

Report of the Commission on Funding the Vermont State Teachers' Retirement System

Recommendations to the Governor
and the General Assembly

November 2005

“Because public pension benefits are legally inviolable, default is not an option. Sooner or later, taxpayers will be required to put up the money (or governments will be forced to borrow the money and tax a later generation to pay the interest).”

- Roger Lowenstein, “The End of Pensions,” New York Times, October 30, 2005

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Commission Membership

- Jeb Spaulding, State Treasurer and Chair of the Commission
- Senator James C. Condos of Chittenden County
- Senator Diane Snelling of Chittenden County
- Representative Kevin J. Endres of Milton
- Representative Anne H. Mook of Bennington
- John Simson, member appointed by the Governor
- James B. Reardon, Commissioner of Finance & Management
- Richard H. Cate, Commissioner of Education
- Joel D. Cook, Executive Director, Vermont National Education Association
- Mark Hage, Member Benefits Director, Vermont National Educational Association
- Michael Deweese, Superintendent, Chittenden Central Supervisory Union, representing the Vermont Superintendents' Association
- Joseph Mackey, Chair, Vermont State Teachers' Retirement System
- John A. Nelson, Executive Director, Vermont School Boards' Association

Executive Summary

The 2005 General Assembly created the Commission on Funding the Vermont State Teachers' Retirement System (VSTRS) to make recommendations for funding an adequate, sustainable, and actuarially sound retirement benefit plan for Vermont teachers to the Governor and the General Assembly by November 15, 2005.

The reason for the Commission is the fact that the VSTRS is underfunded and has been increasingly so for well over a decade. To address the serious resulting liability, the Commission makes a group of recommendations to be implemented together.

If these recommendations are adopted and implemented together, the State would cut the difference between this year's appropriated amount and what is required for FY 2007 by more than 60%, from a difference of almost \$35 million to less than \$13 million.

In order to make the implementation of those recommendations useful for state policy, however, the State will need to faithfully appropriate the actuarially required amount each year going forward. If a long-term commitment to funding is not achieved, then the result may be viewed as little more than putting additional "debt" on the State's credit card, with no real plan to pay.

The formal recommendations affect the way the appropriation for VSTRS is determined and stem from ideas brought forth by the VSTRS Board of Trustees, the Treasurer's Office and expert consultants. The Commission also considered a series of options for the State to consider for increasing its appropriation. While it did not consider its charge to include actually determining from what sources the state should seek the additional revenue needed, the Commission did consider a variety of funding options, and its conclusions are provided below.

The Commission offers this set of recommendations with optimism that by providing the means to bring the VSTRS appropriation level realistically within reach, the state will from now on make fully funding this important public pension program a strict priority to address each year.

The Commission here presents its key findings and recommendations.

Key Findings

- Chronic underfunding by the State, more conservative actuarial assumptions, and demographic trends have added considerably to the VSTRS' underfunded status, while greatly increasing the actuarially required annual contribution from the State.
- The actuarial methodology used by VSTRS under Vermont law is rarely used by other public pension plans. The unfunded liability calculated under this method does not reflect the actual experience of the plan, nor does it cause underfunding to be reflected in the "funded ratio" or "unfunded accrued liability," which are often used to measure and compare the financial health of pension plans.
- Using the actuarial methodology used by most states, the VSTRS funded ratio declined from 92.3% in 2001 to 81.1% in 2005.

- Using the actuarial methodology used by most states, the VSTRS unfunded liability increased from \$93.8 million in 2001 to \$315.1 million in 2005.
- For FY 2006, Vermont appropriated \$24.4 million, less than half of the actuarially required contribution of \$56.6 million.
- The problem of underfunding compounds itself. Underfunding in one year means lost investment returns in future years, resulting in ever larger required contributions, which will become increasingly difficult to reach.
- Relative to other public pension systems, the overall level of benefits for VSTRS is low or modest at best.
- Unless the State changes course soon, Vermont may not be able to catch up with actuarially required contributions without taking draconian measures, and may jeopardize its favorable credit rating.
- A new accounting standard adopted last year for all public retirement systems by the Government Accounting Standards Board, and effective in FY 2008, will require disclosure in financial statements of future funding liabilities for other post-employment benefits (OPEBs), primarily, health insurance for retirees, as well as accrual of costs for such benefits. For VSTRS, the additional initial annual expense to be recorded has been estimated at a \$31 million annual obligation. This estimate was made under the assumption that the benefits will be pre-funded in an actuarially adequate manner; if not, the expenses will have to be computed using assumptions that will cause it to be substantially higher. The Vermont State Employees' Retirement System will be required to record an added estimated \$25 million in annual expense for OPEB obligations under the new standard (assuming pre-funding). All public-sector retirement systems with OPEB obligations will be required to accrue such expenses.

Key Recommendations

- Make no change in benefits at this time because current benefits are modest by comparison with similar plans and because any realistic changes to the benefit structure would not provide significant immediate savings.
- Adopt the Entry Age Normal (EAN) actuarial methodology because doing so provides a more accurate picture of the plan's funded status and is consistent with most public retirement plans.
- Reamortize the unfunded actuarial liability (UAL) over 30 years because, while this will increase plan costs over that period, it will reduce the State's required annual contribution substantially.
- Increase the assumed rate of investment return by .25% because doing so reflects the beneficial effects of Vermont's new unified pension fund investment process.

- Create separate appropriations for normal and UAL costs because doing so will make plan costs associated with underfunding distinct from costs associated with paying benefits.
- Enact stronger statutory language to ensure that future appropriations match the actuarial recommendation.
- Fully fund both normal and UAL costs beginning in FY 2007 because doing so is necessary both to justify implementing other recommendations and to preserve the fiscal integrity of the VSTRS.

Potential Funding Options

Implementation of the Key Recommendations would reduce the actuary's formal recommendation for FY 2007 by \$21 million (from \$59.2 million to \$38.2 million), shrinking the gap between the recommendation and the FY 2006 appropriation (\$24.4 million) by more than 60%. A Medicare Part D reimbursement to the VSTRS, as discussed later in this report, will reduce the gap by another \$1.2 million. The remaining gap of approximately \$13 million is left to be filled by the Governor and the Legislature.

Closing that gap – and keeping it closed – is the critical element in achieving the goal of an adequate, sustainable, and actuarially sound retirement benefit plan for Vermont teachers.

To assist the Governor and Legislature in finding ways to close the gap, the Commission considered a range of funding options in more or less detail. The Commission gave its unanimous support to finding some of the funds needed through normal revenue growth in the general fund. Other options, discussed in greater detail in the body of this report, received either majority or minimal Commission support as set out below.

Majority support:

- Reallocation of existing resources in the budget to fund the actuarially required contribution.
- One-time reduction of the general fund transfer to the education fund, in order to increase the base appropriation for the VSTRS pension obligation.
- Increase in personal income or other tax sources.

Minimal support:

- Fund all or part of the need through the Education Fund.
- Increase employee contributions for future normal costs.
- Require local school districts to share the costs of future pension liabilities with the State.
- Phase-in increases over a defined period, if necessary.
- Sell selected state assets.
- Utilize pension obligation bonds for some or all of unfunded liability.

Do We Need a Retirement Plan for Vermont Teachers?

The Commission believes that teachers are the foundation of our education system – a resource integral to the long-term viability of the Vermont economy. Retirement security is an important piece of the employment package as individuals make life decisions about their careers. Without a competitive retirement plan, schools will not be able to compete for high quality teachers.

Pension benefits are essentially IOUs to employees that accumulate while they are working and that are cashed in at the time of retirement. These benefits are also a partnership, since employees make ongoing contributions to the plan with the expectation that the employer will meet its obligations.

