



Oklahoma State Pension Commission Retirement System Summary of Actuarial Reports

February, 2004

Duane Hess, CFA, Partner
Joe Miletich, CFA, Partner
Allan Martin, CFA, Senior Consultant



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NEW ENGLAND PENSION CONSULTANTS

One Main Street, Cambridge, Massachusetts 02142
TEL: (617) 374-1300; FAX: (617) 374-1313
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System Characteristics and Assumptions

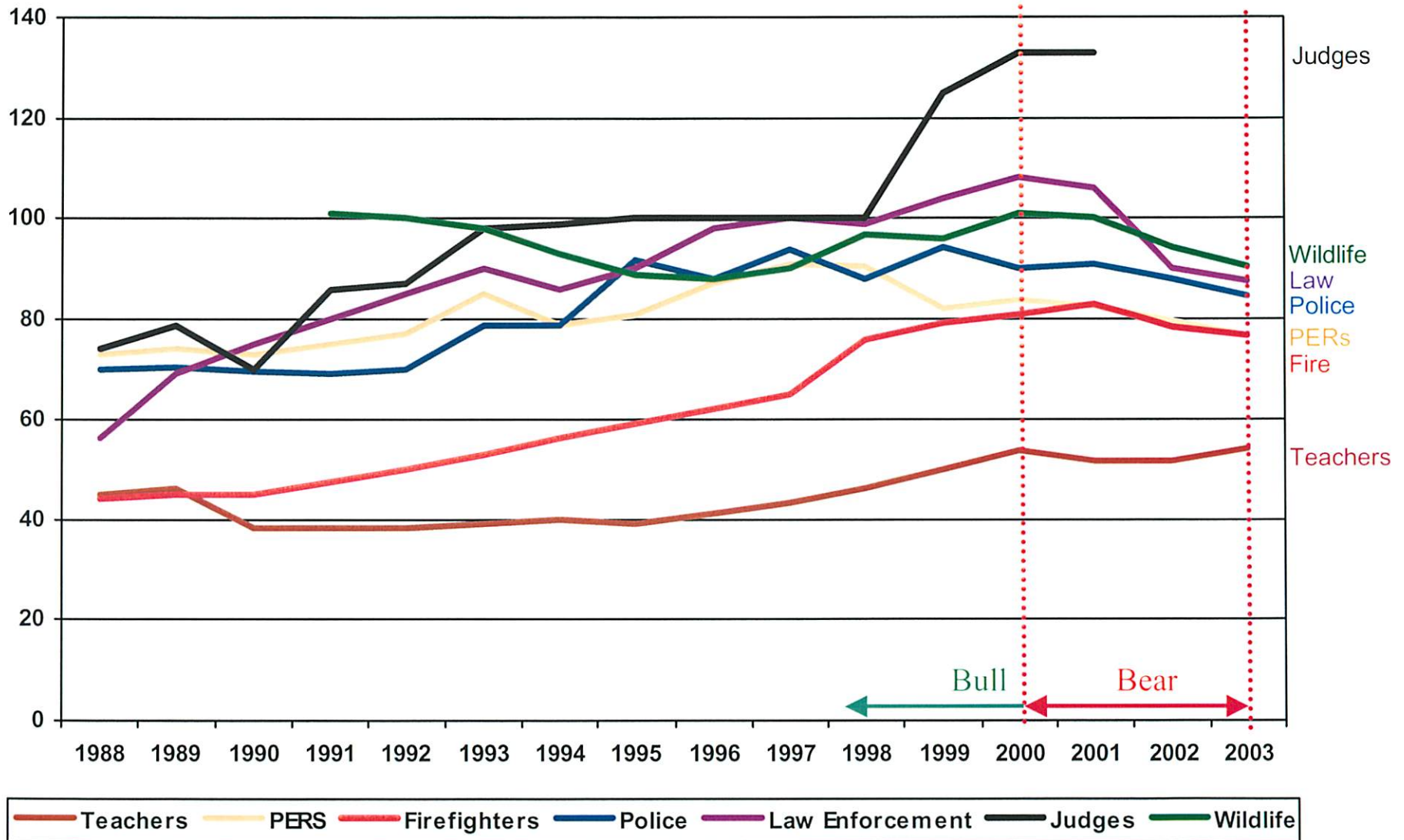
- Based on July 1, 2003 Actuarial Valuation Reports from Actuaries¹ and System Financial Statements
 - Retirement System comprised of the seven plans (Teachers, PERS, Police, Firefighters, Law Enforcement, Judges, Wildlife)
 - All plans employ similar funding method – Entry Age Normal
 - Entry age normal 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 8.0%²
 - Therefore, Oklahoma Systems are more conservative than average public fund
 - Major downward revisions with Corporate Plans, but not Public Funds
 - 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. Mellon Consultants, William M. Mercer and Gabriel, Roeder, Smith & Company. Note that information for Judges Retirement System not available as of February 2003

2. Greenwich Associates survey based on preliminary data collected in August 2002



Funded Status History – Actuarial Value of Assets



Source: 1999 and earlier: R.V. Kuhns & Associates,
 2000 and later: Mellon 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	7/01/2002	7/01/2003
Teachers	46%	50%	54%	51%	51%	54%
PERS	91%	82%	84%	83%	80%	77%
Firefighters	76%	79%	81%	83%	78%	77%
Police	89%	94%	90%	91%	88%	85%
Law Enforcement	99%	104%	108%	106%	90%	88%
Judges	100%	125%	133%	133%	NA	NA
Wildlife	97%	96%	101%	100%	94%	91%

Funded Status - Market Value of Assets

Valuation Date		7/01/1999	7/01/2000	7/01/2001	7/01/2002	7/01/2003
Teachers		57%	59%	49%	44%	47%
PERS		93%	85%	78%	68%	66%
Firefighters		84%	87%	76%	65%	64%
Police		106%	97%	86%	74%	72%
Law Enforcement		116%	114%	104%	81%	78%
Judges		142%	146%	128%	NA	NA
Wildlife		104%	113%	94%	79%	76%

Source: 1999 and earlier: R.V. Kuhns & Associates,
2000 and later: Mellon Consultants, William M. Mercer and Gabriel, Roeder, Smith & Company



Actuarial Accrued Liability and Assets(1999-2003)

2002 to 2003

* Dollars in Millions
As of Valuation Date ()

	Actuarial Accrued Liability (AAL)	Actuarial Value of Assets (AVA)	Funded Ratio	Market Value of Assets (MV)	Funded Ratio
2003 Total	\$23,222.6	\$15,322.0	66%	\$13,231.6	57%
Teachers	\$11,925.2	\$6,436.9	54%	\$5,614.1	47%
PERS	\$6,974.6	\$5,354.8	77%	\$4,619.1	66%
Firefighters	\$1,946.8	\$1,496.9	77%	\$1,247.4	64%
Police	\$1,647.0	\$1,392.0	85%	\$1,182.3	72%
Law Enforcement	\$667.7	\$585.8	88%	\$522.4	78%
Judges	NA	NA	NA	NA	NA
Wildlife	\$61.3	\$55.6	91%	\$46.3	76%
2002 Total	\$23,019.1	\$15,063.6	65%	\$12,835.2	56%
Teachers	12,275.9	6,311.0	51%	5,418.0	44%
PERS	6,639.7	5,299.7	80%	4,485.5	68%
Firefighters	1,858.1	1,457.2	78%	1,214.3	65%
Police	1,554.3	1,370.0	88%	1,156.6	74%
Law Enforcement	632.4	570.3	90%	514.7	81%
Judges	NA	NA	NA	NA	NA
Wildlife	58.7	55.4	94%	46.1	79%

1999 to 2001

* Dollars in Millions
As of Valuation Date (7/1)

	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: 1999 and earlier: R.V. Kuhns & Associates,
2000 and later: Mellon Consultants, William M. Mercer and Gabriel, Roeder, Smith & Company





