

California Actuarial Advisory Panel

Evaluating Public Sector Actuarial Services

Introduction

Due diligence and fiduciary considerations require that plans monitor the selection and retention of actuaries as well as the services provided by actuaries. Plans desire to hire qualified actuaries and obtain quality actuarial services. However, due to the difficult technical nature of actuarial work products, time constraints and a lack of guidance, effective monitoring of actuarial products can be difficult.

As part of its effort to support the maintenance of quality actuarial services the California Actuarial Advisory Panel (CAAP) has developed this document to assist public pension and Other Postemployment Benefits (OPEB) plans. Retirement boards, plan sponsors and others required to procure actuarial services (referred to herein as responsible persons) may want to use this guidance to assist them in obtaining and monitoring these services.

Scope

This document discusses actions responsible persons can take to educate themselves about actuarial concepts, obtain the services of a qualified actuary, and monitor their services.

Section I: Actuarial Concepts

Learning Actuarial Concepts

Learning actuarial concepts may help the responsible person better understand actuarial reports and other work products. Steps that responsible persons may consider to increase their understanding of actuarial concepts include:

- Reading to become familiar with basic actuarial terminology and concepts. Definitions of actuarial terminology are frequently found in the appendix of an actuarial valuation report. In addition, there are a number of publications that explain actuarial terminology and concepts, such as:
 - The California State Library's "Actuarially Speaking: A Plain Language Summary of Actuarial Methods and Practices for Public Employee Pension and Other Post-Employment Benefits" by Grant Boyken. (<https://www.library.ca.gov/crb/08/08-003.pdf>)
 - The National Education Association's "Glossary of Actuarial and Accounting Terms and Concepts for Retirement Plans". (<http://www.nasra.org/Files/Topical%20Reports/Actuarial/Glossary%20of%20Actuarial%20Terms.pdf>)
 - Have an actuary conduct an educational session on the basics of actuarial science, as it relates to pension and OPEB plans. The educational session could cover actuarial topics such as present values, liabilities, amortization policies, asset smoothing and the calculation of contribution rates.
- Participate in educational programs offered by an organization connected to California public pension issues, such as the California Association of Public Retirement Systems (CALAPRS), the State Association of County Retirement Systems (SACRS), the League

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of California Cities, the California State Association of Counties (CSAC), or the California Society of Municipal Finance Officers (CSMFO). Many national organizations also sponsor educational opportunities related to public plans, including the National Association of State Retirement Administrators (NASRA), the National Conference on Public Employee Retirement Systems (NCPERS) and the Government Finance Officers Association (GFOA).

- Watch in person or online a presentation of the results of an actuarial valuation.

Section II: Reviewing the Actuary's Qualifications and Services

The Actuary's Qualifications

High quality actuarial work begins with the actuaries responsible for the services. These are some steps the responsible person can take to employ qualified actuaries. It is important that the actuary has both the credentials and experience to perform the type of work that they have been retained to complete.

Validate the actuary's credentials

- Check the actuary's professional designations. It is important an actuary be a member of one of the recognized actuarial organizations for actuaries working in the area of pensions and OPEB plans. Actuaries who are members of one of these organizations generally have been trained through a rigorous exam process, are required to follow Actuarial Standards of Practices (ASOPs), and will have earned an official designation. The designations and organizations are:
 - MAAA – Member, American Academy of Actuaries
 - FSA – Fellow, Society of Actuaries
 - ASA – Associate, Society of Actuaries
 - FCA – Fellow, Conference of Consulting Actuaries
 - ACA – Associate, Conference of Consulting Actuaries
 - FSPA – Fellow, Society of Pension Actuaries (American Society of Pension Professionals and Actuaries)
 - MSPA – Member, Society of Pension Actuaries (American Society of Pension Professionals and Actuaries)

The American Academy of Actuaries serves as an organization devoted to public policy considerations as well as some practice guidance. The Society of Actuaries (SOA) and American Society of Pension Professionals and Actuaries (ASPPA) are organizations that administer exams, educate and help prepare actuaries for their profession. ASPPA and the Conference of Consulting Actuaries (CCA) both help the professional actuary adhere to practice standards and stay current on developments related to their work. In particular, the CCA sponsors a Public Plans Community that provides comments and guidance on actuarial issues specific to public pension and OPEB plans.

- In addition, an actuary may have the Enrolled Actuary (EA) credential. This designation indicates the actuary has experience with federal regulations affecting pension law in the US. Although some rules - such as IRC 415 limits – will also apply to public plans, most federal laws are limited in application to private sector plans. For that reason, while it is

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a useful indicator of knowledge in the pension area, the EA credential is not necessary for the actuary to be able to provide most public pension actuarial services.

- Confirming an actuary is a member of the organizations for which they claim a designation is a simple process: their credentials can be reviewed by checking the actuarial directory maintained on the website of the Society of Actuaries (<http://www.soa.org/>). Note that the directory should also indicate whether the actuary has attested to being current with their continuing education requirements.