As a first step, the Commission agreed to define concisely what Vermont should expect from a retirement plan for teachers. After several presentations and considerable discussion, the Commission agreed on a set of guiding principles, as follows:

What Do We Want From Our Retirement Benefit Plan?

Recruitment - The benefit plan should act as an incentive for recruiting high quality education professionals. The plan must be competitive with those in other states and within Vermont.

Retention - The benefit plan should act as an incentive for retaining high quality education professionals and maintaining a stable workforce. The plan should also be compatible with changing workforce and demographic trends.

Reward - The benefit plan should provide a solid foundation for retirement security following a career in teaching.

Sustainability - The cost of the benefit plan should be sustainable and predictable over the long term.

A 2004 study completed for the Pension Research Council, The Wharton School, University of Pennsylvania, concluded that defined benefit plans provide significant economic benefit to the broad community:

“As consumers, retired pension participants spend their benefits on a range of goods and services. These expenditures increase economic demand and promote employment, generating additional economic activity, which begets additional demand and employment. Setting aside all other benefits to employers and employees of DB plans, contributions to public pension plans may be among the best investments a state or local government can make.”

Benefit payouts by VSTRS are currently in excess of \$60 million, clearly an amount that has a significant impact on the Vermont Economy.

How Does Vermont's Teacher Retirement Plan Compare?

Vermont's benefit levels, in comparison to other states, are modest at best. The Commission reached that conclusion by reviewing VSTRS' benefits and comparing them to those offered in other states, particularly in the New England area and New York. This review included in a 2004 study completed by the National Education Association (NEA), as well as a presentation and benefit comparison of teacher retirement systems by the research director for the National Association of Retirement Administrators (NASRA) using similar data sources. In addition, an in-house survey of benefit levels and other plan characteristics for other teacher retirement systems in New England and New York was conducted. This analysis centered on states linked to Social Security, as Vermont is. The purpose of these reviews was both to provide a context for recommendations and for guidance as to whether benefit reductions should be considered to lower the funding needed to support the retirement plan.

Public Fund Sample of Social Security-Eligible Plans Versus Vermont Teachers' Retirement System

Benefit Feature	Sample	VTRS
Normal retirement benefit	Median: 1.85%	1.67%
Limitation on retirement benefit	Most have no limit; of those that do have a limit, the most frequent is 100%, and 75% and 80% are also used.	50%
Normal retirement eligibility	A majority of teacher plans allow normal retirement by age 60; some by 62, some by 65	62/any, any/30
Early retirement eligibility	Some plans do not allow early retirement. Age 55 is the most common for early retirement eligibility, although most plans require ten or more years to qualify.	55/5
Early retirement reduction	Most reductions range from 3% to 7% for each year short of normal eligibility.	6% reduction for each year short of normal eligibility
Cost-of-living adjustment availability	Two-thirds to three-fourths of public plans offer some form of automatic COLA. Others provide an ad hoc COLA or one tied to investment returns.	Automatic COLA
Cost-of-living adjustment amount	Designs vary: some are tied to the full CPI, some are a fraction of the CPI, and some are a flat percentage, such as 2% or 3%.	One-half of CPI, up to 5%
Contribution Rates	Median employer rate: 7.1%; median employee rate: 5.0%	Employer rate: 5.16%; employee rate: 3.54%

Sources

- Public Fund Survey, NASRA and NCTR
- *Comparative Study of Major Public Employee Retirement Systems*, Wisconsin Legislative Council
- *Characteristics of Large Public Education Pension Plans*, National Education Association

COMPARISON OF BENEFITS AND ASSUMPTIONS - NEW ENGLAND STATES AND NEW YORK

TRS BENEFIT FEATURE	VT	ME	NH	MA	CT	RI	NY
Value of each year of service	1.67%	2%	1.67% to 65; 1.515% after	1.5%/55; 2.0%/60 2.5%/65	1.5%-2%	2%	2% up to 30; 1.5% over 30
Limitation on retirement benefit	50%	None	None	80%	100%	75%	None
Normal retirement eligibility	62 or 30 yrs	62/10	60/A	65/10	60/20; A/35	60/10; A/28	62/5; 55/30
Early retirement eligibility	55/5	A/25	50/10; R-70	55/10; A/20	55/20; A/25	None	55/5
Early retirement reduction	6%	6%	N/A	N/A	6%; 4%	N/A	AR*
Final average salary period	3HC	3H	3H	3HC	3H	3HC	3HC
Cost-of-living adjustment amount	1/2 CPI w/ max of 5%	CPI w/ max of 4%	Ad Hoc	Ad Hoc	Ad Hoc	3%	1/2 CPI change w/max of 3%
Employee contribution rate	3.40%	7.65%	5%	5%-11%	6%	9.50%	3%
Vesting period	5 years	10 years	10 years	10 years	10 years	10 years	5 years
ACTUARIAL ASSUMPTIONS							
Actuarial cost method	FIL	EAN	OGA**	EAN	EAN	EAN	Aggregate Cost
Investment rate of return	8%	8%	9%	8.25%	8.50%	8.25%	Modified
* Actuarial Reduction							
** Open Group Aggregate							

In reviewing the value associated with each year of service, Vermont service year benefits (1.67%) are low compared to the median of 1.85%. Also, the limitation of the retirement benefit (50%) is extremely low. In fact, it is the lowest of all surveyed state teacher retirement systems in any study reviewed by the Commission. The cost-of-living adjustments seem to be slightly on the positive side of a continuum of benefits, as are early retirement eligibility provisions. The benefit reduction associated with the early retirement benefit seems to offset any adverse impact to the system. Group C members who elect early retirement prior to age 62 receive benefits that are reduced by 6% for each year by which their age at benefit commencement precedes age 62. According to modeling completed by Buck Consultants, the current early retirement formula produces reductions that are rather close to actuarially equivalent reductions (and are thus not heavily subsidized reductions).

Employee contributions, in comparison to other states, are modest as well, as the chart above demonstrates.

The Commission reviewed actuarial modeling of various possible benefit changes for new or non-vested members and determined that any realistic changes to the benefit structure would not provide significant immediate savings to offer remedy to the current funding problem. The Commission also concluded that any review of benefits should be done in the context of a larger

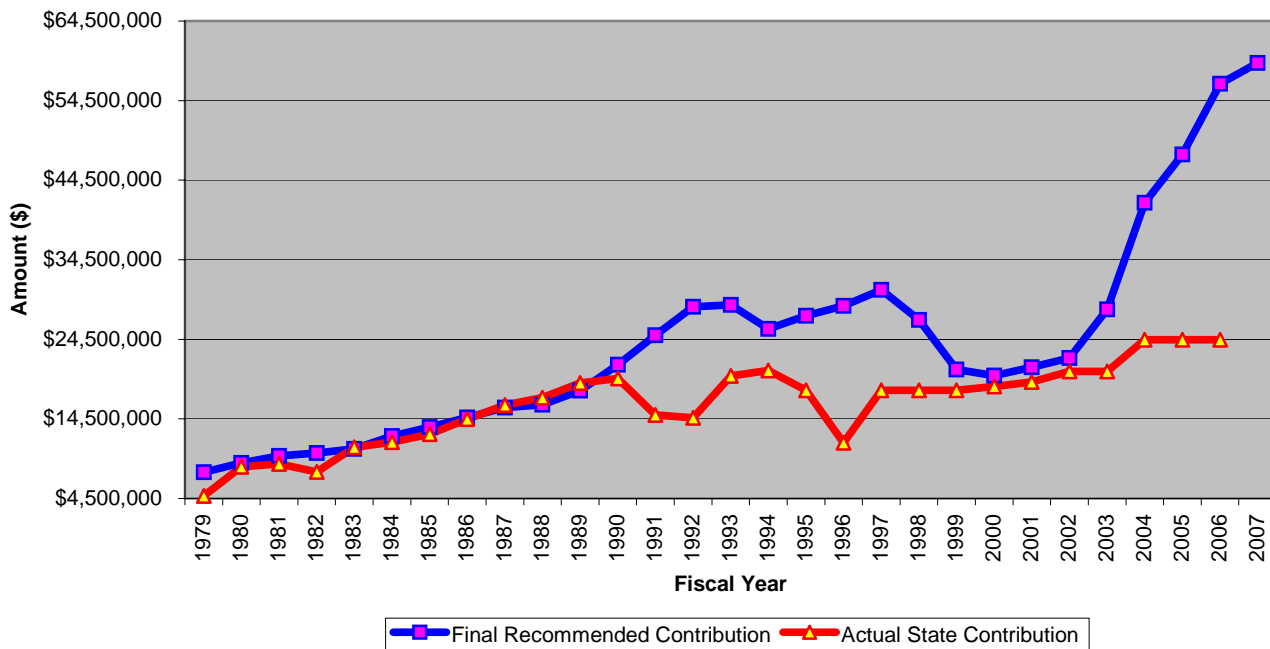
study and that care should be taken to look at benefit changes in a way that does not adversely impact long-term education goals – teacher recruitment and retention.

