State of Alaska Retirement Systems

Actuarial Presentation to the Alaska Retirement Management Board and Special Committee on Ways and Means

March 23 and 24, 2006

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Agenda

- Actuarial Process
- Review of Mercer's 2004 Actuarial Valuation
- 2005 Actuarial Valuation Results
- Questions

Actuarial Process

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State of Alaska Retirement Systems

- Alaska consists of four traditional defined benefit (DB) pension plans
  - Public Employees' Retirement System (PERS)
  - Teachers' Retirement System (TRS)
  - Judicial Retirement System (JRS)
  - National Guard and Naval Militia Retirement System (NGNMRS)
- In addition to the traditional DB plans, a defined contribution (DC) plan was added effective for new hires after July 1, 2006
- A postemployment healthcare plan covers all members in the DB and DC plans
- Actuarial valuations are performed annually as of June 30. The most recent is as of June 30, 2005 for PERS and TRS. JRS and NGNMRS are performed biannually with the next scheduled valuation to be performed June 30, 2006

Actuarial Valuation

- Quantifies the benefit obligation
  - Present value of future pension payments calculated using service at the valuation date
  - Also called Accrued Liability
- Determines actuarial soundness of statutory contribution
  - If not sound, additional contribution required by State
  - Measures current funded status
  - Early warning system for potential funding problems

Actuarial Valuation (cont'd)

- The process includes:
  - Membership data
  - Financial data
  - Benefit structure
  - Actuarial assumptions
  - Funding method
  - Asset valuation method
- Expected benefit payments over future years is calculated and discounted back to the valuation date
- Calculations are performed on each member and summed

Actuarial Assumptions

- Used to quantify amount and value of future benefit payments
  - Demographic (amount)
  - Economic (value)
  - Healthcare (combination of demographic and economic)
- Should be a realistic “best guess” based on:
  - Past history
  - Future expectations
  - Long time horizon (40+ years)
- Inflation should be consistently applied to salary increases/COLAs (liability), investment return (assets) and healthcare trend
- Assumptions are recommended by the Actuary, approved by the Alaska Retirement Management Board
- Should be explicit - each assumption individually reasonable
- Setting of assumptions is a blend of art and science

Summary of Current Economic Assumptions

	PERS & TRS
• Investment Return	8.25%
• Inflation	3.50%
• Interest on Contributions	4.50%
• Salary Increases	
– Inflation	3.50%
– Productivity	0.50%*
– Economic Portion	4.00%*
• Payroll Growth	4.25%
• COLAs	
– Post Retirement Pension Adjustments	1.75% at age 60 or after 5 years (8 years for TRS) of payments; 2.625% at age 65 or upon disability
– Alaska	10% for those living in Alaska
• Healthcare Trend	Medical trend starts at 9.5% and grades to 5% over 9 years; Prescription drug trend starts at 14% and grades to 5% over 9 years

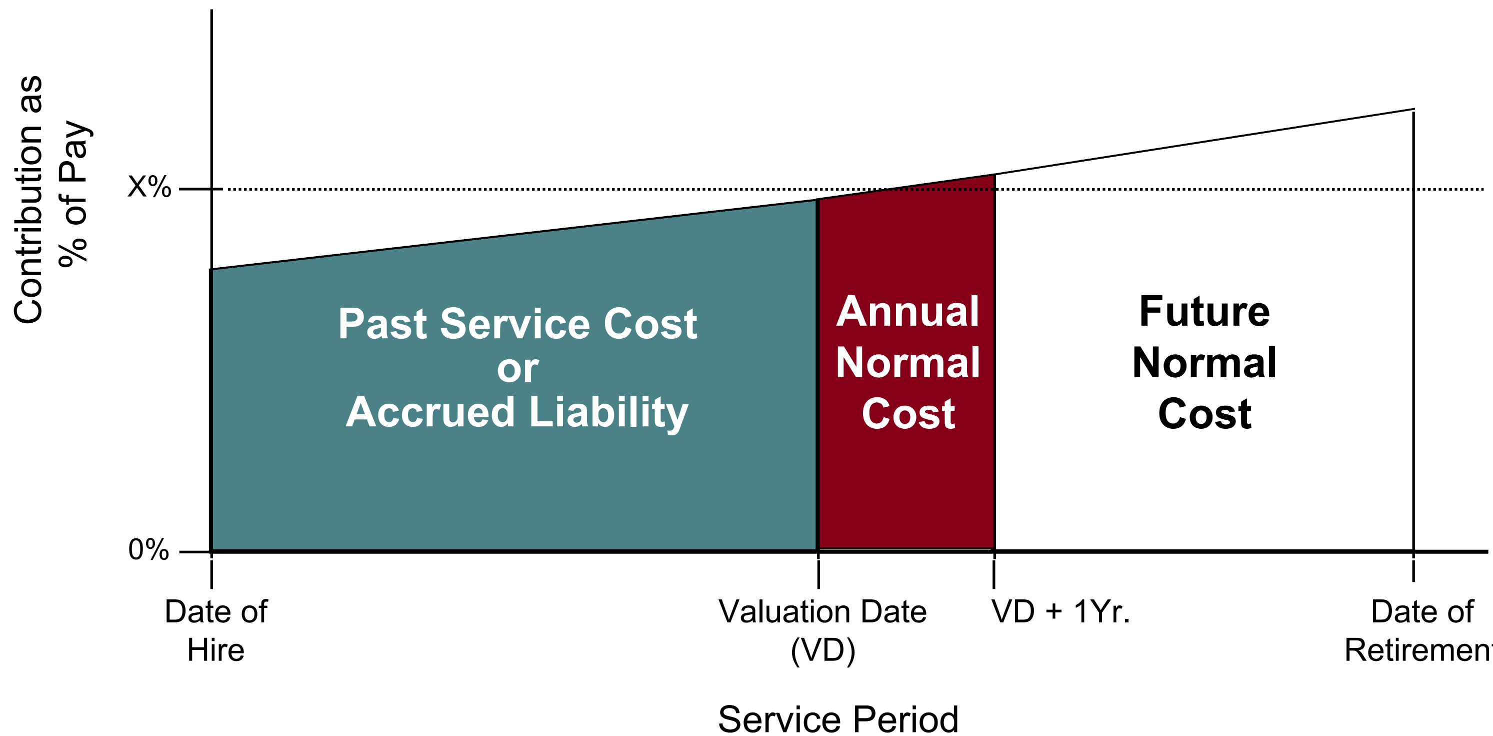
**Productivity for PERS Police/Fire is 1%, and the economic portion is 4.5%.*

