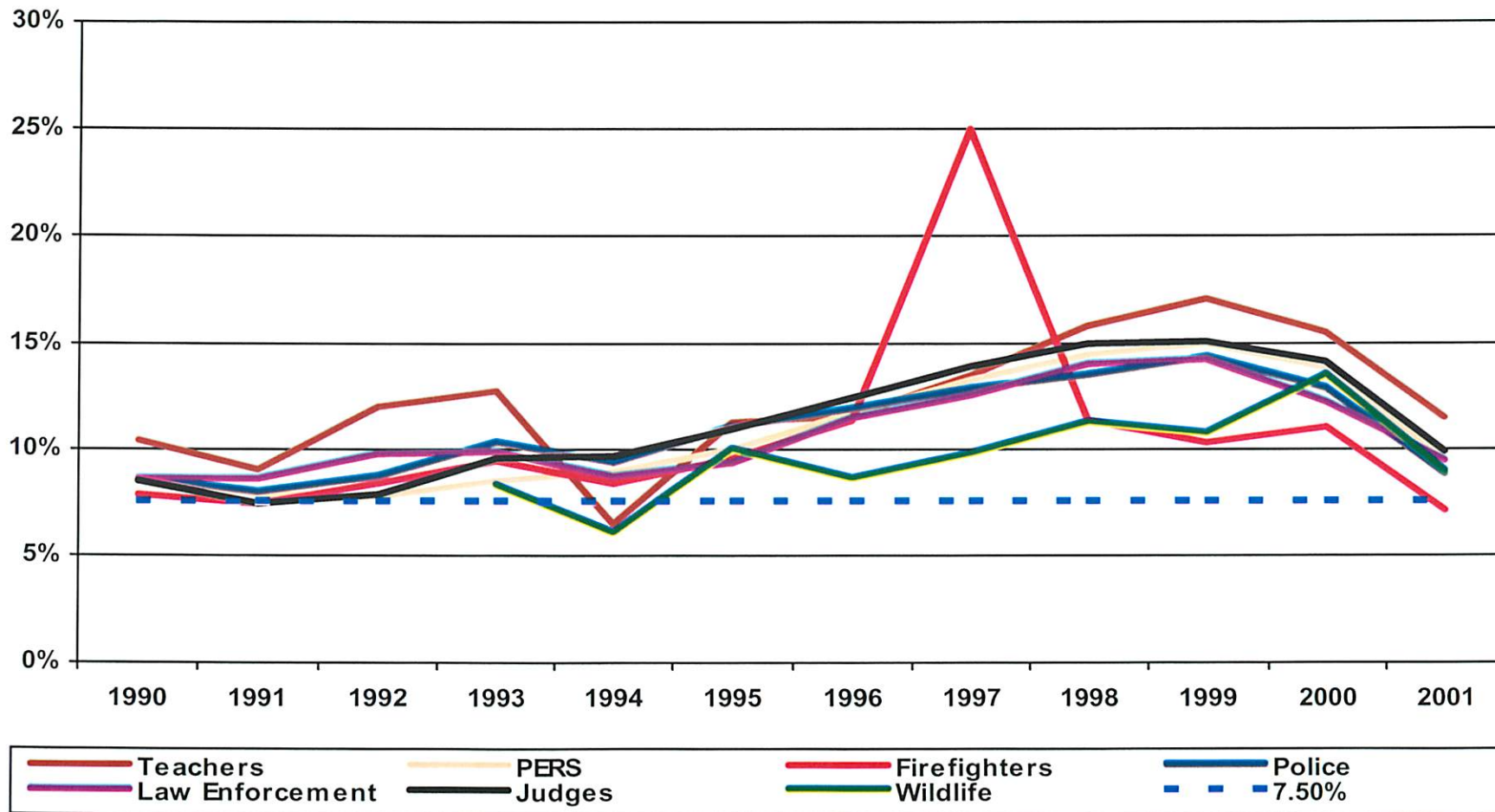
NA = Not Available

Source: R.V. Kuhns & Associates, Buck Consultants, William M. Mercer and Gabriel, Roeder, Smith & Company