Therefore, the Commission chose to base its recommendations on the current level of benefits.

The Funding Problem

Past history demonstrates a commitment by the State to fund the system at actuarially required levels until 1990, as can be seen in the graph below. Then, in fiscal years 1991 through 1998, state contributions paid into the VSTRS retirement plan were substantially less than actuarial requirements. The shortfall was reduced over the next several years, largely due to unprecedented investment returns that are not likely to be duplicated in the foreseeable future. Recently, the gap between actuarially required contributions and actual appropriations has grown dramatically to unprecedented levels. Underfunding itself is a significant factor in this trend. Unfortunately, underfunding compounds. For example, the contribution shortfall in 1982 was \$2,377,449. If this amount had been invested, the earnings would have been \$36,685,732 through FY 2004. Underfunding in any single year means lost investment returns in future years, resulting in ever larger required contributions, which are becoming difficult to reach.

VSTRS Final Actuarial Recommended Contribution vs. Actual State Contribution



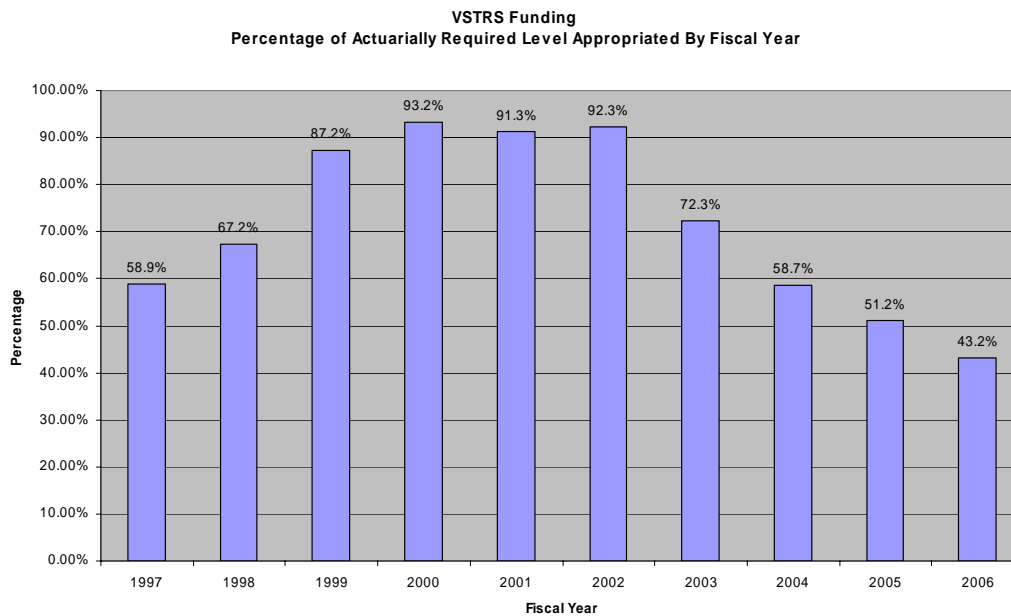
The impact of the historical underfunding has been documented in prior analyses completed by the State’s consulting actuary. According to a 2004 study completed by Buck Consultants, if additional funding had not been required to make up for prior shortfalls, the recommended contribution for FY 2004 would have been \$14 million less than it was. Buck estimated the system had “lost” approximately \$120 million in interest earnings due to underfunding. If

subsequent year underfunding were added to that study, the results would be substantially more dramatic.

What About the Funded Ratio and Unfunded Liability?

One significant reason for the ongoing underfunding of VSTRS is the current actuarial method, which masks the negative impacts of such underfunding.

For several years, actual appropriations to VSTRS have been substantially less than the actuarially required contributions and, as noted in the graph below, the system has experienced a dramatic decrease in funding as a percentage of the actuarially required level.



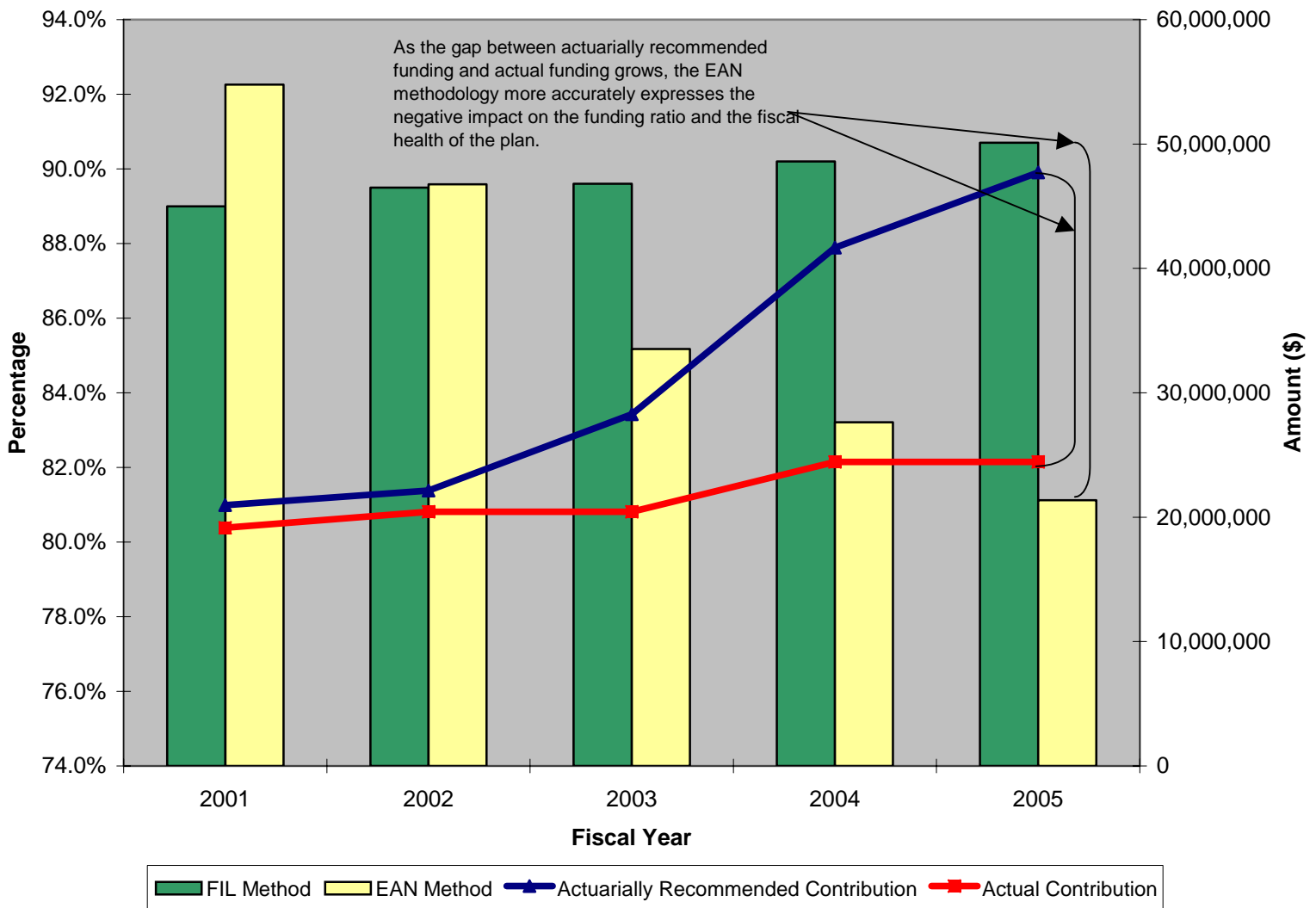
However, the impact of this shortfall is not evident in the funded ratio of assets to liabilities using Vermont’s current actuarial methodology. This funded ratio, which continues to improve despite underfunding, is often used to rationalize continued underfunding. This is dangerous.