Actuarial Cost Method

- Used to allocate pension cost from year to year
- Determines pattern of funding - "Pay me now or pay me later"
- Projected Unit Credit Cost Method - Used to allocate cost between past and future service
  - Normal Cost - cost of benefits due to service during the year beginning on the valuation date and projecting salaries
  - Accrued Liability - represents present value of benefits credited with respect to service earned as of the valuation date
  - Unfunded Accrued Liability - Accrued liability minus actuarial value of assets
  - Actuarial Contribution - Normal cost plus amortization payment of unfunded liability (25 years) as a percent of pay

Funding Process

Projected Unit Credit Method

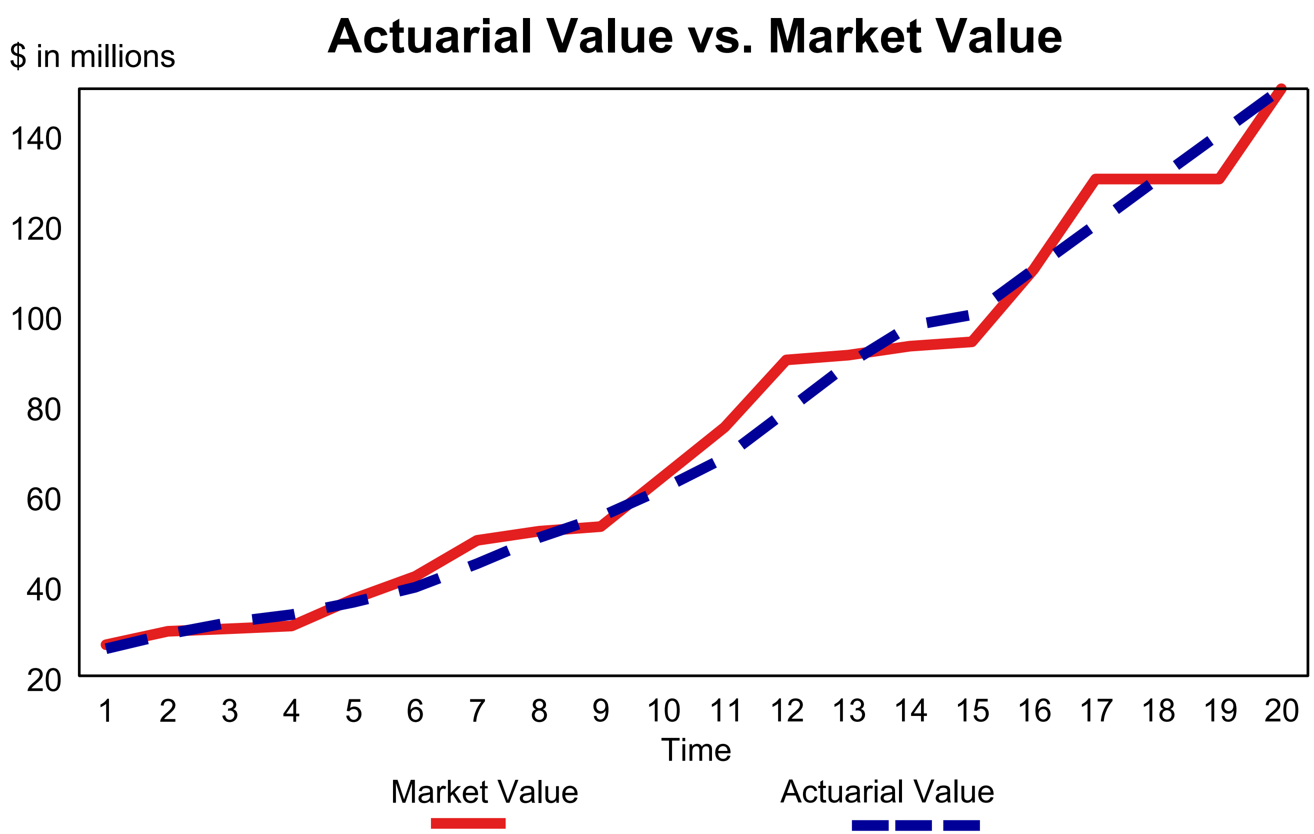


Accrued Liability - Assets = Unfunded/(Surplus)

Asset Valuation Method

- 5-year smoothing of Market Value
- Each year, a base is determined equal to difference between expected and actual return
- 20% of each base over last 5 years is recognized in Actuarial Value
- Constrained to be within 80% and 120% of Market Value
- Reduces volatility on actuarial contribution, but does not eliminate volatility
- Asset value reinitialized at Market Value on June 30, 2002. Phase-in of 20% of each base occurs over five years

Example of Asset Smoothing Method



Actuarial Value is expected to be:

- *Below Market when market is doing well*
- *Above Market when market is doing poorly*

Review of Mercer's 2004 Actuarial Valuation

Review of Mercer's 2004 Valuation

- Reviewed assumptions and methods
- Replicated the 2004 valuation results
- Completed PERS and TRS
- JRS and NGNMRS will be completed later this year

Comments on Actuarial Review

- Projected Unit Credit Method is more likely to produce increasing normal cost rates. Entry Age Method is expected to produce more stable normal cost rates

- Investment return assumption of 8.25% is reasonable long-term given current asset allocation policy

- Payroll growth assumption is overstated. We will recommend reducing from 4.25% to 4.0% for next valuation

- Demographic assumptions are generally reasonable, although we want to carefully review retirement rates during the experience analysis

Comments on 2004 Replication

- Buck results matched Mercer results closely for TRS
- Minor differences in valuation process on TRS “washed out,” so differences not material
- Mercer understated the healthcare benefits in the PERS valuation by 7%
- Minor differences in valuation process of PERS pension benefit not material

Replication of Mercer's Results
TRS ($ in thousands)

	Mercer	Buck	%
Pension Accrued Liability	$ 4,216,480	$ 4,200,341	(0.38%)
Healthcare Accrued Liability	1,907,120	1,933,624	1.39%
Total	$ 6,123,600	$ 6,133,965	0.17%
Pension Normal Cost	$ 71,119	$ 70,264	(1.20%)
Healthcare Normal Cost	46,104	46,194	0.20%
Total	$ 117,223	$ 116,458	(0.65%)
Normal Cost Rate	13.76%	13.61%	(1.09%)
Past Service Rate	28.02%	28.14%	0.43%
Total Employer Contribution Rate	41.78%	41.75%	(0.07%)

Replication of Mercer's Results

PERS ($ in thousands)

	Mercer	Buck	%
Pension Accrued Liability	$ 6,711,507	$ 6,676,235	(0.53%)
Healthcare Accrued Liability	4,732,409	5,088,308	7.52%
Total	$11,443,916	$11,764,543	2.80%
Pension Normal Cost	$ 165,003	$ 164,834	(0.10%)
Healthcare Normal Cost	131,483	144,123	9.61%
Total	$ 296,486	$ 308,957	4.21%
Normal Cost Rate	13.32%	14.16%	6.31%
Past Service Rate	14.87%	16.21%	9.01%
Total Employer Contribution Rate	28.19%	30.37%	7.73%

