GRS Gabriel Roeder Smith & Company
Consultants & Actuaries

EDUCATIONAL RETIREMENT BOARD OF NEW MEXICO

ACTUARIAL VALUATION

AS OF JUNE 30, 2012

GRS
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November 27, 2012

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, 2012

The results of the June 30, 2012 annual actuarial valuation are presented in this report. 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, 2012.

This report was prepared at the request of the Board and is intended for the Board's use and those designated or approved by the Board. This report may be provided to parties other than the ERB only in its entirety and only with the permission of the Board

To the best of our knowledge, this report is based on benefit provisions in effect as of June 30, 2012, 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.

The valuation report is a snapshot of the Plan's estimated financial condition as of the valuation date. The valuation does not predict the Plan's future financial condition or its ability to pay benefits in the future and it also does not provide any guarantee of future financial soundness of the Plan. Over time, the plan's total cost will depend on a number of factors, including the amount of benefits the plan pays, the number of members receiving benefits, the period of time over which benefits are paid, plan expenses, and the amount earned on any assets invested toward the payment of benefits. These amounts and other variable are uncertain and unknowable at the valuation date.

To prepare the valuation report, actuarial assumptions, including those adopted with the June 30, 2010 experience study, are used in a forward looking financial and demographic model to present a single scenario from a wide range of possibilities; the results based on that single scenario are included in the valuation. The future is uncertain and the plan's actual experience will differ from those assumptions; these differences may be significant or material because these results are sensitive to the assumption made, and, in some cases, to the interaction between the assumptions.

Different assumptions or scenarios within the range of possibilities may also be reasonable and results based on those assumptions would be different. As a result of the uncertainty inherent in a forward looking projection over a long period of time, no one projection is uniquely "correct" and many alternative projections of the future could also be regarded as reasonable. Two different actuaries could, quite reasonably, arrive at different results based on the same data and different views of the future.

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

Financing Objectives

In accordance with HB 628, employer and member contributions are scheduled as follows.

For employees with annual salary more than $20,000/less than $20,000 per year:

Fiscal Year End	*Employer Contribution Rate*	*Member Contribution Rate*
2013	10.90%/12.40%	9.40%/7.90%
2014	13.15%/13.15%	7.90%/7.90%
2015 and thereafter	13.90%/13.90%	7.90%/7.90%

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 maximum 30-year period currently 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.

Progress Toward Realization of Financing Objectives

The funded condition of the plan, as measured by the funded ratio, declined from 2011 to 2012. The decline was due to the continued loss on the actuarial value of assets (a loss of $524 million) and a net gain on the liabilities of $200 million.

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, 2011 was 63.0%, while it is now 60.7%. Five years ago the ratio stood at 70.5%, and ten years ago the ratio was 86.8%. However, if the ratio were calculated using the market value rather than the actuarial value of assets, it would be 59.9% as of June 30, 2012, down from 62.7% as of June 30, 2011. During the last fiscal year, the UAAL increased from $5.7 billion to $6.2 billion.

The plan's funding period as of the valuation date is infinite. This is a theoretical calculation of the period that will be required to amortize the UAAL, assuming that the current year's amortization payment increases at the payroll growth rate (3.75%) each year in the future. The infinite period compares with infinite funding period calculated as of the prior actuarial valuation. An infinite period means that the principal on the UAAL will never be paid down.

This calculation of the funding period is a snapshot as of the valuation date and ignores a number of factors: (i) the scheduled future increases in the employer contribution rates, (ii) the known deferred asset gains and losses that are reflected in the actuarial value of assets and that will be recognized over the next four years, and (iii) the expected future growth in the active membership (0.75%).

Recent Events

In FYE 2009, the financial markets experienced major losses. The equity markets dropped dramatically through early March 2009 before beginning to recover. Many pension trusts lost 30% to 40% through early March 2009 but then rebounded off of those lows. For instance, the market value of the ERB trust was $7.1 billion as of June 30, 2009 and is $9.5 billion as of June 30, 2012. Most of the investment losses from FYE 2009 have been recognized in this valuation but some are still being deferred and will be recognized in future valuations. The total amount of deferred losses as of June 30, 2012 is $117.3 million dollars and the plan's funding period has become infinite.

The annual return from 2011 to 2012 on the market value of assets was 1.6% and the annual return from that same period on the actuarial value of assets was 2.2%. The return on the actuarial value of assets of less than the assumed return of 7.75% reflects the smoothing of gains and losses at work in the asset method- for instance, in 2009 not all the losses were recognized at one time in the actuarial value of assets and likewise, for this valuation, not all the 2012 losses have been recognized in the actuarial value of assets. The net result of the losses from 2009 and 2012 and the gains from 2010 and 2011 that are recognized in this valuation is an overall loss on the actuarial value of assets.

Benefit Provisions

HB 628 was enacted in 2011. This bill extended the 1.50% shift in contributions that was enacted in prior legislation from the employer to the member and added an additional shift of 1.75%. The 1.75% shift expired as of June 30, 2012 and the 1.50% shift will expire at June 30, 2013. The result is the employer is contributing 10.90% for FYE 2013 and the member is contributing 9.40%.

(Members with annual salary less than $20,000 per year will continue to contribute 7.90% and the employer will contribute 12.40% for FYE 2013).

Previous legislation enacted a new "tier" of benefits for members who join ERB after June 30, 2010. This is the second valuation that reflects new members in the plan under the provisions of the new tier. The provisions include later eligibility for retirement and a change in the reduction of benefits for members who take an early retirement.

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 2010 actuarial valuation, and the Board adopted a number of assumption changes, including a decrease in the discount rate from 8% to 7.75%, and changes in mortality, retirement and salary increase rates. A change was also made to use the traditional entry age normal cost method. Under this method, the normal cost should generally remain level from year to year. However, as tier 2 members enter the system, the normal cost will gradually decrease to the cost of the tier 2 benefits. As of this valuation, the normal cost decreased from 13.83% last year to 13.79% this year.

The three tier licensure program is still in effect for ERB members. We have made no separate adjustment to account for this program; the impact of the three tier licensure program has been accounted for in the salary scale assumptions.

We believe the recommended assumptions are internally consistent and are reasonably based on the actual experience of ERB. The actuarial assumptions and methods used in this report comply with the parameters for disclosure that appear in GASB 25.

The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions.

Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods.

Member and Financial Data

Member data for retired, active, and inactive participants was supplied as of June 30, 2012, 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.

We provided some of the information used in the Comprehensive Annual Financial Report. Specifically, we provided information used in preparing the schedules of Active Member Valuation Data, Retirants and Beneficiaries, Analysis of Financial Experience, and the Solvency Test that are found in the Actuarial Section; and we provided the Schedule of Funding Progress and the Schedule of Required Contributions in the Financial Section.

Certification

All of our work conforms with generally accepted actuarial principles and practices, and to the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of New Mexico state law and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board.

The undersigned are independent actuaries and consultants. Both are Enrolled Actuaries and are Members of the American Academy of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries. Both of the undersigned are experienced in performing valuations for large public retirement systems.