Funded Status

Liability Situation - Public Funds

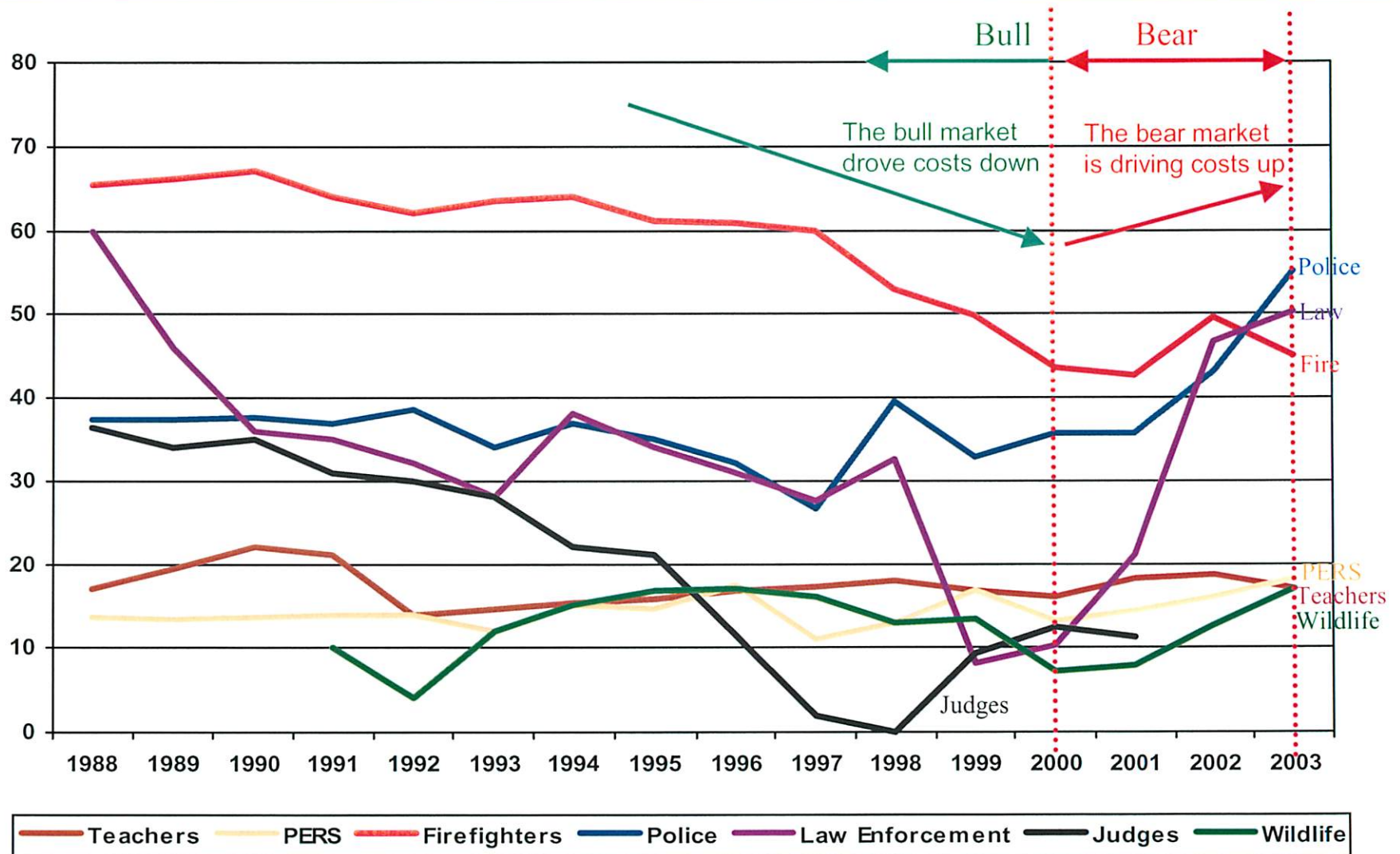
Public Funds (262) (246)

	Total Funds		Percent of Public Funds				No Answer/ Uncertain	
	2001	2002	Under Funded		Over Funded		2001	2002
			2001	2002	2001	2002		
Public Funds	(151)	(127)	46%	52%	54%	48%	(111)	(119)
State	(55)	(46)	53	54	47	46	(45)	(47)
Municipal	(92)	(79)	43	52	57	48	(62)	(65)
Over \$5 billion	(42)	(36)	48	58	52	42	(30)	(33)
\$1,001-5,000 million	(50)	(39)	42	49	58	51	(33)	(36)
\$501-1,000 million	(33)	(29)	61	52	39	48	(22)	(20)
\$500 million and under	(26)	(23)	31	48	69	52	(26)	(30)

Source: Greenwich Associates, Fall 2003



GASB 25 Annual Employer Cost as % of Payroll – All Sources (Local, State & Federal)



Source: 1999 and earlier: R.V. Kuhns & Associates,
 2000 and later: Mellon Consultants, William M. Mercer and Gabriel, Roeder, Smith & Company





Contributions – Employer (Local, State & Federal)

Plan Year Beginning	<i>Required Employer Contribution (assuming GASB 25 funding requirements)</i>								
	7/1/1995	7/1/1996	7/1/1997	7/1/1998	7/1/1999	7/1/2000	7/1/2001	7/1/2002	7/1/2003
Teachers	\$434.7	\$446.5	\$446.2	\$456.9	\$455.3	\$451.5	\$556.2	\$585.1	\$534.8
PERS	131.3	110.9	96	107.2	161.8	169.6	188	232.8	257.0
Firefighters	58.3	59.7	56.1	57	57	62	63.1	76.5	73.7
Police	30.9	26.5	22.4	39.8	34.7	53	54.9	71.7	96.5
Law Enforcement	7.8	6.6	6.1	8.7	6.3	4.1	10.7	23	25.4
Judges	2.5	1.2	0	0	0.4	1.1	1	NA	NA
Wildlife	1.4	1.5	1.5	1.1	1.2	0.8	0.9	1.5	2.0
Total	\$666.9	\$652.9	\$628.3	\$670.7	\$716.7	\$742.1	\$873.9	\$990.6	\$989.4
Exp. EE Contrib	NA	NA	NA	NA	\$259.6	\$270.8	\$291.2	\$307.8	\$302.1

Plan Year Beginning	<i>Actual Employer Contribution</i>								
	7/1/1995	7/1/1996	7/1/1997	7/1/1998	7/1/1999	7/1/2000	7/1/2001	7/1/2002	7/1/2003
Teachers	\$177.4	\$276.8	\$263.7	\$244.4	\$275.9	\$328.2	\$364.9	\$362.0	TBD
PERS	135.4	135.4	143.7	149.2	125.9	131.1	139.6	137.5	TBD
Firefighters	52.0	55.9	58.3	59.0	61.6	65.7	68.8	72.6	TBD
Police	31.2	33.0	35.4	36.2	37.7	40.0	42.2	44.2	TBD
Law Enforcement	16.0	17.0	18.0	18.0	19.6	19.4	20.4	21.1	TBD
Judges	4.5	4.9	0.0	0.0	2.9	1.9	--	--	TBD
Wildlife	1.4	1.4	1.5	1.2	1.2	0.8	0.9	1.2	TBD
Total	\$417.8	\$524.5	\$520.7	\$508.0	\$524.8	\$587.1	\$636.8	\$638.6	TBD
EE Contrib	NA	NA	NA	NA	\$268.6	\$293.1	\$305.5	\$300.1	TBD

NA = Not Available

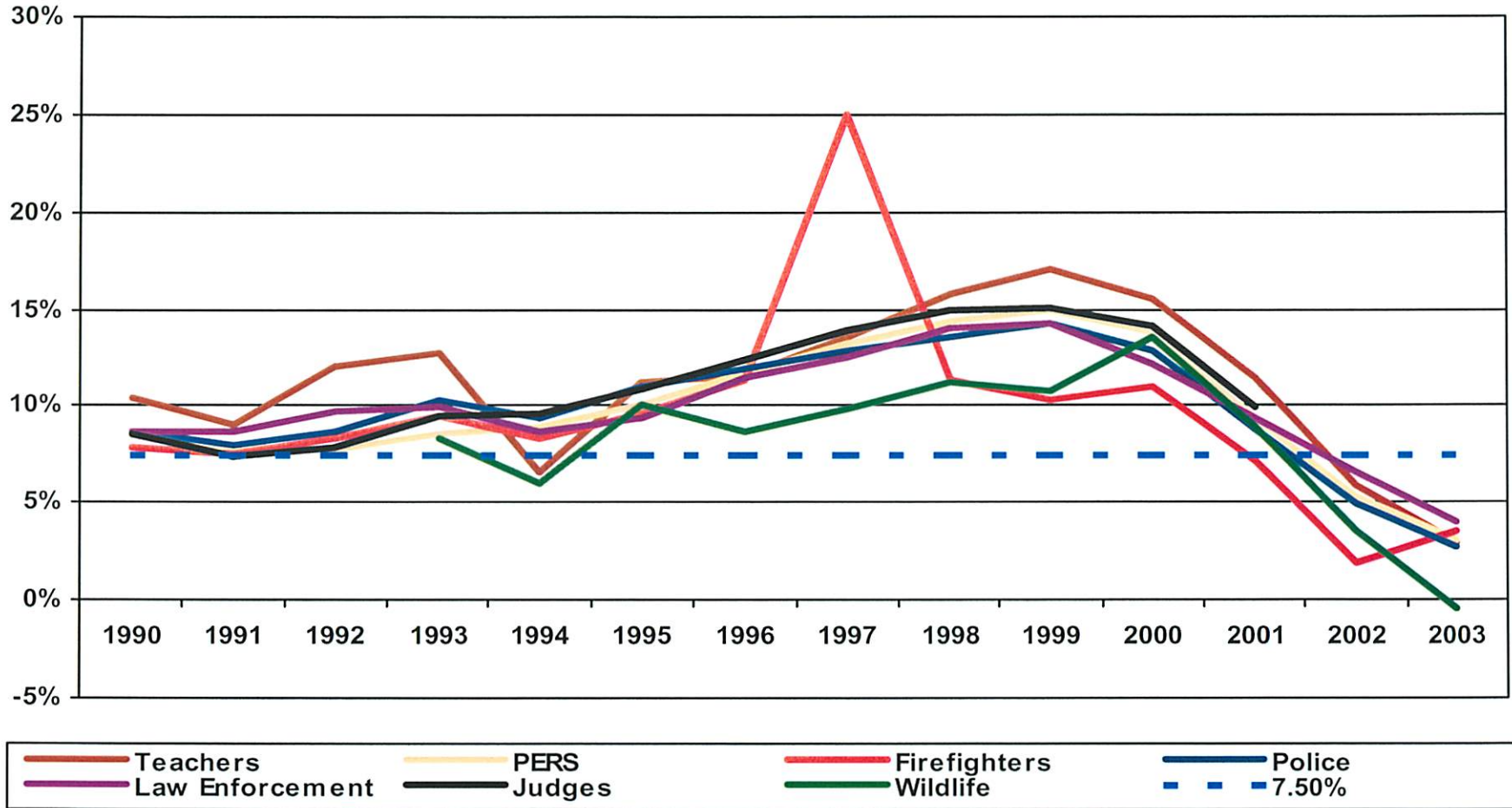
Source: 1999 and earlier: R.V. Kuhns & Associates,
2000 and later: Mellon Consultants, William M. Mercer and Gabriel, Roeder, Smith & Company





