



March 25, 2011

Honorable Gina M. Raimondo  
General Treasurer State of Rhode Island  
State House, Room 102  
Providence, RI 02903

Dear Treasurer Raimondo:

Per your request, we have developed an estimate of the cost to perform the 2011 Asset-Liability Study (the Study) of the Employees Retirement System of Rhode Island (ERSRI or the Plan). The purpose of the Study is to examine the financial risks and opportunities facing ERSRI and to review the current strategic investment allocation to determine whether it is expected to be the most appropriate for the Plan. Pension Consulting Alliance (PCA) and EFI Actuaries (EFI) will work together as a team to perform the Study on behalf of the Rhode Island State Investment Commission (SIC).

### Scope of Work

Through our experience of conducting numerous asset-liability projects, we believe that the Study will include the following tasks:

#### Data Gathering & Plan Modeling

1. Fact finding to develop appropriate inputs for the Study:
  - a. Conduct phone and/or onsite meetings with staff and ERSRI's actuary, as appropriate;
  - b. Review existing ERSRI data files, planning documents, and related materials.
2. Gather member, financial, and plan benefit data to use in modeling ERSRI.
  - a. In order to provide the most information at the least cost, we will model only the Employees' Retirement System (ERS); this System contains about \$5 billion of the total \$6 billion in assets, so its behavior will determine that of the entire pension system. Therefore, the Municipal, Judges, and State Police systems will be excluded from the model, though their behavior is likely to be roughly similar to that of the ERS.
  - b. The model thus constructed will be independent of the actuarial model developed by the ERS consulting actuary: It will use independently-collected member data and a separate actuarial model. As such, it will provide actuarial results constituting a check on the principal conclusions in ERS actuarial studies, and it will be available for use in estimating the cost of certain benefit changes, such as removing the cost-of-living adjustment.
  - c. We will also consult with the Treasurer's Office to determine expectations regarding future ERS membership and compensation. In particular, expected pay reductions, layoffs, attrition, or furloughs will have an impact of future ERS liabilities that should be modeled.
3. Provide an overview to the Rhode Island SIC of the asset-liability modeling process.
4. Develop assumptions for inputs used to model investment classes and pension liabilities.
5. Construct the model of ERSRI's pension liability structure. The PCA/EFI model is designed to be both open group and stochastic.



- a. An open group model includes projected liabilities and costs not just for current members but also for future new members. This provides a much more realistic and robust measure of future financial results.
  - b. The PCA/EFI stochastic model will provide results not only for a single actuarial assumed return, but also for hundreds of simulated future returns. This provides a view not only of the assumed liabilities and cost, but also of the range of liabilities and costs that might occur – a measurement of System risk.
6. Present initial findings of liability projections to the Rhode Island SIC. This presentation will contain the principal results produced by the ERS model. Included will be:
- a. Independent review of the results of the actuarial valuation of ERS conducted by the ERS actuary.
  - b. Projections of future liabilities and costs assuming a level workforce and investment returns in accordance with assumptions.
  - c. Projections of future liabilities and costs assuming that the workforce experiences future layoffs, furloughs, and pay increases in accordance with scenarios identified by the Treasurer's Office.
  - d. Simulations of future liabilities and costs using the current asset allocation policy and the capital market assumptions developed by PCA/EFI in conjunction with the Treasurer's Office.
  - e. Simulations of future liabilities and costs under some alternative asset allocations, particularly allocations at the extremes of the spectrum of risk and reward.

#### Investment Strategy & SIC Board Presentations

7. Work with the SIC to review appropriateness of strategic investment classes considered for ERSRI investment.
8. Assist SIC Board and Investment Staff in modifying asset mix policy as a result of asset-liability analysis. Investment mixes may vary depending on the underlying component plan or set of plans within the ERSRI system. As noted above, PCA/EFI will model only the ERS; complete independent analysis of other ERSRI plans will require incremental costs.
9. At least three presentations will be conducted before the SIC; (i) an introductory presentation, consisting of a review of concepts, investment classes, assumptions, and constraints, and (ii) a second presentation that introduces the asset-liability model to the SIC and allows the SIC to articulate its plan-level tolerance for risk, and (iii) a follow-on meeting to assist the SIC in selecting a policy portfolio, subject to prior discussions about SIC's tolerance for overall plan risk. It is expected that the final presentation will take place in approximately June 2011.

#### **Billing**

PCA will invoice the General Treasurer's Office for the cost of this project. EFI will subcontract with PCA and invoice its portion of the project costs to PCA. PCA expects to invoice the General Treasurer's Office for the full cost amount after its final meeting with the Board.

Any projects outside the scope of this Study – for example, cost estimates for proposed System benefit changes – will be specified and billed separately. PCA/EFI will provide a cost estimate in advance of beginning work on any such project to the Treasurer's Office.



**Project Costs**

The cost of performing the Study as outlined above will be \$109,000. This level factors in specific liability-oriented analytical considerations that are of interest to the SIC. This amount also includes the cost of airfare and lodging for any meetings. Additional meetings may be appropriate to review preliminary results.

In performing this analysis, we will rely on data and other information provided by ERSRI and its actuary, Gabriel, Roeder, Smith and Company. We will not audit this data, but we do point out that our independent review should verify ERSRI'S current actuarial valuation process and procedures.

Differences between our projections and actual amounts depend on the extent to which future experience conforms to the assumptions made for this analysis. It is certain that actual experience will not conform exactly to the assumptions to be used in this analysis. Actual amounts will differ from projected amounts to the extent that actual experience is better or worse than expected.

The attached report provides a description of our asset and liability models and methods.

All information provided by the Treasurer's Office and ERSRI to PCA and EFI shall at all times be considered confidential and proprietary to the Treasurer's Office and ERSRI, and such information, including work product derived from such information, shall not be provided by PCA or EFI to any third party without the prior written consent of the Treasurer's Office.

The Treasurer's Office reserves the right to immediately terminate this contract at any time upon written notice to PCA and EFI, provided that PCA and EFI shall be compensated for all services provided prior to any such termination as documented by PCA and EFI.

This agreement shall be governed by the laws of Rhode Island.

We look forward to working with the Treasurer's Office on this important and interesting project.

Respectfully submitted,

Robert McCrory, FSA  
EFI Actuaries, Inc.

John Burns, CFA  
Pension Consulting Alliance

**Attachment**

Agreed to and authorization to proceed:

**ERSRI**

Mark A. Dingley  
Name

**PCA-EFI**

John Burns  
Name



Pension Consulting Alliance, Inc.

Los Angeles Portland New York www.pensionconsulting.com

*Mark A. Dingle*

Signature

*Deputy Treasurer/Gen'l Counsel*

Title

*3/29/11*

Date

*John J. Bunn*

Signature

Managing Director

Title

March 25, 2011

Date