The State of Vermont is one of only a few states that use a variant of the Entry Age Normal (EAN) actuarial methodology known as the “Frozen Initial Liability” (FIL) method. While FIL represents an actuarially sound approach to funding, it calculates the unfunded liability in a deterministic manner that does not reflect the actual experience of the plan and does not reflect underfunding. Under the FIL method, the impact of unfavorable experience and underfunding is absorbed in the calculation of “normal cost,” a separate component of pension funding, and not in the unfunded liability. That is one reason why, while the funding ratio under the current method improves, the total required contribution (which consists of the sum of the amortization of unfunded actuarial accrued liability and normal cost) is escalating rapidly. The unfunded liability of the VSTRS was established under the FIL method and frozen by statute in 1988. Again, under FIL, the ratio of the System’s assets to accrued liability will rise from one year to the next, even in the presence of substantial underfunding and/or during a period of poor investment results. Any impact of underfunding subsequent to the “freezing” of the liability in

1988 falls to “normal cost,” instead of being added to the unfunded liability as in more conventional funding methods.

Buck Consultants was asked by the VSTRS Board of Trustees to recompute the funding progress for the system from 2001 to 2005 comparing the current FIL method and the more accepted EAN method. The graph below demonstrates that the current method provides a false sense of security. Using the industry standard of actuarial methods, EAN, Vermont has actually lost considerable ground in the status of pension funding in recent years.

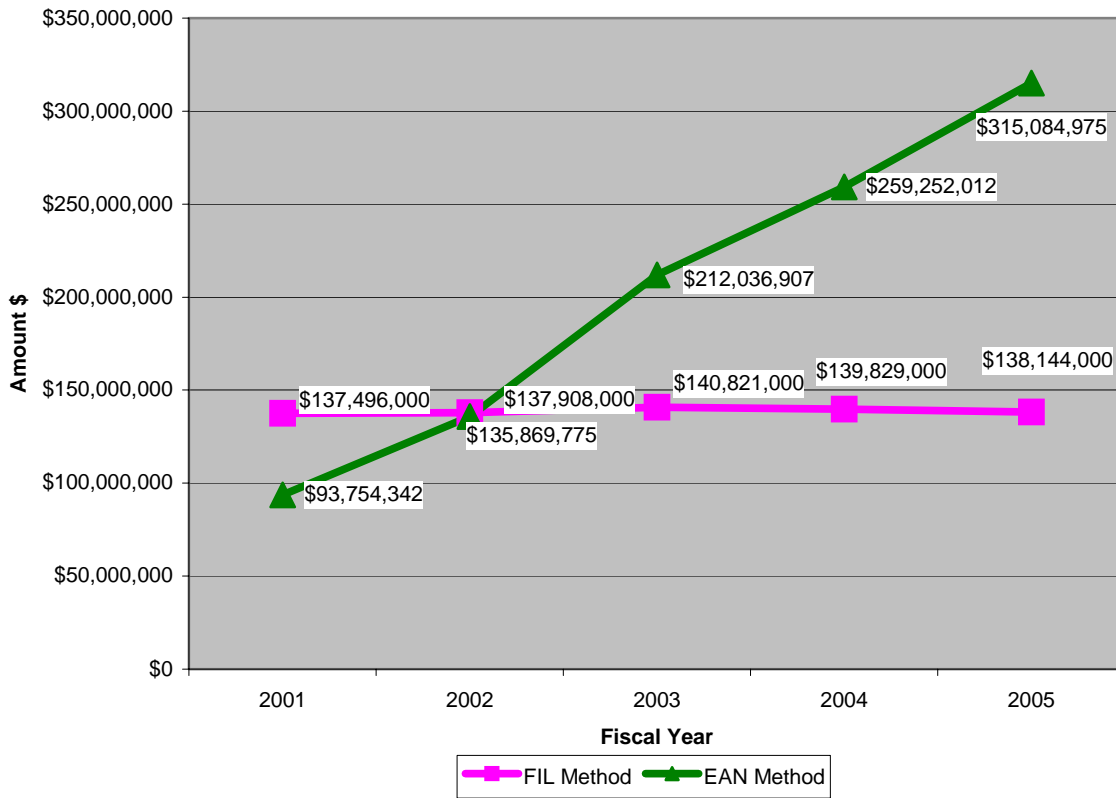
GASB Funding Ratio and Contribution Levels for VSTRS



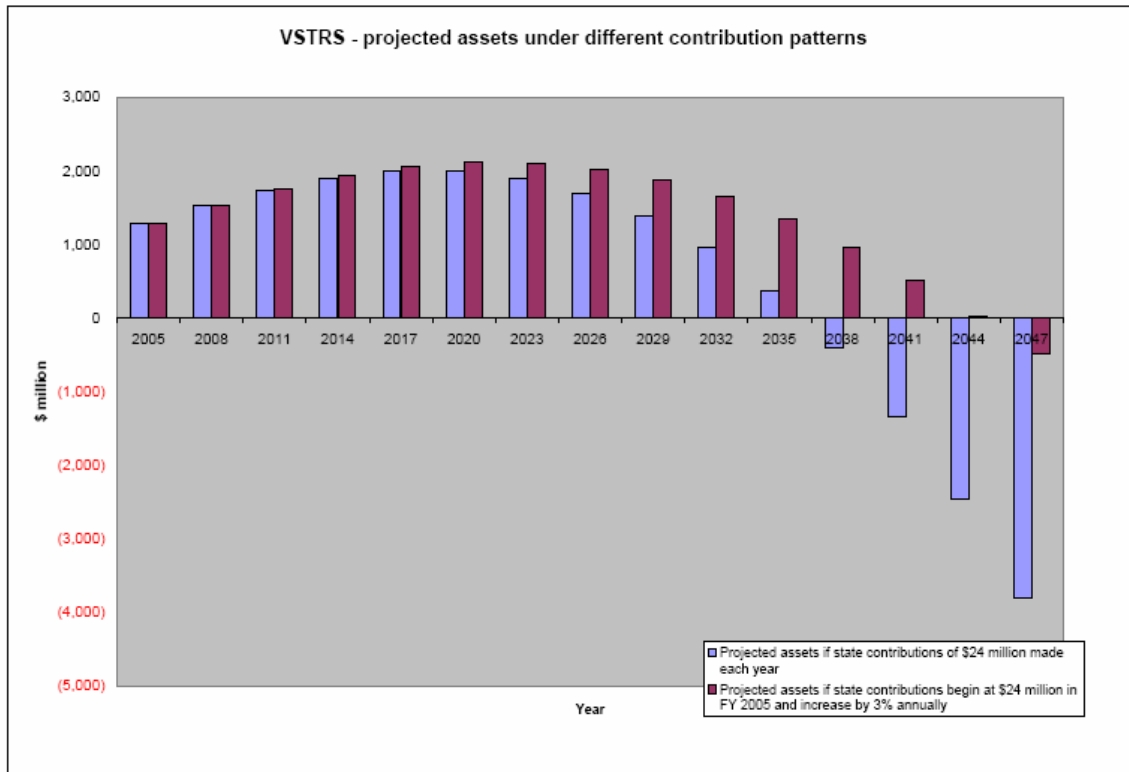
The ratio computed using the EAN method more readily reflects the growing deviation of contributions from actuarially recommended levels, and therefore is a more accurate barometer of the funding progress (or lack of progress). A conversion to this method, which would require a change in statute, is recommended.

