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May 17, 2005

Teachers' Retirement Board
California State Teachers' Retirement System

Re: Defined Benefit Program
Actuarial Valuation as of June 30, 2004

Dear Members of the Board:

At your request, we have performed an actuarial valuation of the Defined Benefit Program of the State Teachers' Retirement Plan as of June 30, 2004. Details about the actuarial valuation are contained in the following report.

I certify that the information included in this report is complete and accurate to the best of my knowledge and belief. All calculations have been prepared in accordance with generally recognized and accepted actuarial principles and practices that are consistent with the applicable Standards of Practice adopted by the American Academy of Actuaries.

Milliman has been engaged by CalSTRS as an independent actuary. The undersigned is a Fellow of the Society of Actuaries, a Member of the American Academy of Actuaries, and an Enrolled Actuary, and is experienced in performing actuarial valuations for large public employee retirement systems.

Any distribution of this report must be in its entirety unless prior written consent is obtained from Milliman, Inc.

Respectfully submitted,

Mark O. Johnson, F.S.A., M.A.A.A., E.A.
Principal and Consulting Actuary

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Section 1
Summary of the Findings

The primary purpose of the actuarial valuation is to analyze the sufficiency of future contributions from members, employers, and the State, to meet the current and future obligations of the Defined Benefit (DB) Program. By using the actuarial methods and assumptions adopted by the Teachers' Retirement Board, this actuarial valuation provides the best estimate of the long-term financing of the DB Program.

The key findings of this Actuarial Valuation are:

- **Funding Sufficiency** — Our findings indicate that, as of June 30, 2004, the future revenue from contributions and appropriations for the DB Program is **not** expected to be sufficient to finance its obligations. This is consistent with our projections in the 2003 Actuarial Valuation.

  The projected revenue shortfall is due primarily to investment return experience over the several years prior to this year that was less than the long-term actuarial assumption of 8% per year. Based on the current Actuarial Value of Assets and all future experience emerging as assumed, the Unfunded Actuarial Obligation will not be amortized over any future period.

(Percent of Earned Salaries)	2004 Valuation	2003 Valuation
Amortization Period based on Current Revenues		
Total Level Rate over the Amortization Period	17.499%	17.384%
Normal Cost Rate	16.827	16.838
Amortization Rate	0.672%	0.546%
Amortization Period (Based on current revenue projections)	*Does not amortize*	*Does not amortize*
Calculated Contribution Rate for 30-Year Funding Period		
Normal Cost Rate	16.827%	16.838%
Amortization Rate	5.235	4.984
Total Level Rate over the Amortization Period	22.062%	21.822%
Estimated Additional Revenue Needed *(Based on current valuation assumptions)*	4.563%	4.438%

Based on the current valuation results, the actuarial value of assets and assumptions about future experience, we find that a level contribution rate of 22.062% will amortize the Unfunded Actuarial Obligation over a thirty-year period. This is equivalent to an **increase of 4.563% of Earned Salaries** for a period of thirty years from the valuation date.

♦ **Supplemental Contributions**

The Legislature has established a test for the funded status of the benefit structure in effect in 1990. Under State law EC §22955(b), additional funds are required to be contributed by the State if at least one of the following two separate conditions is met.

1. Additional funding is required if the sum of the 8% contribution from the members and the 8% contribution from the employers is not sufficient to pay the Normal Cost of the benefits in effect as of July 1, 1990.

2. Additional funding is required if the Actuarial Value of Assets associated with the benefit provisions in effect as of July 1, 1990 is less than the Actuarial Obligation for those benefits.

We found that revenue is sufficient to finance the Normal Costs associated with the 1990 Benefit Structure and there was an Actuarial Surplus as of June 30, 2004. Therefore, **no additional supplemental contributions are needed at this time**. The 2003 valuation showed an Unfunded Actuarial Obligation for the 1990 Benefit Structure of $118 million. The improved funded position of the 1990 Benefit Structure shown in this valuation is primarily due to actuarial gains from recent salary increases that were lower than the long-term assumption.

The funded status of the 1990 Benefit Structure in future years is difficult to predict with certainty because the Actuarial Value of Assets for the 1990 Benefit Structure includes adjustments for contributions and benefits paid in excess of those in place in 1990. The benefits paid can vary considerably depending on demographic experience. In addition, the Actuarial Obligation can only be assessed accurately when current census data is evaluated. Based on information available at this time, and if future experience is consistent with the actuarial assumptions, we believe the 1990 Benefit Structure will continue to have an Actuarial Surplus.

♦ Funding Progress

The Funded Status of a retirement plan is equal to the difference between its Actuarial Value of Assets and its Actuarial Obligation. The Funded Ratio is equal to the Actuarial Value of Assets divided by the Actuarial Liabilities.

($Millions)	2004 Valuation	2003 Valuation
Actuarial Obligation	$ 138,254	$ 131,777
Actuarial Value of Assets	114,094	108,667
Unfunded Actuarial Obligation	$ 24,160	$ 23,110
Funded Ratio	83%	82%

Based on the 2003 Actuarial Valuation, the Unfunded Actuarial Obligation was expected to grow from $23.1 billion to $25.2 billion. The calculated Unfunded Actuarial Obligation of $24.2 includes a net actuarial gain of $1.0 billion from the expected level. A brief summary of the actuarial gains and losses for the year is shown below.

($Millions)	2004 Valuation
Unfunded Actuarial Obligation July 1, 2003	$ 23,110
Actuarial (Gains) and Losses by Source	
Salary increases less than assumed	$ (3,395)
New entrants and rehired members	238
All other non-investment sources	184
Investment return on the Actuarial Value of Assets, including recognition of prior deferred investment losses	1,766
Change in the Health Benefits Fund allocation	175
Net Actuarial (Gains) and Losses	$ (1,032)
Unfunded Actuarial Obligation July 1, 2004	$ 24,160

♦ Changes since the 2003 Valuation

There were no legislative changes since the prior Actuarial Valuation that had a material impact on this valuation. The actuarial assumptions and methods used in this valuation are the same as used in the prior valuation.

♦ **Further Information**

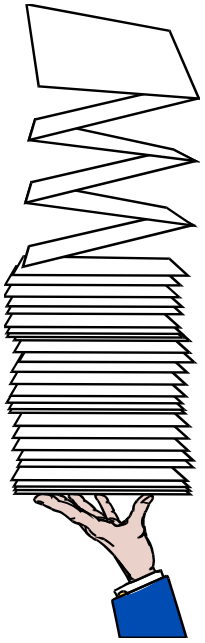
Details of our findings are included in later sections of this report. The Appendices include supporting documentation on the benefit and eligibility provisions used to project future benefits, the actuarial methods and assumptions used to value the projected benefits, and the underlying census data provided by CalSTRS for this valuation.

A summary of the key results of this actuarial valuation is shown on the next page.

Summary of Key Valuation Results

		2004 Valuation	2003 Valuation	Percentage Change
1.	**Total Membership**			
	A. Active Members	444,680	448,478	(0.8)%
	B. Inactive Members	116,128	104,617	11.0%
	C. Retired Members and Beneficiaries	193,245	181,868	6.3%
	D. Total Membership	754,053	734,963	2.6%
2.	**Earned Salaries as of Valuation Date**			
	A. Annual Total *($Millions)*	$ 23,764	$ 23,867	(0.4)%
	B. Annual Average per Active Member	$ 53,441	$ 53,219	0.4%
3.	**Average Allowance Payable**			
	A. Service Retirement	$ 29,856	$ 28,068	6.4%
4.	**Actuarial Obligation *($Millions)***			
	A. Active Members	$ 77,384	$ 77,220	0.2%
	B. Inactive Members	2,645	2,429	8.9%
	C. Retired Members and Beneficiaries	58,225	52,128	11.7%
	D. Total	$ 138,254	$ 131,777	4.9%
5.	**Value of System Assets *($Millions)***			
	A. Fair Value	$ 113,815	$ 99,031	14.9%
	B. Smoothing Reserve	3,391	12,573	(73.0)%
	C Actuarial Value	$ 117,206	$ 111,604	5.0%
	D. Ratio of Actuarial Value to Fair Value	*103%*	*113%*	
	E. Less SBMA Reserve	(1,719)	(1,719)	0.0%
	F. Less THBF Allocation	(1,393)	(1,218)	14.4%
	G Net Actuarial Value	$ 114,094	$ 108,667	5.0%
6.	**Funded Status**			
	A. Unfunded Actuarial Obligation *($Millions)*	$ 24,160	$ 23,110	4.5%
	B. Funded Ratio *(5G ÷ 4D)*	83%	82%	
7.	**Contribution Rates *(percent of salaries)***			
	A. 30-Year Projected Revenue	17.499%	17.384%	0.7%
	B. Normal Cost Rate	16.827	16.838	(0.1)%
	C. Available for Amortization of UAO *(7A – 7B)*	0.672%	0.546%	23.1%
	D. Period to Amortize	Does not amortize	Does not Amortize	
	E. Projected 30-Year Level Funding Rate	22.062%	21.822%	1.1%
	F. Projected Shortfall (Surplus)	4.563%	4.438%	2.8%

Section 2
Scope of the Report



This report presents the actuarial valuation of the Defined Benefit Program of the State Teachers' Retirement Plan as of June 30, 2004.

In reading our Actuarial Certification in Section 3, please pay particular attention to the guidelines employed in the preparation of this report. We also comment on the sources and reliability of both the data and the actuarial assumptions upon which our findings depend. Those comments are the basis for our certification that this report is complete and accurate to the best of our knowledge and belief.

A summary of the key results of this valuation was presented in the previous section. The remainder of this report is arranged as follows.

Section 4 describes the benefit obligations of CalSTRS including the development of the Normal Cost and the Actuarial Obligation.

Section 5 outlines the Fair Value of Assets of the DB Program and the determination of the Actuarial Value of Assets as of June 30, 2004. All of the assets of the Program are available to finance future benefits and expenses, except those allocated for the Supplemental Benefit Maintenance Account and the Teachers' Health Benefits Fund.

Section 6 shows the relationship between the Actuarial Value of Assets and the Actuarial Obligation, also called the Funded Status.

Section 7 discusses the calculations used to determine if a supplemental contribution is required from the State in accordance with EC §22955(b). The key elements of this calculation pertain to an evaluation of the assets and obligations associated with the benefits in effect in 1990.

The funding sufficiency of the current projected revenue stream for the DB Program is tested in Section 8.

This report includes several appendices:

Appendix A — A summary of the current benefit structure, as determined by the provisions of governing law on June 30, 2004.

