Actuarial Standards Board
Conseil des normes actuarielles

Final

Final Standard for Changes to Standards of Practice – Practice-Specific Standards for Insurers, Subsection 2340 – Foreign Exchange

Actuarial Standards Board

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2340 OTHER ASSUMPTIONS: ECONOMIC

Margin for adverse deviations

.00.1 Significant considerations indicating difficulties in properly estimating the best estimate assumption would include

there is little relevant experience,

future experience is difficult to estimate,

operational risks adversely affect the likelihood of obtaining the best estimate assumption,

asset underwriting criteria are weak or poorly controlled,

there are liquidity concerns,

there is uncertainty regarding the credit enhancement techniques used,

the trust structure and legal responsibilities of the different parties for a securitized asset are not clearly understood in a practical and/or legal sense,

the asset held is from a non-passthrough structure with a repackaging of the credit risk that is difficult to understand,

the asset held is from a lower quality tranche of a non-passthrough structure that repackages credit risks,

there is uncertainty about the counterparty credit, or

there is no netting of the aggregate exposure with a counterparty.

.00.2 Other significant considerations indicative of a potential deterioration of the best estimate assumption would include

there is significant concentration of risks and/or lack of diversification, or

operational risks are present such that the likelihood of continuing to obtain the best estimate assumption is adversely impacted.

Fixed income assets: investment return

.01 The forecast of cash flows from a fixed income asset would be the promised cash flows over the term of the asset, modified for asset depreciation and borrower and issuer options. 2340.02 2340.08

Fixed income assets: asset depreciation

.02 The actuary's best estimate of asset depreciation would depend on

asset type, credit rating, liquidity, term, and duration since issue,

subordination to other debt of borrower or issuer,

the insurer's credit underwriting standards, diversification within a particular type of investments, to the extent that it is indicative of the future, the insurer's own experience, the insurance industry's experience,

guarantees which offset depreciation, such as that in an insured mortgage, and

potential for anti-selection by borrowers and issuers.

.03 Asset depreciation comprises that of both assets that are impaired at the balance sheet date and assets that become impaired after the balance sheet date, and includes loss of interest, loss of principal, and expense of managing default.

.04 Asset depreciation is likely to be relatively high after the forced renewal of a mortgage loan; i.e., one where the mortgagor can neither pay, nor find an alternative mortgagee for the balance outstanding at the end of its term but is able to continue its amortization. The explicit forecasting of subsequent cash flow is usually so conjectural that, to commute the cost of that asset depreciation to the end of the term of the mortgage would be an acceptable approximation unless it undermines the interest rate assumption in the scenario.

.05 The actuary would not necessarily assume that the best estimate of asset depreciation is less than the premium of an asset's investment return over the corresponding default-free interest rate.

.06 The low and high margins for adverse deviations for a scenario would be respectively 25% and 100% of the best estimate for that scenario, except that

a higher range would be appropriate where those percentages of an unusually low best estimate are not meaningful, and

zero would usually be appropriate for an Organisation for Economic Cooperation and Development (OECD) government's debt denominated in its own currency.

.07 Repealed.

Fixed income assets: exercise of borrower and issuer options

.08 Examples of borrower and issuer options are the option to prepay a mortgage loan, to extend the term of a loan, and to call a bond.

.09 The assumed exercise may depend on the interest rates in the scenario. Anti-selection by commercial borrowers and issuers would usually be intense.

.10 Forecasted cash flows would include any penalty generated by exercise of an option.

Non-fixed income assets: investment return

.11 The actuary's best estimate of investment return on a non-fixed income asset would not be more favourable than a benchmark based on historical performance of assets of its class and characteristics.

.12 The low and high margins for adverse deviations in the assumptions of common share dividends and real estate rental income would be respectively 5% and 20%.

.13 The margin for adverse deviations in the assumption of common share and real estate capital gains would be 20% of the best estimate plus an assumption that those assets change in value at the time when the change is most adverse. That time would be determined by testing, but usually would be the time when their book value is largest. The assumed change as a percentage of market value

> of a diversified portfolio of North American common shares would be 30%, and
>
> of any other portfolio would be in the range of 25% to 40% depending on the relative volatility of the two portfolios.

.14 Whether the assumed change is a gain or loss would depend on its effect on benefits to policyholders. A capital loss may reduce policy liabilities as a result of that effect.

Taxation

.15 The best estimate would be for continuation of the tax regime at the balance sheet date, except 1520.06
that the best estimate would anticipate a definitive or virtually definitive decision to change that regime. The margin for adverse deviations would be zero.

Foreign exchange

.16 The needed assumptions would include foreign exchange rates when policy liabilities and their supporting assets are denominated in different currencies.

.17 The base scenario used to develop the assumption for foreign exchange rates would be based on currency forwards. If currency forwards are not available, the forward exchange rates would be
derived based on risk-free interest rate differentials where available. If neither is available, the 1130
actuary would use his or her best judgment to develop an appropriate approach.

.18 A provision for adverse deviations would be developed from a scenario using adverse movements in the exchange rate. Such movements would reflect the historical volatility in the exchange rate over the applicable period. The provision for adverse deviations would be the excess of the policy liabilities based on this adverse scenario over the policy liabilities calculated using the base scenario.

.19 A minimum provision for adverse deviations would apply. This would be the excess of the policy liabilities resulting from the application of an adverse five percent margin to the projected exchange rates underlying the base scenario over the policy liabilities calculated using the base scenario.