VERMONT STATE TEACHERS' RETIREMENT SYSTEM

DISCUSSION OF UNDERFUNDING

OCTOBER 2003

BACKGROUND

For several years, state contributions paid into the Teachers' Retirement System (VSTRS) have been less than the actuarial recommendations. In fiscal years 1991 through 1998, the amounts of annual shortfalls were substantial, as can be seen in Appendix A. In fiscal years 2000 through 2003, the shortfalls were significantly lower than they had been in the preceding nine years. However, in the absence of a firm commitment to refrain from deliberate underfunding, the adoption of more conservative assumptions for the funding of the System (on the basis of a recently completed experience study) and increases in actuarially determined contribution levels caused by recent unfavorable investment experience may lead to a return to the situation when the gap between the recommended state contribution to the System and the amounts actually appropriated were substantial, as a percentage of the recommended amounts.

Such underfunding will inevitably result in unfair deferral of contributions to future taxpayers, unless it can be demonstrated that the actuarially determined contributions exceed the annual amounts needed to support VSTRS benefits on a rational funding basis.

The purposes of this report are to:

- explain the actuarial process used to determine annual contributions,
- discuss the disclosed funded position of the system, and
- discuss the long range implications of continued shortfalls in contributions.

CURRENT SHORTFALL

Appendix A shows the extent of VSTRS underfunding through the fiscal year ending June 30, 2003.

The total shortfall in contributions amounts to $111.26 million. This amount increases to $341.64 million when lost investment earnings on this amount are considered.

The actuarial valuations treat the accumulated deficiency as a loss and a portion of each year's recommended contribution goes to fund the deficiency. At this point, approximately $210.52 million of the total $341.64 million deficiency has been repaid through additional contributions and investment earnings on them, which leaves a balance of $131.12 million. The VSTRS has, therefore, about $131.12 million less in current assets than it would have had if the full contributions had been paid.

As noted on page 8, the Governmental Accounting Standards Board (GASB) is concerned about such shortfalls. Under their rules (Statements No. 27) the cumulative shortfalls since July 1, 1987, need to be disclosed in the State's financial statements. This shortfall will be $94.8 million as of June 30, 2003.

RATIONALE FOR FUNDING

Retirement systems are long-term arrangements. VSTRS covers retired teachers in receipt of benefits who provided services years ago and new teachers who are just starting their careers. Further, active members are earning benefits that will not be paid for several years.

Experts feel that pension benefits are part of compensation and should be funded as services are rendered. This is accomplished by following an actuarially determined funding schedule under which assets to pay the deferred benefits are accumulated during the period the members are working so that each generation of taxpayers pays the cost of pensions for the generation of teachers then at work.

There are two further reasons for funding:

1. To provide benefit security and insure that the promised pensions will actually be paid.

2. Contributions in a well-managed fund will generate investment returns, which will help pay future pensions. Consequently, funding, by generating investment income, helps reduce the cost of future pensions.

To demonstrate the need for continued funding, Appendix B shows that payments to retired teachers are projected to increase from about $53.9 million in fiscal 2004 to over $133 million in fiscal 2013; this is the natural effect of COLA payments and higher pensions for recently retired teaches.

ACTUARIAL PROCESS

The basis for the recommended contribution is the annual actuarial valuation.

The actuarial process cannot change the ultimate cost of VSTRS, which will equal the actual benefits paid to retired teachers, past, present and future. It simply attempts to assign a reasonable part of this total cost to each fiscal period, based primarily on actual benefits earned each year by active teachers.

Further, the process attempts to smooth out gains and losses so that the contribution remains relatively steady as a percentage of payroll, which is desirable for fiscal planning and budgeting.

The actuarial valuation starts with the following:

- membership data
- current asset information
- statutory benefit provisions.

Along with these items, assumptions about life expectancies, pay increases, inflation, retirement ages, etc. are made so that the total amounts of future pension payments to active and retired teachers can be calculated. The difference between this value and assets of the system represent the amount that needs to be funded over all future years. A portion is assigned to the current year based on the funding method.