Investment Return – Actuarial Value

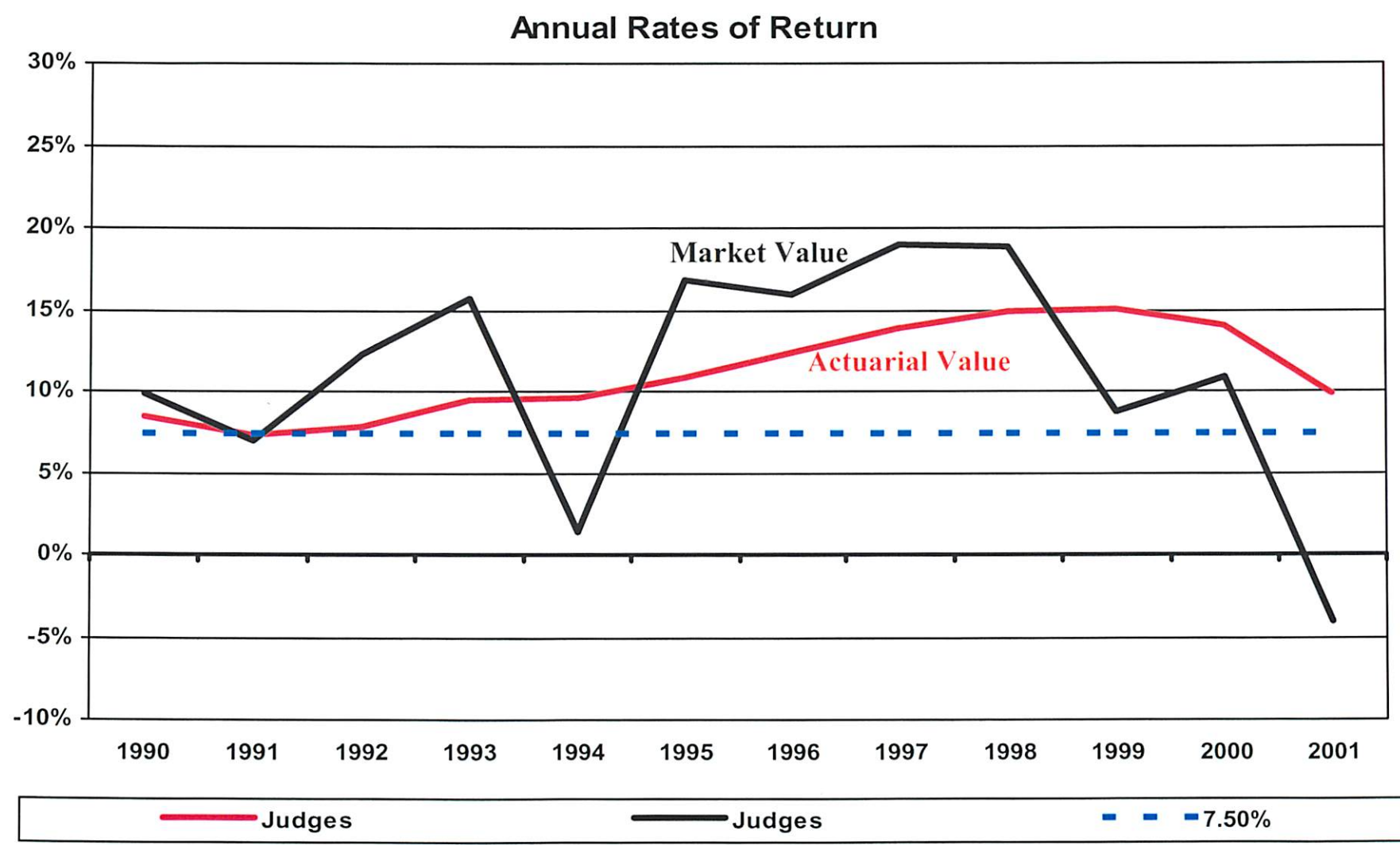
Annual Rates of Return



Source: R.V. Kuhns & Associates, Buck Consultants, William M. Mercer and Gabriel, Roeder, Smith & Company

