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Oklahoma State Pension Commission

Summary of Actuarial Reports

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25
Years
1986-2011

Introduction

- **NEPC is asked to review the Oklahoma State Pension Plans from an actuarial standpoint**
- **Oklahoma Retirement System comprises seven plans**
 - Teachers
 - OPERS
 - Firefighters
 - Police
 - Law Enforcement
 - Judges and Justices
 - Wildlife
- **Information contained in this report is based on July 1, 2011 Actuarial Valuation reports from plan actuaries¹ and system financial statements**
- **The goals of this presentation are:**
 - To present the funded position of the seven pension plans
 - To review the comprehensive return performance of both asset and liabilities
 - To assess the actuarial assumptions and methods for reasonability
 - To note changes in legislation that affect the plans

1. Buck Consultants, Cavanaugh Macdonald Consulting, and Gabriel, Roeder, Smith & Company

System Summary

- **Funded status of the overall plans has improved since the July 2010 valuations**
 - Aggregate funded status for the plans was **66.7%** as of July 1, 2011, vs. 55.9% as of July 1, 2010
- **Major factor contributing to the improvement was Oklahoma legislation HB 2132 (OPLAAA) requiring future cost-of-living increases be concurrently funded at the time they are enacted**
 - Therefore, actuaries removed future COLA assumptions, increasing overall funded status by more than 10%.
- **Average asset return on the plans' Market value was 21.8% for the fiscal year ending June 30, 2011**
 - However, average asset return on the plans' Actuarial Value was **5.7%** for the fiscal year ending June 30, 2011
 - lower than the 7.0% to 8.0% assumed
 - Gains and losses recognized over 5 years, still smoothing in 2008-09 losses
- **Teachers' plan remains the largest and most poorly funded of the seven plans**
 - \$17.6 billion in liabilities, \$10.0 billion in assets, 56.7% funded
 - Actuaries previously projected the period needed to fund Unfunded Accrued Liability as "infinite"; if current funding and benefit levels continue, this now stands at 22 years

System Summary – Funded Position

Plan	Actuarial Value of Assets (in millions)	Actuarial Accrued Liability (in millions)	Funded Status as of 7/1/2011	Funded Status as of 7/1/2010
Teachers	\$9,961	\$17,561	56.7%	47.9%
Public Employees (PERS)	\$6,599	\$8,180	80.7%	66.0%
Firefighters	\$1,758	\$2,760	63.7%	53.4%
Police	\$1,823	\$1,960	93.0%	74.9%
Law Enforcement	\$684	\$901	75.9%	73.6%
Judges	\$238	\$247	96.3%	81.3%
Wildlife	\$74	\$95	78.1%	81.5%
Total	\$21,138	\$31,704	66.7%	55.9%

- **Overall funded status of the plans improved significantly since 2010**
 - New legislation (HB 2132) allowed for removal of the assumption of future cost-of-living adjustments from the valuations, a significant factor in improving funded status
 - Asset returns were positive, but actuarial asset values are smoothed over 5 years and are still recognizing losses from 2008-2009
 - 21.8% return on Market value, 5.7% return on Actuarial Value
 - Liabilities continue to grow at a steady pace
- **Wildlife plan funded status declined mostly due to lowering the discount rate assumption to 7.0%**
- **For comparison purposes, the average funding level for public pensions is 77.1% as of the end of FY 2010 ¹**

System Summary – Legislative Changes

- **Cost-of-living Adjustments (COLA) Assumptions**

- The Oklahoma Pension Legislation Actuarial Analysis Act was modified to change the definition of a non-fiscal retirement bill
- Requires that cost-of-living adjustments be concurrently funded by the Legislature at the time they are enacted