Investment Return – Actuarial Value

Annual Rates of Return

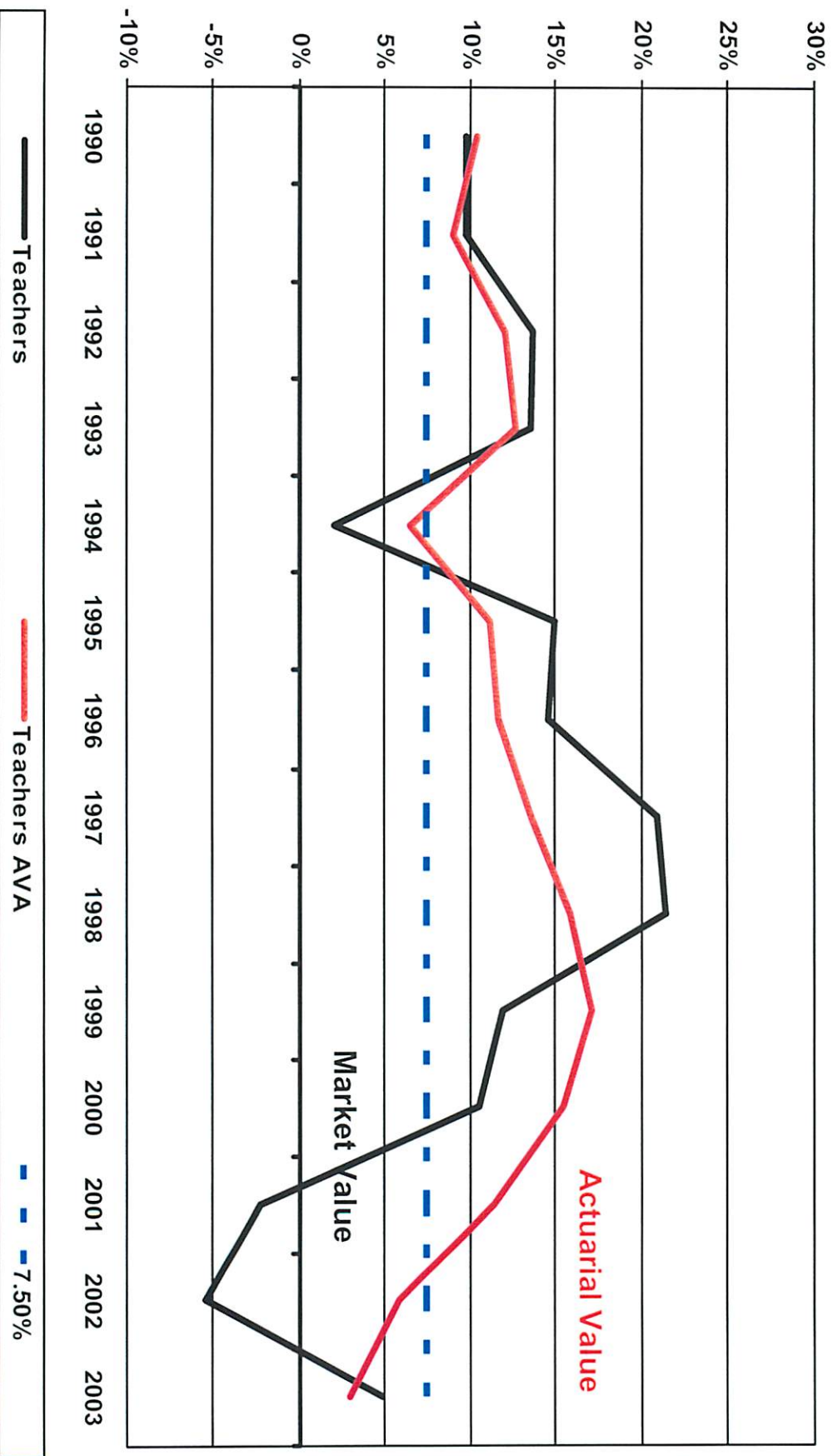


Source: 1999 and earlier: R.V. Kuhns & Associates,
2000 and later: Mellon Consultants, William M. Mercer and Gabriel, Roeder, Smith & Company



Investment Return – Market Value Volatility

Annual Rates of Return



Source: 1999 and earlier: R. V. Kuhns & Associates,
2000 and later: Mellon Consultants, William M. Mercer and Gabriel, Roeder, Smith & Company





Retirement System Investment Return Assumptions

- Based on July 1, 2003 Actuarial Valuation Reports from Actuaries¹
- The assumed investment return assumption ranges from 7.5% to 8.0%
- Public Fund assumed investment return median is 8.0%²
- Distribution of investment return assumptions for surveyed public funds below (August, 2003)²

	Mean		Under	7.0-	7.5-	8.0-	8.6-	9.2-	9.8-	Over	No
	2001	2002	7.0%	7.4%	7.9%	8.5%	9.1%	9.7%	10.5%	10.5%	Answer/ Uncertain
Public Funds	8.3%	8.0%	2%	4%	13%	55%	6%	1%	*%	0%	18%
State	8.3	8.0	2	6	14	47	6	1	0	0	23
Municipal	8.2	8.1	1	3	14	62	5	1	1	0	14
Over \$5 billion	8.3	8.0	3	3	12	57	6	1	0	0	19
\$1,001-5,000 million	8.2	8.1	0	3	16	52	9	0	0	0	20
\$501-1,000 million	8.4	8.0	2	4	14	59	4	0	2	0	14
\$500 million and under	8.2	7.9	2	9	11	55	2	2	0	0	19

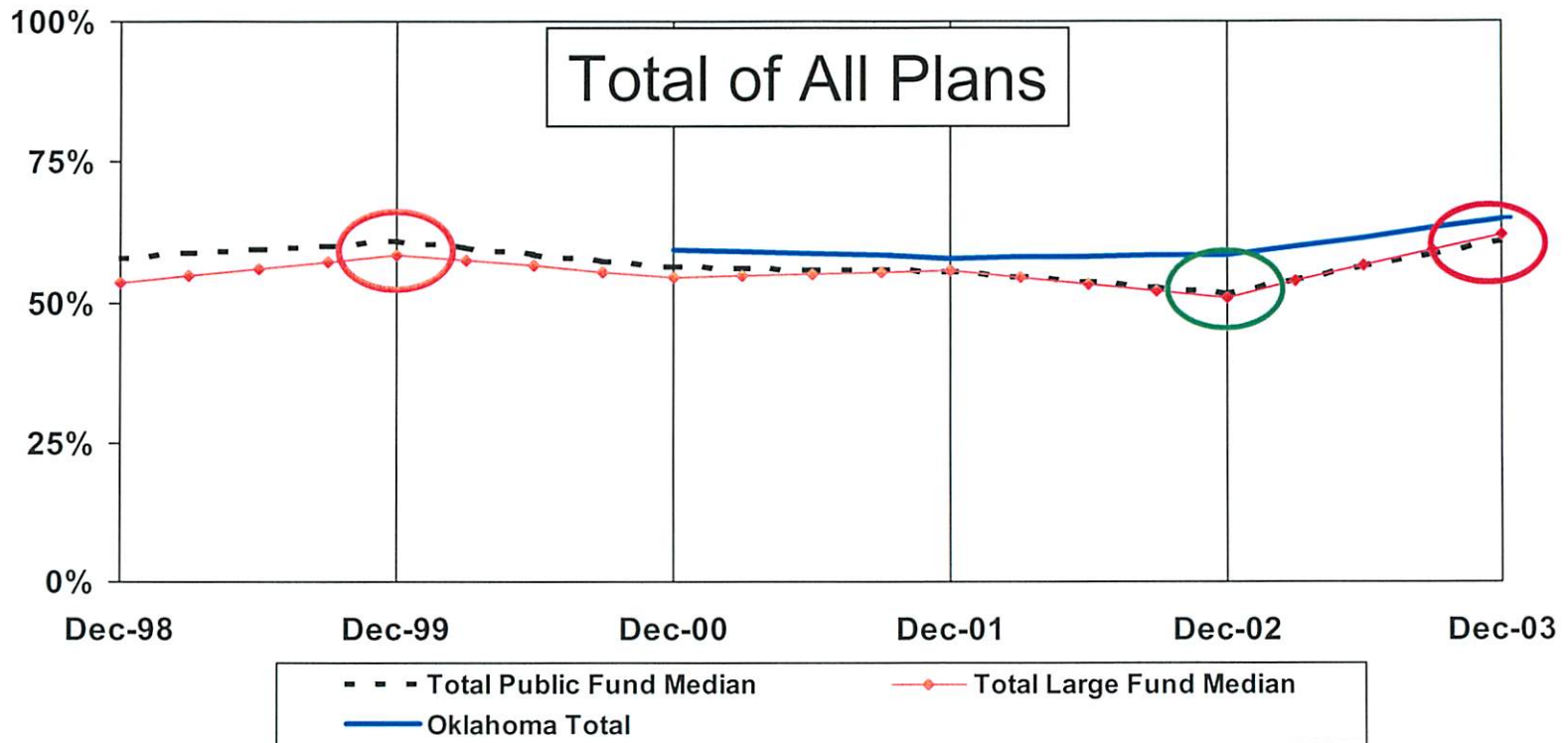
Note: Means exclude "None."

