Educational Retirement Board of New Mexico

ACTUARIAL VALUATION

June 30, 2003

GABRIEL, ROEDER, SMITH & COMPANY

GABRIEL, ROEDER, SMITH & COMPANY
Consultants & Actuaries

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December 12, 2003

Board of Trustees
Educational Retirement Board of New Mexico
P.O. Box 26129
Santa Fe, NM 87502-0129

Dear Members of the Board:

Subject: Actuarial Valuation as of June 30, 2003

We certify that the information contained in this report is accurate and fairly presents the actuarial position of the Educational Retirement Board of New Mexico (ERB) as of June 30, 2003.

All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion the results presented also comply with the relevant statutes, and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board. The undersigned are independent actuaries. Both are Enrolled Actuaries and Members of the American Academy of Actuaries, and both are experienced in performing valuations for large public retirement systems.

To the best of our knowledge, this report is based on benefit provisions in effect as of June 30, 2003, audited financial information prepared as of that date, member data gathered as of that date, and actuarial assumptions and methods previously adopted by the Board.

Actuarial Valuation

The primary purposes of the valuation report are to determine the adequacy of the current employer contribution rate, to describe the current financial condition of ERB, and to analyze changes in ERB's condition. In addition, the report provides information required by ERB in connection with Governmental Accounting Standards Board Statement No. 25 (GASB 25), and it provides various summaries of the data.

Valuations are prepared annually, as of June 30 of each year, the last day of ERB's plan and fiscal year.

Financing Objectives

The member and employer contribution rates are established by statute. The current employer contribution rate is 8.65% and the current member contribution rate is 7.60%. In addition, certain higher education employers make an additional contribution equal to 3.00% of the total pay for their employees who elected to join the Alternative Retirement Program rather than ERB. These rates are intended to be sufficient to pay ERB's normal cost and to amortize ERB's unfunded actuarial accrued liability (UAAL) in payments which are level as a percentage of payroll. Except for short-term fluctuations, the amortization period should not exceed the 30-year period allowed under GASB No. 25. (The amortization period, also referred to as the funding period, is the number of years expected to be required to completely amortize the UAAL, assuming that ERB's experience exactly follows the actuarial assumptions.) This funding policy is set by the Board of Trustees, and is considered reasonable by the actuary. The Board has a goal of maintaining a funding period of no more than 25 years.

Progress Toward Realization of Financing Objectives

As of June 30, 2003, the funding period is 78.0 years. This is an increase from last year's funding period of 27.2 years. Therefore, the current statutory rate is now inadequate. The contribution that would be required in order to amortize the UAAL over 25 years, the Board's target period, is 10.43%. (Last year the 25-year funding rate was 8.81%.) To comply with the 30-year maximum amortization period set by GASB 25, the employer contribution rate would need to be 9.93%.

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) decreased from last year. The funded ratio at June 30, 2002 was 86.8%, while it is now 81.1%. Five years ago the ratio stood at 80.8%. However, if the ratio were calculated using the market value rather than the actuarial value of assets, it would be 65.6%. During the last fiscal year, the UAAL increased from $1,152.8 million to $1,748.6 million.

The increase in the funding period is almost entirely due to the lower than expected investment returns for the last three fiscal years.

Future Expected Changes

All of the standard actuarial measurements, including the funded ratio and the funding period, are functions of the actuarial value of assets. The actuarial value of assets recognizes investment gains and losses – the positive or negative differences between the actual net investment return on market value and the expected 8.00% investment return – over a period of five years, at the rate of 20% per year. Therefore, 40% of the losses from FY 2001, 60% of the losses from FY 2002, and 80% of the losses in FY 2003 are not yet reflected in the actuarial measurements. As these losses are recognized over the next four valuations, we expect the funding period to continue increasing, in the absence of any changes in the benefit-and-contribution structure of ERB, and in the absence of offsetting experience gains.

Benefit Provisions

The actuarial valuation reflects the benefit and contribution provisions set forth in the relevant New Mexico statutes. There were no material changes made to these provisions since the previous actuarial valuation. There are no ancillary benefits (such as cost-of-living increases to retirees) funded by a source independent of ERB.

Assumptions and Methods

Actuarial assumptions and methods are set by the Board of Trustees, based upon recommendations made by the plan's actuary. The last review of these assumptions occurred following the 2002 actuarial valuation, and the Board adopted all of our recommendations. We believe the recommended assumptions are internally consistent and are reasonably based on the actual experience of ERB.

Member and Financial Data

Member data for retired, active, and inactive participants was supplied as of June 30, 2003, by the ERB staff. We have not subjected this data to any auditing procedures, but have examined the data for reasonableness and consistency with the prior year's data. Asset information was also supplied by the ERB staff and by the plan's auditors.

We would like to thank the ERB staff and the auditors for their assistance with this project.

Sincerely,

Gabriel, Roeder, Smith & Company

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Section III — Supporting Exhibits (Continued)

Executive Summary

Item	2003	2002
Membership		
• Number of		
- Active members	62,614	61,091
- Retirees and beneficiaries	24,085	23,052
- Inactive, vested	5,391	5,217
- Inactive, nonvested	15,686	14,714
- Total	107,776	104,074
• Payroll	$2,032.5 million	$1,978.5 million
Statutory contribution rates		
• Employer	8.65%	8.65%
• Member	7.60%	7.60%
Assets		
• Market value	$6,083.4 million	$6,011.2 million
• Actuarial value	$7,518.2 million	$7,595.1 million
• Return on market value	2.7%	-8.8%
• Return on actuarial value	0.1%	3.3%
• Employer contributions	$179.1 million	$173.9 million
• External cash flow %	-1.5%	-1.2%
• Ratio of actuarial to market value	123.6%	126.4%
Actuarial Information		
• Normal cost %	12.92%	12.72%
• Unfunded actuarial accrued liability (UAAL)	$1,748.5 million	$1,152.8 million
• Funded ratio	81.1%	86.8%
• Funding period (years)	78.0	27.2
Gains/(losses)		
• Asset experience	$ (594.6) million	$ (346.5) million
• Liability experience	81.8 million	(189.6) million
• Benefit changes	N/A	N/A
• Assumption/method changes	(65.7) million	N/A
• Total	$ (578.5) million	$ (536.1) million

Introduction

Table 1 shows the most significant actuarial results. Table 2 analyzes changes in the UAAL. Tables 3 and 4 show more detailed actuarial information. Tables 5a and 5b develop the GASB 25 Annual Required Contribution for the last fiscal year, and Tables 6a-6c show required GASB 25 disclosure information. Tables 7a, 7b, 15 and 16 show statistical information about the membership, and Tables 8a-11b, and Table 13 show information about plan assets. Tables 12a and 12b show the calculation of the actuarial gains and losses, and Table 14 shows the solvency test, used by some funds in their annual report. Finally, Appendix 1 is a summary of the benefit and contribution provisions of ERB, and Appendix 2 is a summary of the actuarial methods and assumptions.

Actuarial Information

The determination of the unfunded actuarial accrued liability (UAAL) and the funding period involves the following steps:

- The actuarial present value of future benefits is determined for the present members, including retired members, beneficiaries, inactive members and active members. This amounts to $11,143.9 million, as shown on Table 3.
- The entry age normal funding method is used to allocate the actuarial present value of future benefits between the portion due for the current year (the normal cost), prior years (the actuarial accrued liability) and future years. The actuarial accrued liability is $9,266.6 million, as shown in line 6d on Table 1.
- Under the entry age normal cost method the current and future normal costs are determined as a level percentage of payroll. Table 4 shows an analysis of the normal cost rate. The amount needed to fund the current and future normal costs is 12.92% of payroll inclusive of member contributions. This is the total (member plus employer) contribution rate needed to pay for the average new member.
- A part of the normal cost is paid by the employee contributions of 7.60%, leaving 5.32% to be funded by the employers. I.e., the current year's employer normal cost is 5.32% of payroll. This is shown in Line 3 of Table 1.