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

Sincerely,

Leslie L. Thompson

Leslie L. Thompson, FSA, FCA, MAAA, EA
Senior Consultant

R. Ryan Falls

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Senior Consultant

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Section III — Supporting Exhibits (Continued)

SECTION I

EXECUTIVE SUMMARY

Executive Summary

Valuation as of:	06/30/2012	06/30/2011
Contribution Rates for Fiscal Year Ending:	06/30/2013	06/30/2012
Membership		
Number of		
- Active members	60,855	61,673
- Retirees and beneficiaries	37,336	35,457
- Inactive, vested	9,648	9,333
- Inactive, nonvested	24,384	23,678
- Total	132,223	130,141
Payroll	$ 2.5 billion	$ 2.5 billion
Statutory contribution rates		
Employer	10.90%	9.15%
Member	9.40%	11.15%
Assets		
Market value	$ 9.5 billion	$ 9.6 billion
Actuarial value	$ 9.6 billion	$ 9.6 billion
Return on market value	1.6%	19.0%
Return on actuarial value	2.2%	4.2%
Employer contributions	$ 253.8 million	$ 308.4 million
External cash flow %	-2.8%	-2.0%
Ratio of actuarial to market value	101.2%	100.6%
Actuarial Information		
Normal cost %	13.79%	13.83%
Unfunded actuarial accrued liability (UAAL)	$ 6.2 billion	$ 5.7 billion
Funded ratio	60.7%	63.0%
Funding period (years)	Infinite	Infinite
GASB Annual Required Contribution	17.59%	14.54%
Gains/(losses)		
Asset experience	$ (524.0) million	$ (358.7) million
Liability experience	200.1 million	225.8 million
Benefit changes	-	-
Assumption/method changes	-	(426.1) million
Total	$ (323.9) million	$ (559.0) million

SECTION II

DISCUSSION

Introduction

Table 1 summarizes the key 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, 16 and 17 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. 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, Appendix 2 is a summary of the actuarial methods and assumptions, and Appendix 3 is a Glossary.

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 $18.3 billion, 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 $15.8 billion, 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 13.79% of payroll inclusive of member contributions. This is the total (member plus employer) contribution rate needed to pay for the average new member.

- Part of the normal cost is paid by the employee contributions of 9.40%, leaving 4.39% to be funded by the employers. i.e., the current year's employer normal cost is 4.39% of payroll. This is shown in Line 3 of Table 1. The balance of the employer contribution is used as payment on the UAAL. The employer contribution is expected to increase in future years, and this will affect the amount of funding available to amortize the UAAL.

- 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 $6.2 billion as shown in line 8 on Table 1.

- Since the statutory employer contribution rate is 10.90%, and the employer normal cost rate is 4.39%, the difference of 6.51% is used to amortize the UAAL. *(Next year the employer contribution rate is scheduled to be 13.15%).* The 3% contribution made on behalf of ARP members is also used to amortize the UAAL.

- Finally, the funding period is calculated by determining how long it will take to reduce the UAAL to zero, assuming that the current year's amortization contribution increases at the 3.75% payroll growth period each year. This period is currently infinite. (Note, however, that this calculation does not reflect the scheduled increases in the employer contribution rate. Further, it tacitly assumes a 7.75% return on the actuarial value of assets, not the market value. More realistic projections show that it will take about 56 years to amortize the UAAL if the trust earns 7.75% each year in the future on market and if the employer contribution rate increases occur as scheduled under current law, and if the membership grows 0.75% per year.)

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 a 7.75% 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 $437.9 million for imputed interest and decreased by $181.9 million because of payments made. This means that the UAAL was expected to increase $256.0 million before recognizing plan experience. The UAAL as of June 30, 2011 was $5.65 billion, and the expected UAAL at June 30, 2012, recognizing actual contributions made, was $5.9 billion.

The plan experienced a liability gain of $200.1 million the vast majority of which is due to a gain from salary increases less than expected. This gain represents 1.3% of the total actuarial accrued liability.

A 2% cost-of-living adjustment was applied as of July 1, 2012 to retirement benefits for retirees eligible to receive a cola. Note that the adjustment is only applied to members who retired in calendar year 2011 or earlier; members who retired in 2012 are ineligible. This increase also applied to disabled retirees who had been retired for at least three years, i.e., members who began receiving a disability retirement benefit in calendar year 2008 or earlier.

A small actuarial gain on investments had been anticipated because under the smoothing method used to determine the actuarial value of assets the amount of deferred gains to be recognized this year was greater than the deferred losses. This gain did not materialize due to the lower than expected investment return which occurred in FYE 2012.

The plan experienced an actuarial loss on investments of $524.0 million. The investment loss resulted from the fact that the return on the actuarial value of assets, 2.2%, was less than the 7.75% assumed investment return. This loss was the result of recognizing 20% of the losses from FYE 2008 and FYE 2009, with 20% of the gains from FYE 2010 and FYE 2011, and 20% of the loss from FYE 2012. The market rate of return in FYE 2012 was 1.6%.

There were no material benefit changes or new assumption changes adopted since the last actuarial valuation. An actuarial method change was made to change the amortization period from an open period to a closed period. This change has no impact as of this valuation. As a result of all the experience, the UAAL increased from $5.7 billion to $6.2 billion.

GASB 25 Disclosure

Governmental Accounting Standards Board Statement No. 25 (GASB 25) is the relevant accounting standard for governmental retirement systems like ERB. However, the Standards Board has enacted a new accounting standard (GASB 67) for governmental retirement systems that will be effective as of the plan year beginning July 1, 2013 for ERB. The new standard will have no impact on the funding of the plan but will require some new disclosure items to be reported in the year-end accounting statements beginning FYE 2014.

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 employer 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 years from 1992 to 2001, with the best funded ratio in 2001, 91.9%, then it began to decrease as the negative investment experience in the 2001 – 2003 fiscal years was phased into the actuarial value of assets. The ratio increased slightly in 2007 and 2008, as some gains from prior years were recognized. Finally, due to the poor returns of the financial markets for FYE 2008, FYE 2009 and again FYE 2012, the ratio decreased to 60.7% as of 2012.

Table 6b shows a fifteen-year comparison of (a) the employer contributions actually received, with (b) the GASB 25 ARC. Note that this shows that 63.4% of the ARC was contributed during FYE 2012, since the 9.15% employer contribution rate in FYE 2012 was less than the 30-year contribution calculated in last year's valuation (14.54%). For FYE 2013, the financial reports prepared for ERB will show that only approximately 62% of the ARC was contributed. This is because the 10.90% statutory rate is less than the calculated 30-year contribution rate of 17.59%.

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, June 30, 2003, June 30, 2005 and June 30, 2011.

* The legislative changes made by HB 573, HB 631, and HB 854 in 2009 were recognized at June 30, 2009 and the changes made by SB 91 in 2010 were recognized at June 30, 2010. The changes made by HB 628 were recognized at June 30, 2011.

* There is a contribution deficiency of 6.69% as of June 30, 2012, and this is compared to a contribution deficiency of 5.39% as of June 30, 2011. The 6.69% deficiency is the difference between the 17.59% ARC for FYE 2013, as shown on Table 5a, and the 10.90% statutory employer contribution for that year.

Benefit Provisions

Appendix 1 summarizes the provisions of ERB. 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.

HB 628 was enacted in 2011. This bill extended the 1.50% shift in contributions that was enacted in prior legislation from the employer to the member and added an additional shift of 1.75%. The 1.75% shift expired as of June 30, 2012 and the 1.50% shift will expire at June 30, 2013. The result is the employer is contributing 10.90% for FYE 2012 and the member is contributing 9.40%. (Members with annual salary of less than $20,000 will continue to contribute 7.90% and the employer will contribute 12.40% for FYE 2013).

In Section 16 of HB 628, there is a provision that could modify the FYE 2013 contribution rates. The employer and employee contribution rates will continue for the period July 1, 2012 through June 20, 2013 if the secretary of finance and administration certifies that (1) general fund revenues in fiscal year 2012 were less than one hundred million dollars more than the general fund revenue forecast reflected in the fiscal year 2012 state budget; and (2) at the end of fiscal year 2012, the total amount in the state reserve funds is less than five percent of the total general fund appropriations for fiscal year 2012. For purposes of projections we have assumed that the contribution rates will return from the employer rate of 9.15%, employee rate of 11.15%, to an employer rate for FYE 2013 of 10.90% and an employee rate of 9.40% for those members with annual salary greater than $20,000.