It is important to note that the actuarial process automatically adjusts contributions upward or downward each year based on experience (difference between actual and assumed results) gains or losses.

The actuarial process is based on given facts—membership, assets, benefits and historical expenses. The only judgmental element is the selection of actuarial assumptions regarding future events, as discussed next.

ASSUMPTIONS

The actuarial process does not automatically result in an equitable cost allocation. Much depends on the assumptions. Overly conservative or overly aggressive assumptions distort costs and will lead to contributions that are higher or lower than needed. The following are used to evaluate assumptions.

If the assumptions are periodically adjusted to reflect actual experience of the system, they are more likely to result in stable contributions. This is the case with VSTRS, as assumptions are adjusted to reflect current experience at least every five years, most recently as of June 30, 2003.

It is important to keep in mind that the past is not the only guide in setting assumptions. In each actuarial valuation, past performance is taken into account through the gain/loss adjustment and the contribution rate changed accordingly. From that point assumptions are used to predict what is likely to happen over the next 40 to 60 years.

Although each system is unique, they operate in similar economic environments. Consequently another test of assumptions is whether they are in line with those used by other systems. The assumptions adopted by the Board of the System after the completion of the 2002 experience study are very close to those used by other state teachers' retirement systems. In a 1999 assessment of the impact of underfunding on the System, the previous assumptions were compared with those in use by other systems nationwide. At that time, the assumed interest rate was higher than the average of those used by other systems, while the composite assumed rate of salary increase over a teacher's career was below the average of that of other systems surveyed. Much of the past underfunding of the System thus arose in years when its funding assumptions produced lower actuarially recommended contributions than would have resulted under the use of "national average assumptions."

FUNDED POSITION

Funding can also be measured by the comparison of current assets and obligations. The funded ratio is the ratio of asset value to past service liabilities. Therefore it is a measure of funding progress for benefits earned to date. A funded ratio of 100% or more does not mean future contributions will not be required. It simply means that assets are sufficient to provide all benefits earned by active and retired members up to the valuation date. Unless the system is terminated, ongoing contributions will be needed to pay the cost of benefits earned for service after the valuation date.

For the past few years, the funded ratio has been determined (and disclosed in the State's financial statements) under rules set out in GASB Statement No. 5 which required the calculation of the past service liabilities (PBO) independently of the actuarial funding method.

The funded ratio under GASB No. 5 for VSTRS exceeded 100% as of June 30, 2001, but has declined since. This is largely due to investment returns below assumed levels over the past two years. Ever if the System's funding assumptions had not been altered, the funded ratio of the System as of June 30, 2003, computed under the approach dictated by GASB 5, would have been about 86.8%.

In the past, when the value of this ratio exceeded 100%, the relatively healthy funded position indicated by this ratio was sometimes used to justify a shortfall in contributions. This viewpoint was recognized by GASB, and they expressed concern that the above disclosure has been used to circumvent the actuarial process. Consequently, the funded ratio calculation was revised, effective July 1, 1997, so that it accurately indicates a more funded position. The new rules are set out in GASB Statements No. 25 and No. 27. Of interest is the following from Statement No. 25:

> "A major concern of many respondents was that the PBO *has* been used, but not for the purposes for which it was intended. Rather, it has been used primarily to justify reducing employers' contributions. For many plans, the funded ratios reported based on the PBO have exceeded 100 percent, suggesting that the plan has a funding excess, even though, based on the funding methodology, the plan has a positive unfunded actuarial liability. As a result, legislatures have been pressured to reduce employer contributions or increase benefits without increasing contributions, and some of those efforts have been successful. Respondents indicated that the reduction of contributions had been or was expected to be temporary; all that had occurred was a deferral of costs to the future and a disruption of an orderly funding process. "

Under the GASB disclosure rules, the VSTRS funded ratio is 89.6% as of June 30, 2003.

If there were no shortfall in contributions, the funded ratio under GASB Statement No. 25 would be 99.3% instead of 89.6% as of June 30, 2003.