2005 Actuarial Valuation Results

Changes Since Last Year

- No change in Benefit Provisions
- No change in Actuarial Assumptions
- No change in Asset Valuation Method
- No change in Funding Method
- Changes to assumptions and methods will be recommended in June with the results of the experience analysis

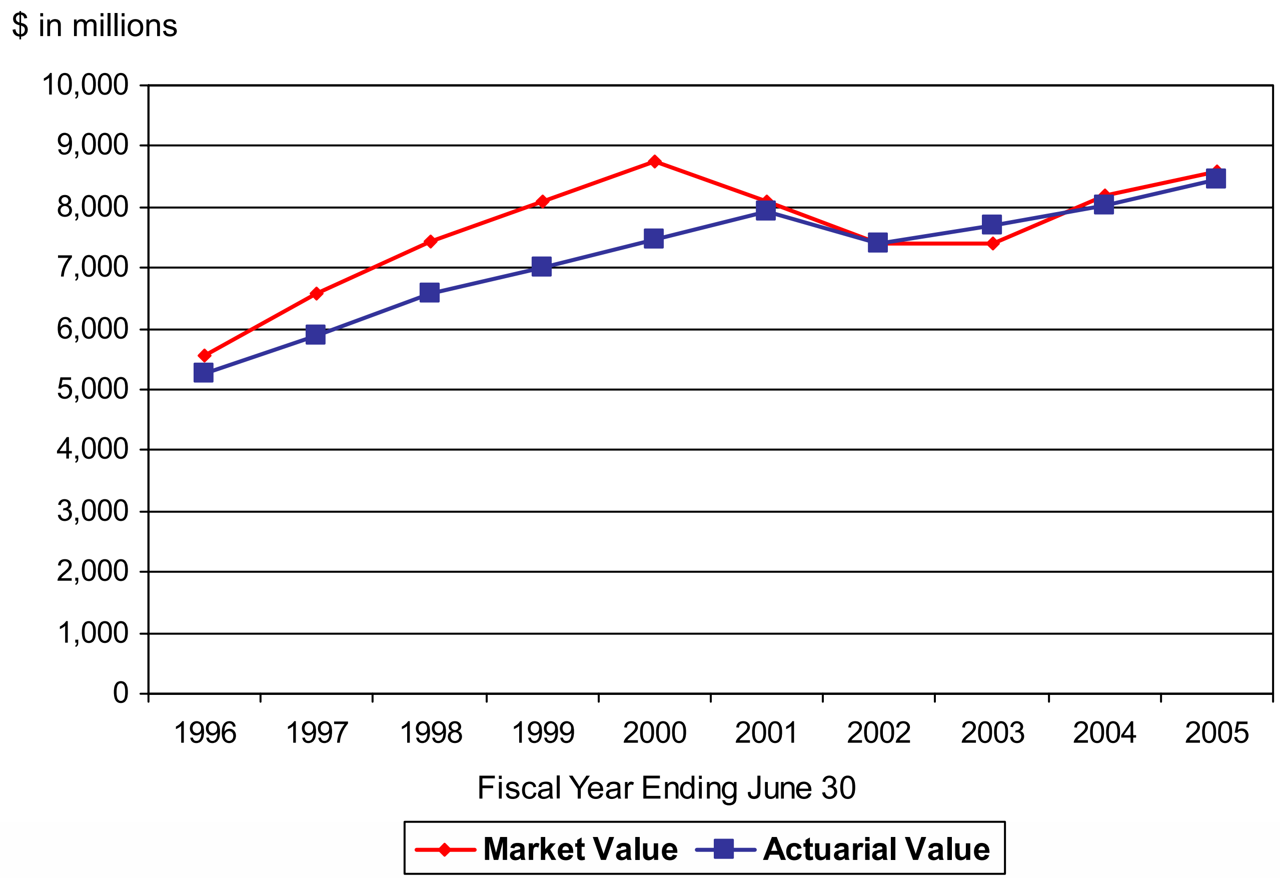
Public Employees' Retirement System
Police/Fire and Others Combined
Pension and Postemployment Healthcare

Total System Assets ($ in millions)

	Year Ending	
	June 30, 2004	June 30, 2005
1. Actuarial Value (BOY)	$7,687	$8,030
Contributions	224	293
Disbursements	(498)	(567)
Expected Return on Market Value	599	663
2. Preliminary Actuarial Value (EOY)	$8,012	$8,419
3. 5-year Smoothing	18	24
4. Actuarial Value (EOY)	$8,030	$8,443
5. Future Smoothing Amount	147	148
6. Market Value (EOY)	$8,177	$8,591

Asset Smoothing for Public Employees' Retirement System

Pension and Postemployment Healthcare 1996 – 2005



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Public Employees' Retirement System
Police/Fire and Others Combined
Pension and Postemployment Healthcare

($ in millions)

	July 1, 2004	July 1, 2005
1. Number		
- Active	33,612	33,730
- Inactive Non Vested	11,860	12,761
- Vested Terminations	5,965	6,105
- Retired and beneficiaries	19,572	20,703
- Total	71,009	73,299
2. Annual Compensation	$1,472	$1,513
3. Assets		
- Market Value	$8,177	$8,591
- Actuarial Value	8,030	8,443
- % AV to MV	98.2%	98.3%
4. Annual Benefit Payments		
- Total	$498	$567
- % of Market Value	6.1%	6.6%
5. Accumulated Member Contributions		
- Total for Actives and Inactives	$1,339	$1,389
- Average (actual)	$26,040	$26,405

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Public Employees' Retirement System

Police/Fire and Others Combined
Pension and Postemployment Healthcare

Actuarial Contribution Under Projected Unit Credit Method
($ in millions)

Funding	July 1, 2004	July 1, 2005
1. Actuarial Accrued Liability	$ 11,444	$ 12,845
2. Actuarial Value of Assets	8,030	8,443
3. Unfunded Actuarial Accrued Liability	$ 3,414	$ 4,402
4. Funded Ratio	70.2%	65.7%
5. Annual Actuarial Contribution		
– Normal Cost	$ 296	$ 338
– Amortization of Unfunded (25) Years	219	285
– Total Contribution	$ 515	$ 623
– % of Pay	35.00%	39.27%
6. Member Contribution		
– Amount	$ 100	$ 109
– % of Pay	6.81%	6.84%
7. Employer Required Contribution		
– Amount	$ 415	$ 514
– % of Pay	28.19%	32.43%

Public Employees' Retirement System

Police/Fire and Others Combined

Pension and Postemployment Healthcare

Actuarial Contribution Under Projected Unit Credit Method
($ in millions)