Appendix B — A summary of the actuarial methods and assumptions used to estimate liabilities and the funding sufficiency.

In our opinion, the assumptions used in the valuation are reasonably related to the past experience of the DB Program, are internally consistent, and represent our best estimate of future conditions affecting the Program. Nevertheless, the emerging costs of the Program will vary from those presented in this report to the extent that actual experience differs from that projected by the actuarial assumptions.

Appendix C — Schedules of valuation data classified by various categories of plan members. We relied upon the membership and beneficiary data supplied by CalSTRS. We compared the data for this and the prior valuation and tested for reasonableness. Based on these tests, we believe the data to be sufficient for the purposes of our calculations.

Appendix D — A glossary of actuarial terms used in this report.

Section 3
Actuarial Certification

The major findings of the 2004 Actuarial Valuation are contained in this report. This report reflects the benefit provisions in effect as of the valuation date. To the best of our knowledge and belief, this report is complete and accurate and contains sufficient information to fully and fairly disclose the funded condition of the Defined Benefit Program as of June 30, 2004.

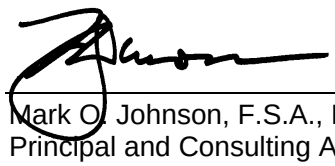
In preparing the valuation, we relied upon the financial and membership data furnished by the System. Although we did not audit this data, we compared the data for this and the prior valuation and tested for reasonableness. Based on these tests, we believe the data to be sufficiently accurate for the purposes of our calculations.

The Teachers' Retirement Board has sole authority to determine the actuarial assumptions and methods used for the valuation of the DB Program. The Board adopted all of the actuarial methods and assumptions used in the 2004 valuation.

The findings have been determined according to actuarial assumptions and methods that were chosen on the basis of recent experience of the DB Program and of current expectations concerning future economic conditions. In our opinion, the assumptions used in the actuarial valuation are appropriate for purposes of the valuation, are internally consistent, and reflect reasonable expectations. The assumptions represent our best estimate of future conditions affecting the DB Program. Nevertheless, the emerging costs of the DB Program will vary from those presented in this report to the extent that actual experience differs from that projected by the assumptions.

On the basis of the foregoing, I hereby certify that, to the best of my knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with principles prescribed by the Actuarial Standards Board and the code of Professional conduct and Qualification Standards for Public Statements of Actuarial Opinion of the American Academy of Actuaries. In addition, the assumptions and methods used meet the parameters set by Governmental Accounting Standards Board Statement No. 25 for financial statement disclosures.

The undersigned is an independent actuary, a Fellow of the Society of Actuaries, a Member of the American Academy of Actuaries, an Enrolled Actuary, and experienced in performing valuations for large public employee retirement systems.



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Section 4
Actuarial Obligation

In this section, the discussion will focus on the commitments of CalSTRS for retirement benefits, which are referred to as its actuarial obligation.

In an active system with new entrants, the actuarial obligation, or liabilities, will generally exceed the actuarial value of assets. This deficiency has to be provided by future contributions and investment returns. An actuarial valuation method sets out a schedule of future contributions and determines if they will amortize any deficiency in an orderly fashion.

Normal Cost

The **Normal Cost** represents the cost assigned to an average member for a given year such that it would meet the continuing costs of a particular benefit if contributed each year starting with the date of membership. The Entry Age Actuarial Cost Method is designed to produce a Normal Cost that remains a level percentage of Earned Salaries, so it is best expressed as a rate.

The following chart shows the Normal Cost Rate has decreased from 16.838% to 16.827% since the last valuation. This decrease by 0.011% of salaries is due to demographic changes in the membership. **Table 1** provides more details on the calculation of the Normal Cost and Normal Cost Rates.

	($Millions)		
	Earned Salaries	**Normal Cost**	**Normal Cost Rate**
June 30, 2003	$ 23,862	$ 4,018	16.838%
June 30, 2004	$ 23,766	$ 3,999	16.827%

The Normal Cost Rate is expected to remain fairly stable as a percentage of Earned Salaries as long as the benefit provisions are not amended, membership experience emerges as assumed, and the demographic characteristics of the membership remain reasonably consistent. The change in the Normal Cost Rate reported in this valuation is well within expected levels of fluctuation.

Actuarial Obligation

The next step in the actuarial valuation process is to project all future DB Program benefit payments for current members and retirees. The level of benefits currently being paid is known, but assumptions are needed to estimate how long they will be paid, and the amount and timing of the payment of future benefits for active and inactive members who are not currently receiving payments. The summation of the discounted values of all of the projected benefit payments for all current members at the assumed rate of return is called the **Actuarial Present Value of Projected Benefits**.

Details are shown in **Table 2** and summarized below.

($Millions)	**2004 Valuation**	**2003 Valuation**
Benefits Being Paid	$ 58,225	$ 52,128
Inactive Deferred Benefits	2,645	2,429
Active Members' Benefits	125,525	125,651
Present Value of Projected Benefits	$ 186,395	$ 180,208
Present Value of Future Normal Costs	48,141	48,431
Actuarial Obligation	$ 138,254	$ 131,777

The **Actuarial Present Value of Future Normal Costs** is the value of all remaining Normal Costs expected to be received over the future working lifetime of current active members. The **Actuarial Obligation** is the difference between the Actuarial Present Value of Projected Benefits and the Actuarial Present Value of Future Normal Costs. The Actuarial Obligation is equal to the assets that would exist if the current Normal Cost Rate had been paid for all members since entry into the Program, and if all experience had emerged as assumed.

Table 1 Normal Cost

($Millions)	2004	2003
Estimated Annual Earned Salaries [1]	$ 23,766	$ 23,862
Present Value of Future Normal Costs for Current Active Members	$ 48,141	$ 48,431
Present Value of Future Earned Salaries for Current Active Members	$286,092	$287,629
Normal Cost		
Retirement	$ 3,653	$ 3,670
Disability	135	136
Death	64	63
Withdrawal	147	149
Total Normal Cost	$ 3,999	$ 4,018
Normal Cost Rate Percent of Earned Salaries		
Retirement	15.371%	15.380%
Disability	0.568	0.570
Death	0.269	0.264
Withdrawal	0.619	0.624
Total Normal Cost	**16.827%**	**16.838%**

Note:

[1] Annual rate of Earned Salaries for active members on the valuation date, excluding active members over age 70 on the valuation date that are assumed to retire immediately and, therefore, do not generate a Normal Cost.

Table 2 Actuarial Obligation

($Millions)	2004	2003
Present Value of Projected Benefits to All Current Members		
Benefits Currently Being Paid		
Service Retirement	$ 53,438	$ 47,684
Disability	1,786	1,697
Survivors	3,001	2,747
Total	58,225	52,128
Benefits to Inactive Members	2,645	2,429
Benefits to Active Members		
Retirement	120,883	121,001
Disability	2,516	2,497
Death	1,466	1,470
Withdrawal	660	683
Total	125,525	125,651
Total Present Value of Benefits	$186,395	$180,208
Present Value of Future Normal Costs	48,141	48,431
Actuarial Obligation	**$138,254**	**$131,777**

Section 5
Valuation Assets

In many respects, an actuarial valuation can be thought of as an inventory process. The inventory is taken as of the actuarial valuation date, which for this valuation is June 30, 2004. On that date, the assets available for the payment of retirement benefits are appraised.

The next step in the valuation process is to calculate the **Actuarial Value of Assets** that will be used to determine the funding status of the Program. As shown in **Table 3**, the Fair Market Value of assets was reported as $113,815 million as of June 30, 2004, up from $99,031 million as of June 30, 2003. **Table 4** shows the asset changes for the period.

Because the underlying calculations in the actuarial valuation are long-term in nature, it is advantageous to use an asset smoothing method to lessen the impact of short-term fluctuations in the value of assets. The asset smoothing method projects an Expected Value of Assets from the Actuarial Value of Assets as of the previous year. The projection uses the assumed rate of investment return, then recognizes only one-third of the difference between the Expected Value and the Market Value to arrive at the Actuarial Value of Assets. The calculation of the Actuarial Value of Assets is shown in **Table 5** and the result is shown below.

($Millions)	**June 30, 2004**	**June 30, 2003**
Fair Market Value	$ 113,815	$ 99,031
Actuarial Value of Assets	$ 117,206	$ 111,604
Unrecognized Investment Gains or (Losses)	$ (3,391)	$ (12,573)
Ratio of AVA to FMV	103%	113%

Due to the asset smoothing method, there are $3.4 billion of investment losses that have not yet been recognized (the difference between the Actuarial and Fair Market Value of Assets). Absent investment returns in excess of the assumed rate in future years to offset the unrecognized investment losses, the current losses will gradually be

reflected in the Actuarial Value of Assets. To illustrate the magnitude of the current difference between the Actuarial Value and Fair Market Value of Assets, a fair market return of approximately 12% in 2004-05 would be required to equal a return of 8% on the Actuarial Value of Assets.

If the future returns on the Fair Market Value of Assets are 8% each year, then as the current unrecognized losses flow through the smoothing method and are recognized, future valuations will show an actuarial loss. The result will be a slow decline in the DB Program's funded status, ultimately increasing the Unfunded Actuarial Obligation by the $3.4 billion of currently unrecognized investment losses.

Table 6 shows a history of the Actuarial Value of Assets compared to the Fair Market Value of Assets.

