Resource Quiz

State Retirement System
Actuarial Valuation Report

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Resource Quiz

The Liabilities and Risks of State-Sponsored Pension Plans

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Introduction


- Governance problem – professional standards fail to prevent actuaries’ accommodation of client desires.
Introduction

• My focus: the pension part of the actuarial profession that has failed to update its core knowledge and to educate its practitioners.
Introduction

• The *profession’s leaders* set standards that:
  – demand far too little from practitioners
  – fail to serve the public

• *Individual practitioners* follow the rules and are dutiful to their clients.
Introduction

• Upcoming
  – Who am I?
  – Brief discussion of the crisis
  – Components of professionalism
  – Rating the pension actuarial profession
Who Am I?

• Jeremy Gold, FSA, MAAA, PhD
  – Pension Actuary
  – Wall Street
  – Wharton
  – Sir Francis Bacon – “I hold every man a debtor to his profession.”
    • Actuarial outsider
    • Actuarial insider
    • Critic
Public Pension Crisis

• Munnell: “each generation of taxpayers should pay the full cost of the public services it elects to receive.”

• Deferred compensation should not defer cost
  – Actuarial models undervalue pension promises
  – This defers cost, robs future generations
Public Pension Crisis

- The crisis is real
  - Known disasters
    - Detroit, NJ, Illinois, San Bernardino, Stockton
  - Seemingly working fine
    - NC, South Dakota ~100% funded
      - after 7 year bull market at actuarial discount rate
      - ~60% funded on economic basis
What is a Profession?

- Body of knowledge
- Education
- Community
- Duty to clients
- Duty to the public
  - Code of conduct, practice standards, discipline
Body of Knowledge

• Actuarial science – an engineering discipline that borrows its science from:
  – Probability and statistics
  – Economics and Finance
  – Demography
  – Medicine

• Economists criticize actuarial discount rates
Education

• High stress exams indoctrinate new actuaries with best and worst of their predecessors knowledge

• Slow to adapt to innovations in borrowed sciences
  
  – “The difficulty lies, not in the new ideas, but in escaping the old ones …” – Keynes

  – “It is difficult to get a man to understand something when his pay depends upon not understanding it.” – Sinclair

  – “Science advances one funeral at a time.” – Planck
Community

• Generally a necessary and positive element of a profession supporting the exchange of knowledge, coordinating action, development of an ethos.
  – Professional meetings
  – Shared literature
  – Networking
• Can lead to group think
• G. B. Shaw – “All professions are conspiracies against the laity.”
Duty to Clients

• Actuaries compete to serve public pension plans.

• Trustees manage the plans and employ actuaries
  – Citizenry & employees want low pension contributions
  – Actuaries keep contributions low

• Loyalty to current clients hurts future generations
Duty to the Public

• Primary duty to protect third parties lies with the profession rather than individual actuaries

• Professional leadership adopts
  – Code of conduct (ethics)
  – Standards of practice
  – Disciplinary procedures
Three Misses

- Mismeasurement
- Mismanagement
- Missing in Action
Mismeasurement

• Discount rates for pension benefits
  – Finance 101 – below 3%
  – Actuarial 101 – typically above 7%

• Example: for $1000 due 20 years from now
  – finance (3%) value: $554
  – actuarial (7%) value: $258
Mismeasurement

- Donald L. Kohn, Vice Chair, US Federal Reserve, 2008 speech to National Conference on Public Employee Retirement Systems
  
  Among economists “there is no professional disagreement: The only appropriate way to calculate the present value of a very-low-risk liability is to use a very-low-risk discount rate.”
Mismanagement

• Trustees manage plans
• Elected officials, union reps negotiate benefits
• All want low current contributions
• Actuaries enable but assert “it’s out of our control”
  – But no one increases benefits or chooses assumptions without consulting their actuaries
Missing in Action

• What the profession says

• What the profession does
What the Profession Says

• American Academy of Actuaries (AAA)
  – Mission statement: “... *To serve the public and the U.S. actuarial profession.*”

• Code of Conduct
  – “... require[s] actuaries to adhere to the high standards of conduct, practice, and qualifications ... thereby supporting the actuarial profession in fulfilling its responsibility to the public.”
• Serving the public is the responsibility of the profession – delivered by our institutions

  – Education (SOA)
  – Public positions (AAA)
  – Standards of practice (ASB)
Education (SOA)

- Volunteer driven
- University involvement – improved early exams
- At advanced pension levels
  - Volunteers propagate flaws they were taught
  - Fail to keep up with advancements in econ/finance
Public Positions (AAA)

- Volunteer driven

- Conflict of interest – firms send people with expectation of gain; some volunteers cannot separate public interest from firm interest
Standards of Practice (ASB)

- Comparing standard setters
  - FASB
    - Full time board members, relatively large staff
  - GASB
    - Most board members paid per diem, have day jobs, relatively small staff
  - ASB
    - Volunteer driven, smaller staff
Standards of Practice (ASB)

• Comparing standard setters
  – FASB & GASB
    • GAAP means top down by fiat
    • Implies best practices
  – ASB
    • GAAP means bottom up by consensus
    • “Appropriate” practice recognized and generally accepted by qualified actuaries
Standards of Practice (ASB)

