NEW ZEALAND SOCIETY OF ACTUARIES

PROFESSIONAL STANDARD NO.4

GENERAL INSURANCE BUSINESS

1. INTRODUCTION

STANDARD

1.1 This Standard applies to every Actuary preparing a report on the Technical Liabilities required for, or on the Financial Soundness of, a General Insurance Undertaking.

1.2 This Professional Standard is worded to cover all types of general insurance business. However, it has only the force of a Guidance Note in regard to business other than Statutory Accident Insurance business arising from the Accident Insurance Act 1998.

1.3 Professional Standards are paragraphs in bold typeface. Interpretative commentary paragraphs in plain typeface follow the Professional Standards.

1.4 This Standard is effective as from 1 September 1999.

COMMENTARY

1.5 Every Actuary reporting on general insurance business transacted within New Zealand shall take account of the requirements of this Standard.

1.6 This Standard applies to advice provided in relation to requirements under:

- the Insurance Companies (Rating & Inspections) Act 1994,
- the Companies Act 1993,
- the Income Tax Act 1994,
- the Accident Insurance Act 1998, and
- the Financial Reporting Standard 35: Financial Reporting of Insurance Activities (FRS 35).

1.7 Sections 1 to 8 of this Standard apply to advice on Technical Liabilities of a General Insurance Undertaking for inclusion in financial statements being prepared in accordance with FRS 35.

1.8 Sections 1 to 9 of this Standard apply to advice on the Financial Soundness of a General Insurance Undertaking for inclusion in reports being prepared in accordance with FRS 35.

1.9 The purpose of this Standard is to ensure as far as possible that advice provided by an Actuary in the areas of Technical Liabilities or Financial Soundness of a General Insurance Undertaking is properly determined, fully and clearly disclosed, accurate and reliable.

1.10 It is desirable and appropriate for the determination and disclosure to be in a form that permits another Actuary to make a judgement as to whether such calculations were in accordance with generally accepted actuarial practice and merits the respect of and acceptance by the public.

2. DEFINITIONS

STANDARD

2.1 Within this Standard, the following words have the meanings noted:

“Actuary”: a Fellow of the New Zealand Society of Actuaries.

“Central Estimate”: an estimate that contains no deliberate or conscious over or under estimation.

“Financial Soundness”: a measure of the sufficiency of the assets of a General Insurance Undertaking to support the continuing operation of that undertaking.

"General Insurance Undertaking" or "Insurer": a general insurer, general insurance company, reinsurer, self insurer or State Owned Enterprise involved in general insurance activities, including statutory accident insurance activities.

“Long-tail Business": Statutory Accident Insurance business and general insurance business under which claims are typically not settled within one year of the occurrence of the events giving rise to those claims.

“Outstanding Claims Liabilities”: the present value of expected future payments on claims that were incurred on or before the calculation date, including future claims handling expenses.

“Outstanding Claims Provisions”: the total of the amounts in the Insurer’s accounts that provide for Outstanding Claims Liabilities at the accounting date.

“Prudential Margin”: the amount of any extra provision arising out of the inherent uncertainty in the determination of the Central Estimate of the Technical Liabilities which is shown in the Insurer's accounts in addition to that Central Estimate.

“Technical Liabilities”: the total of the Unexpired Risk Liabilities and the Outstanding Claims Liabilities.

“Unexpired Risk Liabilities”: the unearned premium reserve plus any adjustment considered necessary to cover future outgoings, including future expenses.

COMMENTARY

2.2 The precise amount required to meet an Insurer’s liability for unexpired risks and outstanding claims is almost always unknown but fixed amounts must be set aside in the accounts at the balance date. Although the Directors of the General Insurance Undertaking have the ultimate responsibility for the amounts reported in the accounts, the Actuary may be asked to advise on the provisions to be set aside, or to provide comment on the provisions that are to be adopted.

2.3 The extent of any prudential margin included in the total of the amounts shown in the accounts to allow for the uncertainty of liability estimates and the inherent variability of conditions affecting future claim payments is a matter of judgement and will depend on such matters as:

- the actuary's confidence in the valuation approach and assumptions,
- the quality and depth of the historical data available,
- statistical fluctuations affecting the ultimate claim costs, and
- the actual development and outcomes of past provisions for the insurer.

2.4 The Actuary should distinguish between the liability, which is the unknown actual value of the outstanding claims or unexpired risks for which a Central Estimate is made, and the provision, which is the total of the amounts shown in the accounts for that liability.

2.5 Financial Soundness is not the same as the measure of a company's ability to satisfy the solvency test as specified in the Companies Act 1993.

3. DATA AND ANALYSIS

STANDARD

3.1 It is the Actuary's responsibility to determine if suitable procedures are in place to verify that the data is reliable and sufficient and to ensure that the data utilised is relevant and appropriate for actuarial calculation.

3.2 The claims experience must be analysed at least with respect to the development over time of claims or cohorts of claims. Where possible, analysis must include:

- **the rate of incidence of claims,**
- **the rate of reporting of claims,**
- **the rate of settlement,**
- **the development of payments,**
- **the adequacy of case estimates, and**
- **other analyses relevant to the circumstances.**

COMMENTARY

3.3 The Actuary should review the claims adjudication and recording procedures with a view to incorporating the effect of any changes in the subsequent analysis of the experience data.

3.4 The Actuary should check the overall consistency of the current calculation data with the previous calculation data and the Insurer's financial records.

3.5 The estimation of Outstanding Claims Liabilities requires the subdivision of the data into groups of claims exhibiting similar characteristics. When determining appropriate subdivisions a balance must be found between homogeneity and statistical reliability.