Table 3 Statement of Program Assets

($Millions)	June, 2004	June, 2003
Invested Assets		
Short-term	$ 1,253	$ 2,436
Debt Securities	27,866	27,734
Equity	74,161	59,012
Alternative	5,406	5,067
Real Estate	6,642	5,779
Total Investments [(1)]	$ 115,328	$ 100,028
Cash and Cash Equivalents	187	162
Receivables	1,625	2,108
Liabilities [(1)]	(3,325)	(3,267)
Fair Market Value of Net Assets	**$ 113,815**	**$ 99,031**

Note:

(1) Excludes offsetting entries from Securities Lending Collateral and Obligation

Table 4 Statement of Changes in Program Assets

($Millions)	June, 2004	June, 2003
Contributions		
Members	$ 1,641	$ 1,558
Employers	1,918	1,892
State of California	549	1,015
Total Contributions	4,108	4,465
Benefits and Expenses		
Retirement, Death, and Survivors	(5,279)	(4,716)
Refunds of Member Contributions	(79)	(62)
Purchasing Power Benefits	(224)	(234)
Administrative Expenses	(94)	(72)
Total Benefits and Expenses	(5,676)	(5,084)
Net Cash Flow	**$ (1,568)**	**$ (619)**
Investment Income		
Realized Income	$ 2,830	$ 3,048
Net Appreciation	13,538	591
Net Securities Lending Income	69	64
Investment Expenses	(83)	(81)
Other (Expense) Income / Adjustment	(2)	0
Net Investment Return	16,352	3,622
Net Increase	**$ 14,784**	**$ 3,003**
Fair Market Value of Net Assets		
Beginning of Year	99,031	96,028
End of Year	**$ 113,815**	**$ 99,031**
Estimated Net Rate of Return [1]	16.6%	3.8%

Note:

[1] Estimated return on Fair Market Value basis, net of all investment expenses and assuming uniform cash flow throughout the year

Table 5 Actuarial Value of Assets

($Millions)	June, 2004	June, 2003
Actuarial Value at Beginning of Year	$ 111,604	$ 109,755
Contributions	4,108	4,465
Benefits and Expenses	(5,676)	(5,084)
Expected Return at 8%	8,866	8,755
Expected Actuarial Value End of Year	$ 118,902	$ 117,891
Fair Market Value	113,815	99,031
Difference between Fair Market Value and Expected Actuarial Value	$ (5,087)	$ (18,860)
Recognition Factor	One-third	One-third
Recognized Gain or Loss	$ (1,696)	$ (6,287)
Actuarial Value at End of Year	**$ 117,206**	**$ 111,604**
Unrecognized Investment Gains or (Losses)	**$ (3,391)**	**$ (12,573)**
Ratio of Actuarial Value of Assets to Fair Market Value of Assets	*103%*	*113%*
Estimated Net Rate of Return [(1)]	6.5%	2.3%

Note:

(1) Estimated return on Actuarial Value basis, net of all investment expenses and assuming uniform cash flow throughout the year

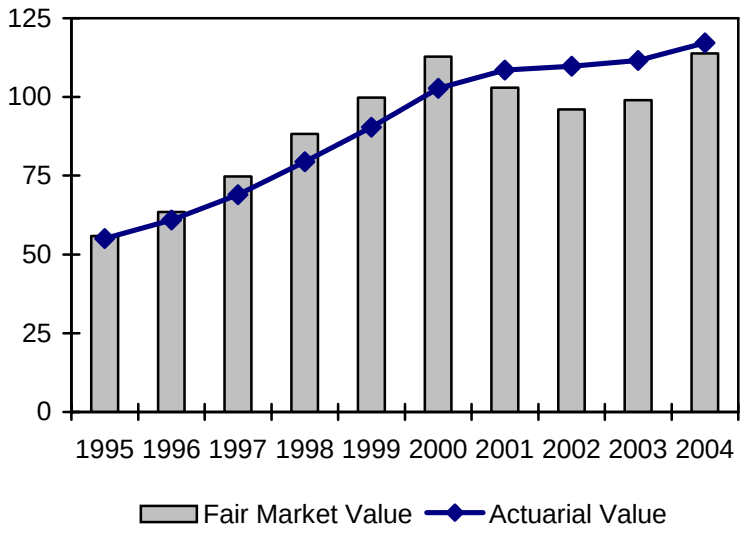
Table 6 History of Actuarial Value of Assets

($Millions) June 30 [1]	Fair Market Value	*Estimated Return* [2]	Actuarial Value	Ratio of Actuarial to Market
1995	$ 55,862	*16.9%*	$ 55,047	99%
1996	63,455	*13.3*	60,876	96
1997	74,778	*17.3*	68,966	92
1998	88,198	*17.3*	79,381	90
1999	99,780	*13.4*	90,265	90
2000	112,771	*12.7*	102,790	91
2001	102,915	*(9.1)*	108,571	105
2002	96,028	*(6.1)*	109,755	114
2003	99,031	*3.8*	111,604	113
2004	113,815	*16.6*	117,206	103

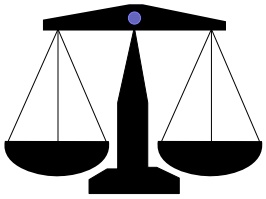
Note:

(1) Asset Method adopted for 1999 valuation with retroactive calculation to July 1, 1993

(2) Estimated return on Fair Market Value basis, net of all investment expenses and assuming uniform cash flow throughout the year



Section 6
Funded Status



The **Unfunded Actuarial Obligation** is the excess of the Actuarial Obligation over the Actuarial Value of Assets, which represents a liability that must be funded over time. Contributions in excess of the Normal Cost are used to amortize the Unfunded Actuarial Obligation. An **Actuarial Surplus** exists if the Actuarial Value of Assets exceeds the Actuarial Obligation.

The **Funded Ratio** is equal to the Actuarial Value of Assets divided by the Actuarial Liability. A Funded Ratio of 100% means the Value of Assets equals the Actuarial Liability, and the DB Program could be financed by contributions equal to the Normal Cost, if all future experience emerges as assumed.

The Funded Status is shown below and in **Table 7**.

($Millions)	2004 Valuation	2003 Valuation
Actuarial Obligation	$ 138,254	$ 131,777
Actuarial Value of Assets		
From Table 5	117,206	111,604
Less SBMA Reserve	(1,719)	(1,719)
Less THBF Allocation	(1,393)	(1,218)
Net for Funding	114,094	108,667
Unfunded Actuarial Obligation	$ 24,160	$ 23,110
Funded Ratio	**83%**	**82%**

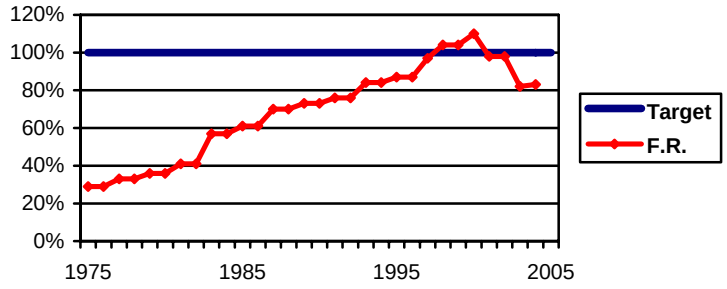
Future benefits provided through the Supplemental Benefits Maintenance Account (SBMA) are not part of the projected benefits included in this valuation. Therefore, the SBMA Reserve is subtracted from the DB Program assets to arrive at the value available to support the benefits included in this valuation.

In addition, the Teachers' Retirement Board has established a policy of allocating funds for future costs associated with the Teachers' Health Benefits Fund (THBF). By subtracting the current value of the set aside, as maintained on an accumulation basis by CalSTRS staff, the remaining DB Program assets are available to support the benefits included in this valuation.

The following table shows a history of the Funded Status of the DB Program.

$(Millions) YE	Actuarial Obligation	Actuarial Value of Assets	Unfunded Actuarial Obligation	Funded Ratio
1975	$ 12,834	$ 3,775	$ 9,059	29%
1977	15,203	5,019	10,184	33%
1979	17,971	6,488	11,483	36%
1981	22,545	9,345	13,200	41%
1983	26,553	15,023	11,530	57%
1985	28,401	17,457	10,944	61%
1987	34,637	24,401	10,236	70%
1989	40,266	29,327	10,939	73%
1991	47,100	36,001	11,099	76%
1993	53,581	45,212	8,369	84%
1995	63,391	55,207	8,184	87%
1997	69,852	67,980	1,872	97%
1998	74,234	77,290	(3,056)	104%
1999	86,349	90,001	(3,652)	104%
2000	93,124	102,225	(9,101)	110%
2001	109,881	107,654	2,227	98%
2003	131,777	108,667	23,110	82%
2004	138,254	114,094	24,160	83%

Historical Funded Ratio



Actuarial Gains and Losses

Comparing the Unfunded Actuarial Obligation as of two valuation dates does not provide enough information to determine if there were actuarial gains or losses. The correct comparison is between the Unfunded Actuarial Obligation on the valuation date and the Expected Unfunded Actuarial Obligation projected from the prior valuation date using the actuarial assumptions in effect since the previous valuation.

The actuarial gains and losses since the 2003 valuation are shown in the following table and with more detail in **Table 8**.

($Millions)	Expected Results	Actual Results	(Gain) or Loss
Actuarial Obligation	$141,227	$138,254	$ (2,973)
Actuarial Value of Assets	116,035	114,094	1,941
Unfunded Actuarial Obligation	$ 25,192	$ 24,160	$ (1,032)
Actuarial (Gains) or Losses by Source			
Impact of New Entrants			$ 167
Impact of Rehired Members			71
Salaries increased less than assumed			(3,395)
All other non-investment sources			184
(Gain) or Loss on the Actuarial Obligation			(2,973)
Investment Return on Actuarial Value of Assets			1,766
Change in the SBMA Reserve			0
Change in the Health Benefit Fund Allocation			175
(Gain) or Loss on the Actuarial Value of Assets			1,941
Total Actuarial (Gain) or Loss			$ (1,032)

Based on the 2003 Actuarial Valuation, the Unfunded Actuarial Obligation was expected to increase to $25,192 million (See Table 14, 2003 report). The actual Unfunded Actuarial Obligation of $24,160 million represents a net actuarial gain of $1,032 million.

The majority of the $2,973 million net gain on the Actuarial Obligation is due to the fact that over the one-year period salary increases were less than the assumed rate. All other non-investment experience represents only a

relatively small portion of the expected Actuarial Obligation. The relatively small "other" loss indicates that the census is consistent from the prior period, and the actual experience (except for salaries) tracked closely with the actuarial assumptions.

On the asset side, there are three sources of the actuarial gain or loss. The largest loss was the investment return on the Actuarial Value of Assets less than the 8% assumption. A portion of this element is due to the recognition of prior deferred investment losses, which occurred even though the fair market value earned in excess of 8% for the period. This is consistent with the 2003 Actuarial Valuation indication that a return in excess of 20% on a Fair Market Value basis would have been required to equal a return of 8% on the Actuarial Value of Assets. The return on the Fair Market Value basis was 16.6% for the year.

The amount allocated to the SBMA Reserve did not change over the year. The Board's allocation of funds for future costs associated with the THBF increased by $175 million due to investment credits greater than the sum of all payments in the year.

Overall, the DB Program is in about the same financial condition as one year ago.