The Academy's site should be sufficient to confirm the actuary's designations with the other organizations, however the addresses of the other organizations are also included below:

- American Society of Pension Professionals and Actuaries: <http://www.asppa.org/>
- Conference of Consulting Actuaries: <http://www.ccactuaries.org/>
- Society of Actuaries: <https://www.soa.org/>

Assess an actuary's experience

When retaining an actuary, the responsible person should consider the following:

- The actuary's number of years of experience.
- The actuary's experience working on public pension or OPEB plans, since public plans may have important differences from other retirement systems.
- The size and complexity of the actuary's public plans clients.
- The actuary's knowledge of the plan's particular regulatory environment.
- The actuary's working knowledge of current issues and recommended practices, such as the recent guidance on funding policies issued by the CCA's Public Plans Community. (<http://www.ccactuaries.org/publications/news/CCA-PPC-White-Paper-on-Public-Pension-Funding-Policy.pdf>)
- The firm's quality control processes, including internal controls, peer review and data security.
- The actuary's and the firm's experience in completing actuarial audits and being audited.
- The actuary's and/or the firm's references, including references from clients of similar size and complexity.

The Actuarial Services

In preparing to receive actuarial services, the responsible person should consider developing a check list of critical results or work products needed. For actuaries, the most well-known are the annual actuarial report and the periodic experience analysis (comprehensive review of actuarial assumptions). However, there are other work products, such as benefit calculations,

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contribution (and other) projections, simulations or presentations to governing boards or plan sponsors. For more information specifically related to actuarial valuation reports, see CAAP's 2011 publication entitled, *Model Disclosure Elements for Actuarial Valuation Reports on Public Retirement Systems in California*. (http://www.sco.ca.gov/Files-EO/CAAP_Model_Disclosure_Elements.pdf)

Many factors will affect the appropriate level of monitoring for actuarial services including the size of the plan in question, the magnitude of the decisions relying on the work, and the frequency of the service.

The Written Report

In reviewing a written report, the responsible person should consider whether:

- There is a statement that the report meets ASOPs.
- The report is signed by the actuaries who are primarily responsible for the product; instead of by a firm or an individual not responsible for the work product.
- The report states the purpose for which the report was created and who may rely upon the results and recommendations of the report.
- The report discusses the limitations and/or risk inherent in the report.

Actuarial Audits/Reviews

Actuarial audits/reviews are an essential element of effective monitoring of actuarial services. Audits can be used as a tool to independently monitor the actuary's work product, relying on the services of another professional. The GFOA has recommended the use of actuarial audits (<http://www.gfoa.org/actuarial-audits>), and the CAAP supports this recommendation, in particular for actuarial valuations, experience studies and any other critical work products (particularly those being produced for the first time). For routine products, such as an actuarial valuation, an audit/review every three to seven years is generally considered appropriate.

The GFOA has identified three levels or types of actuarial audits/reviews, which they have summarized as follows

1. In a *level one*, or full-scope, actuarial audit, the reviewing actuary fully replicates the original actuarial valuation, based on the same census data, assumptions, and actuarial methods used by the plan's consulting actuary. In addition, the reviewing actuary examines the consulting actuary's methods and assumptions for reasonableness and internal consistency.
2. In a *level two* actuarial audit, the reviewing actuary does *not* fully replicate the consulting actuary's valuation, but instead uses a sampling of the plan's participant data to test the results of the valuation. The reviewing actuary also examines the consulting actuary's methods and assumptions for reasonableness and internal consistency.
3. In a *level three* actuarial audit, the reviewing actuary examines the consulting actuary's methods and assumptions for reasonableness and internal consistency, but does *not* perform actuarial calculations.

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A level one (or full-scope) replication of the actuary's work is the most thorough types of audits/reviews. Full replication audits are most commonly performed on the actuarial valuation, and may include not only a match of the actuary's numerical results, but also a review of the communication and presentation surrounding the work. Thereafter, periodic audits/reviews of the actuarial valuation that are less than full replication may be performed in between full audits/reviews.

The less detailed audit/review types may be appropriate for other types of assignments, such as actuarial experience studies, non-critical actuarial work, and in between full or partial replication audit/reviews. These types of audit/review are not recommended for critical work products, where full or partial replications have never been completed.

Actuarial Experience Studies

As noted above, actuarial experience studies are one of the more common types of actuarial service, and are used to monitor and maintain the actuarial assumptions used by actuaries in their actuarial valuations. They can be an important tool in improving the accuracy of the work product by providing a feedback mechanism to better align expectations with relevant data.

CAAP recommends that actuarial experiences studies be performed on a regular basis and that they themselves are subject to aperiodic actuarial audit/review.

Summary

Plans' and stakeholders' dependence on actuarial services continues to grow. Because of the technical nature of actuarial services, responsible persons may not have the expertise or background to retain actuaries or to monitor the quality of actuarial services. The CAAP has issued this document in an effort to provide assistance in these areas. Two key recommendations in this guidance include validating the actuary's credentials and experience, and conducting actuarial audits/reviews.