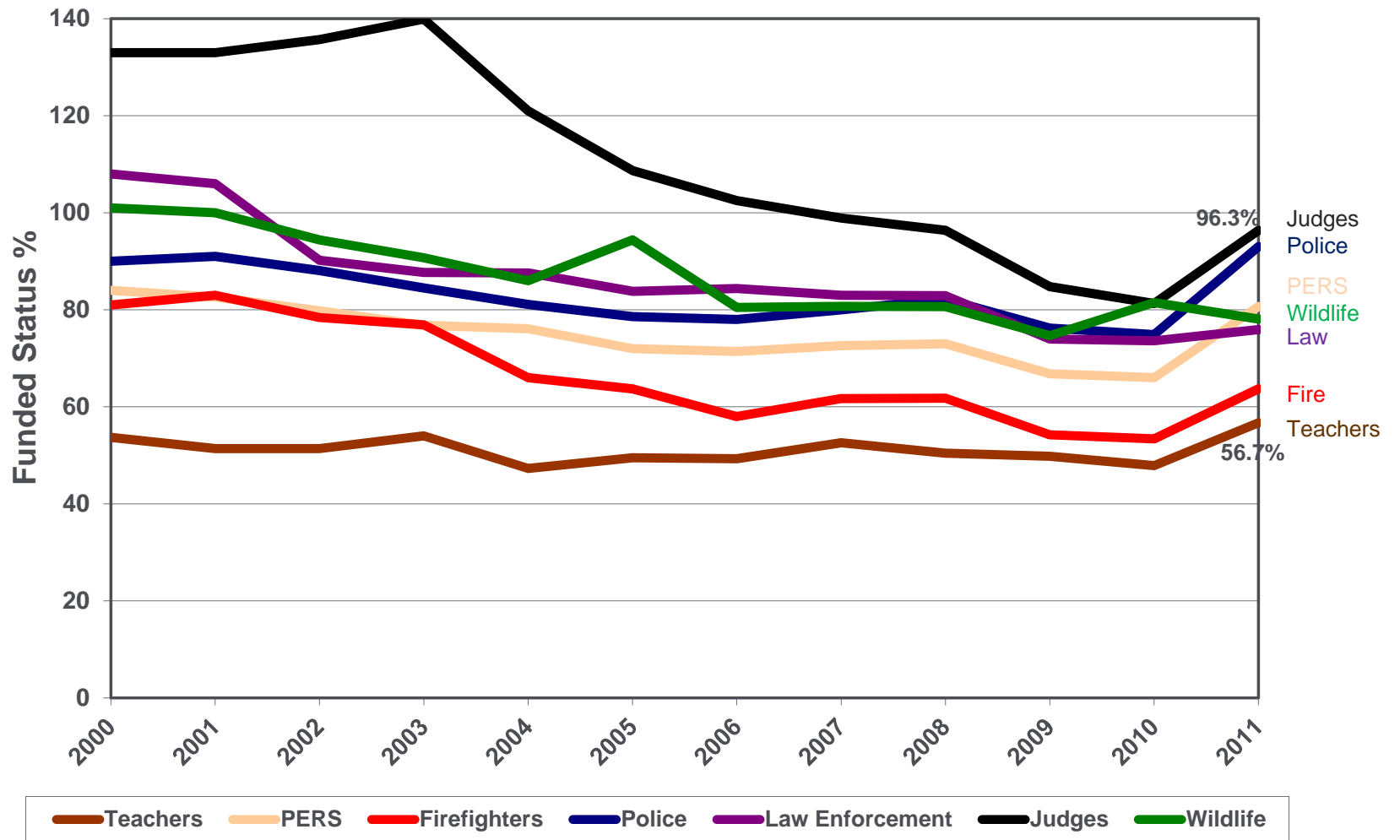
Plan	Actuarial Value of Assets (in millions)	Actuarial Accrued Liability (in millions) assuming COLAs	Actuarial Accrued Liability (in millions)	Funded Status as of 7/1/2011 assuming COLAs	Funded Status as of 7/1/2011
Teachers	\$9,961	\$20,525	\$17,561	48.5%	56.7%
Public Employees (PERS)	\$6,599	\$9,883	\$8,180	66.8%	80.7%
Firefighters	\$1,758	\$3,246	\$2,760	54.2%	63.7%
Police	\$1,823	\$2,383	\$1,960	76.5%	93.0%
Law Enforcement	\$684	\$905	\$901	75.6%	75.9%
Judges	\$238	\$298	\$247	79.8%	96.3%
Wildlife	\$74	\$95	\$95	78.1%	78.1%
Total	\$21,138	\$37,336	\$31,704	56.6%	66.7%

