Section One

Executive Summary

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The Office of the State Actuary (OSA) prepared this actuarial experience study on the Washington State retirement plans as required under RCW 41.45.090. This experience study covers the period 2001 through 2006 and includes an analysis of all demographic assumptions used to develop contribution rates, administrative factors, and estimated fiscal costs (fiscal notes and projections) associated with the retirement plans.

Intended Use

The primary purpose of this experience study is to compare the current demographic assumptions to the actual experience of the plans to determine if any adjustments are required to ensure our assumptions remain reasonable. Readers should not use this study for other purposes. We also advise readers of this study to seek professional guidance as to its content and interpretation, and not to rely upon this communication without such guidance. Distribution of or reliance on only parts of this study could result in its misuse, and may mislead others.

Our Approach

We gathered sufficient data, made assumptions where necessary, and established study methods for each assumption to evaluate how well our current demographic assumptions compare to past actual experience. We also reviewed whether different assumption formats (i.e., assumptions by gender, age, or years of service, etc.) would provide a better fit to past experience than the current formats. Lastly, we made expectations for the future and applied our professional judgment to update our current assumptions where necessary.

Please see the Development of Demographic Assumptions section for additional information.

Fiscal Impact

Actuaries use demographic and economic assumptions to estimate the cost of future plan benefits which determines the timing and amount of plan contributions. Actual plan benefit payments less returns on invested plan contributions determine the actual cost of benefits. Furthermore, we will review all demographic assumptions again in six years and likely make further updates at that time. Therefore, any assumption changes from this experience study impact short-term financing costs only.

Please see the 2007 Actuarial Valuation Report for the impact on plan liabilities and contribution rates resulting from this experience study.

Economic Assumptions

We review the economic assumptions for the plans every two years as part of the contribution rate-setting process under RCW 41.45.030. The current economic assumptions, prescribed by the Legislature, follow:

Inflation	3.50 percent
General salary growth	4.50 percent
Annual investment return	8.00 percent
Growth in system membership	1.25 percent (0.90 percent in TRS)

Although economic assumptions are not part of the analysis of this demographic experience study, we have recommended a change to the general salary growth assumption (a decrease from 4.50 percent to 4.25 percent). We describe this change briefly in this summary and in more detail in the Development of Demographic Assumptions section of this report for the service-based salary increase assumption. The Pension Funding Council (PFC) adopted our recommended general salary growth assumption change. The LEOFF 2 Board did not. The Legislature may revise both actions during the 2009 Legislative Session.

Demographic Assumptions

The following information summarizes the results for the major categories of demographic assumptions that comprise this report. Please see the Development of Demographic Assumptions section for additional information.

Mortality Rates

Analysis of our experience data shows lower rates of mortality in all of our plans than our current assumptions predict. This experience indicates that people are living longer. In addition, national trends suggest improvements in mortality will continue in the future. As a result, we recommend the use of the RP-2000 mortality table (published by the Society of Actuaries) with projected improvements at 50 percent of Scale AA. Scale AA is a table of annual mortality improvement rates published by the Society of Actuaries. Using 50 percent instead of 100 percent of Scale AA recognizes that we expect future improvements in mortality to slow down.

We also recommend the continued use of age adjustments (shifts to the underlying RP-2000 table) to further refine our expected rates with our experience data. These age adjustments have changed for males and females in PERS and males in LEOFF, WSPRS, and PSERS.

We base our current mortality assumptions for retirees with disabilities on the RP-2000 “Healthy” table with minimum rates and large age offsets. We recommend that we move to the RP-2000 “Disabled” table, also published by the Society of Actuaries, for each plan except LEOFF 1. We also recommend projected improvements in disabled mortality at 50 percent of Scale AA.

The recommended changes in the mortality assumptions increase the expected short-term cost of the plans and require an increase in contribution rates to fund these higher expected short-term costs.

Retirement Rates

Our experience data show significant decreases in our retirement rates over the last six years except for WSPRS, TRS 1, and LEOFF 1. This experience indicates that people are delaying their retirement. In addition, national trends suggest people are working longer and delaying retirement. We recommend lower retirement rates for PERS, TRS 2/3, SERS, and LEOFF. PSERS has insufficient data as of this experience study to recommend any changes. WSPRS and TRS 1 assumptions are a good fit and only minor updates are recommended for these plans.

Reducing the retirement rates decreases the expected short-term cost of the plans and decreases the contribution rates required to fund these lower expected short-term costs.

Termination Rates

Termination rates for all plans have increased during the study period which suggests that fewer workers are staying in public employment. Some of this trend can be explained by the economy - when the economy is strong, people change jobs more frequently. We observed two strong economic periods and only one downturn during the study period. We have taken this information into account in developing new termination rates. Because we can't predict the economy for the future, we blended our experience data with the current assumptions to produce a reasonable set of new termination rates.

Increasing the termination rates decreases the expected short-term cost of the plans and decreases the contribution rates required to fund these lower expected short-term costs.

Disability Rates

Overall, the current disability assumptions provide a good fit to the experience of the plans. We recommend minor updates for TRS 2/3 and SERS 2/3, a new assumption format for WSPRS, and lower rates for LEOFF 1 to provide a better fit to past experience in these plans.

The recommended changes to the disability assumptions create a minimal impact on contribution rates.

Service-Based Salary Increases

To estimate future salaries, we model two types of salary growth – general salary increases and service-based salary increases. General salary increases fall under the economic assumption category and service-based salary increases fall under the demographic assumption category. The purpose of this experience study is to analyze the demographic assumptions. However, during our analysis of past salary growth, we determined that the economic and demographic categories of salary assumptions should be considered together to effectively model total salary growth.

Our experience data shows lower general salary increases than expected and higher service-based salary increases, except for LEOFF and WSPRS.

We recommend a 0.25 percent reduction in the general salary increase assumption for all plans. We recommend modest increases to the service-based salary increase assumption for PERS, TRS, and SERS and reductions for LEOFF and WSPRS.

Combining both salary assumption changes results in lower expected short-term costs of the plans and lower contribution rates.

Miscellaneous Assumptions

In addition to the major demographic assumptions described earlier, we use several other demographic assumptions in our actuarial valuation model to estimate the costs of the plans. We include each miscellaneous assumption, and its analysis, in this report. Overall, we recommend general updates, where appropriate, and each update has a very small impact on the expected costs and contribution requirements of the plans. The total impact for all miscellaneous assumptions results in lower expected short-term costs and lower contribution rates for each plan.