HB 129 was also enacted in 2011 and changed the payment of the member-plus-employer contribution made on behalf of retired retirees. Under prior law, the employer paid the total contribution rate, while under HB 129, the employer and employee each pay their own share. SB 119 allows for certain post-retirement beneficiary option designations. Neither of these two bills has a material impact on the valuation.

There has been no legislation enacted in 2012 that impacts ERB.

Impact of the Second Tier "Tier 2" Benefits

For members hired after June 30, 2010, their plan membership will be under the Tier 2 benefit provisions. These benefits have a later date of retirement and a lower cost to the plan. In the course of the past two years, approximately 9,600 new members entered the system and were covered under this second tier. These tier 2 members have an average age of 38.9, average service of 1.1 years and average pay of $35,431.

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. The last review of these assumptions occurred following the 2010 actuarial valuation, and the Board adopted a number of assumption changes, including a decrease in the discount rate from 8% to 7.75%, and changes in mortality, retirement and salary increase rates. A change was also made to use the traditional entry age normal cost method and to change the amortization period from an open period to a closed period.

We believe the recommended assumptions are internally consistent and are reasonably based on the actual experience of ERB. Appendix 2 summarizes the current assumptions.

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 has 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 43% of the assets are now held in traditional equities, about the same as last year. Table 9 shows a reconciliation of the assets from the beginning of the prior year to the valuation date.

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 7.75% 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 investment and administrative expenses.

Note that the actuarial value is currently 101.2% of the market value. The dollar amount of the difference between the actuarial value and market value is the value of the deferred losses, and totals $117.3 million dollars. Over any short time period, a disparity between actuarial value and market value may appear, but in the long-run, we would expect the actuarial value and the market value to continue to track each other fairly closely.

Table 11a shows that the investment return rate for FYE 2012 on market value was 1.6%, while it was 2.2% on actuarial value. 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, 2.8% of market value.

Member Data

Membership data was provided on electronic files by the ERB staff. Data for active members includes sex, birthdate, service, salary paid in the prior year, and accumulated contributions. Data for inactive, nonretired members was similar, but includes the member's accrued benefit as well. For retired members, data includes 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. Table 17 is a reconciliation that tracks changes in the plan population from last year to this year.

The number of active members decreased 1.3% since last year, from 61,673 to 60,855.

Total payroll decreased 1.1% since last year. For all comparative purposes, payroll is the amount supplied by the ERB staff (i.e., the 2011-2012 member pay). However, this figure is increased by one year's pay increase to determine the member's rate of pay at July 1, 2012. 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 1.6%. 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.

SECTION III

SUPPORTING EXHIBITS

Actuarial Information

	June 30, 2012 (1)	June 30, 2011 (2)
1. Payroll		
a. Supplied by System (annualized)	$ 2,495,275,534	$ 2,523,816,000
b. Adjusted for one-year's pay increase	2,649,331,144	2,678,376,300
2. Actuarial present value of future pay	$ 17,996,149,386	$ 18,332,502,820
3. Normal cost rate (payable monthly)		
a. Total normal cost rate	13.79%	13.83%
b. Less: member contribution rate	(9.40%)	(11.15%)
c. Employer normal cost rate	4.39%	2.68%
4. Employer normal cost (Item 3c * Item 1b)	$ 116,305,637	$ 71,780,485
5. Actuarial accrued liability for active members		
a. Actuarial present value of future benefits	$ 9,029,857,760	$ 9,179,336,511
b. Less: actuarial present value of future normal costs	(2,420,181,490)	(2,478,518,951)
c. Actuarial accrued liability	$ 6,609,676,270	$ 6,700,817,560
6. Total actuarial accrued liability for:		
a. Retirees and beneficiaries	$ 8,338,284,890	$ 7,726,559,891
b. Inactive members	889,011,370	865,694,973
c. Active members (Item 5c)	6,609,676,270	6,700,817,560
d. Total	$ 15,836,972,530	$ 15,293,072,424
7. Actuarial value of assets	$ 9,606,304,017	$ 9,642,229,673
8. Unfunded actuarial accrued liability (UAAL) (Item 6d - Item 7)	$ 6,230,668,513	$ 5,650,842,751
9. Amortization payment for next fiscal year		
a. Employer contribution rate	10.90%	9.15%
b. Less: Employer normal cost rate (Item 3c)	(4.39%)	(2.68%)
c. Amortization rate	6.51%	6.47%
d. Amortization contribution (Item 9c * Item 1b)	$ 172,471,457	$ 173,290,947
e. Expected ARP contribution	5,137,269	4,209,632
f. Total	$ 177,608,726	$ 177,500,579
10. Funding period based on current 10.90% employer contribution requirement, with payments increasing at assumed payroll growth rate	Infinite	Infinite

Analysis of Change in Unfunded Actuarial Accrued Liability (UAAL)

Basis	Year Ending June 30, 2012	Year Ending June 30, 2011
(1)	(2)	(3)
1. UAAL at prior valuation	$ 5,650.8	$ 4,922.2
2. Increases/(decreases) due to:		
a. Interest on UAAL	437.9	393.8
b. Amortization payments [1]	(181.9)	(224.2)
c. Liability experience	(200.1)	(225.8)
d. Asset experience	524.0	358.7
e. Changes in actuarial assumptions and methods	-	426.1
f. Benefit change	-	-
g. Total	$ 579.9	$ 728.6
3. Current UAAL (1+2g)	$ 6,230.7	$ 5,650.8

Note : Dollar amounts in millions

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

Actuarial Present Value of Future Benefits

		June 30, 2012 (1)	June 30, 2011 (2)
1.	Active members		
	a. Service retirement benefits	$ 8,127,672,598	$ 8,264,475,122
	b. Refunds and deferred termination benefits	721,795,120	731,928,946
	c. Survivor benefits	83,460,253	84,455,810
	d. Disability retirement benefits	96,929,789	98,476,633
	e. Total	$ 9,029,857,760	$ 9,179,336,511
2.	Retired members		
	a. Service retirement	$ 7,908,613,236	$ 7,317,422,879
	b. Disability retirement	75,673,134	73,290,123
	c. Beneficiaries	353,998,520	335,846,889
	d. Total	$ 8,338,284,890	$ 7,726,559,891
3.	Inactive members		
	a. Vested terminations	$ 792,429,496	$ 776,174,841
	b. Nonvested terminations	96,581,874	89,520,132
	c. Total	$ 889,011,370	$ 865,694,973
4.	Total actuarial present value of future benefits	$ 18,257,154,020	$ 17,771,591,375

Analysis of Normal Cost

		June 30, 2012 (1)	June 30, 2011 (2)
1.	Gross normal cost rate (payable monthly)		
	a. Service retirement benefits	9.70%	9.78%
	b. Refunds and deferred termination benefits	3.77%	3.74%
	c. Disability retirement benefits	0.19%	0.19%
	d. Survivor benefits	0.13%	0.13%
	e. Total	13.79%	13.83%
2.	Less: member contribution rate	(9.40%)	(11.15%)
3.	Employer normal cost rate	4.39%	2.68%

