Alternative Retirement Benefit Designs
Estimated Replacement Rates and Initial Annual Benefit
Table 1

Sample Employee	Ages Worked	Social Security	Current TSERS		DB Alternative 1		DB Alternative 2		DB Alternative 3	
					Multiplier of 1.7% if you leave with less than 30 years, index benefits at 3% between separation and retirement		Multiplier of 1.62% for 1st 10 years, 1.87% for 2nd 10 years, 2.12% after that		Multiplier of 1.81% for 1st 30 years, 2.0% for service after 30 years	
Early Career vs. Late Career										
1	25-40 (15 years, payable at 65)	Without	8.7%	$ 4,331	16.9%	$ 8,471	8.1%	$ 4,053	8.6%	$ 4,307
		With	45.4%	$ 22,681	53.6%	$ 26,821	44.8%	$22,403	45.3%	$22,657
2	50-65 (15 years)	Without	25.8%	$ 12,882	24.1%	$ 12,033	24.1%	$12,057	25.6%	$12,812
		With	62.5%	$ 31,232	60.8%	$ 30,383	60.8%	$30,407	62.3%	$31,162
Increase in Benefit During Career										
3	30-33 (3 years, payable at 65)	Without	2.6%	$ 1,304	2.6%	$ 1,304	2.6%	$ 1,304	2.6%	$ 1,304
		With	39.3%	$ 19,654	39.3%	$ 19,654	39.3%	$19,654	39.3%	$19,654
4	30-40 (10 years, payable at 65)	Without	5.8%	$ 2,887	11.3%	$ 5,647	5.1%	$ 2,570	5.7%	$ 2,872
		With	42.5%	$ 21,237	48.0%	$ 23,997	41.8%	$20,920	42.4%	$21,222
5	30-50 (20 years, payable at 65)	Without	18.8%	$ 9,407	27.4%	$ 13,689	18.0%	$ 9,019	18.7%	$ 9,355
		With	55.5%	$ 27,757	64.1%	$ 32,039	54.7%	$27,369	55.4%	$27,705
6	30-60 (30 years, payable at 60)	Without	42.4%	$ 21,177	42.4%	$ 21,177	43.5%	$21,759	42.1%	$21,061
		With	79.1%	$ 39,527	79.1%	$ 39,527	80.2%	$40,109	78.8%	$39,411
Continue Working After 30 Years										
7	30-65 (35 years)	Without	60.1%	$ 30,059	60.1%	$ 30,059	62.9%	$31,475	60.7%	$30,342
		With	96.8%	$ 48,409	96.8%	$ 48,409	99.6%	$49,825	97.4%	$48,692
Lump Sum (Amount shown is one-time, not annual benefit)										
8	30-60 (30 years)	Without	132.8%	$ 66,383	132.8%	$ 66,383	132.8%	$66,383	132.8%	$66,383
Costs										
	Employee Contribution		6% of pay		6% of pay		6% of pay		6% of pay	
	Employer Normal Cost		6.3% of pay		6.3% of pay		6.3% of pay		6.3% of pay	

Assumptions
Final salary: $50,000 at age 65. Replacement rate is shown as a percent of this salary.
DC balance converted to lifetime annuity at retirement. Benefit is not inflation indexed to be consistent with current TSERS benefit.
DC plan investment return: 7.0% pre-retirement, 5.0% interest rate for conversion to annuity at retirement.
Salary increase rate: 6% per year before age 35, 5% between age 35 and age 50, 4% per year after age 50.
Social Security is assumed to replace 36.7% of final salary for everyone. This estimates Social Security benefit at age 65. Social Security is not available at age 60, so for the employee who works from age 30 to age 60, we have shown the Social Security estimate for age 65.

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Table 2

Sample Employee	Ages Worked	Social Security	Current TSERS		DB/DC Choice		DB/DC Combination	
					ORP with 6.3% employer contribution		DB multiplier of 1% paid by employer, 6% employee contribution goes to DC	
Early Career vs. Late Career								
1	25-40 (15 years, payable at 65)	Without	8.7%	$ 4,331	29.2%	$ 14,584	19.0%	$ 9,494
		With	45.4%	$ 22,681	65.9%	$ 32,934	55.7%	$ 27,844
2	50-65 (15 years)	Without	25.8%	$ 12,882	17.7%	$ 8,867	22.8%	$ 11,403
		With	62.5%	$ 31,232	54.4%	$ 27,217	59.5%	$ 29,753
Increase in Benefit During Career								
3	30-33 (3 years, payable at 65)	Without	2.6%	$ 1,304	2.9%	$ 1,444	2.9%	$ 1,444
		With	39.3%	$ 19,654	39.6%	$ 19,794	39.6%	$ 19,794
4	30-40 (10 years, payable at 65)	Without	5.8%	$ 2,887	18.9%	$ 9,463	12.4%	$ 6,202
		With	42.5%	$ 21,237	55.6%	$ 27,813	49.1%	$ 24,552
5	30-50 (20 years, payable at 65)	Without	18.8%	$ 9,407	34.8%	$ 17,416	27.3%	$ 13,664
		With	55.5%	$ 27,757	71.5%	$ 35,766	64.0%	$ 32,014
6	30-60 (30 years, payable at 60)	Without	42.4%	$ 21,177	30.2%	$ 15,084	38.0%	$ 18,994
		With	79.1%	$ 39,527	66.9%	$ 33,434	74.7%	$ 37,344
Continue Working After 30 Years								
7	30-65 (35 years)	Without	60.1%	$ 30,059	52.6%	$ 26,283	58.7%	$ 29,337
		With	96.8%	$ 48,409	89.3%	$ 44,633	95.4%	$ 47,687
Lump Sum (Amount shown is one-time, not annual benefit)								
8	30-60 (30 years)	Without	132.8%	$ 66,383	416.3%	$ 208,158	203.1%	$ 101,540
Costs								
	Employee Contribution		6% of pay		6% of pay		6% of pay	
	Employer Normal Cost		6.3% of pay		6.3% of pay		6.3% of pay	