

Shared Risk Hybrid Retirement Program for Public Safety HB 55 – Actuarial Implications

William B. Fornia, FSA

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Committee

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William B. Fornia, FSA

Credentials



- Highest Actuarial Credentials
 - Fellow of the Society of Actuaries (1986)
 - Enrolled Actuary under ERISA (1984)
 - Member of the American Academy of Actuaries (1983)
 - Elected to Board of Directors of 35,000-member Society of Actuaries
- Author and Frequent Speaker
 - “Still A Better Bang for the Buck” (with National Institute on Retirement Security), 2014
 - “Are California Teachers Better off with a Pension or 401(k)” University of California Berkeley Labor Center and Journal of Retirement, 2016
 - Frequent Testimony to Legislatures and City Councils
 - Regular Expert Witness (Detroit, Stockton)

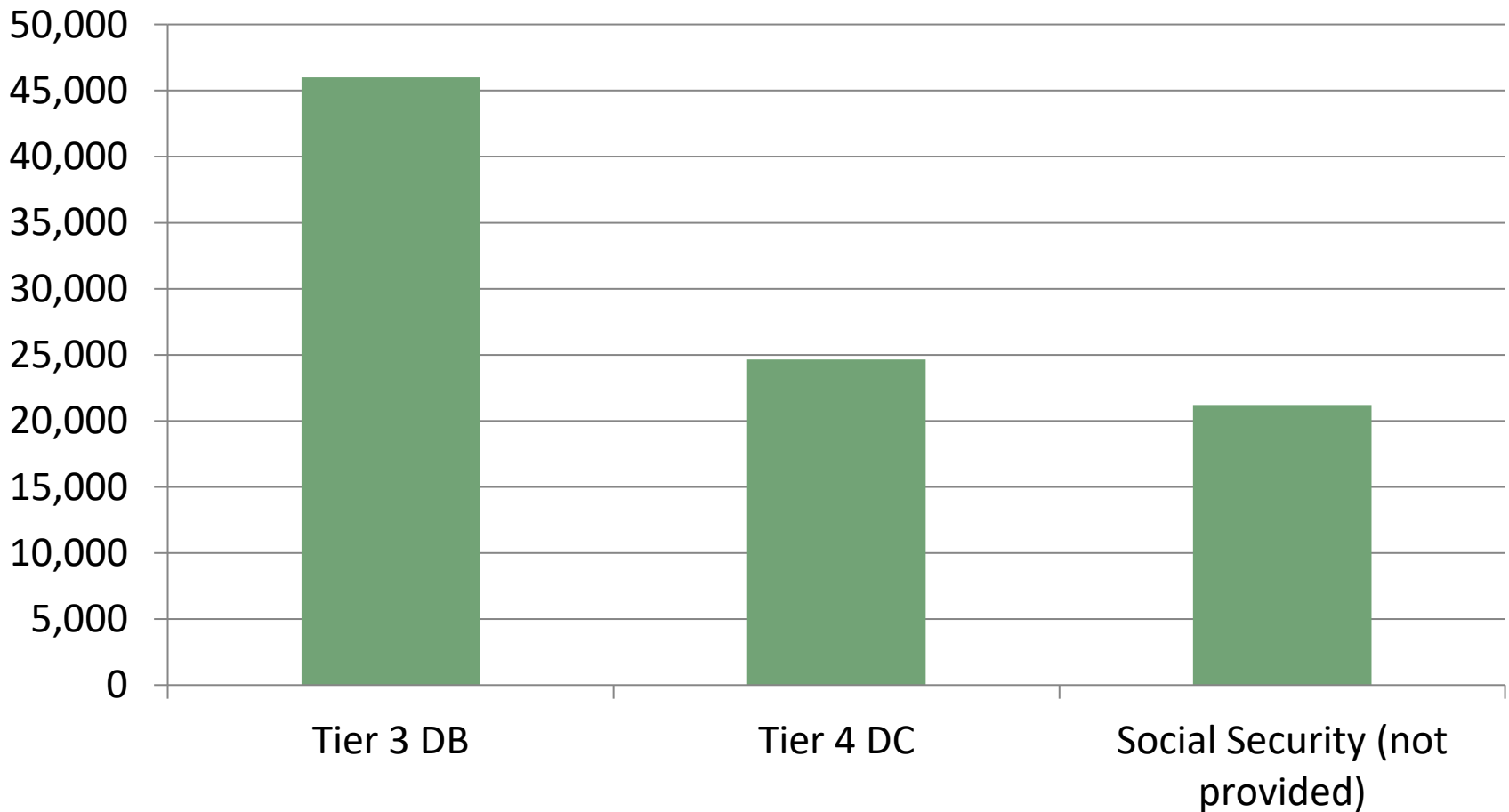
Sample Work History

- Corporate actuary for Boeing 1980-1984
- Founded Pension Trustee Advisors in 2010
- Alaska related experience
 - ARMB first ongoing review actuary 2005-2006
 - Audited Alaska PERS/TRS actuarial valuations 2009
 - Former leader of Buck Consultants' Denver retirement practice
 - Advisors to labor groups since 2011, including testimony
- Consulting services for 23 statewide retirement systems in Alaska, Colorado, Missouri, North Dakota, Oklahoma, Puerto Rico, Utah, Texas, Wyoming and others.
 - Served as system actuary for most of these (including CO, MO, ND, OK, WY)
 - Ongoing consultant to Ohio Retirement Study Council, including reform
- Expert testimony and consulting for governments, pension systems, and labor groups
- Other clients have included the US Department of State, Cities of Baltimore, New York and Philadelphia, IBM, US WEST and Ford

Shared-Risk Hybrid Retirement Program for Public Safety

- Why is change necessary?
- Actuarial Implications
- Illustration of Financial Projections

Illustration of hypothetical police/fire benefits: \$80,000 Final Average Salary



Key Considerations with Shared-Risk Hybrid Retirement Programs

- DB Plans are more cost effective at providing retirement benefits
 - DB pension plans pool “longevity risks”
 - DB pension plans can maintain a better diversified portfolio because, unlike individuals, they do not age
 - DB pension plans achieve better investment returns because of professional asset management and lower fees
- DC Plans are more consistent with individual responsibility