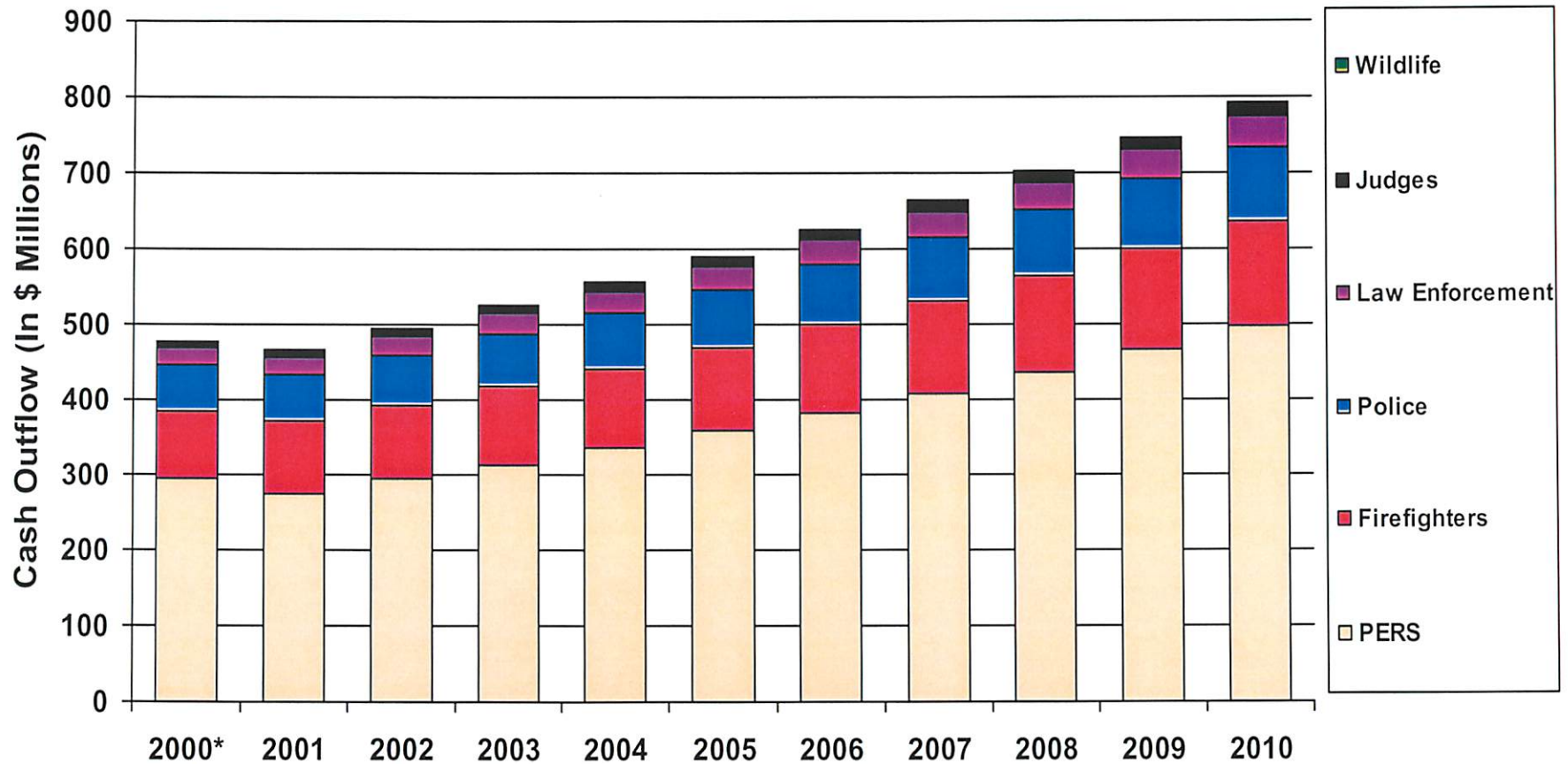


Investment Return – Market Value Volatility



Source: R.V. Kuhns & Associates, Buck Consultants, William M. Mercer and Gabriel, Roeder, Smith & Company