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

	June 30, 2012 (1)	June 30, 2011 (2)
1. GASB 25 funding period (years)	30	30
2. Amortization contribution percentage		
a. Amortization payment	$ 354,862,518	$ 321,839,027
b. Less: expected payment for ARP members	5,137,269	4,209,632
c. Net (a-b)	$ 349,725,249	$ 317,629,395
d. Expected payroll	2,649,331,144	2,678,376,300
e. Amortization contribution percentage (c/d)	13.20%	11.86%
3. GASB 25 Annual Required Contribution		
a. Employer normal cost rate	4.39%	2.68%
b. Amortization percentage	13.20%	11.86%
c. Total	17.59%	14.54%
d. Statutory rate	10.90%	9.15%
e. ARC (greater of (c,d))	17.59%	14.54%

Actual Contributions as Percentage of GASB 25 ARC for Year Ending 06/30/2012

1.	Actual contributions	
	a. On behalf of ERB members	$ 248,893,693
	b. On behalf of ARP members	4,951,584
	c. Total	$ 253,845,277
2.	Statutory employer contribution rate	9.15%
3.	Imputed fiscal year payroll for ERB members (Item 1a / Item 2)	$ 2,720,149,646
4.	GASB 25 Annual Required Contribution	
	a. Required GASB 25 employer contribution for ERB members as percent of payroll	14.54%
	b. Required GASB 25 employer contribution for ERB members (Item 4a * Item 3)	$ 395,509,759
	c. GASB 25 ARC (Item 4b + Item 1b)	$ 400,461,343
5.	Percentage of GASB 25 ARC for Prior Year (Item 1c / Item 4c)	63.4%

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

Valuation Date	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL) (3) - (2)	Funded Ratio (2)/(3)	Annual Covered Payroll	UAAL as % of Payroll (4)/(6)
(1)	(2)	(3)	(4)	(5)	(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%
June 30, 2004	7,488.0	9,927.1	2,439.1	75.4%	2,142.4	113.8%
June 30, 2005	7,457.5	10,591.8	3,134.3	70.4%	2,209.1	141.9%
June 30, 2006	7,813.9	11,436.3	3,622.4	68.3%	2,219.4	163.2%
June 30, 2007	8,591.4	12,190.1	3,598.7	70.5%	2,341.1	153.7%
June 30, 2008	9,272.8	12,967.0	3,694.2	71.5%	2,491.7	148.3%
June 30, 2009	9,366.3	13,883.3	4,517.0	67.5%	2,585.7	174.7%
June 30, 2010	9,431.3	14,353.5	4,922.2	65.7%	2,575.8	191.1%
June 30, 2011	9,642.2	15,293.1	5,650.8	63.0%	2,523.8	223.9%
June 30, 2012	9,606.3	15,837.0	6,230.7	60.7%	2,495.3	249.7%

Note : Dollar amounts in millions

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

Fiscal Year	Annual Required Contribution	Percentage Contributed
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%
2004	$203,937,432	92.8%
2005	$243,237,303	81.3%
2006	$299,967,996	75.5%
2007	$364,128,448	70.3%
2008	$368,196,682	79.0%
2009	$375,430,722	86.2%
2010	$357,220,043	87.7%
2011	$377,884,749	81.6%
2012	$400,461,343	63.4%

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, 2012
Actuarial cost method	Entry Age Normal
Amortization method	Level payment, closed
Amortization period for GASB 25 ARC**	30 years
Asset valuation method	5-year smoothed market
Actuarial assumptions:	
Investment rate of return*	7.75%
Projected salary increases*	4.75% to 13.50%
Cost-of-living adjustments	2.00%

* Includes inflation at 3.00%.

** The GASB Annual Required Contribution (ARC) for this plan is defined as the larger of (a) the employer normal cost plus a 30-year amortization of the UAAL, and (b) the statutory employer contribution rate, plus the 3.00% contribution on behalf of ARP members. Under GASB 25, the maximum allowable amortization period is 30 years. GASB 25 had allowed the use of a 40-year amortization during a transitional period that ended with FY 2006.

Membership Data

			June 30, 2012 (1)	June 30, 2011 (2)
1.	Active members			
	Tier 1			
	a.	Number	51,255	56,459
	b.	Total payroll supplied by System (annualized)	$ 2,192,479,208	$ 2,366,248,754
	c.	Average salary	$ 42,776	$ 41,911
	d.	Average age	48.6	47.6
	e.	Average service	11.7	10.8
	Tier 2			
	a.	Number	9,600	5,214
	b.	Total payroll supplied by System (annualized)	$ 302,796,326	$ 157,467,246
	c.	Average salary	$ 31,541	$ 30,201
	d.	Average age	38.9	38.3
	e.	Average service	1.1	0.8
2.	Vested inactive members (excluding pending refunds)			
	a.	Number	9,648	9,333
	b.	Total annual deferred benefits	$ 93,351,929	$ 89,866,163
	c.	Average annual deferred benefit	$ 9,676	$ 9,629
3.	Nonvested inactive members and vested pending refunds			
	a.	Number	24,384	23,678
	b.	Employee assessments with interest due	$ 96,581,874	$ 89,520,132
	c.	Average refund due	$ 3,961	$ 3,781
4.	Service retirees			
	a.	Number	33,741	31,974
	b.	Total annual benefits	$ 720,860,730	$ 665,619,322
	c.	Average annual benefit	$ 21,365	$ 20,818
5.	Disabled retirees			
	a.	Number	786	774
	b.	Total annual benefits	$ 7,683,718	$ 7,418,072
	c.	Average annual benefit	$ 9,776	$ 9,584
6.	Beneficiaries			
	a.	Number	2,809	2,709
	b.	Total annual benefits	$ 39,596,127	$ 37,244,633
	c.	Average annual benefit	$ 14,096	$ 13,748

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

Historical Summary of Active Member Data

Year Ending June 30,	Active Members Number	Active Members Percent Increase	Covered Payroll Amount in $ Millions	Covered Payroll Percent Increase	Average Salary $ Amount	Average Salary Percent Increase	Average Age	Average Service
(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
2004	62,901	0.5%	2,142	5.4%	34,061	4.9%	45.6	9.4
2005	63,362	0.7%	2,209	3.1%	34,865	2.4%	45.6	9.3
2006	61,829	-2.4%	2,219	0.5%	35,896	3.0%	45.7	9.2
2007	62,687	1.4%	2,341	5.5%	37,347	4.0%	45.9	9.3
2008	63,698	1.6%	2,492	6.4%	39,118	4.7%	46.1	9.4
2009	63,819	0.2%	2,586	3.8%	40,517	3.6%	46.3	9.6
2010	63,295	-0.8%	2,576	-0.4%	40,695	0.4%	46.5	9.7
2011	61,673	-2.6%	2,524	-2.0%	40,923	0.6%	46.8	10.0
2012	60,855	-1.3%	2,495	-1.1%	41,004	0.2%	47.0	10.0

Plan Net Assets
(Assets at Market or Fair Value)