Funding	Pension	Postemployment Healthcare	Total
1. Actuarial Accrued Liability	$ 7,087	$ 5,758	$ 12,845
2. Actuarial Value of Assets	6,017	2,426	8,443
3. Unfunded Actuarial Accrued Liability	$ 1,070	$ 3,332	$ 4,402
4. Funded Ratio	84.9%	42.1%	65.7%
5. Annual Actuarial Contribution			
– Normal Cost	$ 181	$ 157	$ 338
– Amortization of Unfunded (25) Years	70	215	285
– Total Contribution	$ 251	$ 372	$ 623
– % of Pay	15.83%	23.44%	39.27%
6. Member Contribution			
– Amount			$ 109
– % of Pay			6.84%
7. Employer Required Contribution			
– Amount			$ 514
– % of Pay			32.43%

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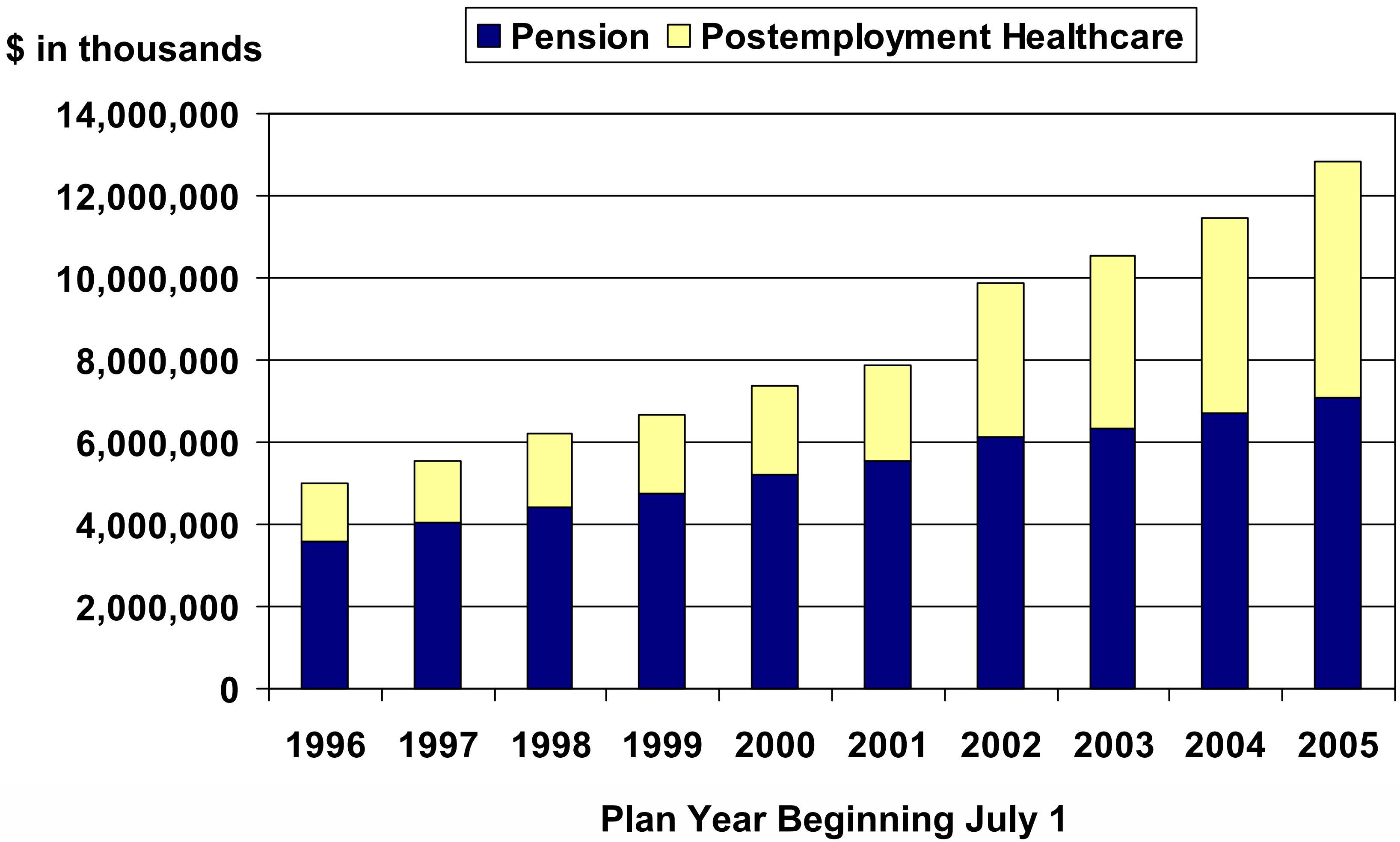
PERS Actuarial Accrued Liability History
Pension and Postemployment Healthcare