- **Other legislative and assumption changes**

- HB 1010 increases the normal retirement age for Judges and Justices
- Wildlife plan enacted major cost savings in 2010, and had more changes in 2011
 - Froze the current plan to new entrants as of June 30, 2010
 - Increased employee contributions to 4% in 2010 and 5% in 2011
 - Decreased discount rate to 7.0% in 2011, increasing liabilities

Funded Status History

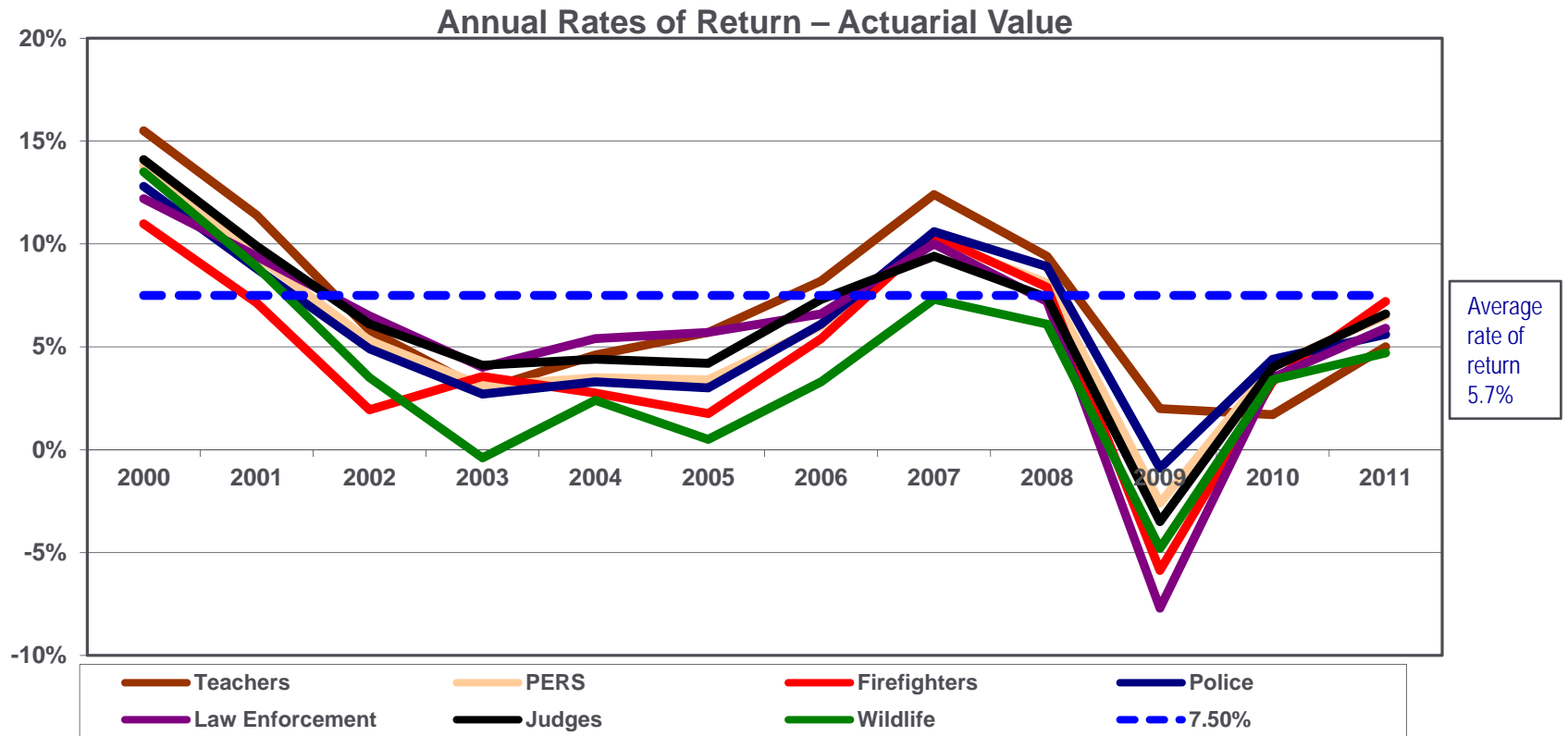
Funded Status History on an Actuarial Basis