Majority of observations is between 7.5%-8.5%

1. Mellon Consultants and William M. Mercer and Gabriel, Roeder, Smith & Company
 2. Greenwich Associates survey based on preliminary data collected in August 2003



Total Public Funds – Equity Commitment



	12/98	12/99	12/00	12/01	12/02	12/03
Top 5th percentile	70.0	72.8	71.0	69.1	67.1	72.5
25th percentile	63.0	64.9	60.5	59.4	57.9	65.5
Total Public Median	58.2	61.0	56.4	55.6	51.8	61.0
75th percentile	48.2	54.4	48.8	44.3	42.3	54.6
95th percentile	0.0	0.0	0.0	0.0	0.0	33.0

Oklahoma Total - - 59.3 57.9 58.5 64.6



Number of Managers Used

Mean Number of Investment Managers Used by Funds

Total Funds (1,138) (1,069) (1,064) (1,032)

									Present Distribution of Managers					No Ans./ Unc.
	Presently Manage				Expect to Manage				1-5	6-10	11-15	16-30	Over 30	
	1999	2000	2001	2002	1999	2000	2001	2002						
Corporate Funds	14.0	13.7	14.6	13.1	13.9	14.6	14.3	13.0	20%	27%	23%	19%	6%	2%
Over \$5 billion	36.9	32.5	27.3	26.0	35.2	34.8	26.4	24.0	4	10	19	31	29	6
\$1,001-5,000 million	15.5	14.2	17.5	15.4	15.3	14.7	16.7	15.2	8	20	30	29	6	3
\$501-1,000 million	9.8	9.0	11.6	9.4	10.1	9.5	12.0	9.8	27	30	28	10	1	2
\$500 million and under	6.3	6.6	7.4	8.0	6.8	7.3	7.6	8.5	34	39	12	10	0	1
Public Funds	17.4	16.8	20.2	17.9	17.8	17.9	20.6	17.5	12%	26%	20%	26%	11%	2%
State	22.8	22.1	26.8	22.0	22.9	23.3	26.5	21.6	10	17	18	28	19	3
Municipal	14.8	14.2	16.6	15.1	15.4	15.4	17.5	15.4	13	31	22	25	6	1
Over \$5 billion	35.7	30.2	34.6	30.3	36.0	33.2	34.9	28.8	6	14	9	28	33	4
\$1,001-5,000 million	18.0	17.9	20.6	18.5	18.3	18.9	21.7	18.9	5	16	23	47	5	1
\$501-1,000 million	10.8	12.5	12.3	11.5	11.0	13.5	13.0	12.1	12	37	31	16	2	0
\$500 million and under	6.7	7.2	9.6	7.9	7.4	8.0	10.5	8.5	28	43	21	4	0	2
Endowments	18.3	18.7	17.7	17.4	20.4	21.5	18.2	19.1	13%	21%	25%	25%	10%	3%
Over \$1 billion	32.9	33.7	24.4	24.8	38.7	37.4	22.3	26.0	12	16	25	14	21	2
\$500-1,000 million	16.3	16.8	17.8	17.0	17.5	20.0	19.5	19.4	11	18	21	35	9	3
\$500 million and under	11.0	10.9	13.6	13.3	11.8	12.6	14.8	14.9	15	26	27	25	3	4
Total Funds	15.6	15.4	16.6	15.1	16.0	16.7	16.6	15.3	16%	25%	22%	22%	8%	3%

Note: Means exclude "None."

- Greenwich Associates survey based on preliminary data collected in August 2003



Strategies Used

Demand for Different Types of Investments

Public Funds (261) (277) (260) (262) (246)

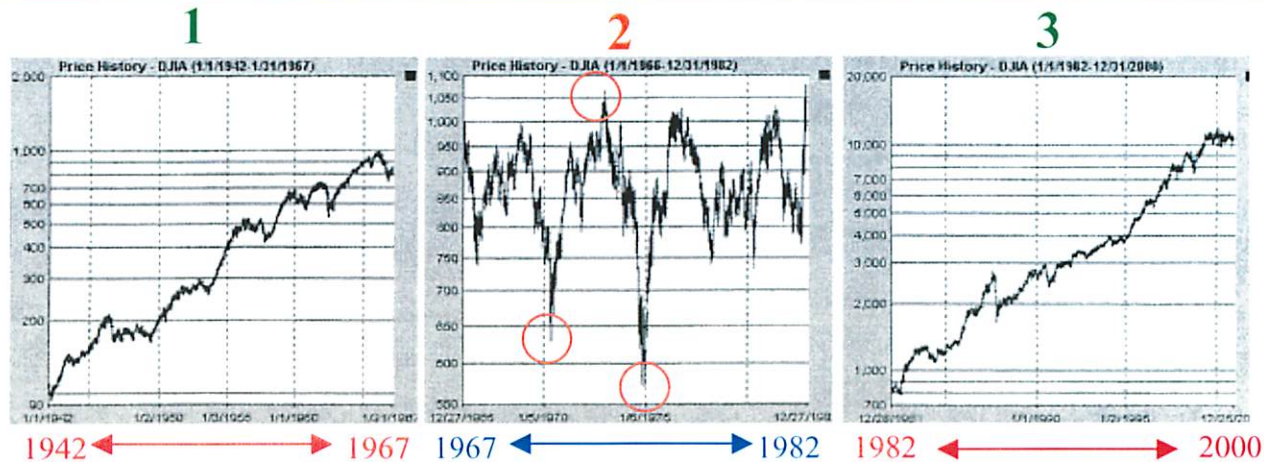
Type of Investment	Now Use					Will Start Using				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Domestic equities - total	93%	92%	92%	94%	93%	13%	15%	12%	11%	16%
Active core equity	52%	51%	46%	44%	41%	3%	*%	2%	0%	1%
All cap equities	--	--	--	--	13%	--	--	--	--	*%
Value stocks - total	87%	86%	85%	87%	85%	7%	5%	3%	6%	8%
- Large cap	84	81	81	80	75	1	1	1	1	2
- Mid cap	--	--	--	40	39	--	--	--	4	3
- Small cap	59	62	64	64	68	7	4	3	3	4
Growth stocks - total	83%	86%	84%	86%	84%	5%	5%	4%	5%	8%
- Large cap	77	79	80	78	76	2	1	1	1	2
- Mid cap	--	--	--	44	37	--	--	--	2	4
- Small cap	60	61	63	61	65	4	4	3	2	3
Small cap stocks - total	74%	74%	73%	76%	76%	8%	7%	5%	4%	6%
Passive/index domestic equities	53%	57%	63%	64%	67%	4%	3%	2%	*%	1%
Enhanced index	--	21%	27%	27%	25%	--	5%	3%	3%	4%
International equities - total	71%	78%	79%	82%	85%	10%	8%	7%	4%	9%
Active or passive bonds - total	92%	90%	89%	89%	91%	6%	4%	5%	4%	5%
- Global	18	18	21	21	17	1	3	1	0	*
- Domestic	94	89	84	86	88	0	0	*	0	*
- International	41	35	32	18	17	6	1	2	1	2
- High yield	--	--	28	32	35	--	--	3	3	4
- CMBS	--	--	--	--	13	--	--	--	--	*
Balanced funds	13%	10%	11%	13%	10%	1%	*%	0%	0%	0%
Equity real estate	53%	49%	49%	47%	49%	11%	2%	1%	2%	9%
Private equity	21%	29%	29%	35%	35%	5%	2%	5%	5%	5%
Hedge funds	3%	--	3%	6%	8%	--	--	2%	3%	9%
Fund-of-fund managers	--	--	--	--	5%	--	--	--	--	1%