Table 7 Funded Status

($Millions)	2004	2003
Actuarial Obligation *(Table 2)*	$138,254	$131,777
Actuarial Value of Assets		
Calculated *(Table 5)*	117,206	111,604
Less SBMA Reserve	(1,719)	(1,719)
Less THBF Allocation	(1,393)	(1,218)
Program Assets	114,094	108,667
Unfunded Actuarial Obligation	**$ 24,160**	**$ 23,110**
Funded Ratio	**83%**	**82%**

Table 8 Actuarial Gains and Losses

($Millions)		Expected	Actual	(Gain) Loss
Actuarial Obligation				
Actuarial Obligation June 30, 2003		$131,777		
Normal Cost for 2003-04		4,307		
Benefits Paid (Excludes Purchasing Power)		(5,358)		
Expected Interest at 8%		10,501		
Actuarial Obligation June 30, 2004		**$141,227**	**$138,254**	**$ (2,973)**
By Source:	*New Entrants*			*$ 167*
	Rehired Members			*71*
	Salaries Increased Less than Assumed			*(3,395)*
	All Other Non-investment Sources			*184*
	Total (Gain) Loss on the Actuarial Obligation			*$ (2,973)*
Actuarial Value of Assets				
Actuarial Value of Assets June 30, 2003		$108,667		
Expected Contributions for 2003-04		4,083		
Benefits Paid (Excludes Purchasing Power)		(5,358)		
Expected Interest at 8% on A.V.A.		8,643		
Actuarial Value of Assets June 30, 2004		**$116,035**	**$114,094**	**$ 1,941**
By Source:	*Investment Return on Actuarial Value of Assets (including the recognition of prior deferred investment losses)*			*$ 1,766*
	Change in SBMA Reserve			*0*
	Change in Allocation to future THBF costs			*175*
	Total (Gain) Loss on the Actuarial Value of Assets			*$ 1,941*
Unfunded Actuarial Obligation		**$ 25,192**	**$ 24,160**	**$ (1,032)**

Section 7
Supplemental Contributions

Under State law EC §22955(b), additional funds are required to be contributed by the State if at least one of the following two separate conditions is met.

1. Additional funding is required if the sum of the 8% contribution from the members and the 8% contribution from the employers is not sufficient to pay the Normal Cost of the benefits in effect as of July 1, 1990.

2. Additional funding is required if the Actuarial Value of Assets associated with the benefit provisions in effect as of July 1, 1990 is less than the Actuarial Obligation for those benefits.

Normal Cost Deficit: Since the Normal Cost Rate for the 1990 Benefit Structure is less than the 16% rate cited in the statute, there is no Normal Cost Deficit.

	2004 Valuation	2003 Valuation
Normal Cost Deficit – 1990 Benefit Structure		
Normal Cost Rate	14.268%	14.274%
Revenue for 1990 Benefits	16.000	16.000
Normal Cost Deficit	0.000%	0.000%

1990 Unfunded Actuarial Obligation: The Actuarial Obligation for the DB Program is recalculated using the benefit provisions in place during 1990. CalSTRS provides us with separate census data for this determination. The process has limitations since we don't know, for example, if members who retired would have done so if the post-1990 benefit enhancements had not been enacted. However, we believe we are using the most reasonable process to estimate what the Actuarial Obligation would be if only the 1990 benefits were currently in place.

There were no benefit improvements enacted between 1990 and 1998 that had a material cost. All benefit enhancements enacted with effective dates from July 1, 1990 to December 31, 1998 have been presumed to be

cost-neutral. Due to the enhanced retirement benefits enacted since 1990, we are using a separate set of retirement probabilities to evaluate the 1990 Benefit Structure.

The Actuarial Obligation related to the 1990 Benefit Structure is $115,425 million. This compares to the Actuarial Obligation for the DB Program of $138,254 million.

($Millions)	2004 Valuation	2003 Valuation
Actuarial Obligation – 1990 Benefit Structure		
Value of Projected Benefits	$155,979	$151,018
Value of Future Normal Costs	40,554	40,798
Actuarial Obligation	$115,425	$110,220

The Actuarial Value of Assets needs to be adjusted to reflect the contributions started on October 1, 1998, and an estimate of the additional benefits paid out due to the post-1990 benefit increases up to June 30, 2004. This task also has some limitations since we do not have precise data regarding the portion of, or the timing of, benefit payments that would be attributable to only the 1990 benefits.

The most significant adjustments to the assets are:

- Eliminate contributions in excess of 16.00%,
- Add back the member contributions that were directed to the DBS Program,
- Add back the benefit enhancements that have been paid, and
- Adjust for interest.

See **Table 9** for the details of the asset adjustment.

($Millions)	June, 2004	June, 2003
Asset Adjustment – 1990 Benefit Structure		
Actuarial Value for DB Program	$114,094	$108,667
Adjustments per Table 9	742	217
Board's THBF allocation	1,393	1,218
Actuarial Value of Assets	$116,229	$110,102

For purposes of testing the funding sufficiency of the 1990 Benefit Structure, note we did not reserve the Board's allocation of assets for future THBF costs.

The following table summarizes the Funded Status of the 1990 Benefit Structure as detailed in **Table 10**. The 1990 Benefit Structure now has an Actuarial Surplus instead of an Unfunded Actuarial Obligation. The primary reasons for the improved Funded Ratio are the actuarial gain due to lower than expected salary increases and the excess of the 16% contribution over the Normal Cost.

($Millions)	2004 Valuation	2003 Valuation
Funded Status – 1990 Benefit Structure		
Actuarial Obligation	$115,425	$110,220
Actuarial Value of Assets	116,229	110,102
Unfunded Actuarial Obligation	$ (804)	$ 118
Funded Ratio	101%	100%

Supplemental State Contributions: The statute calls for a supplemental State contribution if one of the two conditions described above is met. Since the 2003 Actuarial Valuation showed an Unfunded Actuarial Obligation for the 1990 Benefit Structure, additional State contributions were required quarterly by EC §22955(b) beginning October 1, 2004. The 2003 valuation projected the additional contributions would only be required for one year. Since neither triggering condition is met in the 2004 Actuarial Valuation, the additional funding from the State is no longer necessary at this time.

The funded status of the 1990 Benefit Structure in future years is difficult to predict with certainty because the Actuarial Value of Assets for the 1990 Benefit Structure includes adjustments for contributions and benefits paid in excess of those in place in 1990. The benefits paid can vary considerably depending on demographic experience. In addition, the Actuarial Obligation can only be assessed accurately when current census data is evaluated. Based on information available at this time, and if experience is consistent with the actuarial assumptions, we believe the 1990 Benefit Structure will continue to have an Actuarial Surplus.

Table 9 Asset Adjustment for 1990 Benefit Structure

($Millions)	2004	2003
Assets Allocated to Post-1990 Benefit Increases		
Allocated Market Value at Beginning of Year	$ 193	$ (200)
Contributions During the Year		
EC §22951 at 0.250% of salaries	(58)	(57)
EC §22955 at 1.975% of 2001 calendar year salaries		(430)
EC §22955 at 2.017% of 2002-03 fiscal year salaries	(451)	
2% DBS redirection reallocated to DB Program	490	460
THBF costs reallocated to DB Program	27	22
Total Adjustment to Contributions	8	(5)
Benefits Paid During the Year		
Post-1990 Benefits Paid During the Year	503	417
2% DBS redirection reallocated to DB Program	(45)	(17)
Total Adjustment to Benefits Paid	458	400
Estimated Investment Earnings for the Year [1]	62	(2)
Total Allocated Market Value at End of Year	**$ 721**	**$ 193**
Ratio of Actuarial Value to Market Value [2]	102.979%	112.696%
Actuarial Value of Assets for Post-1990 Benefit Increases	**$ 742**	**$ 217**

Note:

[1] Based on Fair Market Value and uniform cash flow for contributions, benefits, and expenses. The rates of return used in these calculations were 3.78% for 2002-03 and 16.64% for 2003-04.

[2] Developed from Table 5

Table 10 Funding Sufficiency for 1990 Benefit Structure

($Millions)	2004	2003
Actuarial Obligation		
Present Value of Projected Benefits		
Benefits Currently Being Paid	$ 52,600	$ 47,535
Benefits to Inactive Members	2,517	2,379
Benefits to Active Members	100,862	101,104
Total	$155,979	$151,018
Present Value of Future Normal Costs	40,554	40,798
Actuarial Obligation	$115,425	$110,220
Actuarial Value of Assets		
Actuarial Value of Assets *(Table 7)*	$114,094	$108,667
Plus, Asset Adjustment *(Table 9)*	742	217
Plus, Allocation to Health Benefits	1,393	1,218
Net Assets Available	$116,229	$110,102
Funded Status		
Actuarial Obligation	$115,425	$110,220
Actuarial Value of Assets	116,229	110,102
Unfunded Actuarial Obligation (Surplus)	$ (804)	$ 118
Funded Ratio	101%	100%
Amortization Period		
Revenue for 1990 Benefits	16.000%	16.000%
EC 22955(b)	0.000	0.524
Normal Cost Rate	(14.268)	(14.274)
Revenue Available for Amortization	1.732%	2.250%
Amortization Period	N/A	1 year

Table 11 Amortization of 1990 Unfunded Actuarial Obligation

$(Millions) Year	FYE	Beginning Unfunded Act. Oblig.	Amortization Payment: Total [1] Contrib.	Amortization Payment: Normal Cost	Amortization Payment: Available Amtzn.	Interest Charge at 8%	Ending Unfunded Act. Oblig.
1	2005	$ (804)	$ 4,169	$ 3,635	$ 534	$ (85)	$ (1,423)
2	2006	(1,423)	4,281	3,790	491	(133)	(2,047)
3	2007	(2,047)					

Note:

[1] The total contribution includes $91,950,000 in 2004-05 and $30,650,000 in 2005-06 for the State's additional contribution pursuant to EC §22955(b) based on the 2003 Actuarial Valuation.

Please refer to the text for a further explanation. The Unfunded Actuarial Obligation for the 1990 Benefit Structure as of June 30, 2003 was expected to be amortized in one year.

Section 8
Funding Sufficiency

The contributions to fund the DB Program include those listed below and described in **Table 12**. Since each contribution is not paid uniformly over time as a percentage of Earned Salaries, we have calculated an equivalent rate over a 30-year period, the period used to test the sufficiency of the statutory revenue stream.

Source of Revenue	Current Rate	Equivalent Rate
Members	8.000%	8.000%
Directed to DBS Accounts	(2.000)	(0.627)
Employers	8.000	8.000
Employers	0.250	0.250
State	2.017	1.851
State – 1990 Benefit Structure	0.524	0.025
Equivalent Level Contribution Rate over 30 Years		**17.499%**

Twenty-five percent of the members' contributions are temporarily directed to the Defined Benefit Supplement Program (DBS) through December of 2010. When converted to a level percentage over a thirty-year period, this is equal to a reduction in the value of contributions of only 0.627% of future salaries.