Item (1)	Valuation as of June 30, 2012 (2)	Valuation as of June 30, 2011 (3)
1. Cash and cash equivalents:		
a. Cash	$ 21,301	$ 11,915
b. Short term investments	317,035,595	552,266,403
c. Total cash and cash equivalents	$ 317,056,896	$ 552,278,318
2. Receivables:		
a. Contributions	$ 70,941,621	$ 71,938,279
b. Investment sales proceeds - brokers	55,468,316	86,433,723
c. Investment income	26,127,712	31,350,765
d. Other	882,683	31,350,765
e. Total receivables	$ 153,420,332	$ 191,498,873
3. Interst in state general fund investment pool	$ 5,521,436	$ 6,346,596
4. Investments		
a. U.S. treasury securities	$ 345,637,771	$ 597,060,723
b. Government agency securities	376,212,714	451,764,467
c. Asset and mortgage backed securities	593,136,863	200,365,752
d. Domestic corporate bonds	986,267,569	1,419,705,812
e. Domestic stocks	2,774,109,793	2,698,482,870
f. International stock	1,303,988,823	1,473,098,558
g. Non-U.S. government bonds	30,378,318	0
h. Private equities	577,114,685	398,411,954
i. Hedge funds	715,935,010	663,541,830
j. Private real estate	160,562,922	119,497,509
k. Other investments	1,314,628,220	1,093,388,583
l. Invested sercuritites lending collateral	0	213,455,151
m. Total investments	$ 9,177,972,688	$ 9,328,773,209
5. Properties : land, building, furniture and equipment (at cost, less accumulated depreciation)	$ 2,862,746	$ 4,201,681
6. Total assets	$ 9,656,834,098	$ 10,083,098,677
7. Liabilities		
a. Accounts payable	$ 15,122,201	$ 1,964,740
b. Accounts payable school contributions	681,409	$ 327,151
c. Accounts payroll and employee benefits	154,904	$ 123,474
d. Accrued compensated absences	203,800	228,616
e. Refunds payable	851,892	672,751
f. Investment purchases payable - brokers	150,839,658	277,566,065
g. Due to other funds	19,065	190,801
h. Securities lending collateral	0	213,462,138
i. Total liabilities	$ 167,872,929	$ 494,535,736
8. Total market value of assets available for benefits (Item 6 - Item 7g)	$ 9,488,961,169	$ 9,588,562,941

Allocation of Cash and Investments

		June 30, 2012	June 30, 2011
		(1)	(2)
1.	Cash and short-term equivalents	3.3%	5.8%
2.	U.S. treasury securities	3.6%	6.2%
3.	U.S. government agencies	4.0%	4.7%
4.	Domestic corporate bonds	10.4%	14.7%
5.	Domestic equities	29.3%	27.9%
6.	Non-U.S. government bonds	0.3%	0.0%
7.	International equities	13.7%	15.1%
8.	Mortage backed securities	6.2%	2.1%
9.	Private equities	6.1%	4.1%
10.	Hedge funds	7.5%	6.9%
11.	Private real estate	1.7%	1.2%
12.	Other investments	13.9%	11.3%
13.	Total investments	100.0%	100.0%

Reconciliation of Plan Net Assets

	Year Ending June 30, 2012 (1)	Year Ending June 30, 2011 (2)
1. Value of assets at beginning of year		
a. Value reported in prior valuation	$ 9,588,562,941	$ 8,232,523,434
b. Prior period adjustments	-	-
c. Revised value	$ 9,588,562,941	$ 8,232,523,434
2. Revenue for the year		
a. Contributions		
i. Member contributions (including redeposits and service purchases)	$ 291,766,525	$ 250,681,286
ii. Employer contributions	248,893,693	304,310,476
iii. Employer contributions for ARP members	4,951,584	4,057,476
iv. Total	$ 545,611,802	$ 559,049,238
b. Income		
i. Interest, dividends, and other income	$ 173,438,306	$ 184,024,381
ii. Investment expenses	(10,964,924)	(35,247,716)
iii. Net	$ 162,473,382	$ 148,776,665
c. Net realized and unrealized gains	$ (565,488)	$ 1,396,479,035
d. Total revenue	$ 707,519,696	$ 2,104,304,938
3. Expenditures for the year		
a. Refunds	$ 40,580,979	$ 35,086,806
b. Benefit payments	754,554,951	701,771,592
c. Administrative and miscellaneous expenses	11,985,538	11,407,033
d. Total expenditures	$ 807,121,468	$ 748,265,431
4. Increase in net assets (Item 2 - Item 3)	$ (99,601,772)	$ 1,356,039,507
5. Value of assets at end of year (Item 1 + Item 4)	$ 9,488,961,169	$ 9,588,562,941

Determination of Excess Earnings to be Deferred

Year ended :	June 30, 2009	June 30, 2010	June 30, 2011	June 30, 2012
	(1)	(2)	(3)	(4)
1. MVA at beginning of year	$ 8,770,044,039	$ 7,113,651,700	$ 8,232,523,434	$ 9,588,562,941
2. Net new investments				
a. Contributions	$ 538,793,240	$ 566,843,306	$ 559,049,238	$ 545,611,802
b. Benefits and refunds paid	(647,391,550)	(685,012,325)	(736,858,398)	(795,135,930)
c. Subtotal	$ (108,598,310)	$ (118,169,019)	$ (177,809,160)	$ (249,524,128)
3. MVA at end of year	$ 7,113,651,700	$ 8,232,523,434	$ 9,588,562,941	$ 9,488,961,169
4. Net MVA earnings (3 - 1 - 2c)	$ (1,547,794,029)	$ 1,237,040,753	$ 1,533,848,667	$ 149,922,356
5. Assumed investment return rate	8.00%	8.00%	8.00%	7.75%
6. Expected return	$ 697,259,591	$ 564,365,375	$ 651,489,508	$ 733,444,568
7. Excess return (4 - 6)	$ (2,245,053,620)	$ 672,675,378	$ 882,359,159	$ (583,522,212)
8. Excess return deferral percent	20%	40%	60%	80%
9. Amount deferred	$ (449,010,724)	$ 269,070,151	$ 529,415,495	$ (466,817,770)

Note : MVA is market value of assets.

Development of Actuarial Value of Assets

1.	Market value of assets as of valuation	$	9,488,961,169
2.	Deferred amounts for fiscal year ending June 30,		
	a. 2012	$	(466,817,770)
	b. 2011	$	529,415,495
	c. 2010	$	269,070,151
	d. 2009	$	(449,010,724)
	e. Total	$	(117,342,848)
3.	Actuarial value of assets (1 - 2e)	$	9,606,304,017
4.	Actuarial value as percent of market value		101.2%

Estimation of Yields

		Year Ending	
		June 30, 2012	June 30, 2011
		(1)	(2)
A.	Market value yield		
	1. Beginning of year market assets	$ 9,588,562,941	$ 8,232,523,434
	2. Investment income (including realized and unrealized gains and losses)	$ 149,922,356	$ 1,545,255,700
	3. End of year market assets	$ 9,488,961,169	$ 9,588,562,941
	4. Estimated dollar weighted market value yield	1.6%	19.0%
B.	Actuarial value yield		
	1. Beginning of year actuarial assets	$ 9,642,229,673	$ 9,431,321,589
	2. Actuarial return	$ 213,598,472	$ 388,717,244
	3. End of year actuarial assets	$ 9,606,304,017	$ 9,642,229,673
	4. Estimated actuarial value yield	2.2%	4.2%

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%
2004	15.3%	0.8%
2005	9.6%	1.1%
2006	12.0%	6.4%
2007	16.7%	11.6%
2008	-6.0%	9.3%
2009	-17.7%	2.2%
2010	17.7%	2.0%
2011	19.0%	4.2%
2012	1.6%	2.2%
Average Returns		
Last 5 years	1.9%	3.9%
Last 10 years	6.4%	3.9%
Last 15 years	5.6%	6.5%

Investment Experience Gain or Loss

Item	Year Ending June 30, 2012	Year Ending June 30, 2011
(1)	(2)	(3)
1. Actuarial assets, beginning of year	$ 9,642,229,673	$ 9,431,321,589
2. Total contributions during year	$ 545,611,802	$ 559,049,238
3. Benefits and refunds paid	$ (795,135,930)	$ (736,858,398)
4. Assumed net investment income		
a. Beginning of year assets	$ 747,272,800	$ 754,505,727
b. Contributions	21,142,457	22,361,970
c. Benefits and refunds paid	(30,811,517)	(29,474,336)
d. Total	$ 737,603,740	$ 747,393,361
5. Expected actuarial assets, end of year (Sum of items 1 through 4)	$ 10,130,309,285	$ 10,000,905,790
6. Actual actuarial assets, end of year	$ 9,606,304,017	$ 9,642,229,673
7. Asset gain (loss) for year (Item 6 - Item 5)	$ (524,005,268)	$ (358,676,117)