In addition to resulting in a misunderstood funded ratio, the current FIL method is masking the real unfunded liability being accrued by Vermont, which in FY 2005 approximates \$315 million, as opposed to \$138 million using the FIL method. Since the liability was frozen in 1988 and is being paid off on a 30-year schedule, it tends to stay quite stable. Under the EAN method that most states use, the unfunded actuarial accrued liability is rising substantially and quickly. This is a more accurate picture of the State's current funding progress. The normal cost then becomes a more accurate indicator of benefit costs absent underfunding.

VSTRS Unfunded Liability Using EAN and FIL Methods



To date, the liquidity of the system has not been compromised. The following graph, prepared using data provided by Buck Consultants, projects the degradation of pension assets assuming two status quo scenarios: continuing the current pattern of contributions at the \$24 million level, and assuming growth in the contribution beginning in FY 2006 at 3% per year. The assets of the fund would begin to decline in 2020 and be completely depleted sometime between 2035 and 2038 in the first scenario, and between 2044 and 2047 in the second. While this may seem to be somewhat far into the future, actuaries point out that the critical tipping point is not when assets run out or even decline, but when Governors and Legislatures no longer believe the required contributions are realistic and give up trying to fund the actuarially required contributions.



Credit Rating Risk

Continued underfunding of the VSTRS retirement plan is likely to have a more immediate impact on the State’s credit rating if it is not corrected. The three major credit rating agencies (Standard & Poor’s, Moody’s, and Fitch) are placing increasing credit emphasis on pension funding and a related problem on the horizon – post-employment benefits (including retiree health care).

“...increasing pension expenses can contribute to or exacerbate declines in liquidity and financial flexibility that may lead to downgrades in the absence of corrective action.”

-Fitch Rating Service, 9/18/03

“...after state pension funds reached their apex of financial soundness, based on funding levels, in 2000, they have since deteriorated -- in many cases precipitously -- leaving most funds with the problem of managing new, large unfunded liabilities. The rapid growth and significant magnitude of these liabilities has become an increasing credit concern for many state ratings, reaching crisis proportions in some cases.”

- Standard & Poor’s, 1/21/05

Vermont currently enjoys a very favorable credit rating – in fact, the best rating in New England. That rating has been carefully protected over the years through judicious debt and financial management, as good ratings decrease the cost of borrowing for the State. While it is difficult to measure the exact impact in a changing rate environment, and there is, at present, no indication that such an action is being considered, a downgrade of a full grade, for instance, could result in an increase in borrowing of from eight (8) to fifty (50) basis points. Based on our current annual borrowing level of \$45 million, that could translate into increased interest costs of as much as \$2.3 million over the life of the bond issue. In addition, the Municipal Bond Bank, which assists in pooled financing for municipalities, also relies on the State’s rating. Adverse rating actions could drive up the costs of borrowing for municipalities, as well.

Commission Recommendations

Keep in mind that all recommendations of the Commission are premised upon full funding of the actuarial recommendation in FY 2007 and in subsequent years. The recommendations are intended to bring the actuarially required annual contribution down to a manageable level for the Governor and Legislature. If the necessary funding is not forthcoming, Vermont could be criticized for wearing rose-colored glasses and doing little more than putting additional debt on the State's credit card, with no real plan or commitment to pay the costs of the VSTRS retirement plan.

Based on the Commission's review of actuarial funding methods, interest rate assumptions, and possible reamortization periods, the following matrix of possible funding solutions was developed.

Current Funding Levels and Recommended Solutions

YEAR	Method	FIL		FIL		EAN		EAN	
	Interest rate	8.00%		8.25%		8.00%		8.25%	
	Amort Restart	Yes	No*	Yes	No	Yes	No	Yes**	No
FY05 Using FY04 Valuation	Total Contribution	\$42.4	\$47.7	\$38.3	\$42.0	\$35.8	\$45.7	\$32.2	\$40.1
FY06 Projection Using FY05 Valuation	Total Contribution***	\$50.6	\$56.6	\$45.0	\$49.9	\$40.8	\$54.6	\$36.5	\$48.2
FY07 Projection Using FY05 Valuation	Total Contribution**	\$52.9	<u>\$59.2</u>	\$47.1	\$52.2	\$42.8	\$57.2	<u>\$38.2</u>	\$50.5

Developed using data supplied by Buck Consultants; note all \$ amounts expressed in millions.

* Represents current method and amortization schedule and are the actuarial recommended contributions absent changes recommended by the Commission

** Represents actuarially recommended contributions assuming Commission recommendations are adopted.

*** Source is the VSTRS valuation completed as of June 30, 2005 in October 2005

**** Represents assumed increased if total payroll increased by 4.5%. To the extent that underfunding is not addressed in 2006, this number could increase if not otherwise offset by investment and actuarial experience.

The Commission unanimously adopted the following recommendations:

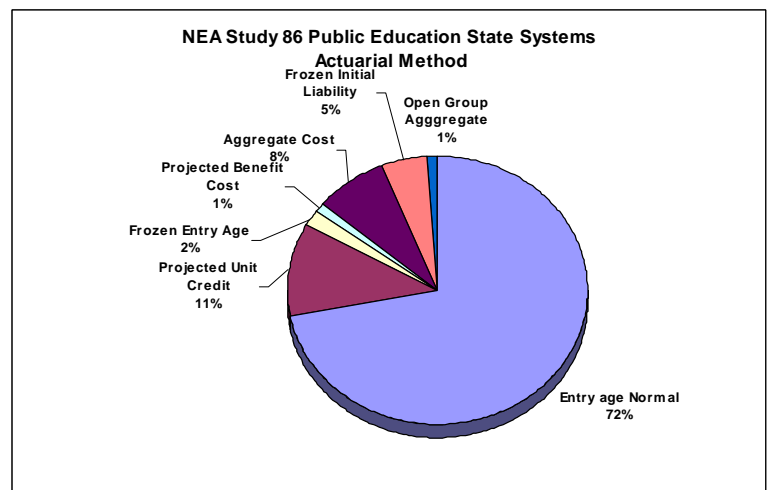
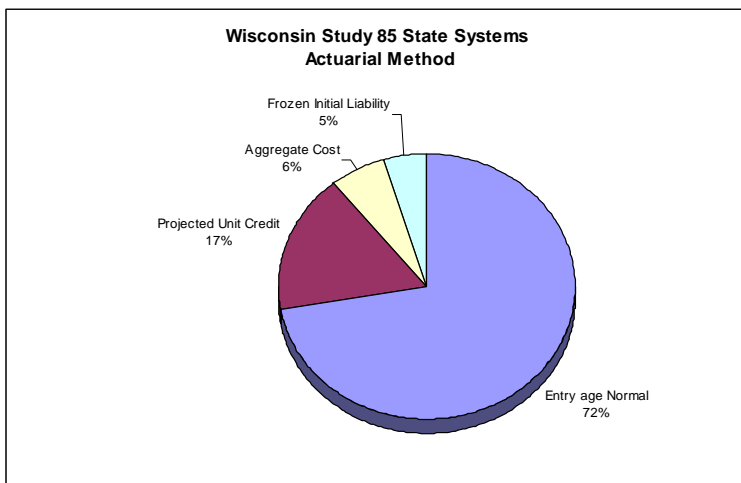
1) Vermont should adopt the industry standard of actuarial methods: EAN

This recommendation requires statutory revision.