 - Benefit is a clearly defined contribution from the employer and employee to a trust
 - Benefit is more under the control and full ownership of the individual
 - Benefit is much more portable
 - No risk of unfunded liabilities to employer
- Shared-Risk Hybrid Plans have many features of both
 - Cost-effectiveness of DB plans
 - But not all of the actuarial risk is borne by the employer

Actuarial Implications of HB 55

- Buck Fiscal note shows modest cost
- Risk to State is “Adverse Plan Experience”
- HB 55 Plan has Safeguards to mitigate this risk
- We have performed simulations to analyze this risk

How does HB 55 strike a compromise?

- Start with 12% fixed employer contribution and manage plan within that target as possible
- Design current target benefit levels
 - Consider benefits provided by DCR and latest DB
- Build in benefit and/or employee contribution adjustment mechanisms
- These provide cushion against adverse experience

Safeguard #1: Reduce benefits vis-à-vis Tier 3

- Minimum Age 55 eligibility
- Five-year average salary
- Eliminate Alaska 10% COLA
- Suspend Post-Retirement Pension Adjustment when not well funded
- Increase employee and employer contributions up to 2% each if not well funded
 - Amended to permit employee increase by 4%

Safeguard #2: Actuarial Methods

- Build in margin in actuarial assumptions
- Build reserves in good times to provide added funding during bad times
- Compare $12\% + 8\% = 20\%$ contributions with costs above
 - 16.35% cost for pension based on 7.00% returns
 - HRA & Medicare Supplement are another 2.92%
 - This provides cushion of 0.73%
 - Additional 8.04% available through PRPA suspension and additional 4%+2% employee and employer contributions

Safeguard #3: Reduced Discount Rate

- Target the pension and health care benefits to be equal to latest tier DB
- Determine the costs based on 7% discount rate rather than 7.38% assumed by PERS actuary
- Seek additional funding for this level, and then commit to this fixed employer contribution rate going forward
 - This is 12% employer contribution for Police and Fire employers
- Monitor experience and adjust benefits and/or contributions as necessary going forward

Benefit Plan Return Thresholds

- ARMB Actuary assumes 7.38% return
- We've built HB55 plan around 7.00%
- If we earn 6.62% each year, will not be below 90% funded for fifty years
- If we earn 6.49% each year, employee contribution increases will be triggered
- If we earn 5.43% each year, will also have frequent suspension of PRPA