The State contribution rate will be 2.017% of the second preceding fiscal year Earned Salaries which is equivalent to a lesser percentage of current Earned Salaries. For example, the State contribution for the 2004-05 will be equal to 2.017% of the 2002-03 Earned Salaries. Based on two years of known future contributions and projections for the rest, the equivalent rate of the thirty-year period is 1.851% of current Earned Salaries.

As demonstrated in Tables 10 and 11, the supplemental contribution from the State is not needed at this time. For purposes of the test of Funding Sufficiency, we have only included the four quarterly supplemental contributions from EC 22955(b) beginning on October 1, 2004.

Note that the future costs associated with the Teachers' Health Benefit Fund have been set aside through a reduction to the Actuarial Value of Assets. Therefore, it is

not appropriate to deduct the expected annual costs from the revenue intended to fund the DB Program benefits.

The calculation of the equivalent rates in **Table 13** results in 17.499% of Earned Salaries over a thirty-year period.

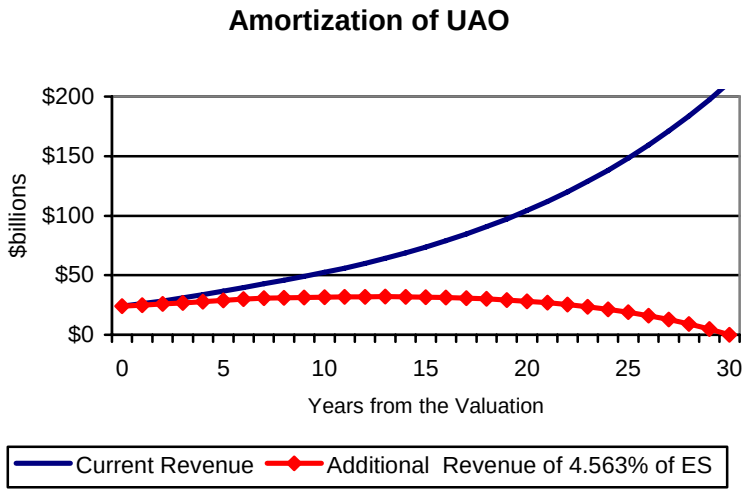
Table 14 shows the amortization of the Unfunded Actuarial Obligation on a year-by-year basis. Based on the current Actuarial Value of Assets and all future experience emerging as assumed, the Unfunded Actuarial Obligation will not be amortized over the next 30 years. This is consistent with our projections from 2003 as well. **Table 15** summarizes these findings.

	2004 Valuation	2003 Valuation
Normal Cost Rate	16.827%	16.838%
Amortization Rate	5.235	4.984
Total Level Rate over a 30-Year Period	22.062%	21.822%
Projected Revenue	17.499%	17.384%
Estimated Additional Revenue Needed	4.563%	4.438%

Even though the DB Program is in a slightly better funded position than one year ago, the future thirty-year funding requirement is somewhat higher as a percentage of future salaries. The reason for this is that the decline in the active membership, and the fact that average Earned Salaries increased less than expected for the year, means the Unfunded Actuarial Obligation will be spread over a lower salary base.

Table 16 (in the same format as Table 14) shows the amortization of the Unfunded Actuarial Obligation over a thirty-year period **if the contribution revenue is increased by 4.563%** of current year Earned Salaries. We did not address the source of the additional revenue as it is not relevant to the amortization schedule.

The following graph illustrates the expected amortization of the Unfunded Actuarial Obligation with and without the additional revenue stream.



One of the future contingencies that may lessen the impact of the funding shortage is the potential growth of the active DB Program membership. An increase in the number of active members will improve the financial condition of the DB Program because the additional revenue should exceed the expected Normal Cost Rate (the Normal Cost Rate is the expected total cost for a new member). The excess of revenue over the Normal Cost Rate for additional members will provide added resources to finance the current Unfunded Actuarial Obligation.

Table 12 Contributions

		Current Rate	Equivalent Rate [1]
EC 22901	Members	8.000%	8.000%
EC 22901.5	Directed to DBS Accounts [2]	(2.000)	(0.627)
EC 22950	Employers	8.000	8.000
EC 22950 (c)	Employers for THBF [3]	*as needed*	0.000
EC 22951	Employers	0.250	0.250
EC 22955 (a)	State [4]	2.017	1.851
EC 22955 (b)	State [5]	0.524	0.025
Equivalent Level Contribution Rate over 30-Year Period			**17.499%**

Note:

(1) Equivalent level contribution rate payable over the next 30 years. See Table 13 for details.

(2) 25% of Member Contributions will be directed to Defined Benefit Supplement Accounts through December 31, 2010.

(3) The Teachers' Health Benefit Fund is financed by a redirection of employer contributions. The Teachers' Retirement Board has set aside DB Program assets to finance these future costs. See Table 7.

(4) The State's contribution of 2.017% is paid quarterly based on second prior fiscal year salaries.

(5) Additional funding is provided only if the Normal Cost Rate is greater than 16.000% of salaries for benefits in effect on July 1, 1990 or there is an Unfunded Actuarial Obligation (related to the 1990 Benefit Structure). The 1990 Benefit Structure was not adequately funded as of the 2003 valuation and four quarterly contributions were required. See Tables 10 and 11 from the 2003 valuation.

Table 13 30-Year Projection of Contributions

($Millions) FYE	Projected Salaries	Member *22901*	Member DBS *22901.5*	Employer *22950 & 22951*	State *22955(a)*	State *22955(b)*	Total Contrib.
2005	$ 25,479	$ 2,038	$ (510)	$ 2,102	$ 472	$ 92	$ 4,195
2006	26,561	2,125	(531)	2,191	469	31	4,285
2007	27,690	2,215	(554)	2,284	514	0	4,460
2008	28,867	2,309	(577)	2,382	536	0	4,649
2009	30,094	2,408	(602)	2,483	559	0	4,847
2010	31,373	2,510	(627)	2,588	582	0	5,053
2011	32,706	2,617	(327)	2,698	607	0	5,595
2012	34,096	2,728	0	2,813	633	0	6,173
2013	35,545	2,844	0	2,933	660	0	6,436
2014	37,056	2,964	0	3,057	688	0	6,709
2015	38,631	3,090	0	3,187	717	0	6,994
2016	40,273	3,222	0	3,323	747	0	7,292
2017	41,984	3,359	0	3,464	779	0	7,602
2018	43,769	3,502	0	3,611	812	0	7,925
2019	45,629	3,650	0	3,764	847	0	8,262
2020	47,568	3,805	0	3,924	883	0	8,613
2021	49,590	3,967	0	4,091	920	0	8,979
2022	51,697	4,136	0	4,265	959	0	9,360
2023	53,895	4,312	0	4,446	1,000	0	9,758
2024	56,185	4,495	0	4,635	1,043	0	10,173
2025	58,573	4,686	0	4,832	1,087	0	10,605
2026	61,062	4,885	0	5,038	1,133	0	11,056
2027	63,657	5,093	0	5,252	1,181	0	11,526
2028	66,363	5,309	0	5,475	1,232	0	12,016
2029	69,183	5,535	0	5,708	1,284	0	12,526
2030	72,124	5,770	0	5,950	1,339	0	13,059
2031	75,189	6,015	0	6,203	1,395	0	13,614
2032	78,384	6,271	0	6,467	1,455	0	14,192
2033	81,716	6,537	0	6,742	1,517	0	14,795
2034	85,189	6,815	0	7,028	1,581	0	15,424
PV [(1)]	$461,501	$ 36,920	$ (2,897)	$ 38,074	$ 8,543	$ 116	$ 80,756
Level Rate [(2)]		**8.000%**	**(0.627)%**	**8.250%**	**1.851%**	**0.025%**	**17.499%**

Note:

(1) Present Value as of the valuation date, of 30-year series of contributions and appropriations.

(2) Equivalent level rate payable over the 30-year period.

Table 14 Amortization of Unfunded Actuarial Obligation [1]

$(Millions) Year	FYE	Beginning Unfunded Act. Oblig.	Amortization Payment: Total Contrib.	Amortization Payment: Normal Cost	Amortization Payment: Available Amtzn.	Interest Charge at 8%	Ending Unfunded Act. Oblig.
1	2005	$ 24,160	$ 4,195	$ 4,287	$ (92)	$ 1,936	$ 26,188
2	2006	26,189	4,285	4,469	(184)	2,102	28,475
3	2007	28,476	4,460	4,659	(199)	2,286	30,961
4	2008	30,962	4,649	4,857	(208)	2,485	33,655
5	2009	33,655	4,847	5,064	(217)	2,701	36,573
6	2010	36,573	5,053	5,279	(226)	2,935	39,734
7	2011	39,734	5,595	5,503	92	3,175	42,817
8	2012	42,818	6,173	5,737	436	3,408	45,790
9	2013	45,790	6,436	5,981	455	3,645	48,980
10	2014	48,981	6,709	6,235	474	3,900	52,407
11	2015	52,407	6,994	6,500	494	4,173	56,086
12	2016	56,086	7,292	6,777	515	4,467	60,038
13	2017	60,038	7,602	7,065	537	4,782	64,283
14	2018	64,283	7,925	7,365	560	5,121	68,844
15	2019	68,844	8,262	7,678	584	5,485	73,745
16	2020	73,745	8,613	8,004	609	5,876	79,012
17	2021	79,012	8,979	8,344	635	6,296	84,673
18	2022	84,674	9,360	8,699	661	6,748	90,761
19	2023	90,761	9,758	9,069	689	7,234	97,306
20	2024	97,306	10,173	9,454	719	7,756	104,343
21	2025	104,343	10,605	9,856	749	8,318	111,912
22	2026	111,912	11,056	10,275	781	8,922	120,053
23	2027	120,054	11,526	10,712	814	9,572	128,812
24	2028	128,812	12,016	11,167	849	10,272	138,235
25	2029	138,235	12,526	11,641	885	11,024	148,374
26	2030	148,374	13,059	12,136	923	11,834	159,285
27	2031	159,286	13,614	12,652	962	12,705	171,029
28	2032	171,029	14,192	13,190	1,002	13,643	183,670
29	2033	183,670	14,795	13,750	1,045	14,653	197,278
30	2034	197,277	15,424	14,335	1,089	15,739	211,927

Note:

[1] Based on the actuarial value of assets.