The Government Accounting Standards Board (GASB) outlines several accepted actuarial methods to measure funding. The Commission reviewed two comparative studies of retirement systems to determine the predominant method used by other states. The studies are:

- The National Education Association (NEA), Characteristics of Large Public Education Pension Plans, November 2004. This publication presents the results of a comparative survey of the large public pension plans that cover public education employees. The research was conducted during the summer of 2004.
- Wisconsin Legislative Council, 2002 Comparative Study of Major Public Employee Retirement Systems, December 2004. This report compares significant features of major state and local public employee retirement systems in the United States. The report compares retirement benefits provided to general employees and teachers, rather than benefits applicable only to narrower categories of employees.

The results are compelling. “Entry Age Normal” (EAN) is, by far, the predominant actuarial method used by public retirement systems (72% of all surveyed systems), while the “Frozen Initial Liability” (FIL) method was rarely used.



One reason for the popularity of EAN is that normal costs under this method are designed to be a level percentage of compensation. They do not fluctuate significantly over the course of a member's employment history as long as experience matches actuarial assumptions. As discussed earlier in this report, while FIL represents an actuarially sound approach to funding, it calculates the unfunded liability in a deterministic manner that does not reflect the actual experience of the plan and does not reflect underfunding. The ratio computed using the EAN method more readily reflects the growing deviation of contributions from actuarially recommended levels, and therefore is a more accurate barometer of the funding progress (or lack of progress). Based on the above analysis, the Commission recommends a statutory change converting VSTRS to the EAN actuarial method.

The Commission emphasizes that once EAN is employed, Vermont's funded ratio will be closer to 81% than the 90.7% indicated under FIL. Further, the ratio will rise or fall largely depending on whether the required funding is forthcoming. If Vermont does not fund at the actuarially required levels, underfunding will be much more visible than under the current FIL actuarial method. This will provide a much stronger incentive for Governors and Legislatures to provide appropriate funding and will also provide a stronger accountability aspect in the funding process.

2) Restart the 30-year amortization period

This recommendation requires statutory revision.

The unfunded liabilities of retirement plans are commonly amortized over an extended period. The existing amortization schedule for VSTRS calls for amortization over 30 years ending in the year 2018. In the interest of bringing the required contributions into line with an achievable appropriations level, the Commission recommends restarting amortization over 30 years, with a firm commitment for full funding.

On an EAN basis, the unfunded actuarial accrued liability for VSTRS will be over \$315 million. With current interest rate assumptions of 8.0% and the current amortization schedule, the actuarially required contributions for FY 2006 and FY 2007 would be \$56.6 million and \$59.2 million, as compared to our current budgeted contribution of \$24.4 million. Clearly that is a gap that will be difficult to close in the current environment. Restarting the amortization schedule over 30 years would reduce the FY 2006 and FY 2007 funding needs to \$40.8 million and \$42.8 million, a reduction in the annual contributions of \$15.8 million and \$16.4 million.

Reamortization is analogous to extending a home mortgage. While not an ideal solution by itself, as part of a comprehensive plan, reamortization can significantly lower the required annual payments to a more achievable level, which, if funding discipline is maintained year-to-year, can provide a realistic path for achieving full funding.

3) Increase actuarially assumed rate of investment return by .25%

This recommendation requires action by the VSTRS Board of Trustees.

The Commission reviewed the actuarial assumptions associated with the VSTRS retirement plan. These assumptions were compared to those in other major education-related retirement systems

generally and more closely with those in New England and New York. One assumption that received considerable attention was the investment return rate used in the actuarial reports.

Until 2003, the interest rate assumption used in the actuarial reports was 8.5%. Administrative charges must be included in this assumption. In an experience study of the system conducted by Buck Consultants in 2002, the following actuarially determined rates of return were noted (these will vary from investment performance on a market basis):

Year Ending June 30	Rate of Return Based on Actuarial Asset Value
1998	15.59%
1999	14.69%
2000	13.28%
2001	10.25%
2002	6.71%
1998-02 avg.	12.06%

While the historical rate was higher than the assumed rate, the following recommendation was made by Buck:

“The rate of return has been about 12% annually during the past five years. However, as we are recommending a decrease in the assumed annual rate of inflation (as reflected in the assumed annual cost-of-living adjustments), we also recommend a decrease in the expected rate of return from 8.5% to 8.0%.”

The assumed rate of return must reflect long-term expectations and would not be set at levels as high as the actual returns observed in 1998-2002.

Normally, actuarial assumptions would be revised, if necessary, on a five-year cycle, pursuant to an actuarial experience study. However, a significant positive change in the investment structure for Vermont’s retirement systems occurred in 2005 that supports a small increase in the actuarially assumed rate of return at this time. The Legislature created a pooled investment model, with a unified investment committee, for Vermont’s three state level retirement systems – the VSTRS, the State Employees’ Retirement System (VSERS), and the Vermont Municipal Employees’ System (VMERS). The new pooled investment model is expected to increase expected returns due to the utilization of a more proactive investment model, and to reduce investment expenses (which are netted against returns in the actuarial model).

In the process of considering a recommendation to increase the actuarially assumed rate of return, the Commission heard from the State’s actuary (Buck Consultants) and investment consultants (New England Pension Consultants). These experts were asked to share their professional opinions as to whether a .25% incremental increase in the investment rate of return was reasonable or not, whether or not this change would be consistent with the rest of our actuarial assumptions, and whether such a change would require a change in asset allocation mix

or some other more risky investment approach than would be recommended when using the current 8% assumed rate of return.

The consulting actuary stated that if the honest expectation for the new pension investment model is that it will produce increased returns and/or savings of about 25 basis points, he did not have a problem such a revision. When questioned, he stated that using 8.25% would not require adjustment of the other actuarial assumptions in the VSTRS plan. Finally, he stated the revised assumption would be reviewed in the course of the next experience study and could be maintained or changed depending on the results of that study.

NEPC stated that the current VSTRS asset allocation mix could be expected to earn 8.1% gross of expenses, without taking into account any value added by investment managers. They stated that achieving an incremental return increase of .25% would require the new unified pension investment committee to move ahead expeditiously on opportunities to add value, as recommended by NEPC.

In addition, a review of the interest rate assumptions of the nearby systems in New England and New York was conducted with the following results:

CT– 8.50% MA–8.25% ME– 8.0% NH– 9.0% NY– 8.25% RI– 8.25% VT-8.0%

Based on the above review and analysis, an increase of .25% in the investment return actuarial assumption is recommended.

At the October 26, 2005, meeting of the Vermont State Teachers' Retirement System's Board of Trustees, a motion was adopted to increase the actuarially assumed rate of return by 25 basis points (from 8% to 8.25%), contingent upon the Legislature adopting the EAN funding methodology, re-amortization of the unfunded liability over 30 years (beginning July 1, 2006), and full funding of the (recalculated) FY 2007 actuarial recommendation.

The required contribution using a .25% increase in the rate of return along with the amortization recommended above is \$36.5 million for FY06 and \$38.2 million for FY07. This is a reduction of \$21 million compared to the current FY 2007 recommendation of \$59.2 million.