Benefit Plan Simulations – 2019

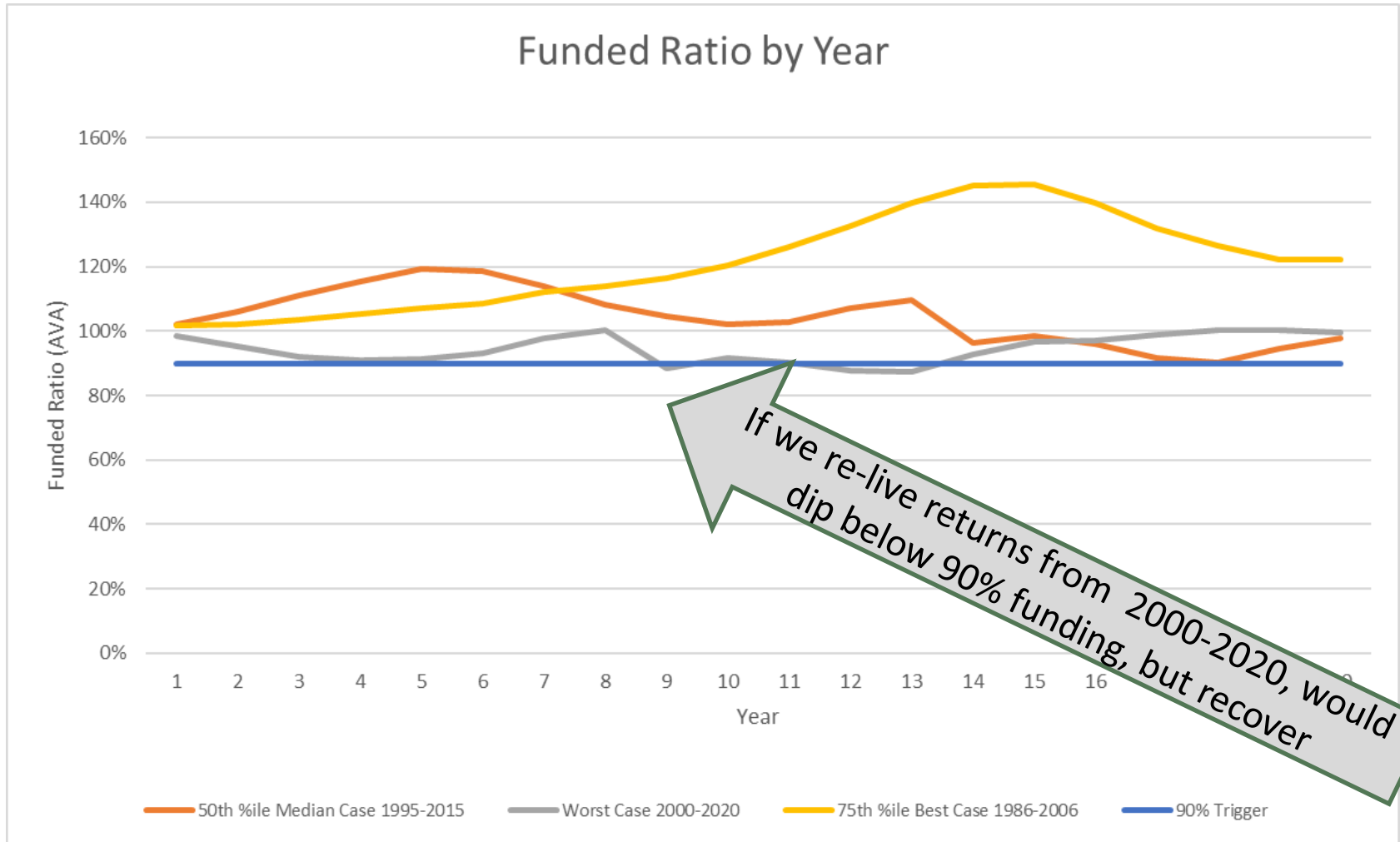
Baseline

- We modelled how plan might have worked under various returns
- If fund earns 6.6% for next ten years, as ARMB investment consultant estimates, then 7.38% (consistent with long-term PERS actuarial consultants) thereafter
 - Plan will grow to 107% funded by 20 years
 - Never below 100% funded
 - Funded ratios based on conservative 7.00%
 - Current actuary uses 7.38%