- The unfunded actuarial accrued liability (UAAL) is determined by subtracting the actuarial value of assets from the actuarial accrued liability. (The actuarial value of assets is a smoothed market value, as discussed in more detail below.) The UAAL is $1,748.6 million, as shown in line 8 on Table 1.
- Since the statutory employer contribution rate is 8.65%, and the employer normal cost rate is 5.32%, the difference of 3.33% is used to amortize the UAAL. The 3% contribution made on behalf of ARP members is also used to amortize the UAAL.
- Finally, the funding period is the anticipated period needed to reduce the UAAL to zero, assuming that plan experience exactly follows the assumptions, that no benefit changes are made, that payroll grows at 3.75% per year, and that the contributions are made as required. The funding period this year is 78.0 years.

Analysis of Changes

Table 2 shows an analysis of the changes in the UAAL. Since the UAAL is an actuarial present value, with future anticipated benefits discounted using an 8.00% interest rate, the UAAL increases each year by the imputed interest rate, less employer contributions made to amortize the UAAL. (Keep in mind that part of the employer contribution is used to pay the normal cost, so only part of each year's contribution is available to amortize the UAAL.)

As shown on Table 2, the UAAL increased by $92.2 million for imputed interest and decreased by $74.9 million because of payments made. This means that the UAAL was expected to increase $17.3 million before recognizing plan experience. The UAAL as of June 30, 2002 was $1,152.8 million, and the expected UAAL at June 30, 2003, recognizing actual contributions made, was $1,170.1 million.

The plan experienced a liability gain of $81.8 million. This gain represents 0.9% of the total actuarial accrued liability.

There was an actuarial loss on investments of $594.6 million. The investment loss resulted from the fact that the return on the actuarial value of assets, 0.1%, was less than the 8.00% assumed investment return rate. This loss was the result of recognizing an additional 20% of the losses from FY 2001 and FY 2002, as well as recognizing 20% of the actuarial investment loss from FY 2003. The market rate of return in FY 2003 was 2.7%.

The Board has adopted several changes to the actuarial assumptions, including:

- Decreasing the mortality rates applied to current and future retirees, reflecting lower mortality and longer life expectancies
- Decreasing male retirement rates at most ages
- Increasing the payroll growth rate from 3.00% to 3.75%
- Revising the new entrant profile used to determine the normal cost to one based on the age-sex-pay distribution of new members during FY 1999 through FY 2002

These assumptions changes, taken together, caused an increase of $65.7 million in the UAAL.

As a result of all the experience, the UAAL increased from $1,152.8 million to $1,748.6 million, and the funding period increased from 27.2 years to 78.0 years.

GASB 25 Disclosure

Governmental Accounting Standards Board Statement No. 25 (GASB 25) is the relevant accounting standard for governmental retirement systems like ERB.

Tables 5a and 5b show the calculation of the Annual Required Contribution (ARC) as computed under GASB 25, and they show what percent of this amount was actually received. For ERB, the ARC is defined to be the actual contributions required by statute, as long as this is not less than the minimum allowed under GASB 25. The GASB 25 minimum is equal to the normal cost, plus a 30-year amortization of the UAAL.

Tables 6a, 6b, and 6c show information required to be reported under GASB 25. Table 6a shows a history of funding progress--a comparison of the actuarial value of assets with the actuarial accrued liability and a comparison of the UAAL with covered payroll. This table shows steady progress over the last few years from 1992 to 2001, with the best funded ratio in 2001, 91.9%, then it decreased to 86.8% as of 2002 and 81.1% as of 2003.

Table 6b shows a six-year comparison of the employer contributions actually received with the GASB 25 ARC. Note that this shows that 100% of the ARC was contributed during FY 2003, since the 8.65% employer contribution rate is larger than the 30-year contribution calculated in last year's valuation (8.49%). For FY 2004, however, the financial reports prepared for ERB will show that only 87.1% of the ARC was contributed for FY 2004. This is because the 8.65% statutory rate is less than the calculated 30-year contribution rate of 9.93%.

Table 6c shows other information which must be included in the notes section of the financial report. The auditor's notes should also disclose the following items that may affect the comparability of the trend information shown in Tables 6a and 6b:

- Actuarial assumptions were changed at June 30, 1998, June 30, 2001 and June 30, 2003.

Benefit Provisions

Appendix 1 summarizes the provisions of ERB. These have not been materially changed since the previous valuation.

This valuation reflects benefits promised to members by statute. There are no ancillary benefits - retirement type benefits not required by statutes but which might be deemed an ERB liability if continued beyond the availability of funding by the current funding source.

Actuarial Assumptions and Methods

In determining costs and liabilities, actuaries use assumptions about the future, such as rates of salary increase, probabilities of retirement, termination, death and disability, and an investment return assumption. ERB's Board adopts the assumptions used, taking into account the actuary's recommendations. Appendix 2 summarizes the current assumptions.

The most significant assumptions are (i) the assumed investment return, currently set at 8.00%, and (ii) the assumption regarding future salary increases, which is based on a table that varies by service and averages about 5.6%.

As noted above, following the completion of the June 30, 2002 actuarial valuation, we prepared an analysis of experience for ERB, generally over the five-year period ending June 30, 2002. As a result of that investigation, we recommended some changes to the actuarial assumptions, including adoption of revised post-retirement mortality rates and revised retirement rates for males. We also recommended increasing the payroll growth rate from 3.00% to 3.75%. The Board approved all of our recommendations.

In addition to the actuarial assumptions, the actuary also makes use of an actuarial funding method to allocate costs to particular years. In common with most public-sector plans, ERB uses the entry age normal method. This method produces a relatively level pattern of funding over time, and thereby provides equity between various generations of taxpayers. We continue to believe this method is appropriate for ERB.

Assets

ERB assets are held in trust. The ERB staff and the ERB auditors have provided the asset information used in this valuation.

Table 8a presents a summary of the market value of assets held by the fund, and Table 8b shows the allocation of assets held for investment. About 68% of the assets are now held in equities, compared to 66% last year and 67% the year before. Table 9 shows a reconciliation of the assets from the beginning of the prior year to the valuation date. Note that after we prepared the June 30, 2002 actuarial valuation, the auditors made a decision to capitalize the purchase of certain software, which had been treated as an administrative expense. This resulted in an adjustment between the market value we used last year at June 30, 2002 and the value used this year.

Tables 10a and 10b show the development of the actuarial value of assets (AVA). The AVA is a smoothed market value. A smoothed value is used in order to dampen some of the year-to-year fluctuations that would occur if the market value were used instead. The method used phases in differences between the actual and expected market returns over five years. The expected return is determined using the 8.00% assumption and the plan's market value, adjusted for contributions received and benefits and refunds paid. Both the actual and expected returns are computed net of administrative expenses.

Note that the actuarial value is 124% of the market value. Over time, we would expect the actuarial value to trend back towards the market value, so this disparity should shrink in the future.

Table 11a shows the investment return rate for the year on both market value (2.7%) and actuarial value (0.1%). Table 11b shows historical return rates since the current actuarial asset method was adopted.

