

**Comment #3 – 6-25-18 – 4:44 p.m.**

**Comments on ASOP 4 Exposure Draft**

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**610-608-1578**

Thank you for the opportunity to comment on **ASOP 4** on measuring pension obligations and costs. The new ASOP 4 is an important development for the profession.

**PVAB or PVVB**

The PVAB (PVVB) provides information about benefit security and/or settlement costs. This concept should always be measured with an objective, low risk discount rate. Measuring the value of benefits that have been accrued to date with a subjective, risky expected rate of return discount rate would seem to provide little useful information for any pension stakeholder, unless the approach to funding is based on the PVAB. The practice of calculating a PVAB or PVVB with the expected rate on return on a portfolio of risky assets should be eliminated, or at least, discouraged to improve the information value and comparability of this important measure.

**INCLUSION OF A MARKET-SENSITIVE MEASURE**

The inclusion of the investment risk defeasement measurement is a valuable addition to actuarial practice. The simple disclosure of this measure is unlikely to have a significant impact on managing pension risk, but it is a first step. Significant impact will come when the actuarial profession, and others concerned with managing pension risk, adopt a market-based perspective. Including an IRDM type measure is helpful in developing that perspective, but the full perspective comes with focusing on and applying market information in all areas of pension management. This perspective would then impact assumption setting and funding, investment strategy and benefit design.

FUNDING

Market-sensitive measures like the IRDM are responsive to information in financial markets at the time of pension valuation. Expected return discount rates should also be responsive to market conditions to best estimate future returns. Bond yields, equity price-to-earning ratios (the inverse of a yield), real estate “cap rates” and other yield or price information is highly correlated with future returns. Today’s methods for estimating future returns imply a term structure for expected returns, just as there is for bond yields. In other words, in any particular model, returns will be different for different future periods, depending on the assumed change in prices or yields in any prior period. Thus expected returns should be applied to future cash flows based on the expected return for the time frame for each cash flow. Without these two aspects of market-sensitive measurements (sensitivity to prices & yields and alignment with the cash flows being discounted), expected return discount rates produce misleading funding targets.

INVESTMENTS

Investment managers for plans that do not use a market-sensitive liability measurement do not typically understand how to align assets with the pension liability. Such issues as the right bond duration for

reducing risk and the inflation-sensitivity of the liability are not taken into account in designing portfolios which creates unnecessary asset-liability risk for the pension plan sponsor.

## BENEFITS

The true risk and cost related to benefit provisions with guarantees (e.g. a 5% return on an account feature) or optionality (e.g. a COLA which fully reflects inflation up to 2%, and only ½ of inflation above 2%) are understood better in the context of market-sensitive measurements, partly because the lack of potential for hedging these types of benefit promises is more apparent.

Anything the ASOPs can do to encourage this perspective will enhance the management of pension risk and reduce the potential for default on benefit payment promises and financial distress for plan sponsors.

## **POTENTIAL ISSUES WITH THE IRDM**

It's important to understand what "effectively settled" really means. It should be understood that "bond matching" exercises to determine discount rates are theoretical and cannot be replicated in the real world. Except for payments beyond 30 years, it is possible to match most expected pension payments precisely with Treasuries and Treasury STRIPS. However, acceptable matching can be achieved with corporate bonds in order to settle a pension obligation at a lower cost. There are a number of considerations applicable to settling a pension obligation with corporate bonds.

- Investment management fees. Any "settlement" based on the creation of an investment portfolio will require that a management fee be paid or that the expense of managing the portfolio be paid directly. These fees are likely to be in the range of 10 bps – 80 bps, depending on the size of the plan and other factors, and will decrease the effective yield on the portfolio.
- Availability of bonds in the two highest rating categories. It is not possible to create a portfolio of AA and AAA bonds with cash flows that match payments for most pension plans because of the small number of bonds in these rating categories. Also, many of these bonds are not available for purchase because they are so often held to maturity by investors like insurance companies. Or, they may not be available for purchase in the market in the quantity needed to fully fund the liability, especially for larger plans.
- Availability of bonds that mature 10-20 years in the future. It is particularly challenging to find bonds that mature beyond 10, but less than 20 years in the future. Corporate bonds are typically only issued with 10 year maturity or 30 year maturity. Real world matching portfolios are usually short exposure in the 10-20 year range and long exposure in the 22-30 year range.
- Reinvestment risk. Bonds are not generally available to fund cash flows beyond 30 years. In addition, bond portfolio cash flows do not typically match the expected payments from a pension plan precisely because the structure of bond payments (small coupons paid until the final debt is paid at maturity) does not align well with a typical pension payment profile (relatively high in the first year, growing some for several years and then gradually decreasing to zero over many years). That means that coupons must be reinvested at a yield which is not known at the time of the original portfolio construction.
- Transaction costs and holding cash. There is an initial cost to creating a portfolio due to illiquidity in the corporate bond market. Because bond portfolio payments do not align precisely with expected pension payments and because expected payments change over time, it

is necessary to buy and sometimes to sell (for example if a bond is downgraded) bonds which generates transaction costs mostly related to illiquidity. In addition some cash is held by a portfolio from the time the cash is generated (for example by a coupon payment) until the time it is needed to make benefit payments.