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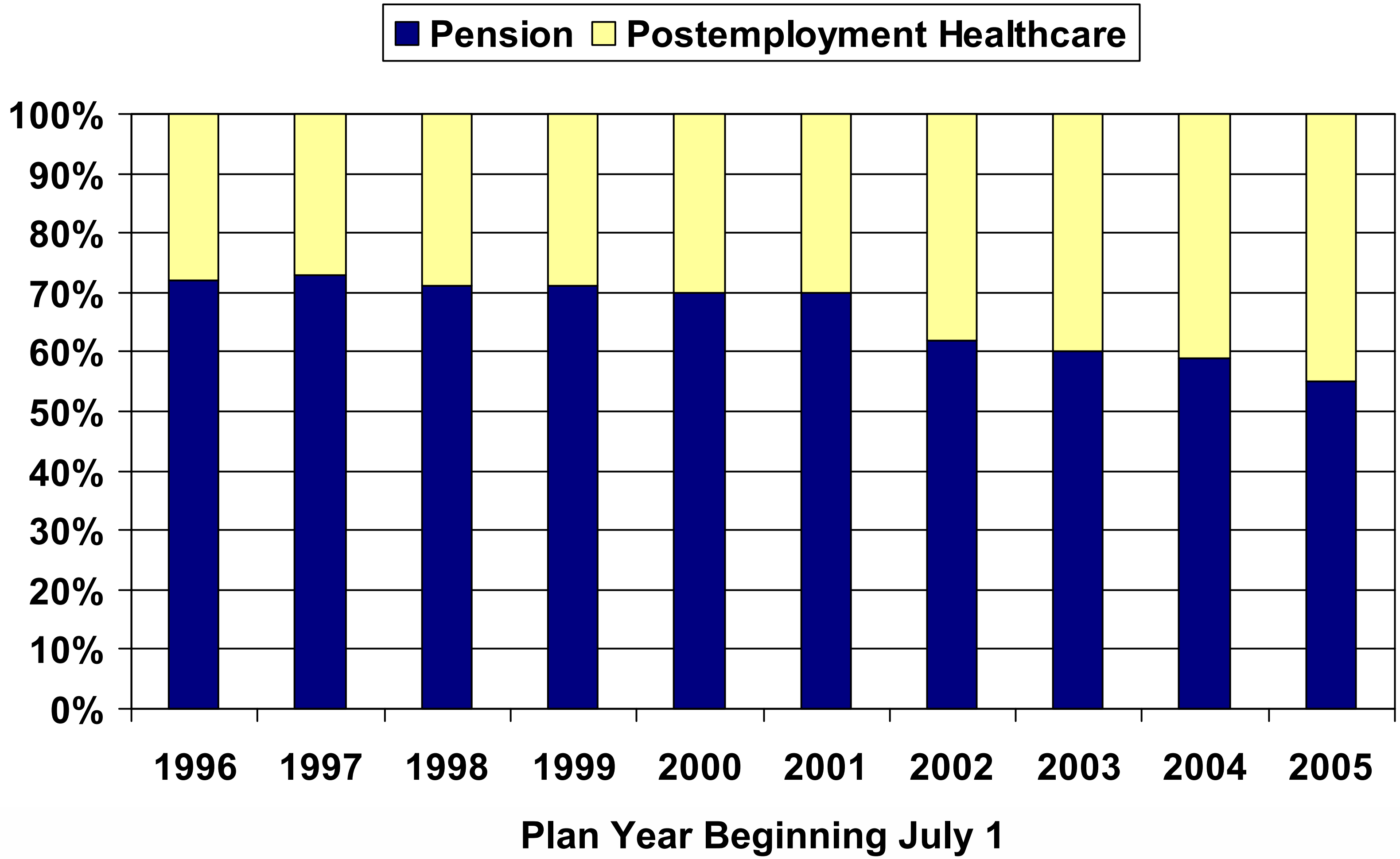
PERS Actuarial Accrued Liability History

Distribution % Between Pension and Postemployment Healthcare



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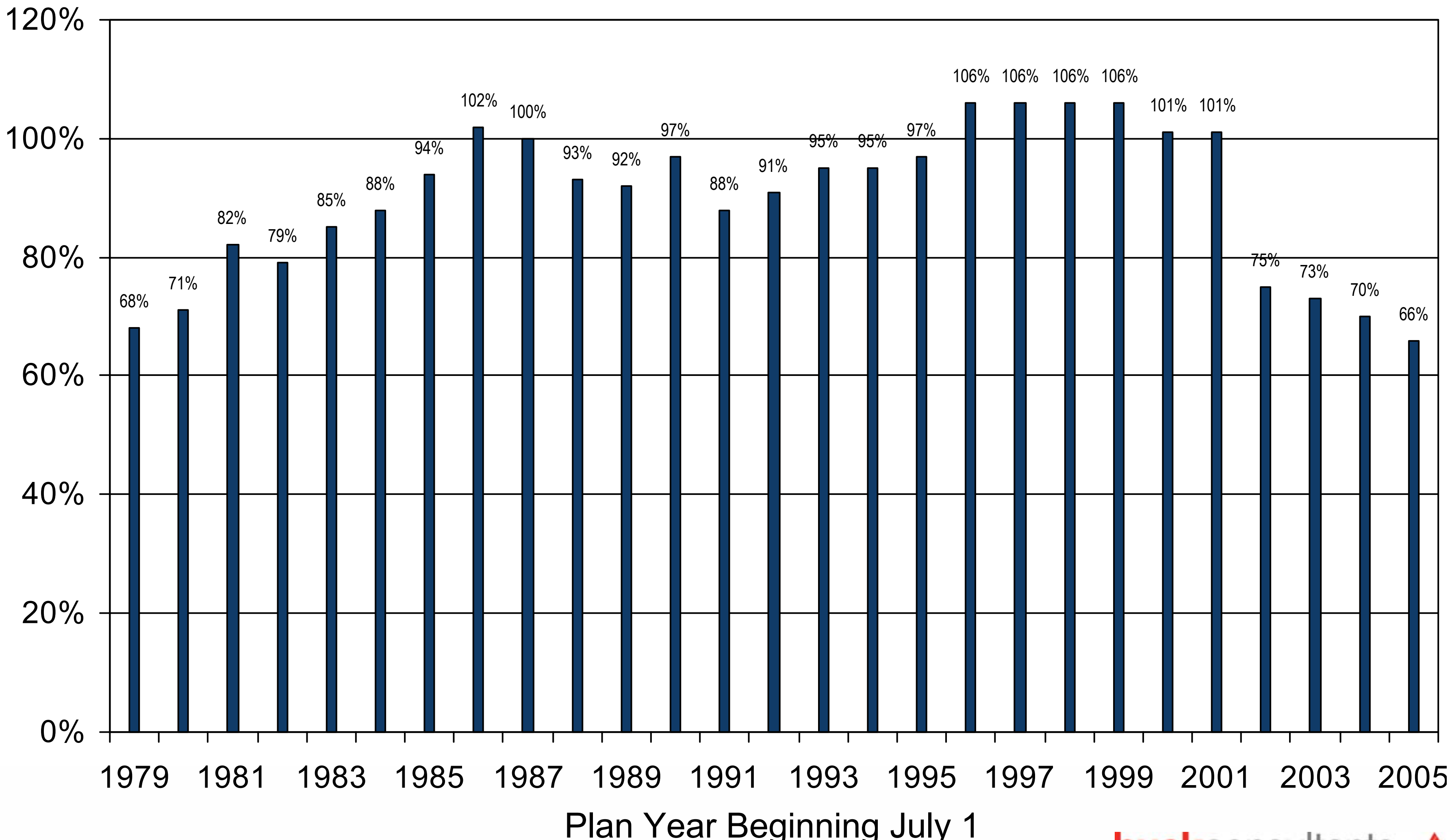
PERS Funding Ratio History

Pension and Postemployment Healthcare
Based on Valuation Assets



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Teachers' Retirement System
Pension and Postemployment Healthcare

Total System Assets ($ in millions)

	Year Ending	
	June 30, 2004	June 30, 2005
1. Actuarial Value (BOY)	$3,752	$3,845
Contributions	126	150
Disbursements	(329)	(359)
Expected Return on Market Value	289	314
2. Preliminary Actuarial Value (EOY)	$3,838	$3,950
3. 5-year Smoothing	7	9
4. Actuarial Value (EOY)	$3,845	$3,959
5. Future Smoothing Amount	67	68
6. Market Value (EOY)	$3,912	$4,027

