



ASOP 4 (Requires Fixed Income Market Discount Rates)

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Actuarial Standards of Practice (ASOP) are created by the Actuarial Standards Board (ASB) to identify what should be considered, done, documented and disclosed when rendering actuarial services. The ASOPs are binding upon actuaries in the U.S.. The first ASOP was adopted in 1986.

One of the most controversial actuarial practice areas is the pension discount rate. **ASOP #4** was approved and adopted by the ASB in December 2021. It **becomes effective for actuarial reports on or after February 15, 2023**. It requires a new way to select a discount rate as follows:

“Section 3.11 Low-Default-Risk Obligation Measure – When performing a funding valuation, the actuary should calculate and disclose a low-default-risk obligation measure of the benefits earned or costs accrued as of the measurement date. The actuary need not calculate and disclose this obligation measure more than once per year.

When calculating this measure, the actuary should select a discount rate or discount rates **derived from low-default-risk fixed income securities whose cash flows are reasonably consistent with the pattern of benefits expected to be paid in the future**. Examples of discount rates that may meet these requirements include, but are not limited to, the following:

- a. U.S. Treasury yields;
- b. Rates implicit in settlement of pension obligations including payment of lump sums and purchases of annuities from insurance companies;
- c. Yields on corporate or tax-exempt general obligation municipal bonds that receive one of the two highest ratings given by a recognized ratings agency;
- d. Non-stabilized ERISA funding rates for single employer plans; and
- e. Multiemployer current liability rates”

ASOP 4 requires a discount rate(s) based on low-default-risk fixed income securities whose cash flows are consistent with the projected benefits payment schedule. This should mean **a yield curve of high-quality zero-coupon bonds who cash flow match the liability cash flows (projected benefit payments)**. This is the FASB approach to pension discount rates where the discount rates settle or defease the liability cash flows. Under ASC 715 (FASB), AA corporate zero-coupon bonds as a yield curve are used as the discount rates with a single discount rate calculated that matches the present value of liabilities to the future value using this discount rate yield curve. Moody’s has also adopted ASC 715 as the way they will assess the credit rating of municipalities (12/19/17... Adjustments to US State and Local Government Reported Pension Data).



If cash flow matching is a requirement for a discount rate(s) in conformity to ASOP 4 then it seems that *only* ASC 715 with zero-coupon AA corporates or U.S. Treasury STRIPS meet this standard. No other discount rate option has a term structure or yield curve of certain cash flows. U.S. Treasury STRIPS would produce a much higher liability present value due to the lower interest rates yield curve. Treasury STRIPS would produce a lower funding valuation (Funded Ratio and Funded Status) than ASC 715. As a result, ASC 715 should be favored as the preferred discount rate methodology.

ASC 715 Methodology

Ryan ALM is one of few ASC 715 discount rate vendors. We provide *four distinct discount rate yield curves* that best conform to FASB GAAP requirements. Each curve is comprised of hypothetical AA corporate zero-coupon bonds from 0.5 -30+ years to maturity:

High End Select	(top 10% yielding bonds)
Top 1/3 Curve	(top 33% yielding bonds)
Above Median Curve	(top 50% yielding bonds)
Full Curve	(all 100% yielding bonds)

Yield curves derived from actual AAA/AA corporate bonds placed into 8 maturity bands:

1.01 - 3.00 years	7.51 - 9.50 years	24.01 - 27.00 years
3.01 - 5.00 years	9.51 - 17.00 years	27.01 + years
5.01 - 7.50 years	17.01 - 24.00 years	

Parameters of Eight (8) Maturity Bands:

Ratings	AA+
Minimum Issue	\$100 million
Currency	U.S. Dollar Denominated
Coupon	Non-zero, fixed coupon bonds
Maturity Type	Option Free (Non putable or callable)
Issue Type	Publicly traded U.S. Corporate bonds Private placements with 6 months seasoning No Foreign Agencies, Govt. or Supranationals
Pricing	Excludes bonds priced outside \$55 - \$145 range
Yields	Excludes YTM >2.0 STD from the average YTM

Benefits

1. Ryan ALM discount rates consistently higher than industry
2. Offer four distinct discount rate yield curves in conformity to ASC 715
3. Ryan ALM discount rates used by Price Waterhouse Coopers and actuarial firms



Ronald J. Ryan, CFA: Awards and Recognition



*William F. Sharpe
Index Lifetime Achievement Award
and ETF Product of the Year Award*



Lifetime Achievement Award



*Bernstein Fabozzi/Jacobs Levy Award
Research Paper of the Year*



Most Innovative ETF of the Year Award