4) **Separate appropriation lines for normal costs and unfunded liability costs**

This recommendation may be accomplished by administrative action.

In keeping with the Commission's focus on instilling discipline in the process for funding the actuarially required contributions, it is recommended that the two components of the actuarial contribution, normal cost and the unfunded actuarial accrued liability, be separately appropriated. "Normal cost" is the cost assigned, under the actuarial cost method in use, to a given year subsequent to the inception of a pension plan. It includes that portion of the actuarial present value of pension plan benefits and expenses allocated to a valuation year by a given actuarial cost method for members of the system. "Unfunded actuarial accrued liability" refers to the excess of the actuarial accrued liability over the actuarial value of assets. In this way, growth in

the unfunded liability can be properly ascribed so that the need for remedial action is more apparent.

Using the EAN with amortization re-start and an 8.25% interest rate assumption, the FY07 actuarial contribution is estimated as follows (000):

Normal Cost	\$23,527
Amortization	14,704
Total Cost	\$38,231

5) **Enact stronger statutory language to ensure future appropriations match the actuarial recommendation**

This recommendation requires statutory revision.

In recognition of the recent past history of underfunding the VSTRS retirement plan and the critical importance of funding actuarially required contributions in the future, the Commission recommends strengthening Vermont law to ensure appropriate funding.

6) **Fully fund both the actuarially required normal and unfunded accrued liability contributions beginning in FY 2007**

This recommendation requires a commitment by Governors and Legislatures.

Based on current methodology, actuarial assumptions, and amortization schedules, the funding level for FY07 would be \$59.2 million, which is \$34.8 million higher than the actual contribution budgeted in FY06. This is most likely out of the “doable” range for the Governor and Legislature. The Commission recommendations will significantly reduce the gap, as compared to the FY06 actual appropriation of \$24.4 million by \$21 million, but still leaves a gap of \$13.8 million.

Under the Medicare, Prescription Drug, Improvement, and Modernization Act of 2003 (MMA), eligible sponsors of retiree prescription drug plans can apply for a 28% subsidy for the qualified prescription drug costs of their retirees. The State of Vermont Teachers’ Retirement System is an eligible sponsor. Buck Consultants has estimated that the annual 2006 subsidy amount will be around \$1.2 - \$1.3 million. Assuming this subsidy is deposited into VSTRS, the remaining gap is approximately \$13 million.

The Commission believes that by reducing the gap to approximately \$13 million, funding the actuarially required contribution is attainable and essential in FY 2007 and in subsequent years.

Funding Options

The Commission recognizes that multiple sources will likely be needed to secure the approximately \$13 million in increased funding for FY 2007. The Commission considered a range of funding options in more or less detail and gave its unanimous support to finding some

of the funds needed through normal revenue growth in the general fund. Other options either enjoyed majority or minimal Commission support, as set out below. Majority support required a simple majority. Minimal support connotes anything less than a simple majority.

Options receiving majority support:

- 1) **Reallocate existing resources in budget to fund the actuarially required contribution.** Funding the actuarially required contribution for the VSTRS retirement plan should be a priority when reallocating funds during the appropriation process.
- 2) **One-time reduction of general fund transfer to the education fund to add to base appropriation for VSTRS pension obligation.** This one-time action is envisioned as a means to “jump-start” the VSTRS appropriation, increasing the base from which future appropriation calculations are derived. This would have the effect of lowering the general fund base on which future transfers are calculated and increasing the base from which future VSTRS funding is derived. The practical effect of this proposal would be that both the non-residential and residential statewide property tax rates would be lowered one or two cents less than otherwise would be the case, or perhaps just the non-residential rate by two or three cents less than otherwise would be the case. Based on current estimates of the FY06 grand lists:

- One penny on the non-residential equalized grand list (EGL) will raise approximately \$2.7 million;
- One penny on the homestead EGL will raise \$2.5 million.

The current statutory rates are \$1.59 for non-residential and \$1.10 for homestead. The actual rates for FY05 were \$1.54 and \$1.05 respectively, and \$1.51 and \$1.02 in FY06. Preliminary estimates are that actual rates will decline further in FY07.

- 3) **Increase in personal income or other tax sources.** A slight majority of members felt that if no other sources of funds are found, a small increase in existing taxes or utilization of some new tax source should be approved. Since the Commission did not achieve consensus on this item, no specific tax or expansion of the tax base is recommended.

Options receiving minimal support:

- 1) **Funding all or part of the future normal costs through the Education Fund.** It was recognized by all members that the State alone should be responsible for paying off any unfunded liability.

A majority of the Commission does not support any new cost centers being added to the Education Fund, both as a matter of principle and because they believe this would result in increased property tax rates at the local level.

However, some members of the Commission believe that teacher retirement benefits are legitimate education expenses and therefore some or all future normal costs could come from the Education Fund. For example, assuming that the FY 2007 \$14.7 million

amortization payment for accrued unfunded liability would remain a General Fund responsibility and that the difference between the \$24.4 million FY 06 appropriation, inflated by 4.5%, and the FY 07 amortization payment would be transferred to the Education Fund, this would add a new \$12.7 million obligation for the Education Fund. All other things being equal, that would translate into about 2 cents on the statewide property tax.

- 2) **Increase employee contributions for future normal costs.** Because Vermont's retirement benefits for teachers are comparatively modest, a majority of Commission members did not feel it appropriate to increase employee contributions as part of a solution to the underfunding problem. There was also consensus that the state should bear the responsibility for the portion of future funding related to past underfunding.

Vermont's employee contribution rate is 3.4% of earnings. An additional amount bringing the level to 3.54% was added in 2002 to partially offset an increase in medical coverage to plan members. In an analysis completed by the National Association of Retirement Administrators on behalf of Vermont, the sample average (using the Public Funds Survey, the state comparative study completed by the Wisconsin Retirement Office, and the NEA study) was 5.0%.

- 3) **Require local school districts to share the costs of future pension liabilities with the State.** The majority of the Commission believes that paying for retirement benefit costs should remain at the State level. They point out that adding a local share would be a cost shift to the property tax and that such an arrangement may lead to increased conflict between school boards and teachers.

Some members of the Commission believe there should be a local school district contribution to paying for retirement costs. They point out that local districts are the employers for the purposes of hiring, termination, and establishment of wages; the determination of teacher levels and per pupil ratios is by the local municipality or school district. Proponents of a local share would establish a partnership between the local districts and the State for future normal costs. They believe this would provide an element of accountability and cost control at the local level. Paying for the accrued unfunded liability would remain the responsibility of the State.

The Commission discussed options of incorporating a local share through a variety of mechanisms. The results, displayed on the following chart, indicate a wide diversity of treatment of paying for retirement benefits in New England and New York.

Employer Contributions for Northeast States		
State	Treatment of Pension Employer Contributions	Treatment of Health Care Premium Payments, if info provided
Connecticut	There is no local responsibility for the employer contribution to Connecticut State Teachers' Retirement System. The State is responsible for the employer contribution.	
Maine	The State pays 100% of the employer contribution for retirement (federally funded teachers paid by federal funds). This funding arrangement is established in statute (5 MRSA, §17151) dealing with the employer contribution).	Per statute, Maine pays 40% of retired teachers' health insurance, increasing to 45% beginning January 1, 2006.
Massachusetts	The State pays the entire employers' cost, then bills the locals for the healthcare portion.	Local entities are billed for health care portion. Unable to verify if any partial local aid reimbursement is made.
New Hampshire	The State funds 100% of the employer normal costs for all State employees, and 35% of the employer normal costs for teachers, police officers, and firefighters employed by political subdivisions.	
New York	"Each year an employer contribution rate is calculated by our Research and Valuation Department and adopted by the Retirement Board. Salary information is accumulated through the employer report process. The rate is applied to the member's SALARY RECEIVED to determine the employer contribution. In the case of school districts, this employer contribution, together with the employees' contribution, is deducted by the State Education Department from state aid and paid directly to the Retirement System."*	
Rhode Island	Teacher retirement is shared by the municipalities, the State, and the teachers.	
Vermont	State pays the employer contribution.	State pays 80% of retirees' health care premiums based on the 250 comprehensive plan and apply same dollar figure to all other plans.

