AMERICAN ACADEMY of ACTUARIES

**Principles-Based Approach Definitions from the American Academy of Actuaries' Consistency: Principles, Summary, Definitions & Report Format Work Group**

**Presented to the National Association of Insurance Commissioners' Life and Health Actuarial Task Force**

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Consistency: Principles, Summary, Definitions & Report Format Work Group

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## PRINCIPLES-BASED APPROACH DEFINITIONS

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| *Prudent Best Estimate* | Any valuation assumption used for projections that is developed by applying a margin for uncertainty (reflecting estimation error and adverse deviation) to the Best Estimate assumption. The resulting assumption should be consistent with the stated principles[1] of a Principles-Based Approach, be based on any relevant and credible experience that is available, and should be set to produce, in concert with other Prudent Best Estimate Assumptions, an overall value that is consistent with the stated level of conservatism for the calculation under consideration. |
| *Best Estimate* | The actuary's expectation of future experience for a risk factor given all available, relevant experience and information pertaining to the assumption being estimated and set in such a manner that there is an equal likelihood of the actual value being greater than or less than the expected value. |
| *Margin for Uncertainty* | An amount applied to a Best Estimate assumption in order to derive a Prudent Best Estimate assumption to provide for estimation error and adverse deviation. The Margin should be directly related to the level of uncertainty in the behavior or phenomenon for which the Prudent Best Estimate assumption is made whereby the greater the uncertainty, the larger the required Margin for Uncertainty, with the Margin added or subtracted as needed to produce a larger reserve than would otherwise result without it. |
| *Tail Risk* | Risks that have high impact, but low probability. |
| *Degree of Control or Influence* | The extent to which a company has the ability to directly or indirectly affect a given risk assumption. For instance the company's underwriting process is expected to impact select year mortality experience, but the ultimate mortality assumption should be expected to trend towards industry experience. |
| *Stated Level of Conservatism* | An estimate for the aggregate margin in a reserve which meets the standards for Margins for Uncertainty as specified in an actuarial opinion and determined as (a) less (b), where (a) is the reserve calculated using Prudent Best Estimate assumptions, and (b) is the reserve calculated using Best Estimate assumptions. |
| *Solvency Objective of Statutory Reporting* | The definition for this item is that given in the National Association of Insurance Commissioners (NAIC) Preamble of Codification. |
| *Cash Surrender Value* | For ordinary life, universal life or annuities it is the amount available to the policyholder upon surrender of the policy, prior to any outstanding policy indebtedness and after application of any surrender charges. |
| *Scenario* | A single path of outcomes used in a cash flow model, including assumptions for (1) investment performance (e.g., a path of future interest rates, equity performance, separate account fund performance and asset defaults), (2) policyholder behavior (e.g., lapses), (3) company experience pertaining to the insurance risk (e.g., mortality) and (4) any other material assumptions. |
| *Clearly Defined Hedging Strategy* | A strategy undertaken by a company to manage risks through the future purchase or sale of hedging instruments and the opening and closing of hedging positions meeting the principles of a Principles-Based Approach and any specific guidance in the applicable regulation. A Clearly Defined Hedging Strategy must at a minimum, identify:<br>a. the specific risks being hedged (e.g., delta, rho, vega, etc.),<br>b. the hedging objectives,<br>c. the risks not being hedged (e.g., variation from expected mortality, withdrawal, and other utilization or decrement rates assumed in the hedging strategy, etc.),<br>d. the financial instruments that will be used to hedge the risks,<br>e. the hedge trading rules including the permitted tolerances from hedging objectives,<br>f. the metric(s) for measuring hedging effectiveness,<br>g. the criteria that will be used to measure effectiveness,<br>h. the frequency of measuring hedging effectiveness,<br>i. the conditions under which hedging will not take place, and<br>j. the person or persons responsible for implementing the hedging strategy.<br>The hedging strategy may be dynamic, static, or a combination thereof. |
| *Conditional Tail Expectation (CTE)* | A statistical risk measure that is calculated as the average of all modeled outcomes, i.e., scenarios, (ranked from lowest to highest) above the percentile corresponding to the CTE level (for example, CTE65 is the average of all of the scenarios above the 65th percentile). |

[1] The principles of a Principles-Based Approach are documented in the August 18, 2006 work product of the Consistency Work Group.

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| *Accumulated Deficiency* | An amount measured at the end of a projection year (including the amount at time 0) and equal to the projected Working Reserve less the statutory value of projected assets, both at the end of the projection year. It may be a positive or negative value. |
| *Greatest Present Value of Accumulated Deficiencies (GPVAD)* | For a given scenario the value which is the numerically largest of the present values of the Accumulated Deficiencies (at the beginning of the projection and at the end of each future projection year within the scenario) using specified discount rates. [note - this definition assumes that the results for a given scenario will be defined as the GPVAD plus the assets at the start of the projection] |