

MASSACHUSETTS TEACHERS' RETIREMENT SYSTEM
2000-2005 EXPERIENCE STUDY

Introduction

The Public Employee Retirement Administration Commission (PERAC) has completed our second Experience Study of the Massachusetts Teachers' Retirement System. This report presents the results of our experience analysis for members of the Massachusetts Teachers' Retirement System over the six-year period from January 1, 2000 through December 31, 2005. In addition, for some of our analysis, we used data as of December 31, 2006.

The nature of an experience study is to track annual salary increases and how members leave a system (retirement, death, disability, or withdrawal) and adjust our actuarial assumptions based on both this past experience as well as anticipated future experience. This task requires more detailed data than is necessary for an annual actuarial valuation. We received additional information from the Massachusetts Teachers' Retirement Board to complete this study.

Until the January 1, 2006 actuarial valuation, PERAC estimated salary for a significant number of members due to questionable reported pay. Our estimates were based on the Annuity Savings Fund contributions and the contribution rate. In addition, since actual credited service is not provided to us, each year we estimate service based on a member's original date of hire as recorded by the Massachusetts Teachers' System. For these reasons, the salary analysis and any experience results based on service are not as reliable as the other components of this study.

Each year as part of the valuation, we test how well the assumptions are working by performing a gain/loss analysis. If plan liabilities increase more than expected, there is an actuarial loss. Conversely, if plan liabilities increase less than expected, there is an actuarial gain. If each year the results consistently produced an actuarial loss (or an actuarial gain), then this would indicate that the assumptions are not properly reflecting actual experience. In this way, the gain/loss analysis serves as a proxy to the performance of a detailed experience study.

We reviewed the gains and losses on plan liabilities (excluding asset gains and losses) from 2000 through 2006. PERAC performed valuations for each year in this period. Our review of the gains and losses over this period shows that, overall, the actuarial assumptions are reasonable. Although there were actuarial losses in each of the past six years, the losses were relatively small, typically representing less than 1% of the actuarial liability. The losses exceeded \$250 million only once in the six years (\$876 million in 2002), and we expect a significant portion of this loss relates to the implementation of Chapter 114 of the Acts of 2000 (Retirement Plus). Despite the relatively small losses each year, there were consistent actuarial losses and we hope our revised assumptions provide a better estimate of plan liabilities going forward.

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Introduction (continued)

As part of this experience study, we performed a detailed member reconciliation of actual retirements, terminations, and disabilities over the 6-year period. We analyzed these results using not only our valuation data from each year, but also listings generated by the PERAC Disability Unit and the Massachusetts Teachers' Retirement Board's response to a number of our data questions.

The annual funding schedule appropriation (the total plan cost) reflects two sources of plan costs and liabilities. The first is the amortization of the unfunded liability. The actuarial accrued liability less plan assets equals the unfunded liability. The unfunded liability is amortized through FY2023 under the current schedule. In addition to the amortization of the unfunded liability, the annual appropriation also reflects the normal cost (or current cost), which represents the value of benefits accruing during the coming year. The measure of the impact on the total plan cost of any change in assumptions is the impact of that change on these two components.

Although the normal cost and accrued liability directly determine the appropriation under the funding schedule, these items are components that make up a portion of the present value of future benefits (PVFB). The PVFB may be the most accurate measure of the "true" total cost of a plan since it represents the present value of total projected benefits for all active, inactive and retired members. Any change in the actuarial assumptions will change the PVFB and, accordingly, the normal cost and accrued liability (and thereby the amortization of the unfunded liability).

Overall, our proposed assumptions slightly increase the total plan cost.

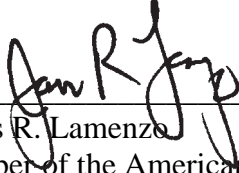
It is important to note that the results for the Massachusetts Teachers' reflect only one component of the total Commonwealth obligation. The revised assumptions will first be reflected in our January 1, 2008 actuarial valuation.

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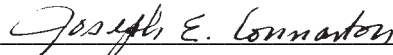
Introduction (continued)

We gratefully acknowledge the efforts of the Massachusetts Teachers' Retirement Board staff in completing this project.

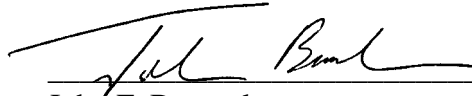
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Dated: February 29, 2008