IMPLICATIONS OF UNDERFUNDING

The preceding remarks demonstrate that there is no basis for claiming VSTRS has been overfunded. We feel that the current assumptions and recommended contribution rates are appropriate.

Continued underfunding will simply have the effect of increasing the unfunded liability and increasing the pension burden for future generations of taxpayers.

Further, since the unpaid contributions will not have been invested as assumed, lost investment earnings will also need to be repaid. In fact, for each $1 million in shortfall, total additional contributions of $1.25 million will be required, basically an additional 25¢ for every $1 shortfall, further adding to the future burden.

Actually, taxpayers in Vermont are already bearing the burden of past underfunding. The 2003 contribution rate of 9.53% would be about 6.23% if additional funding were not required to make up the shortfall. This translates to an additional contribution of over $14 million for the 2004 fiscal year on account of past shortfalls.

CONCLUSION

Underfunding does not bring immediate drastic consequences. The effect will show up in a gradual deterioration of the funded ratio and a gradual increase in the recommended contribution rate. Eventually, this will prove burdensome to future taxpayers.

Unfortunately, only time will tell to what extent the current shortfall has jeopardized the health of the system.

Over the long run, the only way to meet benefit commitments as well as promote fairness between generations of taxpayers is to fund the annual contributions that, as in the case of VSTRS, have been developed through reasonable actuarial methods and assumptions.

The actuarial process takes into account changes in trends and automatically adjusts contributions upwards or downwards depending on experience. There is no justification for making arbitrary adjustments to these calculated amounts.

APPENDIX A

Year ended June 30	Recommended Contributions	Contributions Paid	Deficiency	Accumulated Deficiency	Accumulated Deficiency with Interest
1979	$7,806,825	$4,825,155	$2,981,670	$2,981,670	$2,981,670
1980	8,944,090	8,471,960	472,130	3,453,800	3,678,916
1981	9,862,861	8,830,900	1,031,961	4,485,761	5,051,913
1982	10,200,209	7,822,760	2,377,449	6,863,210	7,887,571
1983	10,721,814	10,929,355	(207,541)	6,655,669	8,492,450
1984	12,341,069	11,592,100	748,969	7,404,638	10,266,458
1985	13,475,181	12,567,866	907,315	8,311,953	12,577,198
1986	14,668,095	14,461,148	206,947	8,518,900	14,729,838
1987	15,925,452	16,239,413	(313,961)	8,204,939	16,669,542
1988	16,294,346	17,186,259	(891,913)	7,313,026	17,347,900
1989	18,072,172	19,000,000	(927,828)	6,385,198	18,909,496
1990	21,320,155	19,561,000	1,759,155	8,144,353	22,593,638
1991	25,013,437	15,000,000	10,013,437	18,157,790	34,588,537
1992	28,595,220	14,618,992	13,976,228	32,134,018	51,331,848
1993	28,819,875	19,890,048	8,929,827	41,063,845	64,999,605
1994	25,805,408	20,580,000	5,225,408	46,289,253	75,203,983
1995	27,451,926	18,080,000	9,371,926	55,661,179	92,058,705
1996	28,490,673	11,480,000	17,010,673	72,671,852	119,527,247
1997	30,721,768	18,080,000	12,641,768	85,313,620	163,903,499
1998	26,927,205	18,106,581	8,820,624	94,134,244	198,276,678
1999	20,723,874	18,080,000	2,643,874	96,778,118	230,047,396
2000	21,703,161	18,586,240	3,116,921	99,895,039	263,714,611
2001	20,970,278	19,143,827	1,826,451	101,721,490	292,571,810
2002	22,146,880	20,446,282	1,700,598	103,422,088	313,903,976
2003	28,279,810	20,446,282	7,833,528	111,255,616	341,639,016*

*** Approximately $210,516,932 has been repaid through additional contributions.**

APPENDIX B

PROJECTED BENEFIT PAYOUTS AND CONTRIBUTIONS

JULY 1, 2003 THROUGH JUNE 30, 2013