Finally, Table 13 shows a history of cash flows to the trust, and the net cash flow measured as a percentage of the assets. The cash flow is slightly negative, 1.5% of market value, but this is not a sign of concern in a mature plan such as ERB.

Member Data

Membership data was provided on electronic files by the ERB staff. Data for active members included sex, birthdate, service, salary paid in the prior year, and accumulated contributions. Data for inactive, nonretired members was similar, but included the member's accrued benefit as well. For retired members, data included status (service retiree, disabled retiree or beneficiary), sex, birthdate, pension amount, form of payment, beneficiary sex and birthdate if applicable, and date of retirement.

While not verifying the correctness of the data at the source, we performed various tests to ensure the internal consistency of the data and its overall reasonableness.

Table 7a summarizes data on all members. Table 7b is a history of key statistical information about active members, and Table 15 is a history of statistical information about retirees. Table 16 is an age/service distribution of active members and their average pay.

The number of active members increased 2.5% since last year, from 61,091 to 62,614. Note that the actual number of active members during the year will be somewhat higher, since the June 30 count excludes May and June retirees, but does not include new teachers who will join the system for the 2003-2004 school year.

Total payroll increased 2.7% since last year. For all comparative purposes, payroll is the amount supplied by the ERB staff (i.e., the 2002-03 member pay). However, this figure is increased by one year's pay increase to determine the member's rate of pay at July 1, 2003. Pay is assumed to change only at the beginning of a school/fiscal year.

Average pay increased 0.2% since last year. Average pay for members active in both this valuation and the last year's valuation increased 3.0%. The difference between these two figures is due to the effect of retirements and terminations, and their replacement by new members who generally earn less.

Actuarial Information

	July 1, 2003 (1)	July 1, 2002 (2)
1. Payroll		
a. Supplied by System (annualized)	$ 2,032,479,090	$ 1,978,528,267
b. Adjusted for one-year's pay increase	2,144,882,038	2,088,571,200
2. Actuarial present value of future pay	$ 14,530,195,684	$ 14,132,519,737
3. Normal cost rate (payable monthly)		
a. Total normal cost rate	12.92%	12.72%
b. Less: member contribution rate	(7.60%)	(7.60%)
c. Employer normal cost rate	5.32%	5.12%
4. Employer normal cost (Item 3c * Item 1b)	$ 114,107,724	$ 106,934,845
5. Actuarial accrued liability for active members		
a. Actuarial present value of future benefits	$ 6,729,619,109	$ 6,497,787,700
b. Less: actuarial present value of future normal costs (Item 3a * Item 2)	(1,877,301,282)	(1,797,656,511)
c. Actuarial accrued liability	$ 4,852,317,827	$ 4,700,131,189
6. Total actuarial accrued liability for:		
a. Retirees and beneficiaries	$ 4,220,117,566	$ 3,860,531,900
b. Inactive members	194,191,579	187,308,311
c. Active members (Item 5c)	4,852,317,827	4,700,131,189
d. Total	$ 9,266,626,972	$ 8,747,971,400
7. Actuarial value of assets	$ 7,518,163,450	$ 7,595,149,744
8. Unfunded actuarial accrued liability (UAAL) (Item 6d - Item 7)	$ 1,748,463,522	$ 1,152,821,656
9. Amortization payment		
a. Employer contribution rate	8.65%	8.65%
b. Less: Employer normal cost rate (Item 3c)	(5.32%)	(5.12%)
c. Amortization rate	3.33%	3.53%
d. Amortization contribution (Item 9c * Item 1b)	$ 71,424,572	$ 73,726,563
e. Expected ARP contribution	3,563,732	3,007,898
d. Total	$ 74,988,304	$ 76,734,461
10. Funding period based on current 8.65% employer contribution requirement, with payments increasing at assumed payroll growth rate	78.0 years	27.2 years

Analysis of Change in Unfunded Actuarial Accrued Liability (UAAL)

Basis (1)	June 30, 2003 (2)	June 30, 2002 (3)
1. UAAL at prior valuation	$ 1,152.8	$ 652.0
2. Increases/(decreases) due to:		
a. Interest on UAAL	92.2	52.2
b. Amortization payments[1]	(75.0)	(87.5)
c. Liability experience	(81.8)	189.6
d. Asset experience	594.6	346.5
e. Changes in actuarial assumptions and methods	65.7	N/A
f. Benefit change	N/A	N/A
g. Total	$ 595.7	$ 500.8
3. Current UAAL (1+2g)	$ 1,748.5	$ 1,152.8

Note : Dollar amounts in millions

1 Actual contributions reduced by normal cost, and adjusted for timing.

Actuarial Present Value of Future Benefits

		June 30, 2003 (1)	June 30, 2002 (2)
1.	Active members		
	a. Service retirement benefits	$ 6,052,112,822	$ 5,863,072,600
	b. Refunds and deferred termination benefits	538,887,830	519,150,600
	c. Survivor benefits	62,588,330	44,452,900
	d. Disability retirement benefits	76,030,127	71,111,600
	e. Total	$ 6,729,619,109	$ 6,497,787,700
2.	Retired members		
	a. Service retirement	$ 3,989,973,067	$ 3,653,839,200
	b. Disability retirement	45,439,515	42,614,300
	c. Beneficiaries	184,704,984	164,078,400
	d. Total	$ 4,220,117,566	$ 3,860,531,900
3.	Inactive members		
	a. Vested terminations	$ 148,674,141	$ 146,722,083
	b. Nonvested terminations	45,517,438	40,586,228
	c. Total	$ 194,191,579	$ 187,308,311
4.	Total actuarial present value of future benefits	$ 11,143,928,254	$ 10,545,627,911

Analysis of Normal Cost

	June 30, 2003 (1)	June 30, 2002 (2)
1. Gross normal cost rate (payable monthly)		
a. Service retirement benefits	8.94%	8.92%
b. Refunds and deferred termination benefits	3.71%	3.57%
c. Disability retirement benefits	0.16%	0.16%
d. Survivor benefits	0.11%	0.07%
e. Total	12.92%	12.72%
2. Less: member contribution rate	(7.60%)	(7.60%)
3. Employer normal cost rate	5.32%	5.12%

Calculation of GASB 25 ARC as Percent of Payroll
(For Following Fiscal Year)

	June 30, 2003 (1)	June 30, 2002 (2)
1. Long term GASB 25 funding period (years)	30	30
2. Amortization contribution percentage		
a. Amortization payment	$ 102,525,361	$ 73,308,849
b. Less: expected payment for ARP members	3,563,732	3,007,898
c. Net (a-b)	$ 98,961,630	$ 70,300,951
d. Expected payroll	2,144,882,038	2,088,571,200
e. Amortization contribution percentage (c/d)	4.61%	3.37%
3. GASB 25 Annual Required Contribution		
a. Employer normal cost rate	5.32%	5.12%
b. Amortization percentage	4.61%	3.37%
c. Total	9.93%	8.49%
d. Statutory rate	8.65%	8.65%
e. ARC (max of (c,d))	9.93%	8.65%

Actual Contributions as Percentage of GASB 25 ARC for Year Ending 06/30/2003

1. Actual contributions		
a. On behalf of ERB members	$	175,697,304
b. On behalf of ARP members		3,434,922
c. Total	$	179,132,226
2. Statutory employer contribution rate		8.65%
3. Imputed fiscal year payroll for ERB members (Item 1a / Item 2)	$	2,031,182,705
4. GASB 25 Annual Required Contribution		
a. Required GASB 25 employer contribution for ERB members as percent of payroll		8.65%
b. Required GASB 25 employer contribution for ERB members (Item 4a * Item 3)	$	175,697,304
c. GASB 25 ARC (Item 4b + Item 1b)	$	179,132,226
5. Percentage of ARC contributed (Item 1c / Item 4c)		100.0%