*NY information obtained through its web site.
Source: Based on JFO survey of states

- 4) **Phase-in increases in State funding over a defined period, if necessary.** This seemed a reasonable last option to some members of the Commission, as the approximate \$13 million in new funds for FY 2007 is a significant amount, but the majority of the Commission worried that using this approach would result in continued erosion of the funded ratio (perhaps to less than 80%), would tend to solidify the expectation that underfunding is not harmful, and would be viewed very negatively by credit rating agencies, especially in combination with the rest of the recommendations of the Commission.
- 5) **Sell selected state assets.** This option received very little Commission support, as it would be using a one-time source of funds for ongoing expenses and would result in the funding gap being even larger in future years.
- 6) **Utilize pension obligation bonds for some or all of unfunded liability.** The Commission reviewed the possible application of pension obligation bonds. A finance specialist from Citigroup made a presentation to the Commission on September 8, 2005, followed by a Treasury staff summation of comments from Government Finance Associates, the State's financial advisor. Pension bonds are taxable bonds issued to refinance a portion or all of the unfunded actuarial accrued liability. The proceeds of the bond issue, after expenses, are deposited into the pension accumulation fund and invested. The pension liability is now "replaced" with debt service payments of principal and interest, which, presumably, are less than the amortization payment, reducing the budgetary strain. If returns are higher than the bond payment, there is a net gain. There is, however, considerable risk if investment return does not reach a level needed to make the bond payment. Since the state would be borrowing at taxable rates instead of the tax-

exempt rates associated with general obligation debt, the potential spread between the debt service interest and the interest rate of the pension fund is reduced. In addition, the transaction creates “hard dollar” obligations that could impact the balance of the state’s long-term debt plan and may be disadvantageous to the state’s credit position.

Conclusion

Vermont can no longer afford to underfund the Vermont State Teachers’ Retirement System. The tipping point where the State will not be able to catch up with actuarially required contributions without draconian measures is approaching rapidly.

Pension benefits are essentially legally binding IOUs to employees that accumulate while they are working and that are cashed in at the time of retirement. Taxpayers and future teachers are at significant risk without restoration of funding at the actuarially required levels. Every dollar we delay putting into the system now results in the need for substantially more dollars later. Vermont’s favorable credit rating may be jeopardized if corrective action is not forthcoming.

Despite enjoying strong economic growth and prosperity in recent years, the State has failed to meet its obligation to properly fund the system. Prudence dictates that it must restore funding in the current period of relatively positive financial results and economic prosperity. In addition, there will be greater financial pressures in the future. For example, new Government Accounting Standards Board requirements for disclosure of funding for other post employment benefits (OPEB), primarily health benefits, will create even more demands on scarce resources.

The Commission recommends that Vermont:

- Adopt the Entry Age Normal (EAN) actuarial methodology because doing so provides a more accurate picture of the plan’s funded status and is consistent with most public retirement plans.
- Re-amortize the unfunded actuarial liability (UAL) over 30 years because, while this will increase plan costs over that period, it will reduce the State’s required annual contribution substantially.
- Increase the assumed rate of investment return by .25% because doing so reflects the beneficial effects of Vermont’s new unified pension fund investment process.
- Create separate appropriations for normal and UAL costs because doing so will make plan costs associated with underfunding distinct from costs associated with paying benefits.
- Enact stronger statutory language to ensure that future appropriations match the actuarial recommendation.
- Fully fund both normal and UAL costs beginning in FY 2007 because doing so is necessary both to justify implementing other recommendations and to preserve the fiscal integrity of the VSTRS.

The creation of this Commission clearly indicates a resolve on the part of the Governor and the General Assembly to tackle this issue. The Commission members and various staff supporting this effort remain committed to working with the various bodies to find and implement solutions.

The Commission hopes that the recommendations and the listing of possible options will assist the Governor and the General Assembly in finding solutions to bring about the long-term sustainability of the Vermont State Teachers' Retirement System.

Acknowledgements

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- David Driscoll, Consulting Actuary, Buck Consultants
- Staff from the Vermont State Treasurer’s Office, including the Retirement Division
- Vermont Department of Education Staff
- Richard Charlton, New England Pension Consultants
- Keith Brainard, Research Director, National Association of Retirement Administrators

In addition, this report makes considerable use of several publications, including:

- The National Education Association (NEA), Characteristics of Large Public Education Pension Plans, November 2004. This publication presents the results of a comparative survey of the large public pension plans that cover public education employees. The research was conducted during the summer of 2004.
- Wisconsin Legislative Council, 2002 Comparative Study of Major Public Employee Retirement Systems, December 2004. Prepared by William Ford, Senior Staff Attorney. This report compares significant features of major state and local public employee retirement systems in the United States. The report compares retirement benefits provided to general employees and teachers, rather than benefits applicable only to narrower categories of employees.
- Wilshire Research, 2005 Wilshire Report on State Retirement Systems: Funding Levels and Asset Allocation, March 2005. The study includes 125 state retirement systems. Of these 125 retirement systems, 64 systems reported actuarial values on or after June 30, 2004, and 61 systems reported before June 30, 2004. Sixteen of these 61 late-reporting systems reported before June 30, 2003. This is the most recent in a series of annual reports issued by Wilshire.
- New England Pension Consultants. Various quarterly and asset allocation reports prepared for the VSTRS Board. These are available on the Treasurer’s Web site at www.vermonttreasurer.gov .
- Buck Consultants. Various annual valuations, 2004 VSTRS underfunding report, 2002 Experience Study, and the Post Retirement Benefits Analysis for June 30, 2004. These are available on the Treasurer’s Web site at www.vermonttreasurer.gov .
- Gary W. Anderson and Keith Brainard, Profitable Prudence: The Case for Public Employer Defined Benefit Plans, 2004, Pension Research Council, The Wharton School, and University of Pennsylvania.

Statutory Reference

ACTS OF THE GENERAL ASSEMBLY 2005-2006

NO. 71. AN ACT MAKING APPROPRIATIONS FOR THE SUPPORT OF GOVERNMENT.
(H.516)

Sec. 34b. COMMISSION ON FUNDING THE STATE TEACHERS'

RETIREMENT SYSTEM OF VERMONT PENSION

ACCUMULATION FUND

(a) A commission is created to make recommendations for funding an adequate, sustainable, and actuarially sound retirement benefit plan for the state teachers' retirement system of Vermont. The commission shall be comprised of the following 13 members:

(1) two members of the house of representatives, appointed by the speaker of the house;

(2) two members of the senate, appointed by the committee on committees;

(3) the chair of the board of trustees of the Vermont state teachers' retirement system;

(4) the commissioner of finance and management;

(5) the commissioner of education;

(6) the state treasurer, who shall chair this commission;

(7) two members of the Vermont national education association, appointed by the association;

(8) one member of the Vermont superintendents' association, appointed by the association;

(9) one member of the Vermont school boards' association, appointed by the association;
and

(10) one public member with pension and benefit experience, appointed by the governor.

(b) The commission shall file a report of its recommendations with the governor and the general assembly on November 15, 2005.

(c) Legislative members shall be entitled to per diem compensation and expenses as provided for in section 406 of Title 2.