Total Experience Gain or Loss

Item	Year Ending June 30, 2012	Year Ending June 30, 2011
(1)	(2)	(3)
A. Calculation of total actuarial gain or loss		
1. Unfunded actuarial accrued liability (UAAL), previous year	$ 5,650,842,751	$ 4,922,187,834
2. Normal cost for the previous year	$ 370,419,442	$ 343,639,165
3. Less: contributions for the year	$ (545,611,802)	$ (559,049,238)
4. Interest at 7.75 %		
a. On UAAL	$ 437,940,313	$ 393,775,027
b. On normal cost	14,353,753	13,745,567
c. On contributions	(21,142,457)	(22,361,970)
d. Total	$ 431,151,609	$ 385,158,624
5. Expected UAAL (Sum of Items 1 - 4)	$ 5,906,802,000	$ 5,091,936,385
6. Actual UAAL	$ 6,230,668,513	$ 5,650,842,751
7. Total gain (loss) for the year (Item 5 - Item 6)	$ (323,866,513)	$ (558,906,366)
B. Source of gains and losses		
8. Asset gain (loss) for the year	$ (524,005,268)	$ (358,676,117)
9. Liability experience gain (loss) for the year	$ 200,138,755	$ 225,834,501
10. Assumption change	$ -	$ (426,064,750)
11. Benefit change	$ -	$ -
12. Total	$ (323,866,513)	$ (558,906,366)

History of Cash Flow

Year Ending June 30,	Contributions[1]	Expenditures: Benefit Payments	Expenditures: Refunds	Expenditures: Administrative Expenses	Expenditures: Total	External Cash Flow for the Year[2]	Market Value of Assets	External Cash Flow as Percent of Market Value
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2001	315.2	(340.6)	(36.6)	(3.5)	(380.7)	(65.5)	6,667.0	-1.0%
2002	328.6	(367.5)	(28.5)	(5.8)	(401.8)	(73.2)	6,011.2	-1.2%
2003	337.9	(396.1)	(28.3)	(4.3)	(428.7)	(90.8)	6,083.4	-1.5%
2004	355.6	(422.4)	(26.4)	(2.6)	(451.4)	(95.8)	6,911.5	-1.4%
2005	371.0	(455.0)	(27.2)	(5.3)	(487.5)	(116.5)	7,451.1	-1.6%
2006	408.5	(494.1)	(28.3)	(5.2)	(527.6)	(119.1)	8,219.3	-1.4%
2007	449.5	(540.1)	(27.5)	(5.6)	(573.2)	(123.7)	9,455.8	-1.3%
2008	496.2	(578.8)	(29.5)	(6.1)	(614.4)	(118.2)	8,770.0	-1.3%
2009	538.8	(617.7)	(29.7)	(8.7)	(656.1)	(117.3)	7,113.7	-1.6%
2010	566.8	(656.2)	(28.8)	(11.5)	(696.5)	(129.7)	8,232.5	-1.6%
2011	559.0	(701.8)	(35.1)	(11.4)	(748.3)	(189.3)	9,588.6	-2.0%
2012	545.6	(754.6)	(40.6)	(12.0)	(807.2)	(261.6)	9,489.0	-2.8%

Amounts in $ millions

Solvency Test

	June 30, 2012 (1)	June 30, 2011 (2)
1. Actuarial accrued liability (AAL)		
a. Active member contributions	$ 2,304,519,473	$ 2,189,058,132
b. Retirees and beneficiaries	8,338,284,890	7,726,559,891
c. Active and inactive members (employer financed)	5,194,168,167	5,377,454,401
d. Total	$ 15,836,972,530	$ 15,293,072,424
2. Actuarial value of assets	$ 9,606,304,017	$ 9,642,229,673
3. Cumulative portion of AAL covered		
a. Active member contributions	100%	100%
b. Retirees and beneficiaries	88%	96%
c. Active and inactive members (employer financed)	0%	0%

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
2004	24,947	1,420
2005	26,100	1,466
2006	28,539	1,472
2007	29,969	1,523
2008	31,192	1,566
2009	32,496	1,607
2010	33,747	1,628
2011	35,457	1,669
2012	37,336	1,714

Distribution of Active Members by Age and by Years of Service
As of 06/30/2012

	Years of Credited Service												
Attained Age	0 Count & Avg. Comp.	1 Count & Avg. Comp.	2 Count & Avg. Comp.	3 Count & Avg. Comp.	4 Count & Avg. Comp.	5-9 Count & Avg. Comp.	10-14 Count & Avg. Comp.	15-19 Count & Avg. Comp.	20-24 Count & Avg. Comp.	25-29 Count & Avg. Comp.	30-34 Count & Avg. Comp.	35 & Over Count & Avg. Comp.	Total Count & Avg. Comp.
Under 25	369	368	127	63	35	15	0	0	0	0	0	0	977
	$16,414	$23,846	$22,160	$17,582	$19,266	$22,913	$0	$0	$0	$0	$0	$0	$20,238
25-29	414	838	601	512	461	627	9	0	0	0	0	0	3,462
	$23,667	$29,617	$29,753	$31,299	$33,496	$32,353	$24,816	$0	$0	$0	$0	$0	$30,177
30-34	404	724	550	464	527	2,119	404	6	0	0	0	0	5,198
	$26,534	$31,337	$31,940	$32,276	$34,355	$40,047	$41,025	$34,718	$0	$0	$0	$0	$35,725
35-39	979	916	677	584	699	2,061	1,709	255	3	0	0	0	7,883
	$27,219	$30,651	$32,542	$35,166	$36,491	$39,626	$46,814	$46,788	$25,406	$0	$0	$0	$37,610
40-44	315	532	435	402	505	2,245	1,795	1,240	207	2	0	0	7,678
	$33,970	$32,243	$36,457	$35,316	$35,080	$39,646	$45,400	$50,078	$46,948	$34,743	$0	$0	$41,418
45-49	255	459	389	360	449	2,100	1,739	1,386	984	162	2	0	8,285
	$35,874	$31,693	$40,537	$36,632	$32,561	$37,247	$41,609	$47,835	$52,268	$52,600	$44,456	$0	$41,544
50-54	272	421	355	348	424	2,077	1,961	1,679	1,304	623	115	2	9,581
	$34,539	$33,535	$43,623	$38,468	$33,169	$37,049	$41,605	$45,105	$53,104	$56,626	$54,887	$45,326	$42,965
55-59	201	350	310	329	346	1,701	1,865	1,666	1,303	636	321	83	9,111
	$33,435	$35,311	$45,779	$39,884	$37,821	$38,179	$41,259	$46,191	$54,682	$58,498	$63,562	$54,746	$45,190
60-64	132	188	192	214	258	1,258	1,206	859	800	437	245	128	5,917
	$34,166	$41,470	$42,624	$43,782	$36,634	$41,269	$43,687	$47,487	$53,709	$62,267	$70,578	$69,825	$47,509
65 & Over	66	101	92	106	114	1,031	422	288	219	120	103	101	2,763
	$29,174	$31,607	$35,278	$30,991	$34,851	$38,404	$40,723	$47,673	$52,487	$71,133	$73,142	$83,879	$44,215
Total	3,407	4,897	3,728	3,382	3,818	15,234	11,110	7,379	4,820	1,980	786	314	60,855
	$28,066	$31,351	$35,683	$35,244	$34,740	$38,584	$43,120	$47,126	$53,151	$59,000	$65,687	$70,204	$41,004