Schedule of Funding Progress
(As required by GASB #25)

Valuation Date (1)	Actuarial Value of Assets (AVA) (2)	Actuarial Accrued Liability (AAL) (3)	Unfunded Actuarial Accrued Liability (UAAL) (3) - (2) (4)	Funded Ratio (2)/(3) (5)	Annual Covered Payroll (6)	UAAL as % of Payroll (4)/(6) (7)
June 30, 1992	$2,549.8	$3,912.7	$1,362.9	65.2%	$1,150.4	118.5%
June 30, 1993	2,798.2	4,207.7	1,409.5	66.5%	1,191.0	118.3%
June 30, 1994	3,180.1	4,657.7	1,477.6	68.3%	1,258.7	117.4%
June 30, 1995	3,561.8	5,079.6	1,517.8	70.1%	1,356.5	111.9%
June 30, 1996	3,993.6	5,542.3	1,548.7	72.1%	1,413.6	109.6%
June 30, 1997	4,516.4	5,854.4	1,338.0	77.1%	1,448.7	92.4%
June 30, 1998	5,169.5	6,398.8	1,229.3	80.8%	1,542.8	79.7%
June 30, 1999	5,988.5	6,971.7	983.1	85.9%	1,637.5	60.0%
June 30, 2000	6,835.8	7,460.6	624.8	91.6%	1,795.7	34.8%
June 30, 2001	7,418.3	8,070.3	652.0	91.9%	1,819.6	35.8%
June 30, 2002	7,595.1	8,748.0	1,152.8	86.8%	1,978.5	58.3%
June 30, 2003	7,518.2	9,266.6	1,748.5	81.1%	2,032.5	86.0%

Note : Dollar amounts in millions

Schedule of Employer Contributions
(As required by GASB #25)

Fiscal Year	Annual Required Contribution	Percentage Contributed
1997	$131,535,477	98.9%
1998	$136,190,862	100.0%
1999	$145,521,527	100.0%
2000	$153,260,317	100.0%
2001	$161,524,340	100.0%
2002	$173,863,363	100.0%
2003	$179,132,226	100.0%

Notes to Required Supplementary Information
(as required by GASB #25)

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation date	June 30, 2003
Actuarial cost method	Entry Age Normal
Amortization method	Level payment, open
Remaining amortization period (years)	78.0
Asset valuation method	5-year smoothed market
Actuarial assumptions:	
Investment rate of return*	8.00%
Projected salary increases*	4.50% to 13.00%
*Includes inflation at	3.00%
Cost-of-living adjustments	2.00%

Membership Data

		June 30, 2003 (1)	June 30, 2002 (2)
1.	Active members		
	a. Number	62,614	61,091
	b. Total payroll supplied by System (annualized)	$ 2,032,479,090	$ 1,978,528,267
	c. Average salary	$ 32,460	$ 32,387
	d. Average age	45.3	45.2
	e. Average service	9.3	9.3
2.	Vested inactive members (excluding pending refunds)		
	a. Number	5,391	5,217
	b. Total annual deferred benefits	$ 30,708,547	$ 29,601,294
	c. Average annual deferred benefit	$ 5,696	$ 5,674
3.	Nonvested inactive members and vested pending refunds		
	a. Number	15,686	14,714
	b. Employee assessments with interest due	$ 45,517,438	$ 40,586,228
	c. Average refund due	$ 2,902	$ 2,758
4.	Service retirees		
	a. Number	21,620	20,699
	b. Total annual benefits	$ 372,397,610	$ 340,775,737
	c. Average annual benefit	$ 17,225	$ 16,463
5.	Disabled retirees		
	a. Number	598	589
	b. Total annual benefits	$ 4,745,450	$ 4,405,617
	c. Average annual benefit	$ 7,936	$ 7,480
6.	Beneficiaries		
	a. Number	1,867	1,764
	b. Total annual benefits	$ 20,638,204	$ 18,707,056
	c. Average annual benefit	$ 11,054	$ 10,605

Note: Retirement benefits include impact of July 1 cost-of-living increases.

Historical Summary of Active Member Data

Year Ending June 30,	Active Members		Covered Payroll		Average Salary		Average Age	Average Service
	Number	Percent Increase	Amount in $ Millions	Percent Increase	$ Amount	Percent Increase		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1982	42,015	---	$622	---	$14,810	---	40.9	10.7
1984	40,385	-3.9%	670	7.7%	16,600	12.1%	42.0	9.9
1986	45,311	12.2%	786	17.3%	17,353	4.5%	41.7	9.7
1988	45,492	0.4%	863	9.8%	18,968	9.3%	43.9	10.1
1990	48,858	7.4%	1,033	19.7%	21,146	11.5%	42.6	8.5
1992	51,161	4.7%	1,150	11.3%	22,486	6.3%	43.0	8.9
1993	52,296	2.2%	1,191	3.6%	22,774	1.3%	43.2	8.9
1994	53,744	2.8%	1,259	5.7%	23,420	2.8%	43.3	9.0
1995	54,840	2.0%	1,356	7.7%	24,735	5.6%	43.2	9.0
1996	55,782	1.7%	1,414	4.3%	25,341	2.4%	43.7	9.1
1997	56,685	1.6%	1,449	2.5%	25,556	0.8%	43.9	9.1
1998	58,097	2.5%	1,543	6.5%	26,555	3.9%	44.0	9.0
1999	58,615	0.9%	1,637	6.1%	27,936	5.2%	44.3	9.2
2000	60,090	2.5%	1,796	9.7%	29,884	7.0%	44.5	9.1
2001	60,155	0.1%	1,820	1.3%	30,248	1.2%	44.9	9.2
2002	61,091	1.6%	1,979	8.7%	32,387	7.1%	45.2	9.3
2003	62,614	2.5%	2,032	2.7%	32,460	0.2%	45.3	9.3

Plan Net Assets
(Assets at Market or Fair Value)

Item	Valuation as of June 30, 2003	Valuation as of June 30, 2002
(1)	(2)	(3)
1. Cash and cash equivalents	$ 108,068,182	$ 189,327,483
2. Receivables:		
a. Contributions	$ 42,951,929	$ 42,979,199
b. Investment income	21,154,666	27,183,401
c. Investment sales proceeds - brokers	7,090,361	44,555,672
d. Other	2,528	1,526
e. Total receivables	$ 71,199,484	$ 114,719,798
3. Investments		
a. U.S. treasury securities	$ 383,767,250	$ 455,999,937
b. U.S. government agencies	979,434,779	801,770,798
c. Domestic corporate bonds	470,180,574	601,700,740
d. Domestic equities	3,199,553,289	2,898,146,632
e. International equities	930,026,908	992,565,074
f. Total investments	$ 5,962,962,800	$ 5,750,183,181
4. Invested securities lending collateral	$ 710,907,101	$ 849,455,775
5. Properties : land, building, furniture and equipment (at cost, less accumulated depreciation)	$ 3,633,927	$ 1,425,410
6. Total assets	$ 6,856,771,494	$ 6,905,111,647
7. Liabilities		
a. Accounts payable	$ 1,943,065	$ 1,715,936
b. Accrued expenses	192,768	194,359
c. Refunds payable	2,308,415	2,522,051
d. Investment purchases payable - brokers	57,809,285	39,860,759
e. Due to other funds	252,076	212,015
f. Securities lending collateral	710,907,101	849,455,775
g. Total liabilities	$ 773,412,710	$ 893,960,895
8. Total market value of assets available for benefits (Item 6 - Item 7)	$ 6,083,358,784	$ 6,011,150,752