Sources: 1999 and earlier: R.V. Kuhns & Associates,
 2000 and later: Buck Consultants, Milliman Consultants and Actuaries, and Gabriel, Roeder, Smith & Company
 2010: Buck Consultants, Cavanaugh Macdonald Consulting, and Gabriel, Roeder, Smith & Company



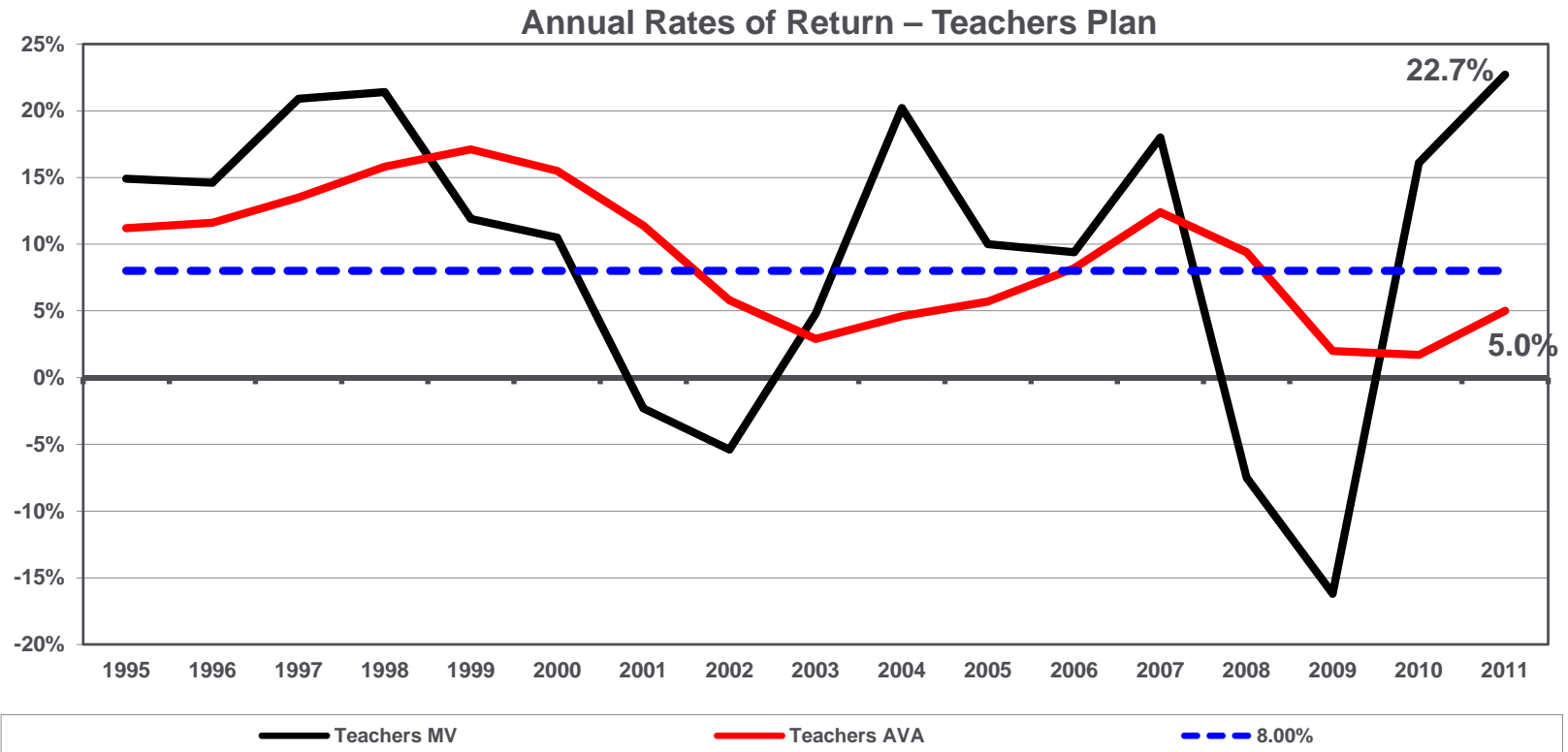
Investment Return on Actuarial Value of Assets