Combined Plans (ex-Teacher's)¹ - Projected Benefit Payments



1. For the Teacher's Plan, projection of benefit payments not provided in valuation report

* Actual benefits paid for 7/1/2000- 6/30/2001 plan year

Source: Buck Consultants, William M. Mercer and Gabriel, Roeder, Smith & Company



Retirement System Investment Return Assumptions

✓ Based on July 1, 2001 Actuarial Valuation Reports from Actuary¹

- The assumed investment return assumption ranges from 7.5% to 8.0%
- Public Fund assumed investment return median is 8.3%²
- Distribution of investment return assumptions for surveyed public funds below (September, 2001)²

	Mean	Under 7.0%	7.0- 7.4%	7.5- 7.9%	8.0- 8.5%	8.6- 9.1%	9.2- 9.7%	9.8- 10.5%	Over 10.5%	No Answer/ Uncertain
Public Funds	8.3%	1%	3%	10%	53%	7%	4%	2%	1%	18%
State	8.3%	2%	5%	8%	41%	8%	3%	3%	1%	30%
Municipal	8.3%	1%	3%	11%	61%	5%	5%	2%	1%	12%
Over \$5 billion	8.3%	0%	1%	8%	50%	8%	6%	0%	1%	25%
\$1,001-5,000 million	8.2%	1%	4%	10%	56%	7%	5%	0%	0%	17%
\$251-1,000 million	8.3%	1%	5%	10%	52%	6%	5%	4%	1%	17%
\$100-250 million	8.2%	4%	3%	11%	54%	7%	3%	4%	1%	14%