Allocation of Cash and Investments

		June 30, 2003	June 30, 2002
1.	Cash and short-term equivalents	1.8%	3.2%
2.	U.S. treasury securities	6.3%	7.7%
3.	U.S. government agencies	16.1%	13.5%
4.	Domestic corporate bonds	7.7%	10.1%
5.	Domestic equities	52.8%	48.8%
6.	International equities	15.3%	16.7%
7.	Total investments	100.0%	100.0%

Reconciliation of Plan Net Assets

	Year Ending June 30, 2003 (1)	Year Ending June 30, 2002 (2)
1. Value of assets at beginning of year		
a. Value reported in prior valuation	$ 6,011,150,752	$ 6,667,001,941
b. Prior period adjustments	2,083,048 [1]	-
c. Revised value	$ 6,013,233,800	$ 6,667,001,941
2. Revenue for the year		
a. Contributions		
i. Member contributions (including redeposits and service purchases)	$ 158,770,180	$ 154,730,089
ii. Employer contributions	175,697,304	170,943,074
iii. Employer contributions for ARP members	3,434,922	2,920,289
iv. Total	$ 337,902,406	$ 328,593,452
b. Income		
i. Interest, dividends, and other income	$ 151,395,127	$ 168,605,483
ii. Investment expenses	(6,621,136)	(4,291,673)
iii. Net	$ 144,773,991	$ 164,313,810
c. Net realized and unrealized gains	$ 16,156,143	$ (746,928,008)
d. Total revenue	$ 498,832,540	$ (254,020,746)
3. Expenditures for the year		
a. Refunds	$ 28,338,456	$ 28,508,035
b. Benefit payments	396,081,755	367,494,870
c. Administrative and miscellaneous expenses	4,287,345	5,827,538
d. Total expenditures	$ 428,707,556	$ 401,830,443
4. Increase in net assets (Item 2 - Item 3)	$ 70,124,984	$ (655,851,189)
5. Value of assets at end of year (Item 1 + Item 4)	$ 6,083,358,784	$ 6,011,150,752

[1] Sum of (i) $2,205,176 in expenses capitalized after completion of June 30, 2002 actuarial valuation, and (ii) ($122,128) prior period adjustment made this year

Table 10a

Determination of Excess Earnings to be Deferred

Year ended :	June 30, 2000 (1)	June 30, 2001 (2)	June 30, 2002 (3)	June 30, 2003 (4)
1. MVA at beginning of year	$ 6,740,382,211	$ 7,567,525,248	$ 6,667,001,941	$ 6,011,150,752
2. Net new investments				
a. Contributions	$ 295,885,902	$ 315,244,141	$ 328,593,452	$ 337,902,406
b. Benefits and refunds paid	(346,966,397)	(377,229,591)	(396,002,905)	(424,420,211)
c. Subtotal	$ (51,080,495)	$ (61,985,450)	$ (67,409,453)	$ (86,517,805)
3. MVA at end of year	$ 7,567,525,248	$ 6,667,001,941	$ 6,011,150,752	$ 6,083,358,784
4. Net MVA earnings (3 - 1 - 2)	$ 878,223,532	$ (838,537,857)	$ (588,441,736)	$ 158,725,837
5. Assumed investment return rate	8.00%	8.00%	8.00%	8.00%
6. Expected return	$ 537,187,357	$ 602,922,602	$ 530,663,777	$ 477,431,348
7. Excess return (4 - 6)	$ 341,036,175	$ (1,441,460,459)	$ (1,119,105,513)	$ (318,705,511)
8. Excess return deferral percent	20%	40%	60%	80%
9. Amount deferred	$ 68,207,235	$ (576,584,184)	$ (671,463,308)	$ (254,964,409)

Note : MVA is market value of assets.

Development of Actuarial Value of Assets

1.	Market value of assets as of valuation	$	6,083,358,784
2.	Deferred amounts for fiscal year ending June 30,		
	a. 2003	$	(254,964,409)
	b. 2002	$	(671,463,308)
	c. 2001	$	(576,584,184)
	d. 2000	$	68,207,235
	e. Total	$	(1,434,804,666)
3.	Actuarial value of assets (1) - (2)	$	7,518,163,450
4.	Actuarial value as percent of market value		123.6%

Estimation of Yields

	Year Ending	
	June 30, 2003	June 30, 2002
	(1)	(2)
A. Market value yield		
1. Beginning of year market assets	$ 6,011,150,752	$ 6,667,001,941
2. Investment income (including realized and unrealized gains and losses)	$ 163,013,182	$ (582,614,198)
3. End of year market assets	$ 6,083,358,784	$ 6,011,150,752
4. Estimated dollar weighted market value yield	2.7%	-8.8%
B. Actuarial value yield		
1. Beginning of year actuarial assets	$ 7,595,149,744	$ 7,418,311,093
2. Actuarial return	$ 9,531,511	$ 244,248,104
3. End of year actuarial assets	$ 7,518,163,450	$ 7,595,149,744
4. Estimated actuarial value yield	0.1%	3.3%

History of Investment Return Rates

Plan Year Ending June 30 of	Market	Actuarial
(1)	(2)	(3)
1995	18.5%	11.5%
1996	12.2%	12.0%
1997	20.3%	13.4%
1998	19.6%	15.0%
1999	11.3%	16.4%
2000	13.1%	15.1%
2001	-11.1%	9.5%
2002	-8.8%	3.3%
2003	2.7%	0.1%

Investment Experience Gain or Loss

	Item	June 30, 2003	June 30, 2002
	(1)	(2)	(3)
1.	Actuarial assets, beginning of year	$ 7,595,149,744	$ 7,418,311,093
2.	Total contributions during year	$ 337,902,406	$ 328,593,452
3.	Benefits and refunds paid	$ (424,420,211)	$ (396,002,905)
4.	Assumed net investment income at 8%		
	a. Beginning of year assets	$ 607,611,980	$ 593,464,887
	b. Contributions	13,516,096	13,143,738
	c. Benefits and refunds paid	(16,976,808)	(15,840,116)
	d. Total	$ 604,151,268	$ 590,768,509
5.	Expected actuarial assets, end of year (Sum of items 1 through 4)	$ 8,112,783,207	$ 7,941,670,149
6.	Actual actuarial assets, end of year	$ 7,518,163,450	$ 7,595,149,744
7.	Asset gain (loss) for year (Item 6 - Item 5)	$ (594,619,757)	$ (346,520,405)