- Defaults and downgrades. If a portfolio of AA and AAA bonds is created, then some of the bonds may eventually default and not make the intended payments. When a bond in a settlement portfolio is downgraded out of the universe of the top two rating categories the portfolio will experience a loss in market value which is not reflected in the liability and a portfolio manager would need to decide whether to sell a bond which no longer meets the original criteria. If the bond is sold, a loss relative to the liability will be experienced, increasing the ultimate cost of settlement. For example, at the end of 2011 many AA-rated bonds for financial institutions were already viewed as high risk and bond matching portfolios for accounting purposes “cherry picked” these bonds to produce relative high rates. In fact, at the end of 2011, the average AA bond yield was higher than the average single-A bond yield. Those higher risk bonds were downgraded in 2012 and exacerbated the large drop in discount rates between EOY 2011 and EOY 2012. Thus any portfolio invested in matching AA bonds in 2011 would have fallen substantially behind its liability target in 2012.
- Inflation sensitivity. Because there are no inflation-indexed corporate bonds, any part of a pension liability that is fully or partially sensitive to inflation could not be defeased with corporate bonds.
- Benefit provisions which can't be matched. Benefit provisions such as guaranteed rates of interest, cash balance interest rate crediting, and even lump sum payments (which fix rates during a 12-month period) are not directly “defeasable”.

Typically the total impact of these factors could be expected to be between 50-100 bps, depending on the size of the plan (which impacts the fee level) and how much impact from defaults and downgrades is anticipated. A real-world bond portfolio will include single-A and usually BBB bonds that will increase the yield on the portfolio and reduce the impact of bond availability, but also increase the potential for default risk. However, real world portfolios often include a mix of Treasury (often STRIPS) and corporate securities as well. Overall, the real world cost of settling a pension liability by investing in corporate bonds is probably about 10% higher than the cost of hypothetical AA or better portfolio. It is probably about 5% less than the cost of a hypothetical portfolio of Treasury securities.

For some plans, a true defeasement portfolio is much more complex than for traditional pension payments. For instance a defeasement portfolio for a cash balance plan (with a crediting rate equal to 30 year Treasury rates) would include the use of forward rates, the use of derivatives, and projecting the yield curve beyond 30 years to a much greater extent than for a typical pension plan (in order to develop the forward rates). COLA provisions with caps and floors also make the creation of a defeasement portfolio very challenging.

### **IRDM & UNIT CREDIT METHOD**

It is preferable to base the IRDM on the traditional unit credit method since this provides information about benefit security and settlement which is relevant for most pension plans – the exception being some public plans which may not be allowed to settle based on accrued benefits. The disadvantage of using TUC for the IRDM is that it muddles the impact of the cost method with the impact of investment

and assumption (discount rate) risk. A disclosure which would be valuable in all circumstances might look like the following:

a. Funding target (best estimate discount rate, EAN)	\$5,000.00
b. Adjustment to market discount rate	\$2,000.00
c. Adjustment to Unit Credit cost method	<u>(\$800.00)</u>
d. Market-sensitive solvency measure	\$6,200.00
Investment risk ratio (b/a)	40%

Presumably, if actuaries felt like the TUC measure was misleading in the case when another cost method is being used for funding, they could identify the different pieces in a format similar to the display above.

### **AMORTIZATION METHOD**

It may not be clear to all actuaries why the duration of the AAL is an important factor to consider with regard to the amortization method. It could be beneficial to expand on this, perhaps to include the size and remaining working lifetime for the active population as a consideration or to say “duration of the AAL or other measures of maturity of the plan population”. A plan with a small active population (relative to the retired group) and/or an older active population should pay off deficits quickly. Any approach to funding and amortization which does not target full payment within the active employees working lifetime introduces material risk that benefits may not be paid as promised. Any such approach should be discouraged.

### **PREDICTABILITY OF COSTS**

The goal of predictable costs may be better described along the lines of “maintaining the cost level and cost uncertainty within a range that is anticipated and manageable by the plan sponsor”. The issue is that costs may become a source of financial stress for the plan sponsor. Small costs which are unpredictable won’t present a problem beyond minor budgeting issues.