- Asset declines from the market crisis of 2008-09 are still being reflected
- Asset smoothing methods help dampen the losses (and gains) over 5 years

Sources: 1999 and earlier: R.V. Kuhns & Associates,
 2000 and later: Buck Consultants, Milliman Consultants and Actuaries, and Gabriel, Roeder, Smith & Company
 2010: Buck Consultants, Cavanaugh Macdonald Consulting, and Gabriel, Roeder, Smith & Company

Investment Return on Teachers' Plan



- **Market Value reflects strong performance in past two fiscal years**
- **Actuarial Value lags behind Market Value, as losses and gains are smoothed over 5 years**
- **2008-9 losses are still being recognized for two more years, but recent gains have started to outweigh past losses**

Sources: 1999 and earlier: R.V. Kuhns & Associates,
2000 and later: Gabriel, Roeder, Smith & Company

System Summary – Cost and Contributions

- The following table summarizes the post-Employee contribution requirements and mandated contribution rates for the 2011 and 2012 fiscal years

Pension Plan	FY 2011 Contribution Requirements			FY 2012 Contribution Requirements	
	Total post-EE Contribution as % Pay	Total post-EE Contribution Required (\$)	Actual post-EE Contribution (\$)	Total post-EE Contribution as % Pay	Total post-EE Contribution Required (\$)
Teachers	20.4%	\$822	\$638	14.9%	\$588
OPERS	23.9%	\$402	\$253	15.3%	\$240
Firefighters	78.7%	\$196	\$92	58.4%	\$142
Police	58.8%	\$147	\$56	25.5%	\$65
Law Enforcement	68.2%	\$50	\$25	68.5%	\$49
Judges	35.7%	\$13	\$3	21.4%	\$7
Wildlife	21.4%	\$3	\$3	26.0%	\$4
Total as % of Payroll	25.7%		16.8%	18.3%	
Total in Millions \$	\$1,633	\$1,633	\$1,070	\$1,094	\$1,094

- For fiscal year ending 2010, the GASB recommended contribution to the Oklahoma pension plans was \$1.63 billion (25.7% of payroll)
 - \$1.07 billion was actually contributed, or 66% of required amount (ARC)
 - Average percentage of Required Contribution (ARC) paid by public plans was 88% in 2010¹
- For fiscal year ending 2011, the GASB recommended contribution is \$1.1 billion (or 18.3% of payroll)
 - Current year contributions are a third less than last year's amount, due to actuarial gains

1. Results from the Public Fund Survey Summary Findings for FY 2010, published December 2011 by the National Association of State Retirement Administrators

Contribution History – State and Municipalities

Required Employer Contribution (assuming GASB 25 funding requirements) - After reduction for estimated Employee contributions