Total Experience Gain or Loss

Item (1)	June 30, 2003 (2)	June 30, 2002 (3)
A. Calculation of total actuarial gain or loss		
1. Unfunded actuarial accrued liability (UAAL), previous year	$ 1,152,821,656	$ 652,024,201
2. Normal cost for the previous year	$ 265,666,258	$ 244,471,227
3. Less: contributions for the year	$ (337,902,406)	$ (328,593,452)
4. Interest at 8 %		
a. On UAAL	$ 92,225,732	$ 52,161,936
b. On normal cost	10,626,650	9,778,849
c. On contributions	(13,516,096)	(13,143,738)
d. Total	$ 89,336,286	$ 48,797,047
5. Expected UAAL (Sum of Items 1 - 4)	$ 1,169,921,794	$ 616,699,023
6. Actual UAAL	$ 1,748,463,522	$ 1,152,821,656
7. Total gain (loss) for the year (Item 5 - Item 6)	$ (578,541,728)	$ (536,122,633)
B. Source of gains and losses		
8. Asset gain (loss) for the year	$ (594,619,757)	$ (346,520,405)
9. Liability experience gain (loss) for the year	$ 81,756,424	$ (189,602,228)
10. Assumption change	$ (65,678,395)	N/A
11. Benefit change	N/A	N/A
12. Total	$ (578,541,728)	$ (536,122,633)

History of Cash Flow

Year Ending June 30,	Contributions[1]	Expenditures: Benefit Payments	Expenditures: Refunds	Expenditures: Administrative Expenses[2]	Expenditures: Other	Expenditures: Total	External Cash Flow for the Year[3]	Market Value of Assets	External Cash Flow as Percent of Market Value
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1994	214.2	(175.3)	(19.8)	(1.7)	0.0	(196.8)	17.4	3,190.0	0.5%
1995	229.7	(193.1)	(22.3)	(2.0)	0.0	(217.4)	12.3	3,792.3	0.3%
1996	238.9	(210.6)	(23.9)	(2.3)	0.0	(236.8)	2.1	4,257.2	0.0%
1997	245.6	(231.6)	(24.7)	(1.9)	0.0	(258.2)	(12.6)	5,107.3	-0.2%
1998	260.9	(254.4)	(28.2)	(2.1)	0.0	(284.7)	(23.8)	6,082.1	-0.4%
1999	278.9	(274.8)	(30.0)	(2.7)	0.0	(307.5)	(28.6)	6,740.4	-0.4%
2000	295.9	(311.8)	(35.2)	(2.5)	0.0	(349.5)	(53.6)	7,567.5	-0.7%
2001	315.2	(340.6)	(36.6)	(3.5)	0.0	(380.7)	(65.5)	6,667.0	-1.0%
2002	328.6	(367.5)	(28.5)	(5.8)	0.0	(401.8)	(73.2)	6,011.2	-1.2%
2003	337.9	(396.1)	(28.3)	(4.3)	0.0	(428.7)	(90.8)	6,083.4	-1.5%

Amounts in $ millions

[1] Column (2) includes employee assessments and employer contributions, as well as employer contributions for ARP members.
[2] Excludes investment expenses starting in 1997.
[3] Column (8) = Column (2) + Column (7).

Solvency Test

	June 30, 2003 (1)	June 30, 2002 (2)
1. Actuarial accrued liability (AAL)		
a. Active member contributions	$ 1,144,836,500	$ 1,084,611,241
b. Retirees and beneficiaries	4,220,117,566	3,860,531,900
c. Active and inactive members (employer financed)	3,901,672,906	3,802,828,259
d. Total	$ 9,266,626,972	$ 8,747,971,400
2. Actuarial value of assets	$ 7,518,163,450	$ 7,595,149,744
3. Cumulative portion of AAL covered		
a. Active member contributions	100%	100%
b. Retirees and beneficiaries	100%	100%
c. Active and inactive members (employer financed)	55%	70%

Historical Retired Participants' Data

Year Ending June 30,	Number	Average Monthly Benefit
(1)	(2)	(3)
1984	8,462	$430
1986	10,004	512
1988	11,375	663
1990	12,741	767
1992	14,107	846
1993	15,001	890
1994	15,814	966
1995	16,593	976
1996	17,381	1,011
1997	18,317	1,055
1998	19,244	1,104
1999	20,109	1,139
2000	21,186	1,228
2001	22,191	1,274
2002	23,052	1,315
2003	24,085	1,376

Note: Retirement benefits include impact of July 1 cost-of-living increases.

Table 16

Distribution of Active Members by Age and by Years of Service
As of 06/30/2003

	Years of Credited Service												
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	Total
Attained Age	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.
Under 25	598	505	218	71	36	10	0	0	0	0	0	0	1,438
	$14,661	$18,901	$15,564	$14,977	$16,748	$20,948	$0	$0	$0	$0	$0	$0	$16,398
25-29	568	1,111	840	621	436	456	6	0	0	0	0	0	4,038
	$21,912	$25,348	$25,644	$26,539	$28,033	$27,580	$26,139	$0	$0	$0	$0	$0	$25,652
30-34	539	906	789	667	558	1,926	266	7	0	0	0	0	5,658
	$23,835	$23,838	$24,931	$27,471	$27,933	$31,079	$30,955	$26,234	$0	$0	$0	$0	$27,624
35-39	1,075	1,143	772	670	538	2,022	1,207	243	9	0	0	0	7,679
	$21,317	$24,573	$24,883	$25,485	$26,659	$29,956	$34,275	$35,824	$30,308	$0	$0	$0	$27,679
40-44	513	855	801	739	656	2,487	1,561	1,138	305	14	0	0	9,069
	$25,250	$23,588	$23,447	$24,127	$26,140	$29,083	$34,464	$39,219	$38,195	$29,016	$0	$0	$29,738
45-49	419	802	710	710	593	2,557	1,972	1,383	1,223	427	10	0	10,806
	$26,759	$23,913	$24,950	$25,861	$27,391	$29,982	$36,010	$41,331	$45,704	$44,763	$38,960	$0	$33,587
50-54	330	617	593	502	509	2,164	2,137	1,665	1,332	1,106	230	1	11,186
	$27,624	$27,740	$27,790	$28,200	$29,803	$32,378	$35,737	$41,251	$48,059	$51,080	$52,221	$26,058	$37,520
55-59	209	428	387	364	322	1,293	1,376	1,314	978	735	380	29	7,815
	$32,645	$28,912	$28,939	$29,380	$30,502	$32,537	$37,149	$40,421	$46,725	$51,836	$57,492	$60,083	$38,976
60-64	93	149	172	148	156	661	643	592	404	341	176	68	3,603
	$32,660	$28,856	$30,115	$26,230	$28,987	$30,672	$33,618	$39,127	$43,120	$51,535	$62,935	$63,036	$37,838
65 & Over	49	73	83	66	57	288	228	163	113	90	58	54	1,322
	$28,307	$16,391	$19,515	$27,690	$21,272	$26,278	$28,880	$36,055	$42,068	$41,671	$65,612	$66,924	$32,675
Total	4,393	6,589	5,365	4,558	3,861	13,864	9,396	6,505	4,364	2,713	854	152	62,614
	$23,180	$24,544	$25,124	$26,260	$27,680	$30,452	$35,149	$40,202	$45,762	$49,922	$57,529	$63,611	$32,460

Summary of Plan Provisions

1. Effective Date: July 1, 1957.

2. Plan Year: Twelve-month period ending June 30th.

3. Administration: The Educational Retirement Board is responsible for administration of the System and investment of System assets.

4. Type of Plan: The System is a qualified, defined benefit, governmental retirement plan. For government accounting purposes, it is a cost-sharing multiple-employer PERS.

5. Eligibility: All teachers, nurses and administrators employed by public schools in New Mexico, including public colleges and universities, participate in the System. These are the "regular members", and their participation is a condition of employment. However, see the section on the Alternative Retirement Plan below for an exception. Generally, other employees of these schools are also required to participate, although such employees employed continuously since June 30, 1971 may exempt themselves from membership. Certain other employees of various state schools and agencies also participate.