1. Greenwich Associates survey based on preliminary data collected in August 2003



The Need for Sound Management Over Generations

Dow Jones
Index



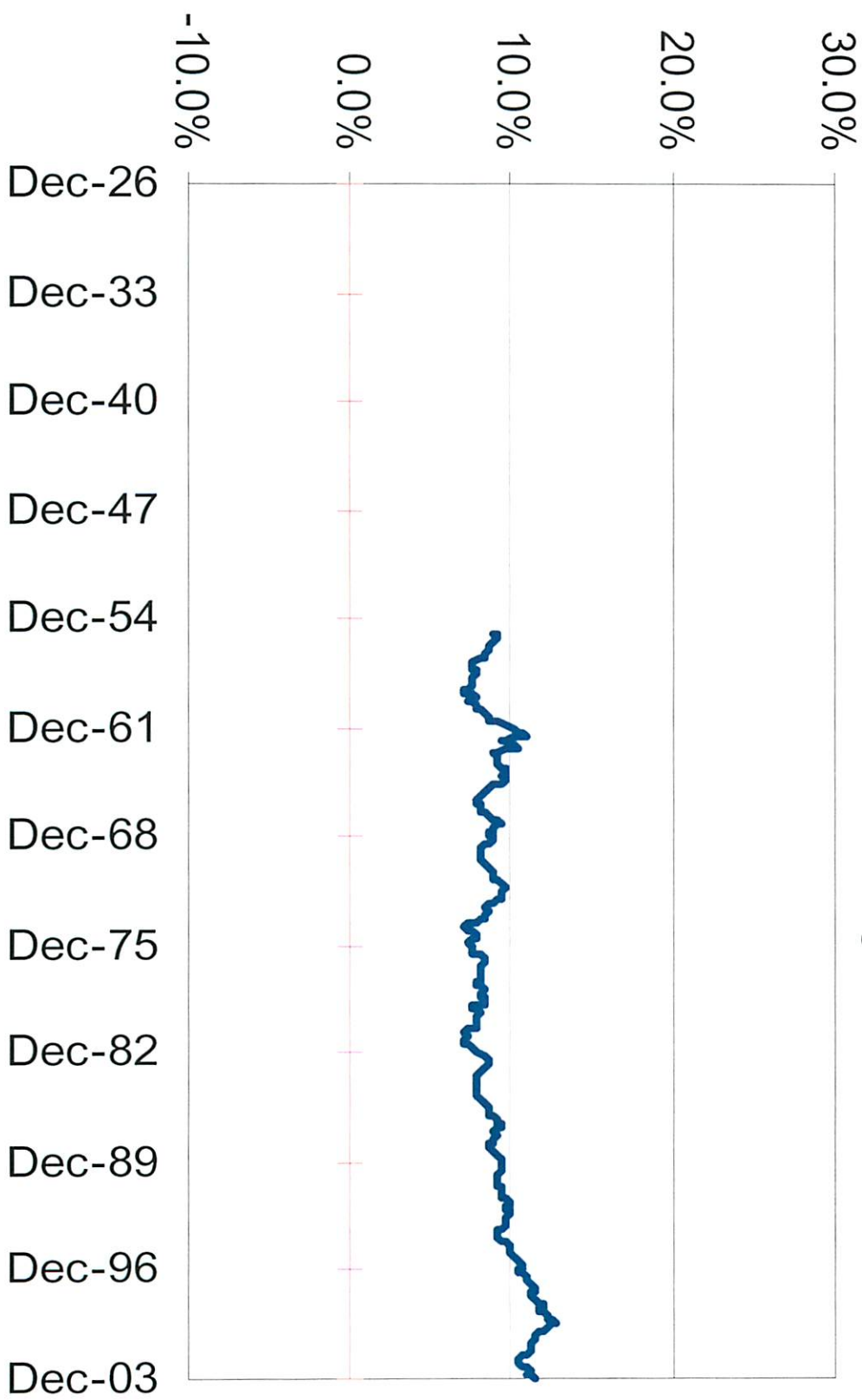
- Both bond and stock markets have long spells of going nowhere, with fierce rallies and declines throughout the dry spell (180 degree reversals)
- Volatility hurts buy-and-hold strategies: over-weight equities at market tops and under-weight equities at market bottoms
- Sometimes discipline is not essential (Charts #1 and #3), sometimes it's the key ingredient to long-term success (Chart #2)
- Discipline now more than ever
- Sharpen your rebalancing plans and execute
- Think outside the box