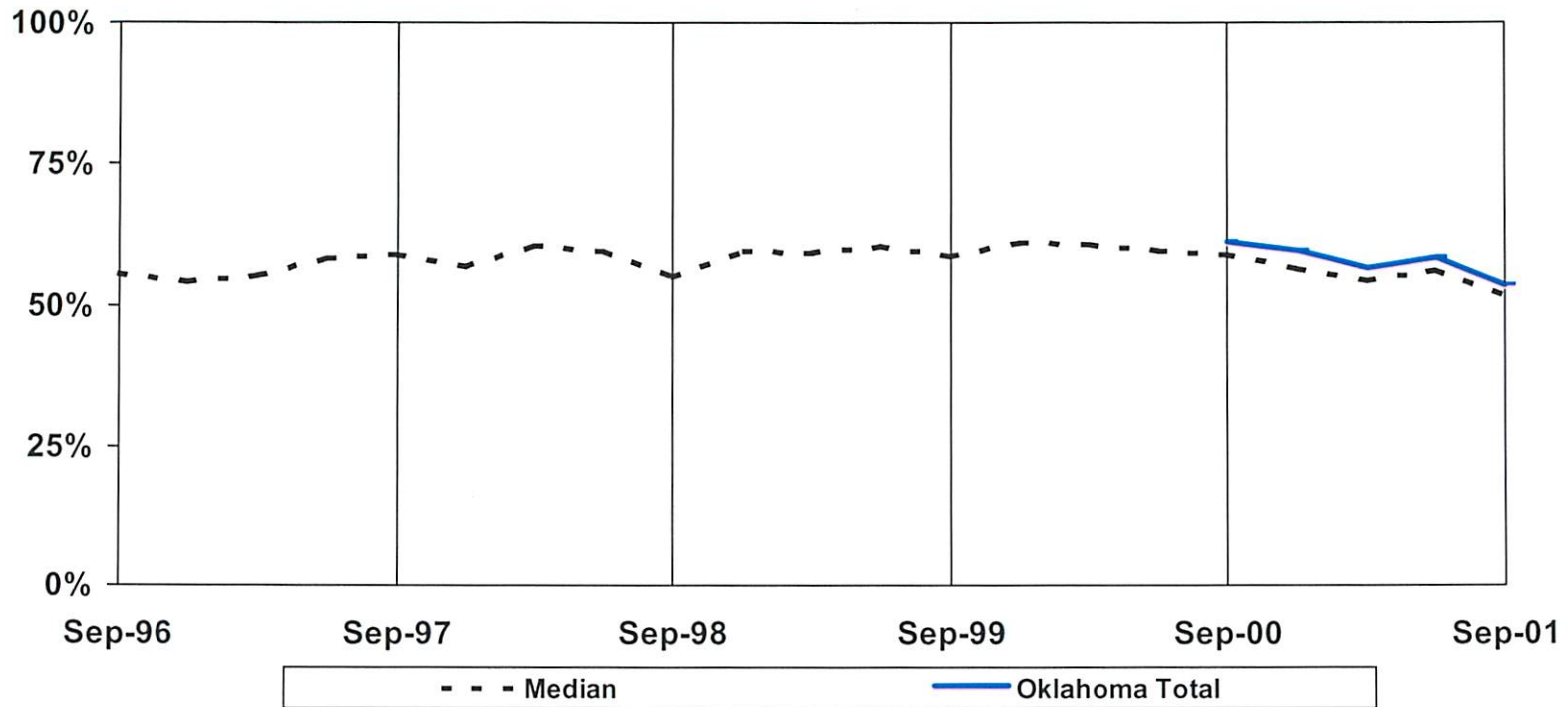
↓ ↓

7.5% 8.0%

1. Buck Consultants and William M. Mercer and Gabriel, Roeder, Smith & Company
 2. Greenwich Associates survey based on preliminary data collected in September 2001



Total Public Funds-Equity Commitment



	9/96	9/97	9/98	9/99	9/00	9/01
Top 5th percentile	68.8	70.4	68.6	70.4	73.9	68.1
25th percentile	62.1	64.6	60.1	62.8	64.0	55.9
Median	55.6	59.1	55.0	58.6	58.9	51.7
75th percentile	47.2	50.4	48.6	53.9	55.1	34.0
95th percentile	1.2	0.0	7.7	15.6	27.0	0.0

Oklahoma Total - - - - 60.7 53.3



Equity Return Outlook

- ✓ Lehman Bros. Aggregate Bond Index yield to maturity is 5.3% as of 9/30/2001
- ✓ Assuming the fixed income portion of the portfolio returns 5.3% annually,
- ✓ Table below summarizes the **required equity return** to achieve an assumed investment rate of return under various equity commitment scenarios

Required Equity Return

	Equity Commitment of		
Return Assumption	50%	60%	70%
7.50%	10%	9%	8%
8.00%	11%	10%	9%
8.50%	12%	11%	10%

FUNDED STATUS

Because the employer contribution rates are set by statute, this report determines the funding period required to amortize the Unfunded Actuarial Accrued Liability (UAAL).

Overall, the actuarial picture presented in this report is much gloomier than last year's. The UAAL increased by almost \$1 billion, from \$4.635 billion to \$5.632 billion. The funded ratio – the ratio of the actuarial accrued liability to the actuarial value of assets – decreased from 53.7% to 51.4%. The funding period – the number of years that would be required under the current contribution schedule to amortize the UAAL – has increased from 31.0 years to 62.2 years.

All of these effects, though, are due to the change in actuarial assumptions used in this report and principally to the adoption of an assumption that ad hoc cost-of-living increases will continue to be granted in the future, and these will average 1.0% per year. There is more information of the effect of this assumption in Section J.

Despite the strong investment results over the last four years, the System remains very poorly funded. It remains among the five or six most poorly funded of all statewide plans in the nation. As noted above, the funded ratio declined from 53.7% to 51.4%. The actuarial value of assets is large enough to cover all of the liabilities for currently retired members, however.

The current combined employer/state contribution rate of about 11.5% for FY 2002 is not large enough to pay the normal cost and pay the interest on the UAAL. Therefore, negative amortization results. I.e., for several years the UAAL will be expected to increase. See the schedule of projected UAAL's in Table 13. As may be seen, the UAAL is expected to continue increasing until around 2044, at which point positive amortization will begin to occur. It will take until about 2060 before the UAAL is again as low as it is now, in the absence of future gains or losses.

This report also determines the 40-year funding requirement under Section 17-106. This is the contribution required to fund the normal cost and to amortize the UAAL in level installments (not as a level percent of pay) over 40 years. This amount is reported as the Annual Required Contribution (ARC) under GASB 25, and is shown in Table 1.