6. Member Contributions: All active members contribute 7.6% of their earnings. Substantially all earnings are included for this purpose. Employee contributions are "picked up" by the local employer for federal income tax treatment.

7. Employer Contributions: The school district or other local administrative unit which employs a member contributes 8.65% of the member's earnings. In addition, state universities, colleges and junior colleges contribute 3% of the earnings of non-members who are participating in the Alternative Retirement Plan.

8. Service: Employees receive credit for each calendar quarter in which they are contributing members. Credit is also granted for service prior to the System's effective date, and certain military service. Credit may also be purchased for some out-of-state service under certain circumstances.

9. Final Average Compensation (FAC): The average of the member's earnings for the last five consecutive years, or such other five consecutive year period that gives the largest average. Monthly benefits are based on one-twelfth of this amount.

10. Normal Retirement

a. Eligibility: A member may retire upon Normal Retirement on the earliest of (i) the date he/she attains age 65 with credit for 5 years of service, or (ii) the date the member completes 25 years of service, or (iii) the date that the sum of the member's age and service is at least 75, provided the member is at least age 60.

b. Monthly Benefit: 2.35% of FAC (monthly) times years of service.

c. Payment Form: Benefits are paid as a monthly life annuity, with a guarantee that if the payments made do not exceed the member's accumulated contributions with interest, determined as of the date of retirement, the balance will be paid in a lump-sum to the member's beneficiary. Optional forms of payment are available; see below.

11. Early Retirement

a. Eligibility: A member may take early retirement once the sum of his/her age and service equals or exceeds 75.

b. Monthly Benefit: 2.35% of FAC (monthly) times years of service, multiplied by the early retirement factor below.

c. Early Retirement Factor:

Age at Retirement	Factor
60 or later	1.000
59	.976
58	.952
57	.928
56	.904
55	.880
54	.808
53	.736
52	.664
51	.592
50	.520
49	.448
48	.376
47	.304
46	.232
45	.160

d. Payment Form: Same as for Normal Retirement above.

12. Disability Retirement

   a. Eligibility: A member is eligible provided (i) he/she has credit for at least 10 years of service, and (ii) the disability is approved by the Board.

   b. Monthly Benefit: 2% of FAC (monthly) times years of service, but not less than the smaller of (i) one-third of FAC, or (ii) 2% of FAC times years of service projected to age 60.

   c. Payment Form: The disability benefit commences immediately upon the member's retirement. Disability benefits are payable as a monthly life annuity, with a guarantee that if the payments made do not exceed the sum of the member's accumulated contributions with interest as of the date of retirement, the balance will be paid in a lump-sum to the member's beneficiary. If the disabled member survives to age 60, the regular optional forms of payment are available.

13. Vested Termination Benefit

   a. Eligibility: A member with at least 5 years of service who does not withdraw his/her contributions from the fund is eligible for a vested termination benefit.

   b. Monthly Benefit: 2.35% of FAC (monthly) times years of service. Both FAC and service are determined at the time the member leaves active employment.

   c. Payment Form: Benefits commence when the participant attains his/her normal retirement age. Optionally benefits may commence at the early retirement age, applying the same reduction factors as are used for regular early retirement. The form of payment is the same as for Normal Retirement above.

14. Withdrawal (Refund) Benefit

   a. Eligibility: All members leaving covered employment with less than 5 years of service for a reason other than the member's death. Optionally, members eligible for other benefits may withdraw their contributions in lieu of the regular benefits due.

   b. Benefit: The member who elects to withdraw receives a lump-sum payment of his/her employee contributions, plus interest computed at a rate set by the Board of Trustees.

15. Death in Service

    Benefit: Upon the death of an active member, the beneficiary may receive a refund of the member's contributions, plus interest based upon a rate set by the Board of Trustees. Alternatively, if the member has five or more years of service, the beneficiary may elect to receive an annuity determined as though the member had retired, elected option B below, and then died. If the member is not eligible for early or normal retirement, this benefit may still be elected, with payments deferred until the member would have been eligible for retirement.

16. Optional Forms of Payment: There are optional forms of payment available on an actuarially equivalent basis, as follows:

    a. Option B - A Joint and 100% Survivor annuity with a "pop-up" feature. The regular life annuity amount is reduced to provide a Joint and 100% Survivor benefit, i.e., a benefit payable as long as either the member or his joint annuitant shall live. However, if the joint annuitant predeceases the member, then the member's benefit amount reverts back to the regular life annuity amount. The "pop-up" feature is subsidized by the System.

    b. Option C - A Joint and 50% Survivor annuity with a pop-up feature. The benefit is reduced to provide a Joint and 50% Survivor benefit, i.e., a benefit payable as long as both the member and the joint annuitant are alive, reducing to 50% of this amount upon the member's death, if the joint annuitant is still living. If the joint annuitant predeceases the member, the benefit reverts to the regular life annuity amount. The pop-up feature is subsidized by the System.

17. Cost-of-living Increase: All retired members and beneficiaries receiving benefits receive an automatic adjustment in their benefit each July, beginning in the year they attain age 65. The adjustment is equal to one-half the change in the cost of living, except that the adjustment shall not exceed four percent, nor be less than two percent. However, this increase shall not be greater than the increase in the cost of living. Members retired prior to July 1, 1984 are also entitled to an increase of the lesser of 2% or the increase in the cost of living for years prior to the attainment of 65. Members on disability are entitled to an adjustment commencing on July 1 of the third full year following disability retirement.

18. Alternative Retirement Plan (ARP): Beginning July 1, 1991, new faculty members employed by state universities may elect participation in the ARP rather than in this System. If this election is not made, the employee remains a member of this System permanently. No benefits are paid to ARP members from ERB. Also see the section on Employer Contributions above.

Summary of Actuarial Methods and Assumptions

I. Valuation Date

The valuation date is June 30th of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

II. Actuarial Cost Method

The contribution rate is set by statute for both employees and for the local employers. The funding period is determined, as described below, using the Entry Age Normal actuarial cost method.

The Entry Age Normal actuarial cost method assigns the plan's total unfunded liabilities (the actuarial present value of future benefits less the actuarial value of assets) to various periods. The unfunded actuarial accrued liability is assigned to years prior to the valuation, and the normal cost is assigned to the year following the valuation. The remaining costs are the normal costs for future years. Then each year's contribution is composed of (i) that year's normal cost, plus (ii) a payment used to reduce the unfunded actuarial accrued liability.

The normal cost is the level (as a percentage of pay) contribution required to fund the benefits for a new member. This is determined based upon a hypothetical group of new entrants. This group is based on the age-pay-sex distribution at hire for members joining ERB during the four-year period ending June 30, 2002. Part of the normal cost is paid from the employees' own contributions. The local employers pay the balance from their contributions.

The actuarial accrued liability is the difference between the total present value of future benefits and the actuarial present value of future normal costs. The unfunded actuarial accrued liability is the excess of the actuarial accrued liability over the actuarial value of assets.

The balance of the employers' contributions--the remainder after paying their share of the normal cost--is used to reduce the unfunded actuarial accrued liability. The funding period is the length of time required for the unfunded actuarial accrued liability to be completely amortized, assuming that the portion used to reduce the unfunded remains level as a percentage of total payroll, which is assumed to grow 3.75% per year. The 3.00% contribution made by employers to ERB on behalf of employees who elected to participate in the Alternative Retirement Plan is also used to amortize the unfunded actuarial accrued liability.

It is assumed that all contributions are made monthly at the end of the month.

III. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). Returns are measured net of all investment and administrative expenses.

IV. Actuarial Assumptions

A. Economic Assumptions

1. Investment return: 8.00%, compounded annually, net of expenses. This is made up of a 3.00% inflation rate and a 5.00% real rate of return.

2. Salary increase rate: Inflation rate of 3.00% plus productivity increase rate of 1.50% plus step-rate/promotional as shown:

Years of Service	Annual Step-Rate/Promotional Component Rates of Increase	Total Annual Rate of Increase
0	8.50%	13.00%
1	2.75%	7.25%
2	1.75%	6.25%
3	1.25%	5.75%
4	1.00%	5.50%
5	0.75%	5.25%
6	0.50%	5.00%
7	0.25%	4.75%
8	0.25%	4.75%
9	0.25%	4.75%
10 or more	0.00%	4.50%

3. Cost-of-living increases: 2% per year, compounded annually. Note that increases are deferred until age 65 or, for disabled retirees, until the third year following retirement. Also, members who retired prior to July 1, 1984 and who are younger than age 65 receive an annual increase.

4. Payroll growth:

   3.75% per year (with no allowance for membership growth)

B. Demographic Assumptions

1. Mortality after termination or retirement -

   a. Healthy males - 1994 Uninsured Pensioner Mortality Table for males, set back three years

   b. Healthy females - 1994 Uninsured Pensioner Mortality Table for females, set back two years

   c. Disabled males and females - 1981 Disability Table

   See sample rates below:

	Deaths per 100 Lives		
Age	Healthy Males	Healthy Females	Disabled Males and Females
40	.10	.06	1.76
45	.13	.09	2.08
50	.20	.13	2.42
55	.35	.21	2.83
60	.60	.36	3.29
65	1.09	.72	3.76
70	1.94	1.26	4.36
75	3.06	1.97	5.62
80	4.86	3.41	8.84
85	8.12	5.90	12.95

2. Mortality rates of active members - As shown below for sample ages:

	Deaths per 100 Members	
Age	Males	Females
25	.10	.02
30	.10	.02
35	.08	.04
40	.08	.03
45	.11	.05
50	.15	.10
55	.23	.17
60	.31	.24
65	.46	.31

3. Disability - As shown below for selected ages (rates are only applied to eligible members — members with at least 10 years of service):

Age	Occurrence of Disability per 100 Members	
	Males	Females
25	.00	.00
30	.00	.03
35	.06	.07
40	.13	.12
45	.19	.16
50	.24	.19
55	.26	.20
60	.24	.19
65	.18	.16

4. Retirement - Select and ultimate as shown below for selected ages (rates are only applied to members eligible for retirement):

Retirement Per 100 Members

Males

Age	Years of Service					
	0-4	5-9	10-14	15-19	20-24	25+
45	0.00	0.00	0.00	0.00	0.00	20.00
50	0.00	0.00	0.00	0.00	0.00	20.00
55	0.00	0.00	0.00	0.00	5.00	20.00
60	0.00	0.00	0.00	15.00	20.00	25.00
62	0.00	0.00	40.00	40.00	35.00	35.00
65	0.00	25.00	40.00	45.00	45.00	45.00
70	100.00	100.00	100.00	100.00	100.00	100.00

Females

Age	Years of Service					
	0-4	5-9	10-14	15-19	20-24	25+
45	0.00	0.00	0.00	0.00	0.00	20.00
50	0.00	0.00	0.00	0.00	0.00	20.00
55	0.00	0.00	0.00	0.00	6.00	23.00
60	0.00	0.00	0.00	20.00	15.00	30.00
62	0.00	0.00	50.00	35.00	35.00	40.00
65	0.00	35.00	35.00	35.00	35.00	35.00
70	100.00	100.00	100.00	100.00	100.00	100.00

5. Termination (for causes other than death, disability or retirement) - Select and ultimate as shown below for selected ages:

Terminations per 100 Members

Males

	Years of Service										
Age	0	1	2	3	4	5	6	7	8	9	10+
25	45.10	33.50	23.39	17.10	13.75	11.68	10.21	8.94	7.79	7.10	8.86
30	42.28	28.78	20.12	14.85	11.95	10.34	9.17	8.08	7.04	6.28	5.99
35	40.37	26.82	18.43	13.40	10.65	9.29	8.37	7.48	6.58	5.80	3.84
40	39.28	26.65	17.89	12.64	9.85	8.56	7.82	7.13	6.38	5.65	2.40
45	38.59	26.98	18.04	12.55	9.58	8.20	7.49	6.94	6.37	5.79	1.81
50	37.83	27.06	18.60	13.10	9.90	8.24	7.35	6.83	6.45	6.13	2.50
55	36.87	26.97	19.58	14.29	10.83	8.70	7.43	6.77	6.54	6.59	5.30
60	35.79	27.22	21.09	16.11	12.36	9.58	7.69	6.74	6.57	7.11	10.67
65	34.67	28.18	23.21	18.55	14.47	0.00	0.00	0.00	0.00	0.00	0.00

Females

	Years of Service										
Age	0	1	2	3	4	5	6	7	8	9	10+
25	40.50	29.30	21.62	17.88	16.08	14.90	13.60	11.81	9.39	6.66	7.55
30	36.06	25.45	18.97	15.08	12.93	11.68	10.69	9.58	8.12	6.36	5.47
35	33.25	23.24	16.75	12.79	10.57	9.37	8.62	7.94	7.11	6.03	3.87
40	31.79	22.00	15.10	11.14	9.05	7.99	7.34	6.86	6.35	5.66	2.76
45	31.29	21.37	14.28	10.40	8.46	7.48	6.83	6.32	5.87	5.32	2.20
50	31.49	21.39	14.49	10.65	8.71	7.71	6.96	6.32	5.74	5.18	2.27
55	32.32	22.32	15.72	11.79	9.67	8.47	7.57	6.76	6.02	5.39	3.10
60	33.76	24.34	17.95	13.71	11.24	9.62	8.51	7.54	6.72	6.07	4.95
65	35.82	27.54	21.14	16.33	13.36	0.00	0.00	0.00	0.00	0.00	0.00

Rates are not applied after the member is eligible for reduced or unreduced retirement benefits.

C. Other Assumptions

1. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses. All beneficiaries are assumed to be spouses.

2. Percent electing annuity on death: It is assumed that beneficiaries of deceased members will elect to receive the refund of contributions with interest, unless the member is eligible for early or normal retirement, in which case the beneficiary will elect to receive the survivor annuity.

3. Percent electing deferred termination benefit: All vested active members terminating prior to eligibility for a retirement benefit are assumed to elect the more valuable of (i) an immediate refund, or (ii) a deferred annuity commencing when the member is eligible for an unreduced retirement benefit.

4. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt when eligible for an unreduced benefit (or attained age if later).

5. Administrative expenses: The assumed investment return rate is intended to be the net rate of return after payment of all investment and administrative expenses.

V. Participant Data

Participant data was supplied in electronic files for (i) active members, (ii) inactive members, who are entitled to either a future deferred benefit or a refund of their employee contributions and the accumulated interest, and (iii) members and beneficiaries receiving benefits.

The data for active and inactive, non-retired members include birth date, sex, years of service, salary, and accumulated employee contributions (without interest). For retired members and beneficiaries, the data included date of birth, sex, beneficiary or joint annuitant date of birth (where applicable), current monthly benefit, date of retirement, and a form of payment code.

Salary supplied for the current year was the total earnings for the year preceding the valuation date.