ACTUARIAL GUIDANCE NOTE

AGN 4: OUTSTANDING CLAIM LIABILITIES AND PREMIUM LIABILITIES FOR GENERAL INSURANCE BUSINESS

Application

This Actuarial Guidance Note applies to actuaries estimating outstanding claim liabilities and premium liabilities for general insurance business in Hong Kong. It replaces the prior version of AGN 4 and is effective for valuations prepared as at or after [DD MM 2017].

Practices that deviate from this Actuarial Guidance Note may be deemed acceptable if the actuary provides justification as to why the deviations are appropriate in the particular circumstances in question.

Definitions

For general insurance business, an insurer's **liabilities** consist of outstanding claim liabilities and premium liabilities. Each liability is the sum of (a) its **best estimate** and (b) a **risk margin**.

The **best estimate of a liability** is the actuary's unbiased estimate of future claims, based on his or her professional judgement and all relevant available information. As actual claims may not be known for some considerable time after the estimate is made, it may be difficult to determine the best estimate with precision.

If the distribution of future claims can be expressed as a statistical distribution with assumed parameters, the best estimate of the liability should be the **mean** of the assumed distribution.

A risk margin is an amount in addition to the best estimate of the liability. It reflects the inherent risks in estimating future claims, and a preference for over-reserving rather than under-reserving.

A **reserve** is the amount reported by the insurer in its accounts for outstanding claim liabilities and premium liabilities. For commercial or other reasons deemed appropriate by the actuary's employer or client, the reserve may differ from the sum of the best estimate of the claim liabilities and premium liabilities and respective risk margins. In this document, a distinction is drawn between the 'reserve' (the amount reported in the accounts) and the 'liability' (the sum of its best estimation and a risk margin).

1. The Role of the Actuary

The actuary's role is that of an adviser on the valuation of the insurer's insurance liabilities. Commercial decisions, including the actual level of reserve to be adopted, are matters for the actuary's employer or client. While an individual actuary may have management responsibilities and may make such decisions, they are not part of

the actuarial responsibility. This Actuarial Guidance Note is concerned with the actuarial responsibility of advising an insurer on the valuation of the insurer's claim and premium liabilities.

2. Valuation of Insurance Liabilities

2.1 Liabilities

Outstanding claim liabilities include liabilities for claims that have already been incurred. These include:

- claims which have been reported and have not yet been finalized or settled;
- claims which have been incurred but have not yet been reported; and
- claims which have been paid but may be reopened.

The **outstanding claim liabilities** must include an amount in respect of direct and indirect claim handling expenses that the insurer expects to incur in settling the claims. Direct claim handling expenses include third party costs such as investigation, medical and legal fees. Indirect claim handling expenses refer to the insurer's own administrative costs in settling claims.

Future claim payments may deviate from payments at current levels on similar claims. Any such expected deviation should be taken into account.

Premium liabilities relate to claim payments arising from future events, incurred after the valuation date, attributable to the unexpired coverage of the existing policies as at the valuation date. This amount is usually the maximum of the unearned premium, net of deferred acquisition costs, and the unexpired risk reserves.

Unearned premiums are premiums attributable to the unexpired portion of the coverage.

Deferred acquisition costs are the unamortized portion of capitalized acquisition expenses. Acquisition expenses are those incurred expenses that vary with and are primarily related to the acquisition of new and renewal insurance contracts.

The unexpired risk reserve ("URR") is a prospective assessment of the amount that is needed to provide for claims and expenses that may arise from unexpired cover of in force policies at the valuation date. It should include the expected future claims originated from the unexpired coverage as well as the maintenance and the handling expenses.

The additional unexpired risk reserve ("AURR") is the amount of URR in excess of unearned premium net of deferred acquisition cost

2.2 Types of Best Estimate

The actuary should provide best estimates on both gross and net of reinsurance bases. For the purpose of this Actuarial Guidance Note, "gross" refers to gross of reinsurance premiums and recoveries, and net of non-reinsurance recoveries, and "net" refers to net of reinsurance premiums and recoveries, and net of non-reinsurance recoveries.

2.3 Uncertainties and Risk Margin

Actual claims and expenses are likely to be different from expected amounts. For this reason, the actuary should take the inherent uncertainties into account for estimating insurance liabilities. A risk margin should be added to the best estimate such that their sum should provide for at least an overall 75% probability of liability sufficiency. The risk margin should not be less than zero under any circumstance.

The assessment of the risk margin generally requires the use of one or more of:

- statistical analysis;
- sensitivity analysis;
- scenario analysis; and
- professional judgement.

A diversification benefit may be allowed for among different classes of business under the actuarial investigation, but must not be allowed for between outstanding claim liabilities and premium liabilities.

2.4 Methodology

The choice of methods for the estimation of liabilities depends on the class and nature of the business and the form and quality of the available data. The actuary has the discretion to select the most appropriate method(s) given the circumstances.

Generally accepted methods include:

- Chain ladder method;
- Bornhuetter-Ferguson method;
- Mack method; and
- Bootstrapping method.

If generally accepted methods are used for liability estimation, the actuary can make reference to these methods without describing the details. Adjustments to any of the standard methods, however, should be explained.

When less common methods are used, the actuary should describe the methods and assumptions in sufficient details for another actuary to understand.

2.5 Discounting

Consistent with Guidance Note 9 issued by Hong Kong Insurance Authority, liabilities for general insurance business should be estimated on an undiscounted basis. This guidance applies to both the best estimate and the risk margin components of the liabilities.

2.6 Documentation

Findings of the actuarial review should be documented including details of the methods adopted, assumptions used in the valuation process and analysis conducted in the course of valuing the premium liabilities and outstanding claims liabilities for each class of business. Any deviations from the guidance in this actuarial guidance note must be documented, including their justification.

3. Actual vs Expected Analysis

The actuary should compare the actual claim experience with the expected experience underlying the best estimate liabilities and risk margins from the previous valuation. This comparison should be done at least for the outstanding claim liability. The actuary should decide whether the comparison should be done on a gross and/or a net of reinsurance basis in light of the nature of the reinsurance arrangements and his or her professional judgement.

For a credible comparison, the previous valuation should be a full projection and not a simple roll forward exercise, and should normally be no more than one year old. The actuary should take reasonable steps to understand the details of the previous valuation if one was prepared by another actuary.

The emerging experience should be analysed by cohort defined in accordance with the insurer's accounting policy. The analysis should include splitting the movement in total expected claims into differences in experience and changes in assumptions. Material difference between actual and expected should be explained. Earlier cohorts, whose claims are expected to be close to fully run off, may be excluded from the analysis.

***** END OF ACTUARIAL GUIDANCE NOTE *****