Benefit Plan Simulations - Historical

- We modelled how plan might have worked under various returns consistent with PERS returns
- Considering each 20-year period from 1980-2000 to 2000-2020
 - Median case was if 1995-2015 was replicated
 - 9.1% average return
 - Never falls below 90%
 - Worst case was if 2000-2020 was replicated
 - 8.6% average return
 - Falls below 90% for 3 of those 20 years, by end would be 99% funded
 - 75%ile best case was if 1986-2006 replicate
 - 10.2% average return
 - Would be 133% funded after 20 years

Benefit Plan Simulations - Historical



If we re-live returns from 2000-2020, would dip below 90% funding, but recover

2019 Benefit Plan Simulations- Stochastic

- In 2019, we conducted simulations to see likelihood of this program becoming significantly underfunded
- In the real world, returns will not be stable from year to year.
- ARMB investment advisors estimate a “standard deviation” of 14.71% for the investment return of the current asset mix
 - This roughly means that in one of every three years, return would be more than 14.71% above or below 7.38%.
 - Above 22% in one-sixth of the years and below minus 7.3% in one-sixth of the years
 - Although this standard deviation is higher than we normally see, we modelled future returns consistent with ARMB advisors estimates

2019 Benefit Plan Simulations (cont.)

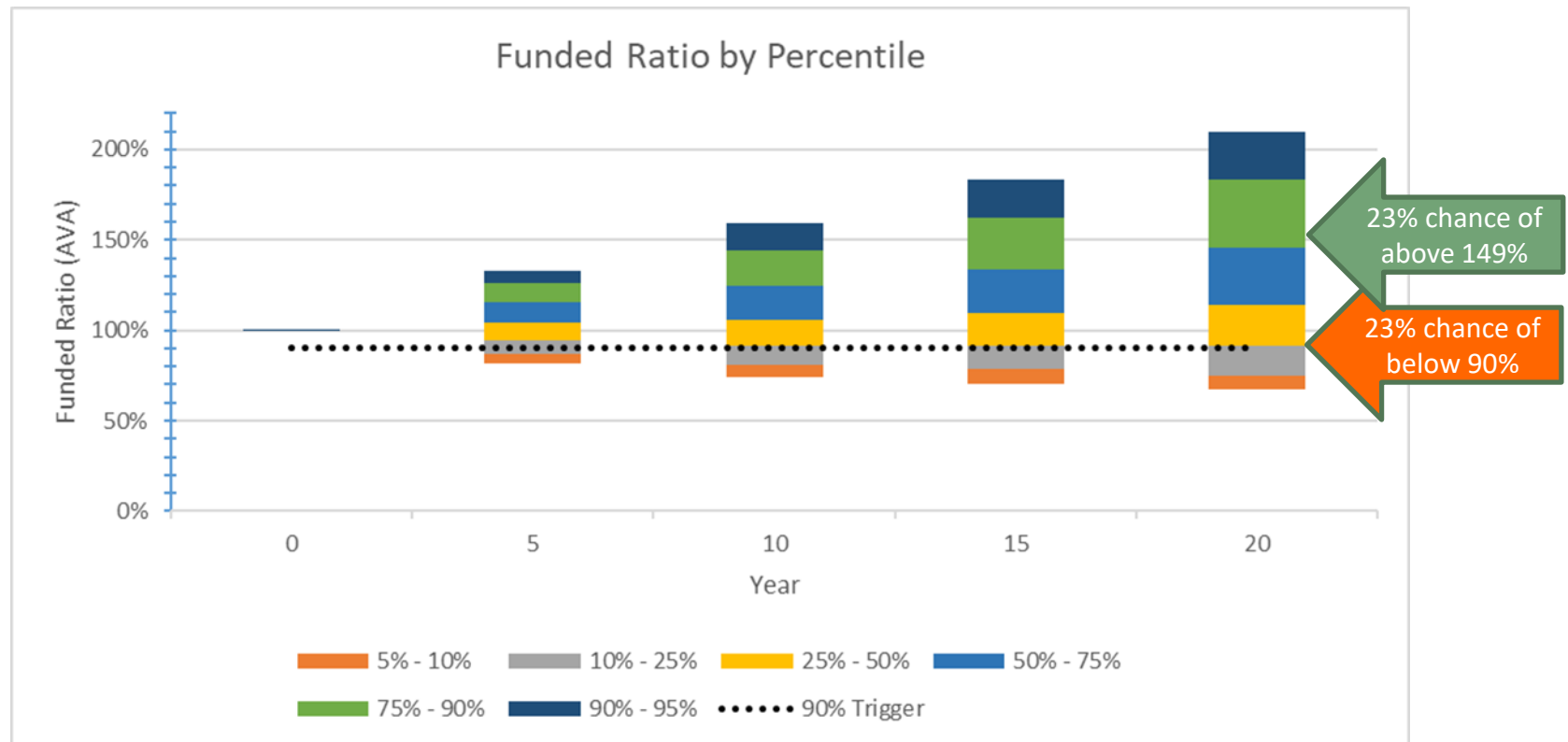
- We modelled 10,000 random simulations based on ARMB investment advisors return assumptions of 6.6% for next ten years, followed by ARMB actuaries assumptions of 7.38% beyond that
- In simulations where the funded ratio fell below 90% threshold, we activated the triggers
 - Boost contributions by 1% (up to 4%)
 - Suspend the Post Retirement Pension Adjustment