NEW MEXICO EDUCATIONAL RETIREMENT BOARD
Reconciliation of Members by Status for Year Ending June 30, 2012

		Inactive, Nonretired Members		Annuitants			
	Active Members	Vested	Nonvested	Service Retirees	Disabled Retirees	Beneficiaries	Grand Total
Number at beginning of year	61,673	9,333	23,678	31,974	774	2,709	130,141
Refund paid (non-death)	(1,358)	(416)	(1,541)				(3,315)
Refund due	(3,091)		3,091				0
Vested terminations	(2,776)	2,776					0
Retirements (nondisabled)	(883)	(1,551)	(34)	2,468			0
Disabled retirements	(26)	(22)			48		0
New Alternate Payee				33			33
Death before retirement - refund	(11)	(25)	(2)				(38)
Death before retirement - annuity							0
Death of annuitant - survivor benefit due				(187)	(32)	219	0
Death of annuitant - no further benefits due				(532)	(4)	(119)	(655)
New hires	6,057						6,057
Reemployments	1,270	(447)	(808)	(15)			0
Adjustments and corrections							0
Number at end of year	60,855	9,648	24,384	33,741	786	2,809	132,223

APPENDIX I

SUMMARY OF PLAN PROVISIONS

Summary of Plan Provisions

1. Effective Date: July 1, 1957.

2. Plan Year/Fiscal 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. Employees of state schools and certain state agencies also participate.

6. Member Contributions: Members must contribute a percentage of their salary to the System. "Salary" for this purpose includes substantially all earnings. The member contribution rate is set by statute, and has been changed from time to time. The following schedule shows recent and future member contribution rates. Employee contributions are "picked up" by the local employer for federal income tax treatment.

Fiscal Year Ended	Member Contribution Rate
FYE 2005 and earlier	7.600%
FYE 2006	7.675%
FYE 2007	7.750%
FYE 2008	7.825%
FYE 2009	7.900%
FYE 2010*	9.400%
FYE 2011*	9.400%
FYE2012*	11.150%
FYE2013*	9.400%
FYE 2014 and later	7.900%

* For members whose annual salary is greater than $20,000. Members with annual salary of $20,000 or less will continue to contribute 7.900%.

7. Employer Contributions: The school district or other local administrative unit which employs a member contributes a percentage of the member's salary to the System. "Salary" for this purpose includes substantially all earnings. The employer contribution rate is set by statute, and has been changed from time to time. The following schedule shows recent and future employer contribution rates. In addition, state universities, colleges and junior colleges contribute 3% of the earnings of non-members who are participating in the Alternative Retirement Plan.

Fiscal Year Ended	Employer Contribution Rate
FYE 2005 and earlier	8.65%
FYE 2006	9.40%
FYE 2007	10.15%
FYE 2008	10.90%
FYE 2009	11.65%
FYE 2010*	10.90%
FYE 2011*	10.90%
FYE 2012*	9.15%
FYE 2013*	10.90%
FYE 2014	13.15%
FYE 2015 and later	13.90%

* For members whose annual salary is greater than $20,000. For members with annual salary of $20,000 or less, the employer will contribute 12.40% in FYE2010 through FYE2013.

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. Tier: Members who join ERB by June 30, 2010 are in Tier 1, while members who join later are in Tier 2. If a Tier 1 member terminates, takes a refund, and later rejoins ERB after June 30, 2010 and does not pay back the refund to ERB to restore the prior service, that member will be in Tier 2 after being reemployed.

10. 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.

11 Normal Retirement

a. Eligibility:

- Tier 1 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.

- Tier 2 member may retire upon Normal Retirement on the earliest of (i) the date he/she attains age 67 with credit for 5 years of service, or (ii) the date the member completes 30 years of service, or (iii) the date that the sum of the member's age and service is at least 80, provided the member is at least age 65.

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 sum of payments made does 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.

12. Early Retirement

a. Eligibility: Tier 1 members may take early retirement once the sum of his/her age and service equals or exceeds 75, while Tier 2 members may take early retirement once the sum of his/her age and service equals or exceeds 80. The reduction for Tier 1 members is from age 60 and the reduction for Tier 2 members is from age 65. The reduction is 2.4% per year for the first five years the retirement precedes age 60 (Tier 1) or age 65 (Tier 2), and 7.2% for any additional years before the indicated age.

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

c. Early Retirement Factors:

Tier 1		Tier 2	
Age at Retirement	Factor	Age at Retirement	Factor
60 or later	1.000	65 or later	1.000
59	.976	64	.976
58	.952	63	.952
57	.928	62	.928
56	.904	61	.904
55	.880	60	.880
54	.808	59	.808
53	.736	58	.736
52	.664	57	.664
51	.592	56	.592
50	.520	55	.520
49	.448	54	.448
48	.376	53	.376
47	.304	52	.304
46	.232	51	.232
45	.160	50	.160

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

13. 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.

14. 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. Alternatively, 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.

d. Death Benefit: Upon the death of an inactive vested member who has not retired, the beneficiary may elect to receive an annuity as described under the Death in Service benefit below, with payments deferred until the member would have been eligible for retirement if the member was not eligible at the time of death. Alternatively, the beneficiary may receive a refund of the member's contributions, plus interest based upon a rate set by the Board of Trustees.

15. 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. Alternatively, 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.

16. 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. 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, in lieu of the refund. 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.

17. 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.

    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.

18. Cost-of-living Increase: All retired members and beneficiaries receiving benefits receive an automatic adjustment in their benefit commencing on July 1 following the year a member retires, or the year in which a member attains the age of 65, whichever is later. The adjustment is equal to one-half of the percentage increase in the cost-of-living index, except that the adjustment shall not exceed four percent, nor be less than two percent. However, if the percentage increase of the consumer price index is less than two percent, the adjustment factor will be equal to the percentage increase of the consumer price index. Members retired prior to July 1, 1984 are also entitled to an increase of the lesser of 2% or the percentage increase in the cost-of-living index for years prior to the attainment of 65. Members on disability retirement are entitled to an adjustment commencing on July 1 of the calendar year in which the third anniversary of disability retirement occurs.

19. Alternative Retirement Plan (ARP): Beginning July 1, 1991, new faculty members employed by higher education 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 as discussed in the section on Employer Contributions above, the employer of an ARP makes a contribution of 3.00% of the member’s salary to ERB.

APPENDIX II

STATEMENT OF ACTUARIAL METHODS AND ASSUMPTIONS

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 employers. The funding period is determined, as described below, using the individual Entry Age Normal actuarial cost method.

The Individual 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 contribution is determined using the Entry Age Normal method. Under this method, a calculation is made to determine the rate of contribution which, if applied to the compensation of each individual member during the entire period of anticipated covered service, would be required to meet the cost of all benefits payable on his behalf. The salary-weighted average of these rates is the normal cost rate. This calculation reflects the plan provisions that apply to each individual member. The employer normal cost rate is equal to (i) the normal cost rate, minus (ii) the member contribution rate.

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 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: 7.75%, compounded annually, net of expenses. This is made up of a 3.00% inflation rate and a 4.75% real rate of return.

