

To: Actuarial Standards Board  
From: Edward Bartholomew  
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Date: July 23, 2018  
Re: Comments on ASOP No. 4 Exposure Draft (March 2018)

We offer these comments in a personal capacity, informed by our professional experience, but not on behalf of any employer or organization.

We enthusiastically commend the ASB for the proposed revisions to ASOP No. 4. While the revisions do not go as far we might have hoped – which would be to make actuarial standards even more consistent with the basic principles of finance in its treatment of valuation and risk – the revisions proposed are an important step in the right direction.

Requiring the calculation and disclosure of an Investment Risk Defeasement Measure (IRDM) is a significant advance for pension actuarial practice, especially for cases where no market-based liability value is otherwise disclosed. While prescriptive, this requirement is highly principled – the two are not contradictory – and important in order for the profession to maintain respect among fellow finance practitioners. If the actuarial profession does not step forward with genuine standards, we believe economists and the accounting profession will continue filling the vacuum, and actuaries risk losing stature as a profession.<sup>1</sup>

As noted in the 2014 SOA Blue-Ribbon Panel Report, the difference between an IRDM pension liability and one based on expected asset returns will reveal how much sponsors are relying on realization of highly-uncertain risk premiums, compounded over decades, to fund long-dated pension promises.<sup>2</sup> And the difference between an IRDM pension liability and plan assets will reveal the additional cost to fully collateralize and defease the pension already earned.<sup>3</sup> This is meaningful even for plans that cannot be terminated, as it indicates the value of the uncollateralized debt of the plan sponsor for providing the promised secure benefit.

Listed below are a few modest recommendations for making ASOP No. 4 even better – an extra half step in the right direction:

- Drop the safe harbor of using AA bond yields as discount rates for IRDM calculations (3.11)
- Require calculation and disclosure of Normal Cost corresponding to the IRDM (3.11)
- Require disclosure of undiscounted cash flows and discount rates used to calculate both the IRDM obligation and the corresponding Normal Cost (3.11)
- Require that each year's annual amortization payments must actually amortize (reduce) the unfunded liability (3.14)

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<sup>1</sup> See "Where are The Screaming Actuaries?" by Jeremy Gold:  
<https://www.forbes.com/sites/pensionresearchcouncil/2015/11/20/where-are-the-screaming-actuaries/#440121e127d8>

<sup>2</sup> Approximately, depending on the actuarial cost method use for expected-return calculations

<sup>3</sup> I.e., benefits accrued for past service

- Specify that an unsmoothed actuarially determined contribution (ADC) also be disclosed so that application of the reasonableness standard may be judged (3.16)
- Specify that the actuary should opine on the reasonableness of critical assumptions and methods even when those assumptions are prescribed by the plan sponsor (“by law” or otherwise) (3.20)

The addition of all or any of the above recommendations would make ASOP No. 4 even more consistent with the basic principles of finance in its treatment of valuation and risk and are logical extensions of the important changes already proposed. Specific language and rationale for each is given in the Appendix.

## Appendix: Language and rationale for recommendations

### 3.11: Investment Risk Defeasement Measure (IRDM)

We strongly endorse the proposed addition of this new section, but suggest three changes:

1. Drop the safe harbor of using AA bond yields as discount rates for IRDM calculations by striking from the end of c.2. the sentence “The actuary may use yields of fixed-income debt securities that receive one of the two highest ratings given by a recognized ratings agency”

Rationale:

The sentence we propose to drop is inconsistent with the stated purpose of the IRDM, which is “to reflect the cost of effectively defeasing the investment risk of the plan.”

Since AA bonds are not default-risk free, funding a pension plan with such bonds does not eliminate (defease) investment risk. Over time, particularly over the decades that a pension promise extends, some AA bonds will suffer credit losses – either from downgrade and sale, or from default. Spot yields derived from AA bonds represent maximum returns, assuming no credit losses, not what would be realized in a downside case, or even the expected one.

Although an insurance company assuming a pension liability (in a risk transfer transaction) might well use AA bonds as collateral, that’s not the full story. The insurance company also would need to reserve for expected credit losses on these bonds and would need to hold capital to absorb unexpected investment losses (as well as unexpected longevity losses). These additional costs would be included in the settlement rate. We think the first part of c.2. (“rates at which the pension obligation can be effectively settled”) covers this case.