Table 15 Funding Sufficiency

($Millions)	June, 2004	June, 2003
Funded Status ***(Table 7)***		
Actuarial Obligation	$ 138,254	$ 131,777
Actuarial Value of Assets	114,094	108,667
Unfunded Actuarial Obligation	$ 24,160	$ 23,110
Funded Ratio	83%	82%
Level Contributions over 30 Years ***(Table 12)***	17.499%	17.384%
Amortization Period based on Current Revenues		
Total Level Rate over the Amortization Period	17.499%	17.384%
Normal Cost Rate	16.827	16.838
Amortization Rate	0.672%	0.546%
Amortization Period (Based on current revenue projections)	*Does not amortize*	*Does not amortize*
Calculated Contribution Rate for 30-Year Funding Period		
Normal Cost Rate	16.827%	16.838%
Amortization Rate	5.235	4.984
Total Level Rate over the Amortization Period	22.062%	21.822%
Estimated Additional Revenue Needed *(Based on current valuation assumptions)*	4.563%	4.438%

Table 16 Amortization of Unfunded Actuarial Obligation [1] Including Additional Contributions [2]

$(Millions) Year	FYE	Beginning Unfunded Act. Oblig.	Amortization Payment: Total [2] Contrib.	Amortization Payment: Normal Cost	Amortization Payment: Available Amtzn.	Interest Charge at 8%	Ending Unfunded Act. Oblig.
1	2005	$ 24,160	$ 5,357	$ 4,287	$ 1,070	$ 1,891	$ 24,981
2	2006	24,981	5,497	4,469	1,028	1,958	25,911
3	2007	25,912	5,723	4,659	1,064	2,031	26,879
4	2008	26,879	5,967	4,857	1,110	2,107	27,876
5	2009	27,876	6,220	5,064	1,156	2,185	28,905
6	2010	28,905	6,485	5,279	1,206	2,265	29,964
7	2011	29,964	7,087	5,503	1,584	2,335	30,715
8	2012	30,716	7,729	5,737	1,992	2,379	31,103
9	2013	31,103	8,058	5,981	2,077	2,407	31,433
10	2014	31,433	8,400	6,235	2,165	2,430	31,698
11	2015	31,697	8,757	6,500	2,257	2,447	31,887
12	2016	31,888	9,130	6,777	2,353	2,459	31,994
13	2017	31,993	9,518	7,065	2,453	2,463	32,003
14	2018	32,004	9,922	7,365	2,557	2,460	31,907
15	2019	31,907	10,344	7,678	2,666	2,448	31,689
16	2020	31,689	10,783	8,004	2,779	2,426	31,336
17	2021	31,336	11,242	8,344	2,898	2,393	30,831
18	2022	30,832	11,720	8,699	3,021	2,348	30,159
19	2023	30,159	12,218	9,069	3,149	2,289	29,299
20	2024	29,300	12,737	9,454	3,283	2,215	28,232
21	2025	28,232	13,278	9,856	3,422	2,124	26,934
22	2026	26,935	13,842	10,275	3,567	2,015	25,383
23	2027	25,382	14,431	10,712	3,719	1,885	23,548
24	2028	23,547	15,044	11,167	3,877	1,732	21,402
25	2029	21,402	15,683	11,641	4,042	1,554	18,914
26	2030	18,913	16,350	12,136	4,214	1,348	16,047
27	2031	16,047	17,045	12,652	4,393	1,111	12,765
28	2032	12,766	17,769	13,190	4,579	842	9,029
29	2033	9,028	18,524	13,750	4,774	535	4,789
30	2034	4,789	19,312	14,335	4,977	188	0

Note:

[1] Based on the actuarial value of assets.

[2] An additional contribution of 4.563% of Earned Salaries is included for each of the thirty years. This schedule is for illustrative purposes only since any legislated increase in contributions would likely be effective after the valuation date.

Appendix A
Provisions of Governing Law

All of the actuarial calculations contained in this report are based upon our understanding of the CalSTRS DB Program as contained in Part 13 of the California Education Code. The provisions used in this valuation are summarized below for reference purposes.

Normal Retirement

Eligibility Requirement:	Age 60 with five years of credited service.
Allowance:	Two percent of final compensation for each year of credited service.
Final Compensation:	Average salary earnable for the highest three consecutive years of credited service for one position. For members with 25 years of service, the calculation is based on the highest average compensation earnable in a consecutive 12-month period.
Credited Service:	For each year of membership, credited service is granted based on the ratio of salary earned to full-time salary earnable for one position.
Sick Leave Service Credit:	Credited service is granted for unused sick leave at the time of retirement. Sick Leave Service Credit can not be used for eligibility for One-Year Final Compensation, the Career Bonus, nor the Longevity Bonus.
Career Bonus:	If a member has thirty years of credited service, the age factor is increased by 0.2%. However, the maximum age factor is 2.4%.
Longevity Bonus:	For members attaining 30 years of service by January 1, 2011, a longevity bonus of $200 per month is added to the unmodified allowance. The bonus is increased to $300 per month with 31 years of service, and $400 per month with 32 or more years of service.
IRC Section 415:	Benefits are subject to limits imposed under Internal Revenue Code (IRC) Section 415. However, no limits are imposed in the valuation of the DB Program in order to address the potential pay-as-you-go funding needs of the Teachers' Replacement Benefits Program Fund.
IRC Section 401(a)(17):	Compensation is limited under IRC Section 401(a)(17) and assumed to increase at the rate of inflation.

Early Retirement

Eligibility Requirement:	Age 55 with five years of credited service, or age 50 with 30 years of credited service.
Benefit Reduction:	A 1/2% reduction in the normal retirement allowance for each full month or partial month the member is younger than age 60, plus a reduction of 1/4% for each full month or partial month the member is younger than age 55.

Late Retirement

Allowance:	Members continue to earn additional service credit after age 60. The 2% age factor increases by 0.033% for each quarter year of age that the member is over age 60, up to a maximum of 2.4%.

Deferred Retirement

Allowance:	Any time after satisfying the minimum service requirement, a member may cease active service, leave the accumulated contributions on deposit, and later retire upon attaining the minimum age requirement.

Post-Retirement Benefit Adjustment

Benefit Improvement:	Two percent simple increase on September 1 following the first anniversary of the effective date of the allowance, applied to all continuing allowances.

Disability Allowance - Coverage A

Eligibility Requirement:	Member has five years of credited California service and has not attained age 60.
Allowance:	Fifty percent of final compensation or 5% of final compensation for each year of service credit if over age 45 with less than 10 years of service credit.
Children's Benefit:	10% for each eligible dependent child, up to a maximum of 40% of final compensation. The increment for each eligible child continues until the child marries or attains age 22.

Offsets:	Allowance, including children's increment, is reduced by disability benefits payable under Social Security, Workers' Compensation and district-paid income protection plan.

Disability Allowance - Coverage B

Eligibility Requirement:	Member has five years of credited California service.
Allowance:	Fifty percent of final compensation, regardless of age and service credit.
Children's Benefit:	10% for each eligible child up to four children, for a maximum of 40% of final compensation. The increment for each child continues until the child attains age 21, regardless of student, marital, or employment status.
Offsets:	The member's allowance is reduced by disability benefits payable under Workers' Compensation.

Death Before Retirement - Coverage A

Eligibility Requirement:	One or more years of service credit for active members or members receiving a disability allowance.
Lump Sum Payment:	$6,163 lump sum to the designated beneficiary. If there is no surviving spouse, domestic partner or eligible children, the contributions and interest are paid to the designated beneficiary.
Allowance:	The surviving spouse or domestic partner with eligible children will receive a family benefit of 40% of final compensation for as long as there is at least one eligible child. An additional 10% of final compensation is payable for each eligible child up to a maximum benefit of 90%. If there is no surviving spouse or domestic partner, an allowance of 10% of final compensation is payable to eligible children up to a maximum benefit of 50%. When there are no eligible children, the spouse or domestic partner may elect to receive one half of a 50% joint and survivor allowance projected to age 60, or take a lump sum payment of the remaining contributions and interest.

Death Before Retirement - Coverage B

Eligibility:	One or more years of service credit for active members.
Lump Sum Payment:	$24,652 lump sum to the designated beneficiary. If there is no surviving spouse or domestic partner, the contributions and interest are paid to the designated beneficiary.
Allowance:	A lump sum payment of the contributions and interest. or One half of a 50% joint and survivor allowance, beginning on the member's 60th birthday, or immediately with a reduction based on the member and spouse's (or domestic partner's) age at the time the benefit begins. If the surviving spouse or domestic partner elects a monthly allowance, each eligible child would receive 10% of the member's final compensation, with a maximum benefit of 50%.

Death After Retirement

Lump Sum Payment:	$6,163 lump sum to the designated beneficiary.
Annuity Form:	If the retirant had elected one of the joint and survivor options, the retirement allowance would be modified in accordance with the option selected. If no option had been elected, payment of the unpaid contributions and interest, if any, remaining in the retirant's account.

Termination from the Program

Refund:	Refund of contributions with interest as credited to the member's account to date of withdrawal. A refund terminates membership and all rights to future benefits from the System.
Re-entry After Refund:	Former members who re-enter the System, may redeposit all amounts previously refunded plus regular interest. The member must earn one year of credited service after re-entry before becoming eligible for System benefits.

Appendix B
Actuarial Methods and Assumptions

This section of the report discloses the actuarial methods and assumptions used in this Actuarial Valuation. These methods and assumptions have been chosen on the basis of recent experience of the DB Program and on current expectations as to future economic conditions.

The assumptions are intended to estimate the future experience of the members of the DB Program and of the DB Program itself in areas that affect the projected benefit flow and anticipated investment earnings. Any variations in future experience from that expected from these assumptions will result in corresponding changes in estimated costs of the DB Program's benefits.

Please refer to the 2003 Actuarial Experience Analysis for further information on the revisions made to the actuarial assumptions in 2003. There were no changes in assumptions or methods in this actuarial valuation.

Actuarial Cost Method

The accruing costs of all benefits are measured by the Entry Age Actuarial Cost Method. The projected revenue in excess of the Normal Cost is tested for sufficiency to amortize the Unfunded Actuarial Obligation created by this method. Amortization is calculated on a level percentage of salary including general wage inflation but no increase or decrease in the number of active members.

Method: The actuarial present value of projected benefits for each individual member included in the valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages. The portion of this actuarial present value allocated to a valuation year is called the Normal Cost. The Normal Cost is based on the benefit structure available to new entrants on the valuation date. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future Normal Costs is called the Actuarial Obligation. The excess of the Actuarial Obligation over the Actuarial Value of Assets is called the Unfunded Actuarial Obligation. If the Actuarial Value of Assets exceeds the Actuarial Obligation, the difference is called the Actuarial Surplus.