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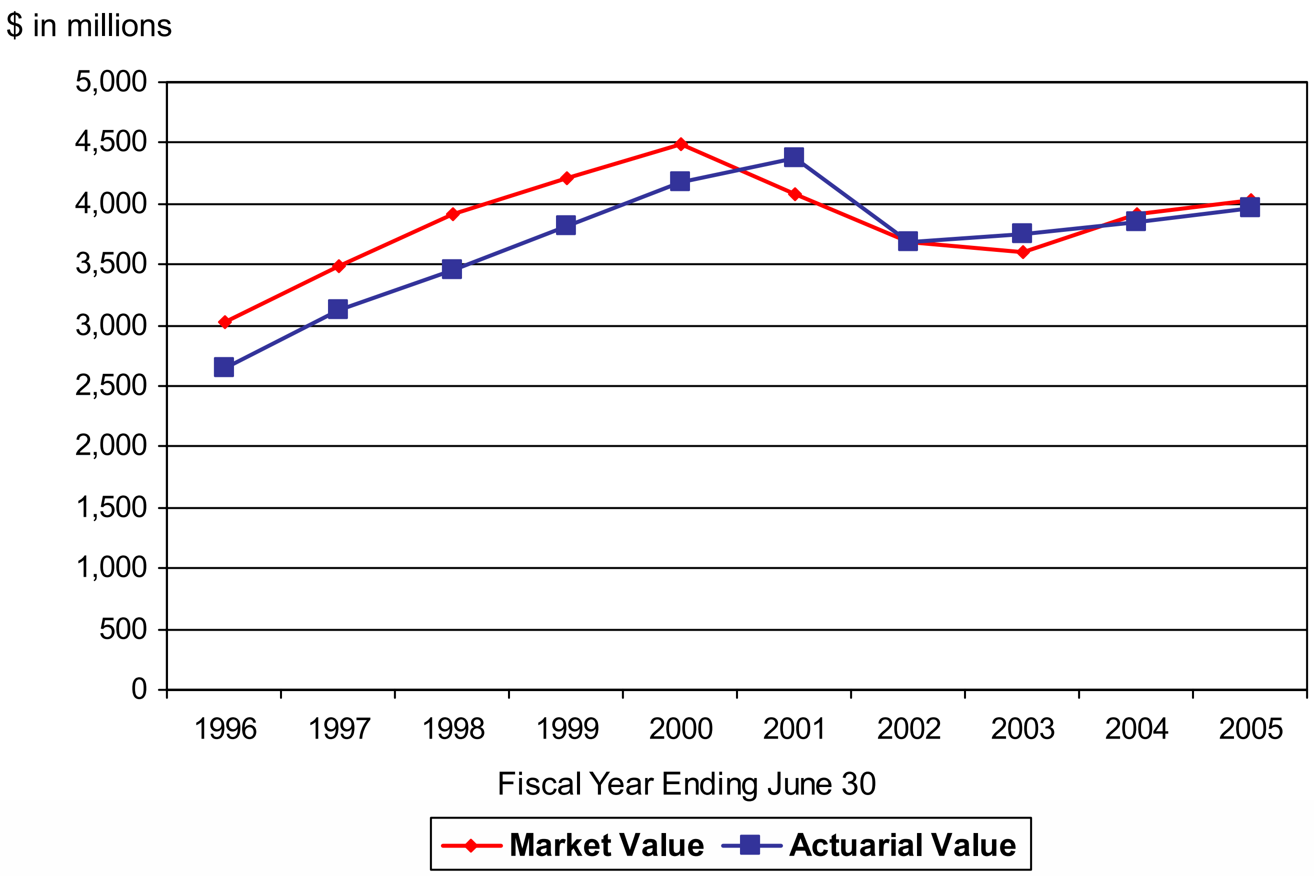
Asset Smoothing for Teachers' Retirement System

Pension and Postemployment Healthcare 1996 – 2005



Teachers' Retirement System
Pension and Postemployment Healthcare

($ in millions)

	July 1, 2004	July 1, 2005
1. Number		
- Active	9,688	9,656
- Inactive Non Vested	2,746	2,874
- Vested Terminations	724	826
- Retired and beneficiaries	8,707	9,020
- Total	21,865	22,376
2. Annual Compensation	$522	$536
3. Assets		
- Market Value	$3,912	$4,027
- Actuarial Value	3,845	3,959
- % AV to MV	98.3%	98.3%
4. Annual Benefit Payments		
- Total	$329	$359
- % of Market Value	8.4%	8.9%
5. Accumulated Member Contributions		
- Total for Actives and Inactives	$647	$672
- Average (actual)	$49,203	$50,300

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Teachers' Retirement System
Pension and Postemployment Healthcare

Actuarial Contribution Under Projected Unit Credit Method
($ in millions)

Funding	July 1, 2004	July 1, 2005
1. Actuarial Accrued Liability	$ 6,123	$ 6,499
2. Actuarial Value of Assets	3,845	3,959
3. Unfunded Actuarial Accrued Liability	$ 2,278	$ 2,540
4. Funded Ratio	62.8%	60.9%
5. Annual Actuarial Contribution		
– Normal Cost	$ 117	$ 119
– Amortization of Unfunded (25) Years	146	166
– Total Contribution	$ 263	$ 285
– % of Pay	50.46%	50.83%
6. Member Contribution		
– Amount	$ 45	$ 49
– % of Pay	8.68%	8.69%
7. Employer Required Contribution		
– Amount	$ 218	$ 236
– % of Pay	41.78%	42.14%

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Teachers' Retirement System
Pension and Postemployment Healthcare

Actuarial Contribution Under Projected Unit Credit Method
($ in millions)

Funding	Pension	Postemployment Healthcare	Total
1. Actuarial Accrued Liability	$ 4,335	$ 2,164	$ 6,499
2. Actuarial Value of Assets	3,185	774	3,959
3. Unfunded Actuarial Accrued Liability	$ 1,150	$ 1,390	$ 2,540
4. Funded Ratio	73.5%	35.8%	60.9%
5. Annual Actuarial Contribution			
– Normal Cost	$ 71	$ 48	$ 119
– Amortization of Unfunded (25) Years	75	91	166
– Total Contribution	$ 146	$ 139	$ 285
– % of Pay	26.04%	24.79%	50.83%
6. Member Contribution			
– Amount			$ 49
– % of Pay			8.69%
7. Employer Required Contribution			
– Amount			$ 236
– % of Pay			42.14%