- Comparing standard setters
  - FASB & GASB
    - Written principles (Concepts Statements)
    - Practice standards derived from principles
      - See Hall & Landsittel (1977)
  - ASB
    - Asserts ASOPs are principles based
      - But no formal written principles
    - Generally accepted “appropriate” implies standards derived from existing practices
Standards of Practice (ASB)

• Comparing standard setters
  
  – FASB & GASB
    • Extensive prescriptive standards

  – ASB
    • Brief nonprescriptive standards allow the actuary to use professional judgment (ASOP 1, Section 3.1.4)
Actuarial Standards of Practice (ASOPs)

• ASOP 1, Section 3.1.4
  – “principles-based”
  – “not narrowly prescriptive”
  – “framework for exercising professional judgment”
  – “factors that the actuary typically should consider”
  – “allow for the actuary to use professional judgment”
ASOPs

• How well have pension ASOPs served?
  – The measure of how well the ASOPs have protected the public is … the facts on the ground …
  • Many states and cities claim to have made nearly all actuarially recommended contributions
  • Most actuaries have followed all the ASOPs
  • Nonetheless the best plans are less than 70% funded (measured economically)
What ASOPs Should Require

• Mandate disclosures of economic measures of:
  – Funding status: plan assets at market vs. accrued benefits discounted by the Treasury yield curve
    • North
    • Novy-Marx & Rauh
    • PEPTA
  – Annual cost: portion of discounted accrued benefits earned in the past 12 months
    • PEPTA
What ASOPs Should Require

• Prescribe best practices for all public pension plan actuarial work – financially robust models, methods, and assumptions for:
  – Funding recommendations
  – Cost studies
  – Benefit designs

• End smoothing
Resistance

• The strong opposition to mere disclosure of accrued benefits discounted by the Treasury yield curve – & the associated annual cost – testifies to the power and necessity of these numbers.
Conclusion

- Actuaries have not, alone, caused the crisis
- Elected officials, unions, untrained trustees, self-interested asset managers have all done their part
- Actuaries have, however, enabled and abetted
- Actuaries should have brought science and discipline to public decision making
Conclusion

• Don’t trust official costs, funding ratios
• Reject expected return on risky assets as discount
• Demand North/Rauh/PEPTA numbers
• Don’t wait for actuaries to fix this – ASB please prove me wrong
• Use your expertise and influence with trustees, elected officials, press; write to ASB.
Thank You

- Lawrence N. Bader
- John Minahan
- Robert C. North, Jr.
- Joshua Rauh
- William Sohn
SOA Motto

• “The work of science is to substitute facts for appearances and demonstrations for impressions” – John Ruskin
Section 3.1.4

“The ASOPs are principles-based and do not attempt to dictate every step and decision in an actuarial assignment. Generally, ASOPs are not narrowly prescriptive and neither dictate a single approach nor mandate a particular outcome. Rather, ASOPs provide the actuary with an analytical framework for exercising professional judgment, and identify factors that the actuary typically should consider when rendering a particular type of actuarial service. The ASOPs allow for the actuary to use professional judgment when selecting methods and assumptions, conducting an analysis, and reaching a conclusion, and recognize that actuaries can reasonably reach different conclusions when faced with the same facts.”
Standards. Standards of practice serve to assure the public that actuaries are professionally accountable. At the same time, standards provide practicing actuaries with a basis for assuring that their work will conform to appropriate practices. Standards protect the public by indicating for various areas of actuarial practice the appropriate procedures, techniques, and approaches, thereby enhancing the public’s trust in the credibility and completeness of the actuarial work product.

• Providing a means by which the many separate elements that make up actuarial practice can be reviewed and updated on a regular basis, so that practice remains current.
• Furnishing criteria for evaluating actuarial work products.
• Providing a basis for discipline in those instances in which standards are not adhered to.
• For individual actuaries, standards confer major benefits as well, by
• Providing guidance, particularly in practice areas that may be somewhat unfamiliar.
• Giving strong evidence to any interested observer that the profession serves the public in an effective and responsible way.
• Offering evidence of appropriate professional performance, which constitutes a defense in any civil or professional disciplinary action.
• Standards of practice also serve to further assure regulatory authorities that they can depend on the actuarial profession to act effectively in the public interest. Written standards of practice, coupled with written provisions for disciplining members, show that a profession governs itself and takes an active interest in protecting the public.
“In general, the ASOPs are principles based and not rules based. As a result, the ASOPs are generally not highly prescriptive. Should the ASOPs related to public plan actuarial valuations be more prescriptive? If so, in what areas?”
Where’s the Science?

• Why have the profession’s standard setters prioritized existing practice over advancing science?
William D. Hall, David L. Landsittel

- A new look at accounting for pension costs (1977)
- “Yet, the APB* ... never gave significant attention to the ... objectives of financial statements. APB Statement No. 4 ... approached the problem backward by attempting to rationalize from existing practice to the concepts and principles, rather than formulating objectives upon which standards for practice could be based; it amounted to nothing more than a codification of existing practice.”
- In 1973, AICPA dissolved APB; replaced by FASB.

* AICPA Accounting Principles Board
Warren Buffett

• Circa 2000

• "The actuaries who have roles in this game know nothing special about future investment returns. What they do know, however, is that their clients desire rates that are high. And a happy client is a continuing client."