Total Returns – 60% Stocks and 40% Long Term Corporate Bonds



Source: Ibbotson Associates

30 Year Average

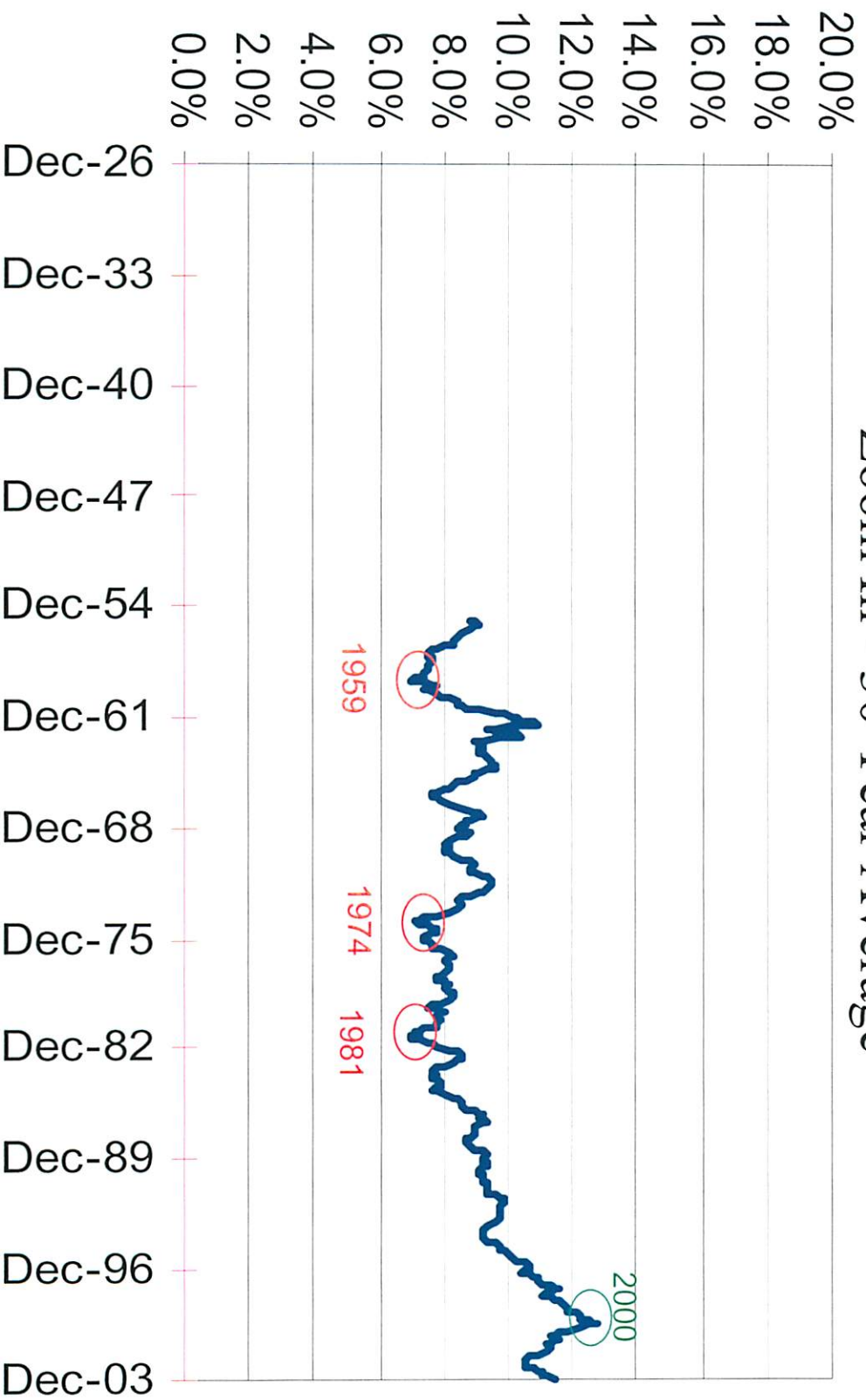


Total Returns – 60% Stocks and 40% Long Term Corporate Bonds



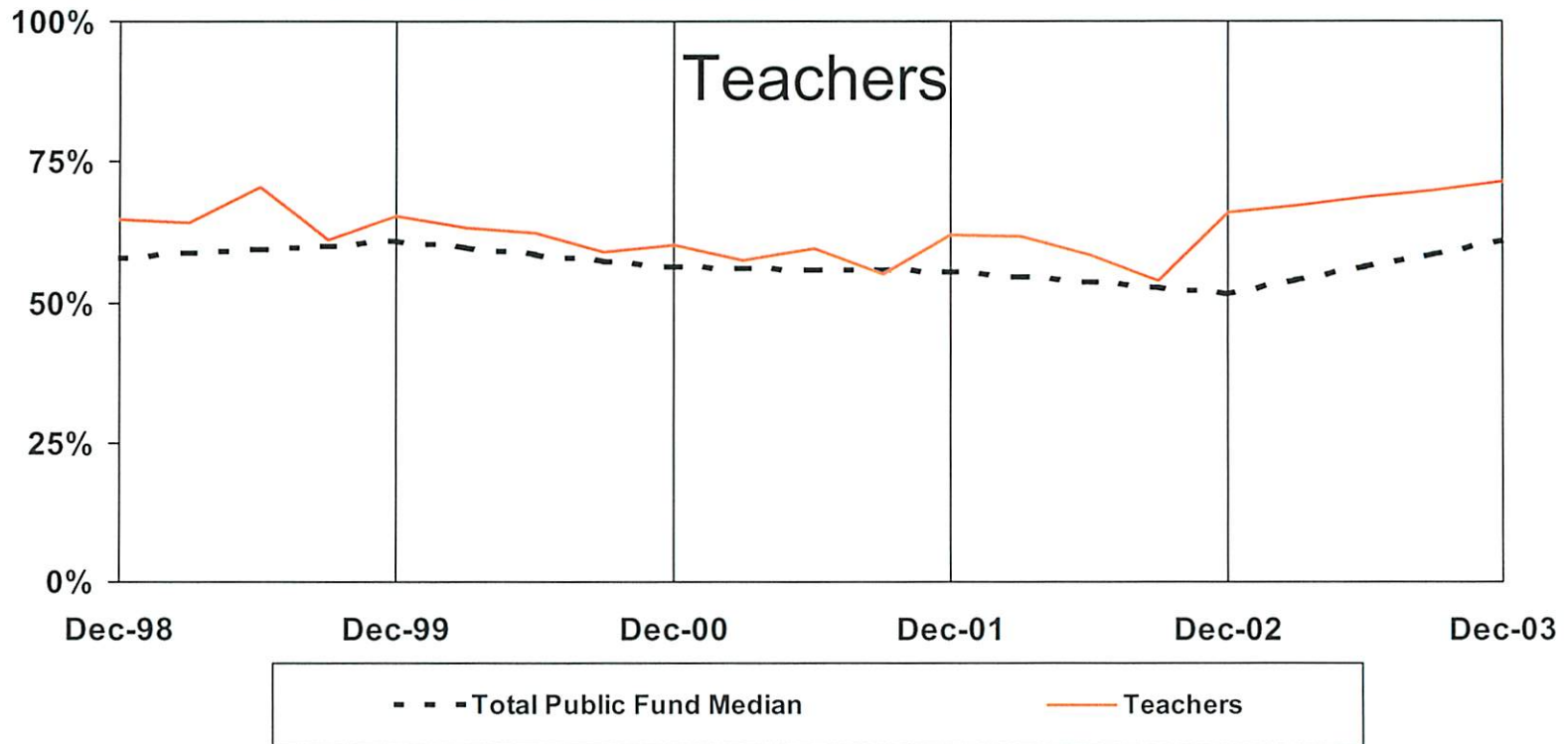
Source: Ibbotson Associates

Zoom In - 30 Year Average





Total Public Funds – Equity Commitment



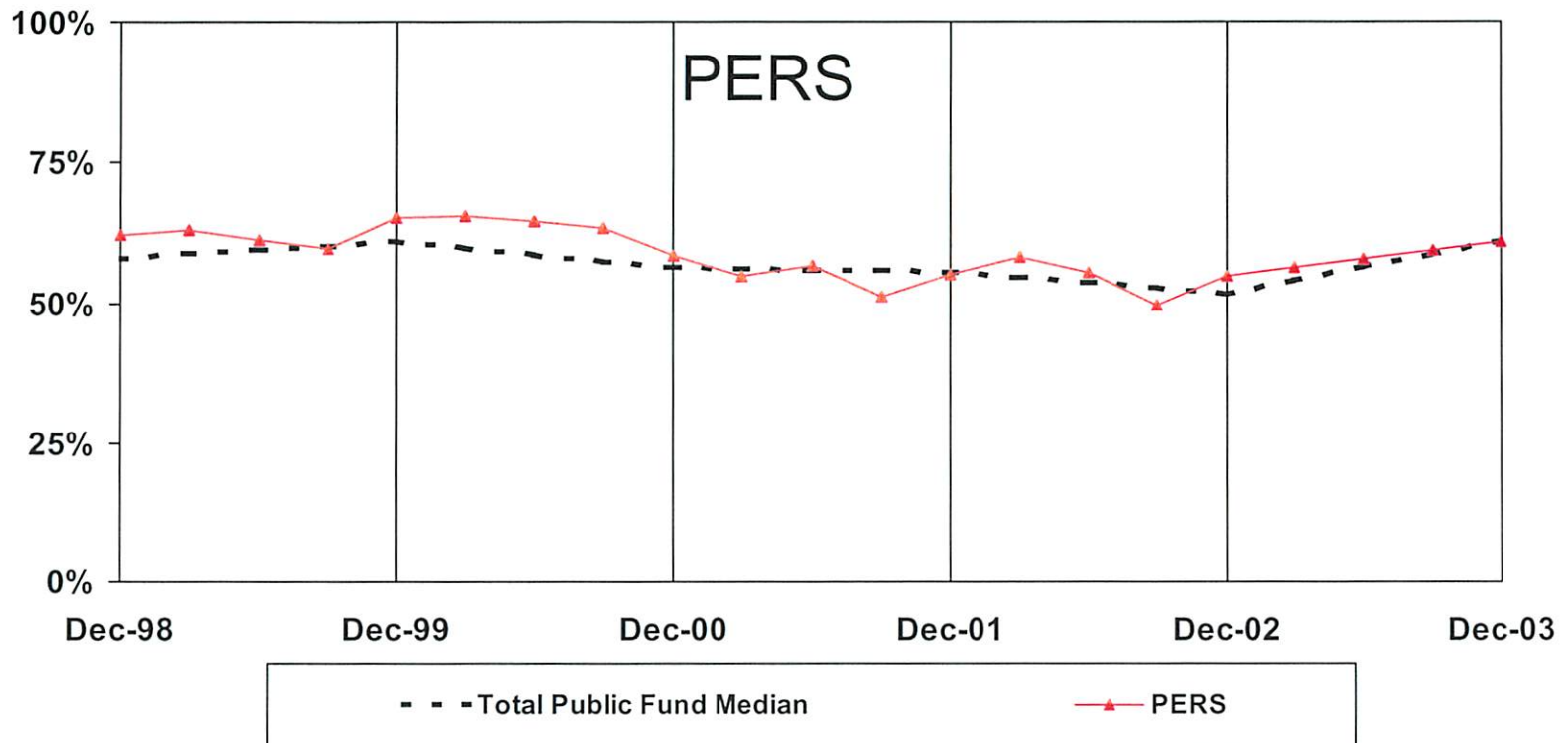
	12/98	12/99	12/00	12/01	12/02	12/03
Top 5th percentile	70.0	72.8	71.0	69.1	67.1	72.5
25th percentile	63.0	64.9	60.5	59.4	57.9	65.5
Total Public Median	58.2	61.0	56.4	55.6	51.8	61.0
75th percentile	48.2	54.4	48.8	44.3	42.3	54.6
95th percentile	0.0	0.0	0.0	0.0	0.0	33.0

Teachers 64.6 65.3 60.2 62.0 66.0 71.3





Total Public Funds – Equity Commitment

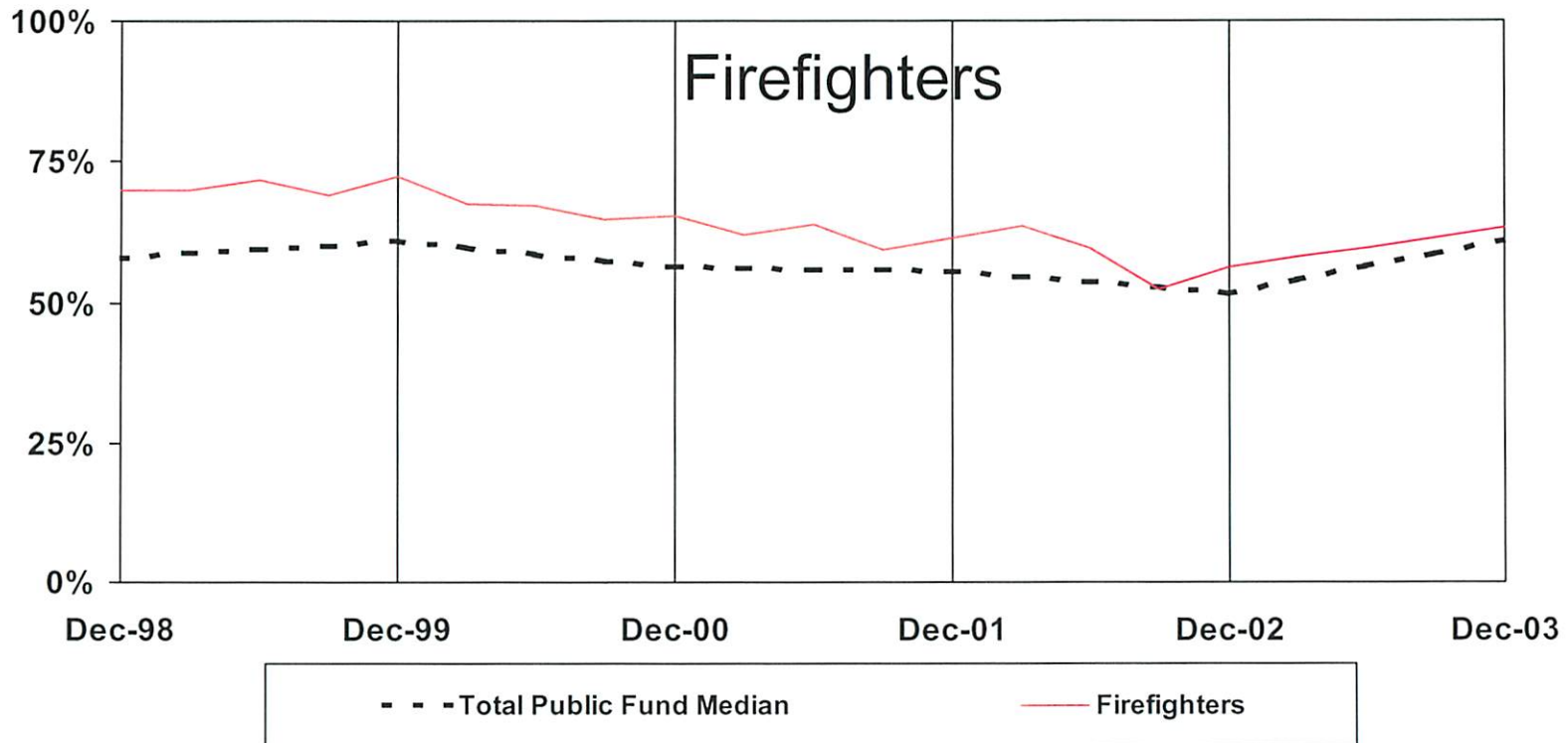


	12/98	12/99	12/00	12/01	12/02	12/03
Top 5th percentile	70.0	72.8	71.0	69.1	67.1	72.5
25th percentile	63.0	64.9	60.5	59.4	57.9	65.5
Total Public Median	58.2	61.0	56.4	55.6	51.8	61.0
75th percentile	48.2	54.4	48.8	44.3	42.3	54.6
95th percentile	0.0	0.0	0.0	0.0	0.0	33.0