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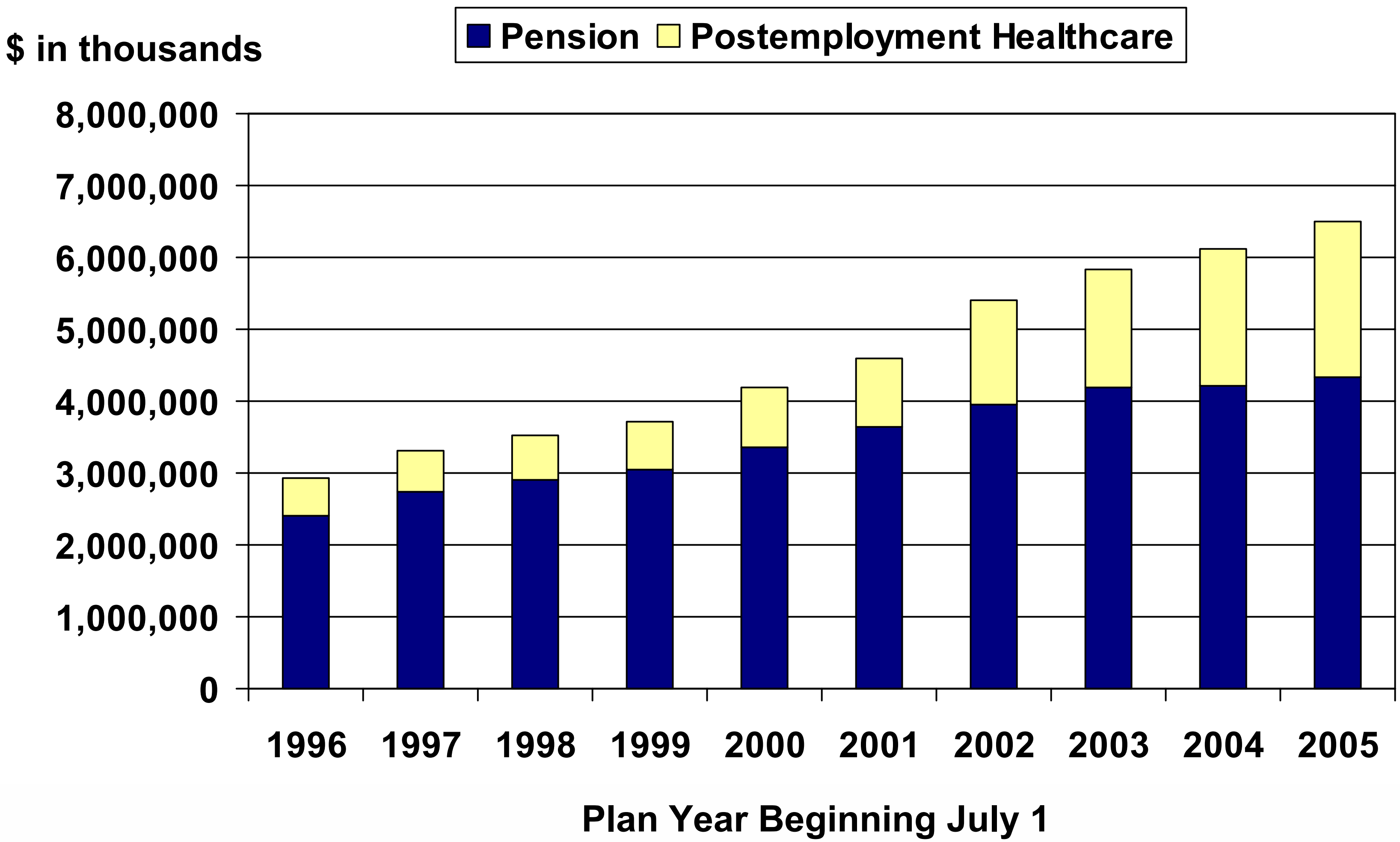
TRS Actuarial Accrued Liability History
Pension and Postemployment Healthcare



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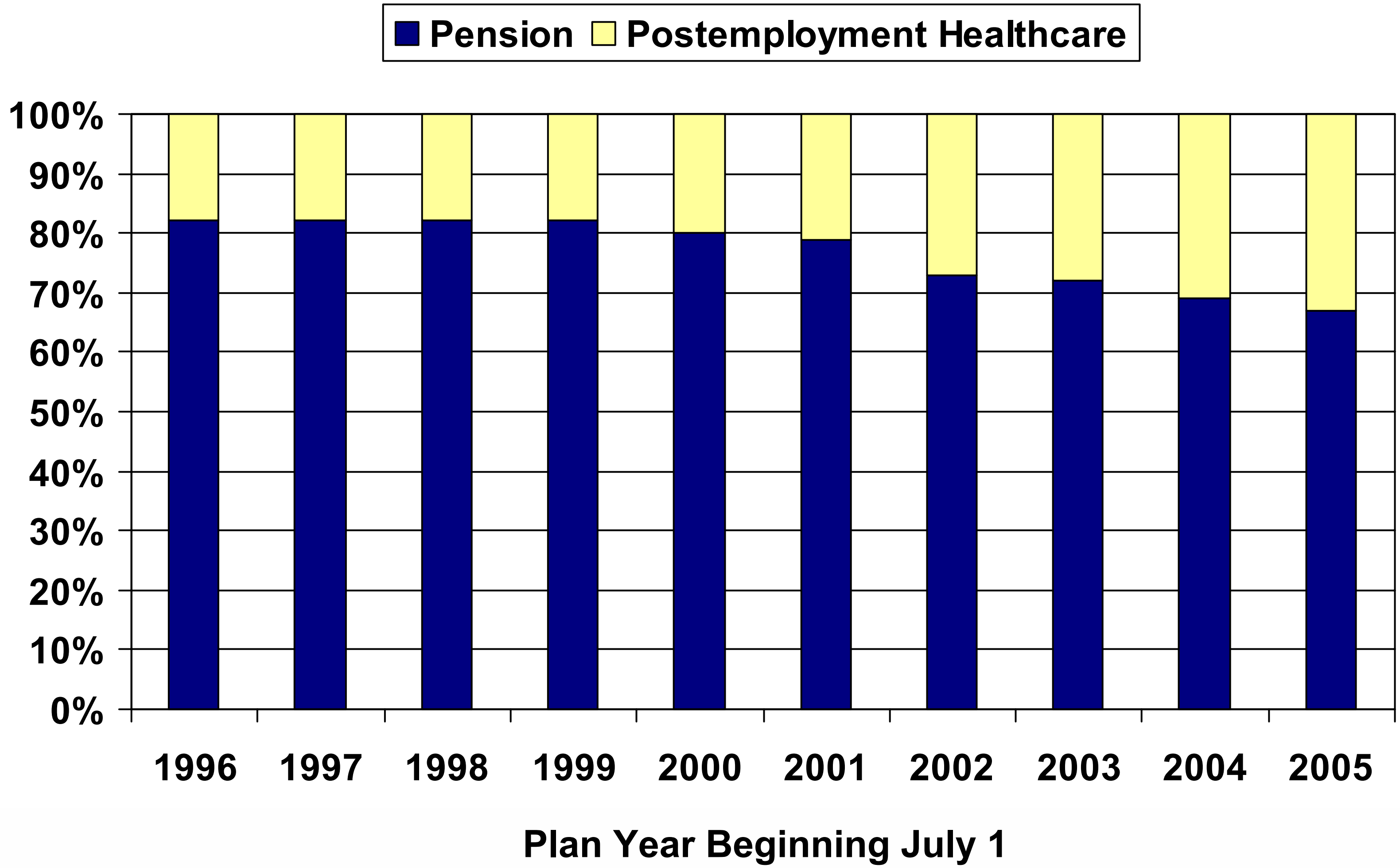
TRS Actuarial Accrued Liability History