If such a settlement rate can’t be determined, then using U.S. Treasury yields (as in c.1.) to represent default-risk free yields is appropriate. Yields on interest rate swaps based on daily collateral posting, often comparable to Treasury yields, would also be appropriate.

2. Require calculation and disclosure of Normal Cost corresponding to the IRDM by adding an unenumerated paragraph below the enumerated item (d):

In addition, the actuary should calculate and disclose the Normal Cost corresponding to the above calculated IRDM obligation, using a consistent set of assumptions.

Rationale:

The reason for having an IRDM measure of the pension liability is not only that it reflects an estimate of where the pension liability could be settled in current market conditions. It also reflects the funding required to not expose the promised pension payments to discretionary additional risk from investments. As noted in the SOA Blue Ribbon Panel Report, the IRDM is the cost of securing the promise (from investment risk) and to make transparent that the additional value claimed by assuming a return on a risky investment portfolio is not guaranteed and subject to the performance of that portfolio as expected.

The same argument applies to Normal Cost. An IRDM Normal Cost represents the cost of the benefit earned during a year, and the amount which must be set aside to fund it without reliance on performance of a risky investment portfolio. It represents the best

measure of an often important and otherwise obscure component of annual compensation, which should be of interest to the intended users of most actuarial work products.

3. Require disclosure of undiscounted cash flows and discount rates used to calculate both the IRDM obligation and corresponding Normal Cost, by adding this paragraph at the end:

Finally, the actuary should disclose undiscounted annual cash flows and discount rates used to calculate both the IRDM obligation and Normal Cost.

This cash flow and rates disclosure should be included in the actuarial report, available to any readers of that report, and publicly disclosed or not per the plan sponsor's normal practice.

Rationale:

As is well known, those with an economic interest in the financial health of pensions, particularly public pensions, extend well beyond the narrowly defined "Intended Users" (ASOP No. 41). Stakeholders include plan beneficiaries and sponsor bondholders, who are at risk if a pension plan fails. And for public pensions, stakeholders also include current and future employees, recipients of government services, and taxpayers, who will be called upon to make up any financial shortfalls if required to make good on pension promises. Lacking official numbers generated by the plan actuary, who is in the best position to provide them, academic and industry analysts are estimating cash flows as well as they can. It would be better for all interested in accurate analysis if official actuarial cash flow projections were disclosed.

#### 3.14: Amortization method

Change the "or" to "and" in the top sentence, so that it would now read:

... the actuary should select an **amortization method** that produces amortization payments that exceed nominal interest on the unfunded **actuarial accrued liability** and that satisfy the following conditions

In addition, drop condition (i) and renumber the remaining conditions.

Rationale: As written (with "or" instead of "and" as proposed) and including condition (i), the section allows the calculated amortization to be negative (an "anti-amortization"). This means the unfunded liability would be increasing, rather than decreasing as it should.

A superior approach would modify this section to require a simple straight-line amortization of the unfunded liability over the period selected. The unfunded liability is related to past service with no logical connection to future payroll. For this reason, there is no reason why the amortization method should be based on the assumed level or growth of future payroll.

#### 3.16: Output smoothing method

Add "which should also be disclosed" at end of the first sentence, so that it would now read:

... the actuary should select an **output smoothing method** that results in a reasonable relationship between the smoothed contribution and the **actuarially determined contribution** without output smoothing, which should also be disclosed.

Rationale: The only purpose for output smoothing is to give sponsors additional time to adjust to large changes in the actuarially determined contribution without overly compromising the

long-term security of the pension promise. This section requires “a reasonable relationship” between the smoothed and unsmoothed ADC, and gives three criteria (a, b, and c) for determining reasonableness. Unsmoothed ADC should also be disclosed so that application of the reasonableness standard may be judged by all stakeholders. Also, the gap between the two reveals the likely change in cash contributions over the next few years if conditions don’t change.

### 3.20: Reasonable Actuarial Determined Contribution (ADC)

Add “federal” before “law” in first sentence so that it would now read:

If the actuary is performing a **funding valuation** that does not include a **prescribed assumption or method set by federal law, ...**

In our view, the actuary should opine on the reasonableness of critical assumptions and methods even when those assumptions are prescribed by a state or local plan sponsor (“by law” or otherwise).