PERS
62.0
64.9
58.3
54.9
54.8
60.7



Total Public Funds – Equity Commitment

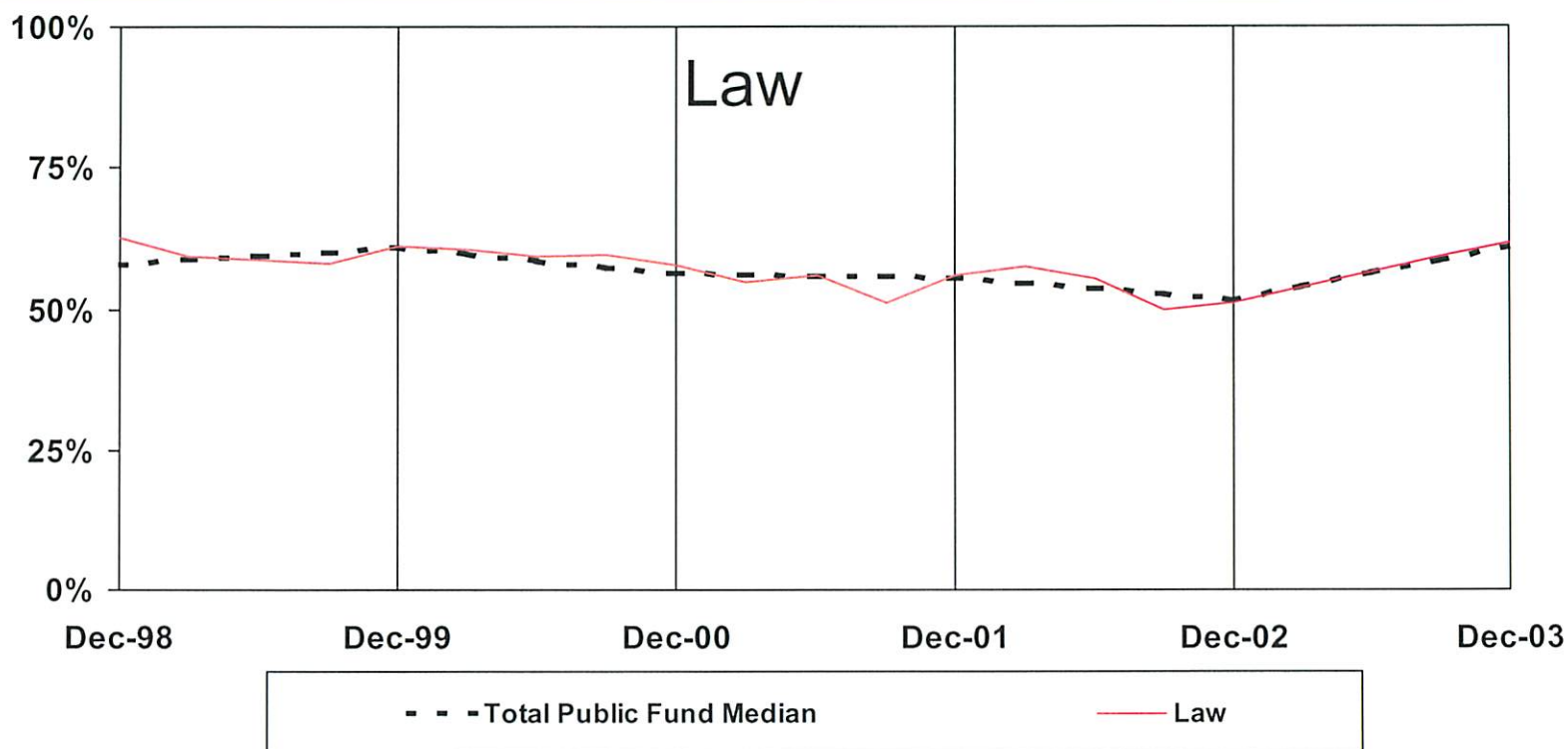


	12/98	12/99	12/00	12/01	12/02	12/03
Top 5th percentile	70.0	72.8	71.0	69.1	67.1	72.5
25th percentile	63.0	64.9	60.5	59.4	57.9	65.5
Total Public Median	58.2	61.0	56.4	55.6	51.8	61.0
75th percentile	48.2	54.4	48.8	44.3	42.3	54.6
95th percentile	0.0	0.0	0.0	0.0	0.0	33.0

Firefighters
69.8
72.4
65.2
61.4
57.6
63.1



Total Public Funds – Equity Commitment

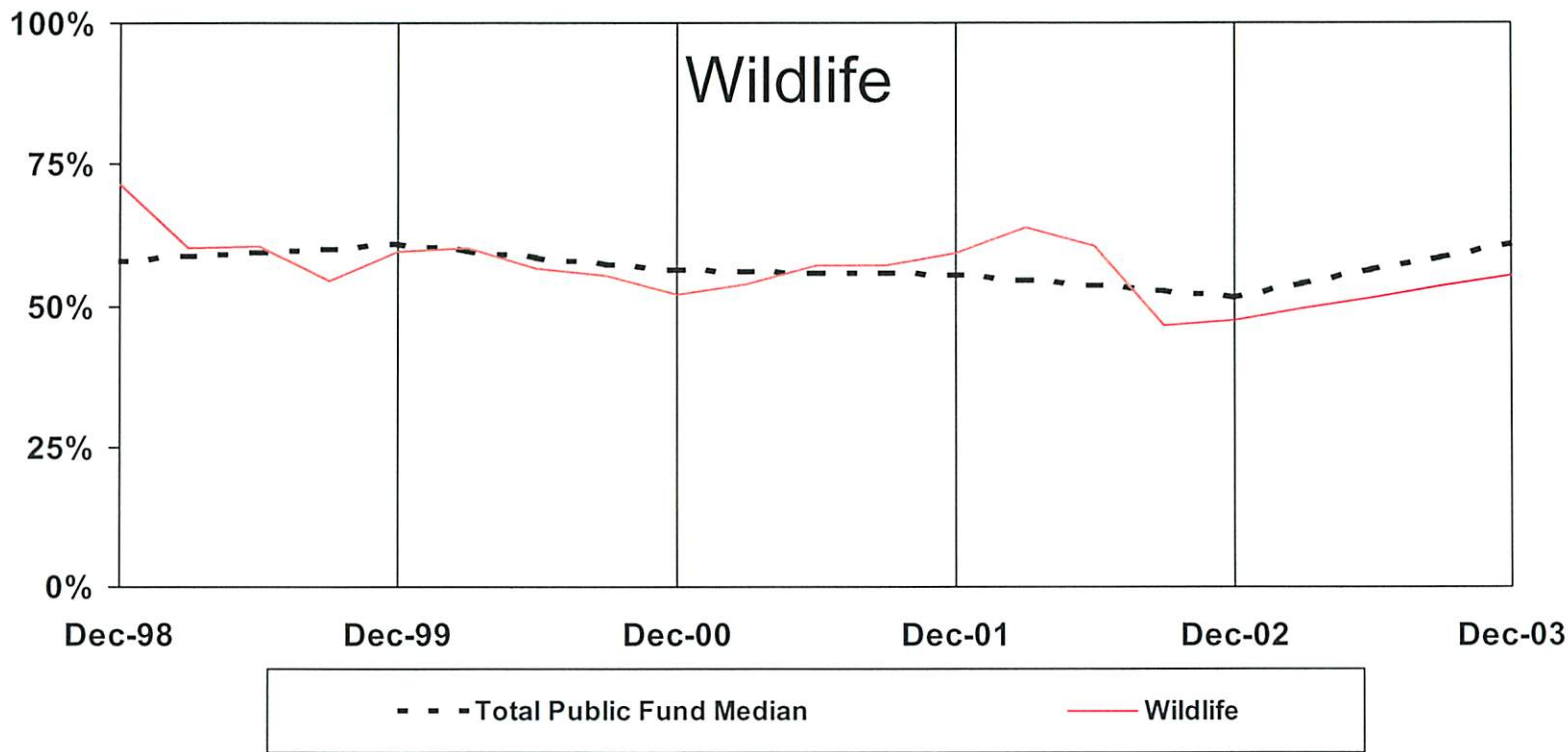


	12/98	12/99	12/00	12/01	12/02	12/03
Top 5th percentile	70.0	72.8	71.0	69.1	67.1	72.5
25th percentile	63.0	64.9	60.5	59.4	57.9	65.5
Total Public Median	58.2	61.0	56.4	55.6	51.8	61.0
75th percentile	48.2	54.4	48.8	44.3	42.3	54.6
95th percentile	0.0	0.0	0.0	0.0	0.0	33.0