Distribution % Between Pension and Postemployment Healthcare



TRS Funding Ratio History

Pension and Postemployment Healthcare
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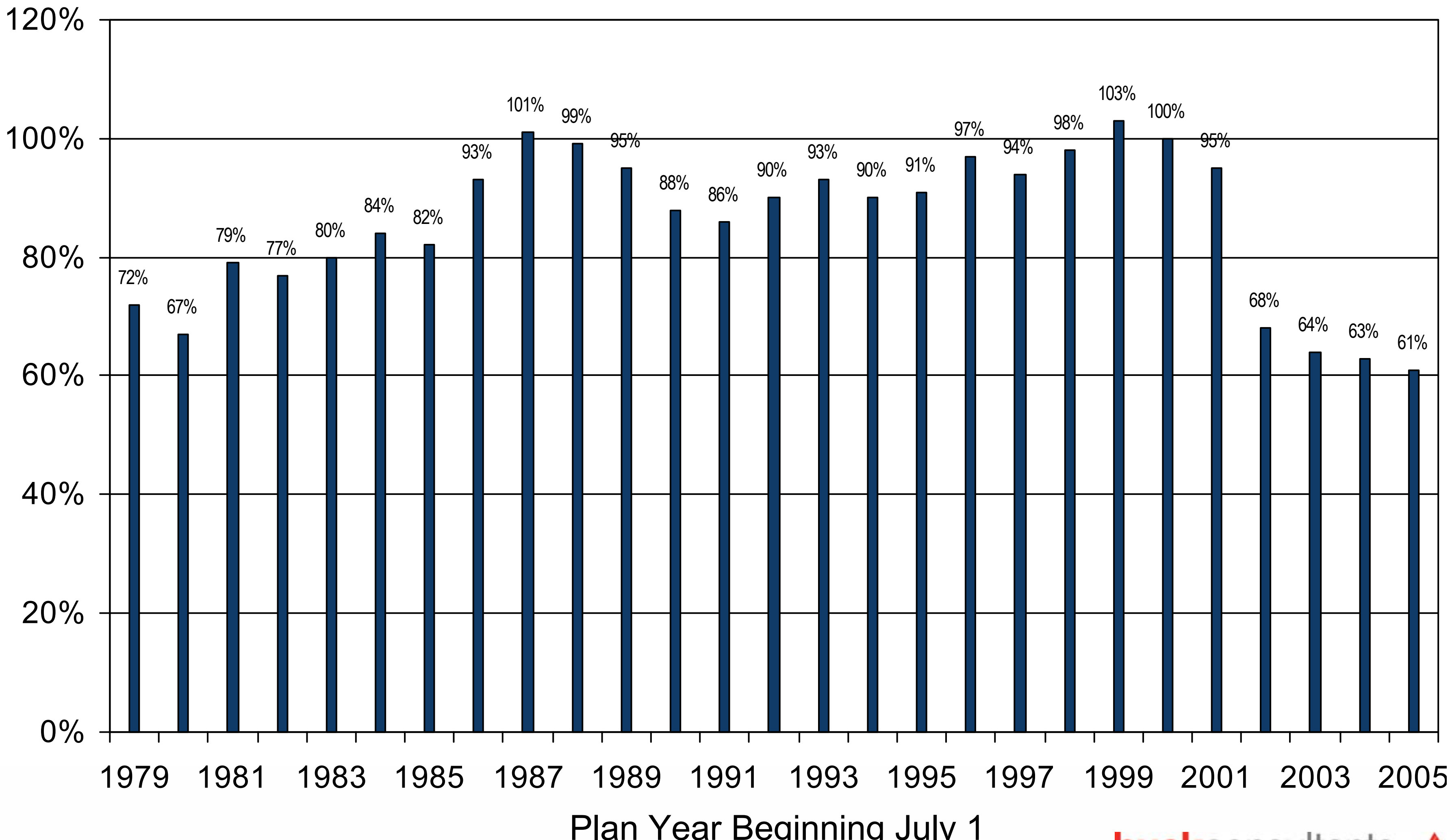

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Conclusions and Comments

PERS and TRS

- Modest asset gains on market value experienced during last year. Rate of return was about 8.55%, or .30% greater than 8.25% assumed.
- Delayed gains from prior years along with the investment gain during last year resulted in Actuarial Value return of 9.1%, or .85% more than 8.25% assumed.
- Loss on liabilities due to decremental experience, healthcare claims and trend, and changes from prior actuary

Conclusions and Comments (cont'd)

- Changes in Unfunded Liability ($ in millions)

	PERS	TRS
2004 Unfunded Liability	$ 3,414	$ 2,278
− Expected increase	65	41
− Asset (gain)	(35)	(15)
− Decremental and other losses	726	117
− Contribution shortfall	232	119
2005 Unfunded Liability	$ 4,402	$ 2,540

Conclusions and Comments (cont'd)

- Increased employer contribution rates required for PERS and TRS

	PERS	TRS
− 2004	28.19%	41.78%
− 2005	32.43%	42.14%
− Change	+4.24%	+0.36%

- Funded ratios declined over last year

	PERS	TRS
− 2004	70.2%	62.8%
− 2005	65.7%	60.9%
− Change	(4.5%)	(1.9%)

Conclusions & Comments – Medicare Part D

- Medicare Part D subsidy is best near-term option
- Wrap-around or PDP likely best long-term option (economically and for accounting)
- GASB proposes treating the subsidy differently than FASB:
  - FASB uses liability net of subsidy, GASB does not
  - GASB Proposed Technical Bulletin No. 2006-a

Conclusions & Comments – Medicare Part A

- Impact of Medicare Part A proportional to members with Part A coverage
- This proportion will grow over time, lowering State costs
- It may be cheaper to pay Medicare Part A premiums than to pay "no-Part A" hospital claims
- Incent retirees to report FICA-covered non-State and FICA-covered spouse employment
- Medicare is likely to pay less to hospitals than the State currently pays
- Hospital backlash?

Questions?

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