2019 Benefit Plan Simulations (cont.)

- High likelihood (68%) that funded ratio will be more than 100% in most years
- Median funded ratio in 20 years is 114%
- But still was about 23% chance that funded ratio will be 90% or below
- Only about 10% chance that funded ratio will be 75% (current PERS level) or below after 20 years
- These simulations have not been updated
- We encourage system actuaries to conduct similar simulations for this program as well as legacy tiers

2019 Benefit Plan Simulations (cont.)

- It was as likely that funded ratio will be above 149% than below 90%



Benefit Plan Simulation Conclusions

- Safeguards have been implemented to protect against downside risk
 - Baseline contributions slightly higher than expected cost
 - Conservative assumed rate of return
 - Triggers if funded ratio fall below 90%
 - Increased contributions by up to 2% each employee and employer
 - Suspension of Post Retirement Pension Adjustment
- High likelihood of being extremely well funded
- But still some risk of being under-funded (2019 analysis)
 - About 23% chance of being below 90% funded in any given year
 - About 10% chance of being below 75% funded in year 20

How have other states operated?



Case Study – Wisconsin



- Cost of Living Adjustment is dependent on fund returns
- At retirement, each member has a fixed benefit
- A variable benefit is added to this, based on fund returns
- The variable benefit itself can go down as well as up, but the fixed benefit does not decrease
- Following 2008, the variable benefit did decrease, but has recovered

Case Study – FPPA



- Colorado Fire and Police Pension Association
 - Formed in 1980, creating new statewide plan
 - Contributions are fixed at 8% employee + 8% employer
 - This level is sufficient for core DB plan
 - Excess contributions went into DC plan during good times
 - Board has discretion over COLA, keeping costs below 16%

Case Study – SDRS



- Historically among best funded state plans
- SDRS is considered a hybrid DB plan with DC features
- History of substantive benefit improvements funded by favorable investment results—included retirees
- Fixed member and employer contributions
- Statutory triggers requiring Board recommendations for corrective actions/no higher employer contributions
- Primary benefit change tied COLA to Funded Ratio and CPI
- Retirees received smaller COLA as a result

Case Study – Ohio



- Employer contributions are fixed for each of five pension systems
- Major pension reform completed in 2012
- Systems were and are required to develop plans to keep funded periods within 30 years
- Systems are now imposing plan reductions in many cases
- Like Alaska, plans include retiree healthcare

Proposed 12% employer contribution is consistent

- Recently modified police and fire plans
 - Utah employer contribution of 12.0%
 - Ohio employer contribution of 14.0% for non-emergency, 19.5% for Police, and 24.0% for Fire
- Major Alaska employers
 - Wells Fargo
 - 6% match on 401(k)
 - Plus 6.2% Social Security for total of **12.2%**
 - Alaska Airlines
 - 7% match on 401(k) plus 1.5% Stock Purchase Plan subsidy
 - Plus 6.2% Social Security for total of **14.7%**

Recap

- Alaska has concern with potential future unfunded liabilities
- DCR provides inadequate benefits
- HB 55 Shared-Risk Hybrid Retirement Program for Public Safety is a potential solution
 - If actuarial experience is as expected, benefits will be paid comparable to Tier 3
 - If actuarial experience is unfavorable, lower benefits will be paid
 - Individuals do not take this risk, the government does not take this risk; pools of individuals do

Questions?

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Technical Note

- We recommend that PERS actuary review and refine our estimates
- Estimates based on limited publicly available actuarial information, while PERS actuary has complete information
- Actuarial calculations were made by or under the direction of William Fornia, FSA, a Member of the American Academy of Actuaries, who is qualified to render these actuarial opinions