Law 62.6 61.1 57.7 55.9 51.1 61.8



Total Public Funds – Equity Commitment



	12/98	12/99	12/00	12/01	12/02	12/03
Top 5th percentile	70.0	72.8	71.0	69.1	67.1	72.5
25th percentile	63.0	64.9	60.5	59.4	57.9	65.5
Total Public Median	58.2	61.0	56.4	55.6	51.8	61.0
75th percentile	48.2	54.4	48.8	44.3	42.3	54.6
95th percentile	0.0	0.0	0.0	0.0	0.0	33.0

Wildlife
71.5
59.5
52.0
59.2
47.4
55.4



Summary of Major Plan Changes

Changes System	Benefit Provisions	Assumption & Methods	Funding	Legislative
Teachers'	Yes Vesting svc req reduced Interest included on refunds for member < 7rs svc Partial lump sum option available Disabled members may select 100%JS	Yes Removed Adhoc COLA	None	None
OPERS	None	None	None	None
Firefighters	HB 1464: Retroactive election of DROP permitted	None	None	Yes SB 286: Amortization of UAAL restarted as of July 1, 2003 (not more than 30 years) SB 206: Reapportion of state insurance premium taxes
Police	HB 1464: Retroactive election of DROP permitted	None	None	Yes SB 206: Reapportion of state insurance premium taxes
Law Enforcement	SB 668 Retroactive election of DROP permitted	None	None	Yes SB 206: Reapportion of state insurance premium taxes SB 408: Lake Patrolmen, Dispatchers, may transfer into Plan SB 426: Reduction of funds transferred from vehicle registration fees.
Wildlife	None	None	None	None

Teachers' Retirement System – Submission of Information to State Pension Commission



- During the 2002 legislative session, legislation was adopted that requires the Retirement Board to submit information to the State Pension Commission
- A valuation was to be performed, for informational purposes only, using a prescribed set of assumptions (70 O.S. 2001, Section 17-106.1, Section H)
 - Interest rate of 7.5% (instead of 8.0%)
 - COLA assumption of 2% (instead of 0%)
 - Mortality table (2000 tables instead of 1989 and 1994 tables)
 - Set amortization period of 30 years (instead of a “floating” period)
- Required information was provided to the Board as an addendum to the June 30, 2003 Actuarial Valuation Report performed by Gabriel, Roeder, Smith & Company
 - AAL = \$14.5 billion (vs. \$11.9 billion)
 - UAAL = \$8.1 billion (vs. \$5.5 billion)
 - Required State contribution = \$610.7 million (vs. current actual contribution of \$128.9 million)

OPERS Retirement System – Submission of Information to State Pension Commission



- During the 2002 legislative session, legislation was adopted that requires the Retirement Board to submit information to the State Pension Commission
- A valuation was to be performed, for informational purposes only, using a prescribed set of assumptions (11 O.S. 2001, Section 50-105.4, Section H)
 - Interest rate of 7.5% (same as current valuation)
 - COLA assumption of 2% (same as current valuation)
 - Mortality table (2000 tables instead of 1983 tables)
 - Set amortization period of 30 years (instead of 40 years)
- Required information was provided to the Board by Mercer (included in the System's Annual Financial Statement)
 - AAL = \$7.2 billion (vs. \$7.0 billion)
 - UAAL = \$1.8 billion (vs. \$1.6 billion)
 - Required State contribution = \$268.8 million (vs. current contribution of \$137.5 million)

Firefighters Retirement System – Submission of Information to State Pension Commission



- During the 2002 legislative session, legislation was adopted that requires the Retirement Board to submit information to the State Pension Commission
- A valuation was to be performed, for informational purposes only, using a prescribed set of assumptions (11 O.S. 2001, Section 49-100.9, Section H)
 - Interest rate of 7.5% (same as current valuation)
 - COLA assumption of 2% (instead of 50% of assumed increase in base pay)
 - Mortality table (2000 tables instead of 1983 and 1994 tables)
 - Set amortization period of 30 years (same as current valuation)
- Required information was provided to the Board as an addendum to the June 30, 2002 Actuarial Valuation Report performed by Buck Consultants
 - AAL = \$2.3 billion (vs. \$1.9 billion)
 - UAAL = \$808 million (vs. \$450 million)
 - Required State contribution = \$92.0 million (vs. current actual contribution of \$50.2 million)

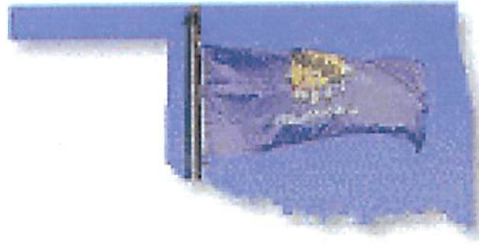
Police– Submission of Information to State Pension Commission

- During the 2002 legislative session, legislation was adopted that requires the Retirement Board to submit information to the State Pension Commission
- A valuation was to be performed, for informational purposes only, using a prescribed set of assumptions (11 O.S. 2001, Section 50-1054, Section H)
 - Interest rate of 7.5% (same as current valuation)
 - COLA assumption of 2% (same for some retirees, others receive 33% to 50% of assumed increase in base pay)
 - Mortality table (same as current valuation)
 - Set amortization period of 30 years (instead of 20 years)
- Required information was provided to the Board as an addendum to the June 30, 2002 Actuarial Valuation Report performed by Buck Consultants
 - AAL = \$1.6 billion (vs. \$1.6 billion)
 - UAAL = \$196 million (vs. \$184 million)
 - Required State contribution = \$28 million (vs. current actual contribution of \$20 million)

Law Enforcement Retirement System – Submission of Information to State Pension Commission



- During the 2002 legislative session, legislation was adopted that requires the Retirement Board to submit information to the State Pension Commission
- A valuation was to be performed, for informational purposes only, using a prescribed set of assumptions (11 O.S. 2001, Section 2-303.1, Section H)
 - Interest rate of 7.5% (same as current valuation)
 - COLA assumption of 2% (instead of 3%)
 - Mortality table (same as current valuation)
 - Set amortization period of 30 years (instead of 19 years)
- Required information was provided to the Board as an addendum to the June 30, 2002 Actuarial Valuation Report performed by Buck Consultants
 - AAL = \$662 million (vs. \$667 million)
 - UAAL = \$36 million (vs. \$ 82 million)
 - Required State contribution = \$12.1 million (vs. current actual contribution of \$15.6 million)



Oklahoma State Pension Commission Retirement System

Summary of Pension Obligation Bonds

February, 2004

Duane Hess, CFA, Partner
Joe Miletich, CFA, Partner
Allan Martin, CFA, Senior Consultant



One Main Street, Cambridge, Massachusetts 02142
TEL: (617) 374-1300; FAX: (617) 374-1313
www.nepc.com



Pension Obligation Bonds (POBs)

- What are they?
 - POBs are long-term debt obligations issued by a municipality to fund a shortfall between its pension plan liabilities and its assets at one date in time
 - POBs are a leveraged attempt to arbitrage by borrowing funds at a low rate and investing those funds at a higher rate
- What costs are being transferred/created?
 - On an sound actuarial basis, the municipality pays the pension plan annually an amount equal to the normal cost plus a portion of the unfunded liability
 - POBs cover the unfunded liability and reduce the municipality's annual pension contribution to just the normal cost
 - That unfunded liability payment is re-directed to pay the interest cost of the POBs
 - Going in, there should be annual cost savings to the municipality as the interest cost on POBs is less than annual cost to amortize the unfunded liability
 - The cost savings is measured by the interest rate difference between the POBs and the pension plan's actuarial assumed interest rate

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Klein's sig.



Pension Obligation Bonds (POBs) – Pros and Cons

- Pros for the municipality
 - Immediate cost savings as the reduction in the annual pension contribution more than offsets the interest cost of the POBs
 - Long term savings if the long term return earned on the bond proceeds exceed the interest rate on the POBs
- Cons for the municipality
 - POBs are a leveraged strategy
 - POBs create two liabilities that the municipality stands behind
 - No guarantee that an unfunded liability won't re-appear
 - Return on the proceeds of the bond sale must exceed the POB's interest rate
 - Actuary's long term assumptions (i.e. mortality) must be fairly accurate
- Cannot measure the success of issuing a POB until many decades have passed
 - Though New Jersey only needed five years





Pension Obligation Bonds (POBs) – Conflicts

- POBs can lead to conflicts between the pension plan and the municipality (i.e. Illinois)
- Risk profiles can differ
 - The risk profile for the municipality certainly has changed
 - Now that the pension plan is (at one moment in time) fully funded, does the risk profile of the plan change?
 - Largely determined by the actuarial interest rate
- Fiduciary obligations differ
 - Pension plan Trustees possess a fiduciary obligation to the Plan's members
 - Municipality has a fiduciary obligation to the tax payer
- Future problems
 - After a cyclical bull market, pension plan funding could be driven well above 100% (see 1999 as an example)
 - Provides an opportunity to “spend” the surplus in a “cost-free” manner
 - Subsequent impact of next bear market is magnified and unfunded liability re-appears
- Can be successful if long term game plan is established from day one!