2. Salary increase rate: Inflation rate of 3.00% plus productivity increase rate of 1.75% plus step-rate/promotional as shown:

Years of Service	Annual Step-Rate/Promotional Component Rates of Increase	Total Annual Rate of Increase
0	8.75%	13.50%
1	3.00%	7.75%
2	2.00%	6.75%
3	1.50%	6.25%
4	1.25%	6.00%
5	1.00%	5.75%
6	0.75%	5.50%
7	0.50%	5.25%
8	0.50%	5.25%
9	0.50%	5.25%
10 or more	0.00%	4.75%

3. Cost-of-living increases: 2% per year, compounded annually. Note that increases are deferred until July 1 following the year a member retires, or the year in which a member attains the age of 65, whichever is later or, for disabled retirees, until July 1 of 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)

5. Contribution accumulation: Member contributions are assumed to have grown at 5.50% per year, with 4.00% interest, compounded annually, applicable to the account balances in the past as well as the future.

B. Demographic Assumptions

1. Mortality after termination or retirement -

   a. Healthy males - 90% of RP-2000 Combined Mortality Table with White Collar Adjustment for males, set back one year, projected to 2010

   b. Healthy females - 90% of RP-2000 Combined Mortality Table with White Collar Adjustment for females, set back one year, projected to 2010

   c. Disabled males and females - 1981 Disability Table

   d. To account for future mortality improvement, the tables selected for nondisabled annuitants were chosen so that the assumed mortality rates are smaller than the rates observed in the most recent experience study, covering experience for FYE 2005 – FYE 2010. The ratio of the actual number of deaths occurring during this period to the expected number based on the selected assumptions was:

      i. 114% for nondisabled male annuitants
      ii. 109% for nondisabled female annuitants.

   No mortality improvement assumption was made for disabled retirees or active members.

   See sample rates below:

	Deaths per 100 Lives		
Age	Healthy Males	Healthy Females	Disabled Males and Females
40	.07	.05	1.76
45	.10	.07	2.08
50	.14	.11	2.42
55	.22	.19	2.83
60	.38	.36	3.29
65	.76	.66	3.76
70	1.34	1.16	4.36
75	2.32	1.95	5.62
80	4.28	3.25	8.84
85	7.87	5.57	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):

	Occurrences of Disability per 100 Members	
Age	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 – Members Hired Before July 1, 2010

	Males - Years of Service					
Age	0-4	5-9	10-14	15-19	20-24	25+
45	0.00	0.00	0.00	0.00	0.00	15.00
50	0.00	0.00	0.00	0.00	0.00	18.00
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	30.00	45.00	45.00	45.00	45.00
70	100.00	100.00	100.00	100.00	100.00	100.00

	Females - Years of Service					
Age	0-4	5-9	10-14	15-19	20-24	25+
45	0.00	0.00	0.00	0.00	0.00	15.00
50	0.00	0.00	0.00	0.00	0.00	18.00
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	40.00	40.00	45.00	45.00
70	100.00	100.00	100.00	100.00	100.00	100.00

Retirement Per 100 Members – Members Hired On or After July 1, 2010

	Males - Years of Service						
Age	0-4	5-9	10-14	15-19	20-24	25-29	30+
45	0.00	0.00	0.00	0.00	0.00	0.00	N/A
50	0.00	0.00	0.00	0.00	0.00	0.00	30.00
55	0.00	0.00	0.00	0.00	0.00	5.00	40.00
60	0.00	0.00	0.00	0.00	20.00	25.00	40.00
62	0.00	0.00	0.00	40.00	35.00	35.00	40.00
67	0.00	25.00	40.00	45.00	45.00	45.00	45.00
70	100.00	100.00	100.00	100.00	100.00	100.00	100.00

	Females - Years of Service						
Age	0-4	5-9	10-14	15-19	20-24	25-29	30+
45	0.00	0.00	0.00	0.00	0.00	0.00	N/A
50	0.00	0.00	0.00	0.00	0.00	0.00	30.00
55	0.00	0.00	0.00	0.00	0.00	6.00	43.00
60	0.00	0.00	0.00	0.00	15.00	30.00	45.00
62	0.00	0.00	0.00	35.00	35.00	40.00	45.00
67	0.00	35.00	35.00	35.00	35.00	35.00	35.00
70	100.00	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.

6. Percent married: For valuation purposes 100% of members are assumed to be married.

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. 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.

APPENDIX III

GLOSSARY

Glossary

Actuarial Accrued Liability (AAL): That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Plan Benefits which is not provided for by future Normal Costs. It is equal to the Actuarial Present Value of Future Plan Benefits minus the actuarial present value of future Normal Costs.

Actuarial Assumptions: Assumptions as to future experience under the Plan. These include assumptions about the occurrence of future events affecting costs or liabilities, such as:

- mortality, withdrawal, disablement, and retirement;
- future increases in salary;
- future rates of investment earnings and future investment and administrative expenses;
- characteristics of members not specified in the data, such as marital status;
- characteristics of future members;
- future elections made by members; and
- other relevant items.

Actuarial Cost Method or ***Funding Method:*** A procedure for allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability. These items are used to determine the ARC.

Actuarial Gain or ***Actuarial 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. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., the Plan's assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results that produce actuarial liabilities which are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.

Actuarially Equivalent: Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.

Actuarial Present Value (APV): 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. For purposes of this standard, each such amount or series of amounts is:

a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.)

b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and

c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Actuarial Present Value of Future Plan Benefits: The Actuarial Present Value of those benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members either entitled to a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would be provide sufficient assets to pay all projected benefits and expenses when due.

Actuarial Valuation: The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB 25, such as the funded ratio and the ARC.

Actuarial Value of Assets or ***Valuation Assets:*** The value of the Plan's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly actuaries use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ARC.

Actuarially Determined: Values which have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.

Amortization Method: A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.

Amortization Payment: That portion of the pension plan contribution or ARC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Annual Required Contribution (ARC): The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under GASB 25. The ARC consists of the Employer Normal Cost and the Amortization Payment.

Closed Amortization Period: A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Funding Period and Open Amortization Period.

Decrements: Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or termination.

Defined Benefit Plan: A retirement plan that is not a Defined Contribution Plan. Typically a defined benefit plan is one in which benefits are defined by a formula applied to the member's compensation and/or years of service.

Defined Contribution Plan: A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, and the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.

Employer Normal Cost: The portion of the Normal Cost to be paid by the employers. This is equal to the Normal Cost less expected member contributions.

Experience Study: A periodic review and analysis of the actual experience of the Plan which may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.

Funded Ratio: The ratio of the actuarial value of assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the market value of assets (MVA), rather than the AVA, although GASB 25 reporting requires the use of the AVA.

Funding Period or ***Amortization Period:*** The term "Funding Period" is used in two ways. In the first sense, it is the period used in calculating the Amortization Payment as a component of the ARC. This funding period is chosen by the Board of Trustees. In the second sense, it is a calculated item: the number of years in the future that will theoretically be required to amortize (i.e., pay off or eliminate) the Unfunded Actuarial Accrued Liability, based on the statutory employer contribution rate, and assuming no future actuarial gains or losses.

GASB: Governmental Accounting Standards Board. The GASB is the independent organization that establishes and improves standards of accounting and financial reporting for U.S. state and local governments. Established in 1984 by agreement of the Financial Accounting Foundations (FAF) and ten national associations of state and local government officials, the GASB is recognized by governments, the accounting industry, and the capital markets as the official source of generally accepted accounting principles (GAAP) for state and local governments.

GASB 25 and ***GASB 27***: Governmental Accounting Standards Board Statements No. 25 and No. 27. These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 27 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 25 sets the rules for the systems themselves.

Normal Cost: That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits which are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated. Under the entry age normal cost method, the Normal Cost is intended to be the level cost (when expressed as a percentage of pay) needed to fund the benefits of a member from hire until ultimate termination, death, disability or retirement.

Open Amortization Period: An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.

Unfunded Actuarial Accrued Liability: The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.

Valuation Date or Actuarial Valuation Date: The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date.