Entry Age: The ages at entry of future active members are assumed to average the same as the entry ages of the present active members they replace. If the number of active members should increase (or decrease), it is further assumed that the average entry age of the larger (or smaller) group will be the same, from an actuarial standpoint, as that of the present active group. Under these assumptions, the Normal Cost Rate will not vary with the termination of the present active membership, or with an expansion or contraction of the active membership.

Asset Valuation Method

The assets are valued using a method that delays recognition of investment gains or losses. The expected actuarial value is the prior year's actuarial value increased with net cash flow of funds, and all increased with interest during the past year at the expected investment return assumption. One-third of the difference between the expected actuarial value of assets and the Fair Market Value of assets is added to the expected actuarial value of assets to arrive at the Actuarial Value of Assets.

The asset smoothing method was adopted for the 1999 actuarial valuation and is effective for the investment experience beginning in July of 1993.

Actuarial Assumptions

The Actuarial Standards Board has adopted Actuarial Standard of Practice No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*. This Standard provides guidance on selecting economic assumptions under defined benefit retirement programs such as the System. In our opinion, the economic assumptions have been developed in accordance with the Standard.

The Actuarial Standards Board has adopted Actuarial Standard of Practice No. 35, *Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations*. This Standard provides guidance on selecting demographic assumptions under defined benefit retirement programs such as the System. In our opinion, the demographic assumptions have been developed in accordance with the Standard.

The assumptions are intended to estimate the future experience of the members of the DB Program and of the System itself in areas that affect the projected benefit flow and anticipated investment earnings. Any variations in future experience from that expected from these assumptions will result in corresponding changes in estimated costs of the Program's benefits.

The demographic assumptions are listed in **Table B.1** and illustrated at selected ages and duration combinations in **Tables B.2** – **B.7**.

Table B.1 List of Major Valuation Assumptions

I. Economic Assumptions

A.	Investment Return (net of investment and administrative expenses)	8.00%	
B.	Interest on Member Accounts	6.00%	
C.	Wage Growth	4.25%	
D.	Inflation	3.25%	

II. Demographic Assumptions

A.	Mortality			
	(1) Active	- Male	1999 CalSTRS Retired – M (-2 years)	Table B.2
		- Female	1999 CalSTRS Retired – F (-2 years)	Table B.2
	(2) Retired *	- Male	1999 CalSTRS Retired – M	Table B.2
		- Female	1999 CalSTRS Retired – F	Table B.2
	(3) Beneficiary *	- Male	1999 CalSTRS Beneficiary – M	Table B.2
		- Female	1999 CalSTRS Beneficiary – F	Table B.2
	(4) Disabled *	- Male	1994 GAM-M (minimum 2.5% with select rates in first three years)	Table B.2
		- Female	1994 GAM-F (minimum 2.2% with select rates in first three years)	Table B.2

* *Future retirees and beneficiaries are valued with a 2-year age setback*

B.	Service Retirement	Experience Tables	Table B.3
C.	Disability Retirement	Experience Tables	Table B.4
D.	Withdrawal	Experience Tables	Table B.5
	Probability of Refund	Experience Tables	Table B.6
E.	Merit Salary Increases	Experience Tables	Table B.7
F.	Supplemental Assumptions		Table B.8

Table B.2 Mortality

	Active Members	
Age	Male	Female
25	0.051%	0.029%
30	0.066	0.029
35	0.080	0.037
40	0.085	0.051
45	0.107	0.077
50	0.158	0.103
55	0.258	0.157
60	0.443	0.256
65	0.798	0.509

	Retired Members *		Beneficiaries *		Disabled (After Year 3) *	
Age	Male	Female	Male	Female	Male	Female
50	0.190%	0.121%	0.233%	0.121%	2.500%	2.200%
55	0.321	0.191	0.398	0.191	2.500	2.200
60	0.558	0.336	0.709	0.336	2.500	2.200
65	1.015	0.668	1.294	0.668	2.500	2.200
70	1.803	1.176	2.173	1.176	2.500	2.200
75	2.848	1.834	3.405	1.834	3.721	2.269
80	5.021	3.778	5.586	3.778	6.203	3.940
85	9.419	6.503	8.961	6.503	9.724	6.774
90	14.754	11.627	14.754	11.627	15.293	11.627
95	23.361	18.621	23.361	18.621	23.361	18.621

Select rates for disability:		
First year of disablement	11.4%	6.0%
Second year of disablement	7.7	3.8
Third year of disablement	6.2	3.0

* *Future retirees and beneficiaries are valued with a 2-year age setback*

Table B.3 Service Retirement

	Only for the1990 Benefit Structure		For the DB Program			
			Under 30 Years		30 or More Years	
Age	Male	Female	Male	Female	Male	Female
50	0.0%	0.0%	0.0%	0.0%	1.5%	1.5%
51	0.0	0.0	0.0	0.0	1.5	1.5
52	0.0	0.0	0.0	0.0	1.5	1.5
53	0.0	0.0	0.0	0.0	2.0	1.5
54	1.5	1.5	0.0	0.0	2.0	2.0
55	5.8	7.0	3.0	5.0	6.0	8.0
56	3.9	4.5	2.0	3.5	6.0	8.0
57	4.9	4.5	2.0	3.5	8.0	10.0
58	6.8	7.0	3.0	4.5	12.0	15.0
59	17.5	14.0	5.0	6.0	16.0	18.0
60	25.0	22.0	7.0	10.0	25.0	30.0
61	16.5	15.0	7.0	10.0	40.0	35.0
62	16.5	15.0	9.0	12.0	35.0	32.0
63	15.0	15.0	13.0	18.0	27.0	30.0
64	17.5	18.0	12.0	15.0	27.0	27.0
65	20.0	18.0	14.0	16.0	27.0	27.0
66	16.0	18.0	10.0	15.0	27.0	27.0
67	16.0	18.0	10.0	15.0	27.0	27.0
68	16.0	16.0	10.0	15.0	27.0	27.0
69	16.0	16.0	10.0	15.0	27.0	27.0
70	100.0	100.0	100.0	100.0	100.0	100.0

Table B.4 Disability Retirement

Coverage A

Age	Male	Female
25	0.021%	0.021%
30	0.030	0.030
35	0.051	0.060
40	0.081	0.090
45	0.111	0.110
50	0.159	0.220
55	0.210	0.280

Coverage B

	Entry Ages - Male		Entry Ages - Female	
Age	Under 40	40 and Up	Under 40	40 and Up
25	0.021%		0.030%	
30	0.030		0.030	
35	0.051		0.051	
40	0.120		0.090	
45	0.150	0.118%	0.141	0.139%
50	0.195	0.202	0.231	0.252
55	0.270	0.312	0.318	0.367
60	0.195	0.477	0.243	0.530
65	0.120	0.853	0.168	0.916

Table B.5 Withdrawal

	Entry Ages - Male					
Year	Under 25	25 - 29	30 - 34	35 - 39	40 - 44	45 & Up
0	15.3%	15.3%	15.3%	15.3%	15.3%	15.3%
1	12.5	12.5	12.5	12.5	12.5	13.5
2	7.7	7.7	7.7	7.7	7.7	8.6
3	6.3	5.4	5.4	5.4	5.4	6.3
4	4.4	4.4	4.4	4.4	4.4	4.4
5	3.9	3.0	3.0	3.0	3.0	3.6
10	2.0	2.0	2.0	2.0	2.4	
15	1.1	1.1	1.1	1.2		
20	0.6	0.6	0.6			
25	0.5	0.5				
30	0.0					

	Entry Ages - Female					
Year	Under 25	25 - 29	30 - 34	35 - 39	40 - 44	45 & Up
0	15.3%	15.3%	15.3%	15.3%	15.3%	15.3%
1	10.0	10.0	10.0	10.0	10.0	10.0
2	7.2	7.2	7.2	7.2	7.2	7.2
3	6.3	6.3	5.8	5.3	4.9	4.9
4	5.8	5.8	5.4	4.9	3.9	3.0
5	5.5	5.8	4.2	2.9	2.5	2.5
10	2.3	2.0	1.7	1.4	1.6	
15	1.1	0.9	1.0	0.9		
20	0.6	0.7	0.9			
25	0.6	0.6				
30	0.0					

Table B.6 Probability of Refund

	Entry Ages - Male				
Year	**Under 25**	**25 - 29**	**30 - 34**	**35 - 39**	**40 and Up**
Under 5	100%	100%	100%	100%	100%
10	50	50	42	45	45
15	42	42	36	30	
20	34	36	27		
25	24	27			
30	0				

	Entry Ages - Female				
Year	**Under 25**	**25 - 29**	**30 - 34**	**35 - 39**	**40 and Up**
Under 5	100%	100%	100%	100%	100%
10	40	35	36	36	35
15	30	30	30	30	
20	25	20	20		
25	15	10			
30	0				

Table B.7 Merit Salary Increases

	Entry Age - Annual Increase in Salaries Due to Merit					
Yr.	Under 25	25 - 29	30 - 34	35 - 39	40 - 44	45 & up
1	5.6%	5.3%	5.1%	4.8%	4.8%	3.5%
2	5.6	5.1	4.9	4.7	4.7	3.3
3	5.6	5.0	4.8	4.6	4.6	3.0
4	5.5	4.8	4.6	4.4	4.4	2.9
5	5.5	4.8	4.5	3.8	3.8	2.6
10	3.2	3.0	2.7	2.3	2.2	1.6
15	1.5	1.5	1.4	1.1	1.1	0.8
20	1.3	1.1	1.1	0.8	0.8	0.6
25	1.1	0.9	0.8	0.5	0.5	
30	0.9	0.7	0.6	0.5		
35	0.8	0.7	0.6			
40	0.8	0.6				
45	0.8					

Table B.8 Supplemental Assumptions

Unused Sick Leave

Add 0.67 years of Credited Service at retirement; pro-rated for part-time members.

Optional Forms:

Option 1: Valued as single life annuity
Option 8: Valued as 65% joint and survivor annuity

Probability of Marriage

Male: 90%
Female: 70%

Male spouses are assumed to be three years older than female spouses.

Number of Children

Male: 0.53
Female: 0.23

Only married members are assumed to have children.

Assumed Offsets

The following offsets, expressed as a percentage of Final Compensation, are assumed for life.