	7/1/01	7/1/02	7/1/03	7/1/04	7/1/05	7/1/06	7/1/07	7/1/08	7/1/09	7/1/10	7/1/11
Teachers*	\$556	\$585	\$535	\$722	\$535	\$576	\$591	\$714	\$742	\$822	\$588
OPERS	\$188	\$233	\$257	\$266	\$310	\$339	\$364	\$323	\$389	\$402	\$240
Firefighters**	\$63	\$77	\$74	\$107	\$118	\$147	\$147	\$158	\$187	\$196	\$142
Police**	\$55	\$72	\$64	\$74	\$85	\$95	\$101	\$103	\$132	\$147	\$65
Law Enforcement**	\$11	\$23	\$25	\$25	\$30	\$33	\$33	\$37	\$48	\$50	\$49
Judges	\$1	\$0	\$0	\$2	\$4	\$6	\$8	\$8	\$11	\$13	\$7
Wildlife	\$1	\$2	\$2	\$2	\$3	\$3	\$3	\$3	\$4	\$3	\$4
Total	\$875	\$991	\$956	\$1,198	\$1,086	\$1,197	\$1,246	\$1,374	\$1,514	\$1,633	\$1,094

Actual Employer Contribution

	7/1/01	7/1/02	7/1/03	7/1/04	7/1/05	7/1/06	7/1/07	7/1/08	7/1/09	7/1/10	7/1/11
Teachers*	\$365	\$362	\$375	\$406	\$460	\$536	\$597	\$619	\$621	\$638	TBD
OPERS	\$140	\$138	\$134	\$140	\$171	\$198	\$220	\$243	\$260	\$253	TBD
Firefighters**	\$69	\$73	\$23	\$82	\$82	\$118	\$83	\$83	\$82	\$92	TBD
Police**	\$42	\$44	\$24	\$49	\$50	\$56	\$56	\$59	\$55	\$56	TBD
Law Enforcement**	\$20	\$21	\$13	\$21	\$22	\$24	\$25	\$25	\$23	\$25	TBD
Judges	\$1	--	--	\$1	\$1	\$1	\$2	\$2	\$9	\$3	TBD
Wildlife	\$1	\$1	\$1	\$3	\$3	\$3	\$3	\$3	\$4	\$3	TBD
Total	\$637	\$639	\$570	\$701	\$788	\$936	\$986	\$1,034	\$1,054	\$1,070	TBD

Percent of Required Employer Contribution Actually Contributed

	7/1/01	7/1/02	7/1/03	7/1/04	7/1/05	7/1/06	7/1/07	7/1/08	7/1/09	7/1/10	7/1/11
Teachers*	66%	62%	70%	56%	86%	93%	101%	87%	84%	78%	TBD
OPERS	74%	59%	52%	53%	55%	58%	61%	75%	67%	63%	TBD
Firefighters**	109%	95%	31%	77%	70%	80%	56%	53%	44%	47%	TBD
Police**	77%	62%	38%	66%	59%	59%	56%	57%	41%	38%	TBD
Law Enforcement**	191%	92%	53%	85%	73%	75%	77%	68%	48%	50%	TBD
Judges	50%	0%	0%	23%	18%	20%	22%	27%	81%	26%	TBD
Wildlife	100%	80%	60%	119%	96%	104%	97%	100%	100%	100%	TBD
Total	73%	64%	60%	58%	73%	78%	79%	75%	70%	66%	TBD

* Teachers plan contributions include State, Employer, and Federal funds

** Contributions include State and Agency or Municipality funds

System Summary – Contribution Rates

- The following table summarizes the current Employee and Employer contribution rates as of July 1, 2011 as a % of payroll

Pension Plan	EE Contribution Rate	Employer + Federal Mandated Contrib rate	Municipality / Agency Mandated Contrib rate	State Mandated Contrib rate
Teachers	7.00%	EESIP: 9.5% Non-EESIP: 8.55% Federal grants: 7.0%		5% of tax and lottery revenue
OPERS	3.50%			16.5%*
Firefighters	8.00%		13.00%	34% of insurance premium tax
Police	8.00%		13.00%	14% of insurance premium tax + a % of special tax credit fund
Law Enforcement	8.00%		10.00%	5.0% of insurance premium tax + 1.2% of drivers license tax
Judges	8.00%			11.50%*
Wildlife	5.00%			

* Represent FY 2012 rates

- For comparison purposes:**
 - Median public plan Employee contribution rates are 5.0% if participating in Social Security, 8.0% if not ¹
 - Median public plan Employer contribution rates are 9.5% if participating in Social Security, 12.7% if not ¹