	Coverage A		Coverage B	
	Male	Female	Male	Female
Death	9.1%	5.8%	0.0%	0.0%
Disability	5.3%	2.3%	2.7%	2.9%

Appendix C
Valuation Data

The membership data for this actuarial valuation was supplied by CalSTRS and accepted without audit. We have examined the data for reasonableness and consistency with prior valuations and periodic reports from the CalSTRS staff to the Teachers' Retirement Board.

In preparing this report, we relied upon the membership data furnished by CalSTRS. Although we did not audit this data, we compared the data for this and the prior valuation and tested for reasonableness. Based on these tests, we believe the data to be sufficiently accurate for the purposes of this valuation.

Tables C.1 – C.6 summarize the census data used in this valuation.

Table C.1 Summary of Statistical Information

	June 30, 2004	June 30, 2003
Number of Members		
Active Members [1]	444,680	448,478
Inactive Members [1]	116,128	104,617
Retirees and Beneficiaries		
Service Retirants	169,022	159,172
Disabilitants	7,311	6,949
Survivors	16,912	15,747
Total	193,245	181,868
Total Membership in Valuation	754,053	734,963
Active Member Statistics		
Earned Salaries	$23,764 million	$23,867 million
Average Salary	$ 53,441	$ 53,219
Average Age	44.5 years	44.3 years
Average Service	10.7 years	10.5 years

Note:

[1] Some active members were reported with no Earnable Salaries, in which case their liabilities, if any, were included with inactive members

Table C.2 Age and Service Distribution
Active Male Members

	Service					
Age	**Under 1**	**1 – 5**	**6 – 10**	**11 - 15**	**16 - 20**	**21 - 25**
Under 25	343	533				
25 to 30	1,211	8,152	400			
30 to 35	896	9,581	6,560	145		
35 to 40	672	6,165	6,675	2,925	61	
40 to 45	635	4,718	4,108	3,776	2,156	48
45 to 50	660	4,077	3,274	2,961	3,187	1,819
50 to 55	623	3,983	3,099	2,706	3,004	2,834
55 to 60	564	3,573	2,393	2,158	2,215	1,965
60 to 65	257	1,790	1,112	912	895	663
65 to 70	105	651	329	234	250	149
70 & Up	70	409	156	97	69	55
Unknown	1	9	4			
Total	6,037	43,641	28,110	15,914	11,837	7,533

	Service					
Age	**26 - 30**	**31 - 35**	**36 - 40**	**41 - 45**	**Over 45**	**Total**
Under 25						876
25 to 30						9,763
30 to 35						17,182
35 to 40						16,498
40 to 45						15,441
45 to 50	118					16,096
50 to 55	3,613	324				20,186
55 to 60	3,931	4,850	374			22,023
60 to 65	1,014	1,530	1,010	16		9,199
65 to 70	164	185	180	93	6	2,346
70 & Up	48	50	55	26	29	1,064
Unknown						14
Total	8,888	6,939	1,619	135	35	130,688

Table C.3 Age and Service Distribution
Active Female Members

	Service					
Age	**Under 1**	**1 - 5**	**6 - 10**	**11 - 15**	**16 - 20**	**21 - 25**
Under 25	1,582	2,793	1			
25 to 30	3,215	29,989	1,967			
30 to 35	1,672	22,303	19,536	493	1	
35 to 40	1,364	12,199	14,516	7,551	350	
40 to 45	1,424	10,564	9,250	8,190	5,818	214
45 to 50	1,297	10,488	9,314	7,192	6,854	4,523
50 to 55	1,021	9,276	9,458	8,492	7,869	6,342
55 to 60	669	6,105	6,321	6,884	7,348	5,114
60 to 65	259	2,360	2,293	2,396	3,008	2,360
65 to 70	98	719	529	462	584	549
70 & Up	58	392	182	152	173	138
Unknown	6	141	175			
Total	12,665	107,329	73,542	41,812	32,005	19,240

	Service					
Age	**26 - 30**	**31 - 35**	**36 - 40**	**41 - 45**	**Over 45**	**Total**
Under 25						4,376
25 to 30						35,171
30 to 35						44,005
35 to 40						35,980
40 to 45						35,460
45 to 50	262					39,930
50 to 55	6,348	566	3			49,375
55 to 60	5,978	6,889	643			45,951
60 to 65	2,146	1,777	1,320	49	5	17,973
65 to 70	456	286	188	100	9	3,980
70 & Up	131	104	70	38	31	1,469
Unknown						322
Total	15,321	9,622	2,224	187	45	313,992

Table C.4 Age and Service Distribution
All Active Members

	Service					
Age	**Under 1**	**1 - 5**	**6 - 10**	**11 - 15**	**16 - 20**	**21 - 25**
Under 25	1,925	3,326	1			
25 to 30	4,426	38,141	2,367			
30 to 35	2,568	31,884	26,096	638	1	
35 to 40	2,036	18,364	21,191	10,476	411	
40 to 45	2,059	15,282	13,358	11,966	7,974	262
45 to 50	1,957	14,565	12,588	10,153	10,041	6,342
50 to 55	1,644	13,259	12,557	11,198	10,873	9,176
55 to 60	1,233	9,678	8,714	9,042	9,563	7,079
60 to 65	516	4,150	3,405	3,308	3,903	3,023
65 to 70	203	1,370	858	696	834	698
70 & Up	128	801	338	249	242	193
Unknown	7	150	179			
Total	18,702	150,970	101,652	57,726	43,842	26,773

	Service					
Age	**26 - 30**	**31 - 35**	**36 - 40**	**41 - 45**	**Over 45**	**Total**
Under 25						5,252
25 to 30						44,934
30 to 35						61,187
35 to 40						52,478
40 to 45						50,901
45 to 50	380					56,026
50 to 55	9,961	890	3			69,561
55 to 60	9,909	11,739	1,017			67,974
60 to 65	3,160	3,307	2,330	65	5	27,172
65 to 70	620	471	368	193	15	6,326
70 & Up	179	154	125	64	60	2,533
Unknown						336
Total	24,209	16,561	3,843	322	80	444,680

Table C.5 Inactive Members

Fiscal Year Ending June 30	Number Vested	Total Number	Male % of Total	Female % of Total
1995	12,724	54,159	26.7%	73.3%
1996	13,261	56,424	26.8	73.2
1997	13,925	59,385	27.2	72.8
1998	14,038	61,848	27.4	72.6
1999	15,421	69,112	27.7	72.3
2000	16,211	75,580	27.8	72.2
2001	18,469	87,146	28.1	71.9
2002	19,703	96,159	28.0	72.0
2003	20,627	104,617	28.3	71.7
2004	22,511	116,128	28.7	71.3

Fiscal Year Ending June 30	Average Account on Deposit	Average Age	Average Service Credit	Average Years Inactive
1995	$ 10,282	47.4	3.6	8.0
1996	10,931	47.2	3.5	8.0
1997	11,431	47.3	3.5	8.2
1998	11,731	47.5	3.4	8.3
1999	12,105	47.1	3.3	8.0
2000	12,325	46.8	3.2	7.8
2001	12,889	50.7	3.2	8.2
2002	12,997	46.0	3.1	7.3
2003	12,691	46.0	3.0	7.4
2004	12,418	45.8	2.9	7.3

Table C.6 Service Retirants

Fiscal Year Ending June 30	Total	Male % of Total	Female % of Total
1995	130,576	38.1%	61.9%
1996	133,764	38.2	61.8
1997	135,809	38.3	61.7
1998	139,193	38.3	61.7
1999	142,309	38.3	61.7
2000	145,415	38.1	61.9
2001	149,727	38.0	62.0
2002	154,884	37.8	62.2
2003	159,172	37.6	62.4
2004	169,022	37.2	62.8

Fiscal Year Ending June 30	Average Age at Retirement	Average Years of Service Credit	Final Average Compensation	Average Current Allowance Payable
1995	60.9	24.6	$ 2,637	$ 1,434
1996	60.9	24.7	2,743	1,502
1997	60.8	24.8	2,837	1,566
1998	60.8	24.7	2,945	1,638
1999	60.7	24.8	3,057	1,729
2000	60.7	25.0	3,175	1,824
2001	60.7	25.4	3,356	2,033
2002	60.7	25.7	3,539	2,183
2003	60.7	25.9	3,735	2,339
2004	60.7	26.0	3,931	2,488

Appendix D
Glossary

The following definitions are largely excerpts from a list adopted in 1981 by the major actuarial organizations in the United States. In some cases, the definitions have been modified for specific applicability to the CalSTRS DB Program. Defined terms are capitalized throughout this Appendix.

Actuarial Assumptions: Assumptions as to the occurrence of future events affecting pension costs, such as mortality, withdrawal, disablement, and retirement, changes in compensation, rates of investment earnings and asset appreciation or depreciation, and procedures used to determine other relevant items.

Actuarial Cost Method: A procedure for determining the Actuarial Present Value of pension plan benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Normal Cost and an Actuarial Obligation.

Actuarial Gain or Loss: A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions during the period between two Actuarial Valuation dates, as determined in accordance with a particular Actuarial Cost Method.

Actuarial Obligation: That portion, as determined by a particular Actuarial Cost method, of the Actuarial Present Value of pension plan benefits and expenses which is not provided for by future Normal Costs.

Actuarial Present Value: The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions.

Actuarial Surplus: The excess, if any, of the Actuarial Value of Assets over the Actuarial Obligation.

Actuarial Valuation: The determination, as of a Valuation Date, of the Normal Cost, Actuarial Obligation, Actuarial Value

	of Assets, and related Actuarial Present Values for a pension plan.
Actuarial Value of Assets:	The value of cash, investments and other property belonging to a pension plan, as used by the actuary for the purpose of an Actuarial Valuation.
Actuarial Equivalent:	Of equal Actuarial Present Value, determined as of a given date with each value based on the same set of Actuarial Assumptions.
Entry Age Cost Method:	An actuarial cost method under which the Actuarial Present Value of Projected Benefits of each individual included in an Actuarial Valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages. The portion of this Actuarial Present Value allocated to a valuation year is called the Normal Cost. The portion of this Actuarial Present Value not provided for at a valuation date by the Actuarial Present Value of future Normal Costs is called the Actuarial Obligation.
Normal Cost:	The portion of the Actuarial Present Value of Projected Benefits which is allocated to a valuation year by the Actuarial Cost Method.
Unfunded Actuarial Obligation:	The excess, if any, of the Actuarial Obligation over the Actuarial Value of Assets.
Valuation Date:	June 30, 2004.