1. Results from the Public Fund Survey Summary Findings for FY 2010, published December 2011 by the National Association of State Retirement Administrators

System Summary – Legislative Changes

	Benefit Provisions	Assumption & Methods	Funding Methods	Legislative Changes that effected the pension
Teachers	Changes to normal and early retirement conditions	HB 2132 - changes definition of a nonfiscal retirement bill to exclude cost of living assumptions	None	HB 2132 - changes definition of a nonfiscal retirement bill to exclude cost of living assumptions
OPERS	None	HB 2132 - changes definition of a nonfiscal retirement bill to exclude cost of living assumptions	None	HB 2132 - changes definition of a nonfiscal retirement bill to exclude cost of living assumptions
Firefighters	None	HB 2132 - changes definition of a nonfiscal retirement bill to exclude cost of living assumptions	None	HB 2132 - changes definition of a nonfiscal retirement bill to exclude cost of living assumptions
Police	None	HB 2132 - changes definition of a nonfiscal retirement bill to exclude cost of living assumptions	None	HB 2132 - changes definition of a nonfiscal retirement bill to exclude cost of living assumptions
Law Enforcement	None	HB 2132 - changes definition of a nonfiscal retirement bill to exclude cost of living assumptions	None	HB 2132 - changes definition of a nonfiscal retirement bill to exclude cost of living assumptions
Justices and Judges	Changes to normal retirement conditions	HB 2132 - changes definition of a nonfiscal retirement bill to exclude cost of living assumptions HB 1010 - Increases retirement age	None	HB 2132 - changes definition of a nonfiscal retirement bill to exclude cost of living assumptions HB 1010 - Increases retirement age
Wildlife	None	Decreased discount rate from 7.5% to 7.0%	Employee contribution rate increased to 5%	None

- **HB 2132 was the major legislation impacting the plans, resulting in the removal the cost-of-living increase assumptions**
- **Several other changes were enacted that did not impact this year’s participants but will effect future participants**
 - SB 794 increases retirement age for future Public Employees
 - SB 347 forfeits benefits of employees convicted, pleading guilty, or nolo contendere to specific crimes

System Summary - Characteristics and Assumptions

- **The plans' assumptions are within a reasonable range**
 - Funding methods
 - All plans employ Entry Age Normal funding method
 - A conservative funding schedule
 - Asset valuation methods
 - All plans employ similar actuarial asset valuation method
 - Smooths asset gains and losses over 5 years
 - Investment return assumptions
 - 8.0% for Teachers plan, 7.0% for Wildlife plan, 7.5% for all other plans
 - Median discount rate for public plans is 8.0%¹
 - Amortization schedules
 - All plans have in place long term amortization schedules to fund the Unfunded Accrued Liability
 - However some schedules are “open” and some “closed”
 - Some plans with “closed” amortization schedules are currently amortizing over 7 or 10 years (Police and Law Enforcement, respectively)
 - These are shorter amortization timeframes than some other plans currently amortizing over ...
 - 16 years (Judges and OPERS)
 - 22 years (Firefighters)
 - 30 years (Teachers)

1. Results from the Public Fund Survey Summary Findings for FY 2010, published December 2011 by the National Association of State Retirement Administrators

Conclusions

- **In aggregate, the State's plans are 66.7% funded as of June 30, 2011**
 - Funded status improved across the board with legislation removing cost-of-living assumptions from the liability calculations
 - Teachers' plan is the least funded at 56.7%
- **Although the plans had strong asset performance in the 2010 and 2011 fiscal years, the market losses of 2008-09 are still being reflected in the Actuarial value of assets and funded status of plans**
 - 5-year smoothing method means the large loss of 2008-09 will be reflected over the next 2 years, but are also being offset by more recent gains
- **Scheduled future increases in Employer contributions are in place for one of the plans (Judges and Justices)**
- **Rating agencies will be scrutinizing States and Municipalities for debt ratings – pension plan health is one item for review**