3.6 The experience should be analysed on a basis that is gross of reinsurance and recoveries. Analysis of the reinsurance and other recovery experience should be appropriate to the circumstances. In some exceptional situations where it may be more appropriate to analyse the experience net of reinsurance and/or other recoveries, separate estimates of the recovery amounts may still have to be made.

3.7 Care should be given to reviewing the pattern of development of known claims. The claims handling procedures affect the manner in which the pattern of development changes over time for any individual claim. Further, the length of time to settlement will affect the observed reserve development. The propensity for claims to be reopened can vary substantially by type of benefit, and this should also be reviewed regularly.

4. ASSUMPTIONS

STANDARD

4.1 The Actuary must give independent consideration to the reasonableness of each assumption. The assumptions as a whole must also be consistent and reasonable.

4.2 The assumptions that are used must be appropriate to the circumstances of the Insurer, to each portfolio of business under consideration and to any relevant legislation.

COMMENTARY

4.3 The Actuary should be familiar with the general characteristics of the insurance portfolio that have a material bearing on the estimation of the liabilities and capital requirements. This includes familiarity with the contractual terms and benefits payable under policies written as well as other relevant attributes.

4.4 Where any liabilities arise from the insurance of benefits specified by Statute or Regulation, the Actuary should be conversant with the provisions of the law for which liabilities are to be established. This includes familiarity with the benefits described in the law and their current judicial interpretations.

4.5 The Actuary should be familiar with the relevant aspects of the procedures for the administration and accounting of the Insurer’s claims and policies, the Insurer’s assets and investment policy, and the general economic, legal and social trends in the community which may have a bearing on the business.

4.6 The Actuary should be aware of, and give due recognition to, any relevant statutory requirements, taxation rulings or generally accepted accounting practice.

4.7 The actuarial calculations should be based on the Insurer’s policies and practices as at the effective date of calculations (including those known to take effect after the calculation date), adjusted as appropriate to include the effect of proposed changes to benefits or other policy terms or conditions.

STANDARD

4.8 In selecting the claims experience assumptions, the Actuary must have regard to the calculation model and the analysis of the experience.

4.9 When estimating the Outstanding Claims Liabilities, the Actuary must make an appropriate allowance for claims escalation.

COMMENTARY

4.10 Claims experience assumptions should include trends in the claims experience and assumptions about reinsurance or other recoveries.

4.11 The Actuary need not change assumptions from those of the prior calculation date unless the effect of the change is material. The financial effect of any assumption changes should be recognised when the change occurs.

4.12 Future claims payments may well be greater than current payments on similar claims, as a result of wage or price inflation or other economic or environmental causes.

STANDARD

4.13 In arriving at appropriate discount rate assumptions, the Actuary must consider matters including:

- **the risk free rate, and**
- **the nature of the liabilities of the Insurer.**

4.14 The risk free rate of return, which is the rate of return on a portfolio of assets matched to the liabilities, must be the starting point for determining the appropriate discount rates. The Actuary should explain the reasons for adopting rates that differ from the risk free rate.

4.15 The discount rate used to determine the present value of calculations made to satisfy FRS 35 shall be determined in accordance with that Financial Reporting Standard.

COMMENTARY

4.16 The discount rates to be used in measuring the present value of the liabilities should be the risk free rates which are appropriate to the future periods over which the liability payments are expected to be made.

4.17 For other than Long-tail Business, on the ground of materiality the Actuary may choose to make no specific allowance for discounting.

STANDARD

4.18 The Actuary must make appropriate allowance for future costs of administering and settling outstanding claims in addition to those included in payments on individual claims.

COMMENTARY

4.19 The Actuary should have regard to the Insurer's available data, level of expenses, organisational structure, future administrative developments and other relevant matters.

4.20 The complexity of the approach used to determine the allowance should be commensurate with the materiality of the amount of the allowance.

4.21 When reporting on the business as a going concern, this allowance should cover only the costs of the claim function. If the business is being run-off, expenses might rise significantly and the allowance might then include areas other than claims costs, such as general management costs.

5. ACCURACY AND REASONABLENESS

STANDARD

5.1 The Actuary has a responsibility to ensure the overall reasonableness of the results produced for a calculation and to quantify the effects of any changes in the calculation basis since the previous calculation.

5.2 An approximation to an assumption or method is acceptable provided it is disclosed and does not materially affect the result.

5.3 A matter is material when its misstatement or omission would cause the report or statement to influence users when they make decisions or assessments.

COMMENTARY

5.4 It is the Actuary's responsibility to ensure that the actuarial calculations are accurate.

5.5 The Actuary may be called upon to justify the work undertaken. The Actuary should therefore compile and retain documentation that shows that the work conforms to this Standard, and to generally accepted accounting practice and taxation rulings.

5.6 The Actuary should attempt to identify emerging differences between the experience and each of the assumptions adopted for the calculation.

6. REPORTING

STANDARD

6.1 The Actuary must prepare, date and sign a written report. The report must state:

- **who has commissioned the report and, if different, the addressee(s) of the report,**
- **the purpose of the report or the terms of reference given,**
- **the extent to which the report falls short of, or goes beyond, its stated purpose or terms of reference,**
- **the effective date of the calculation or assessment,**
- **the name of the Actuary, his/her professional qualification and the capacity in which he/she has prepared the report,**
- **any restrictions imposed on the Actuary,**
- **any reliances and limitations associated with the calculations and the resulting conclusions, and**

- **whether the calculation has been made in accordance with the sections of the Standard that apply to the report or, if not, the areas where the Standard has not been applied.**

6.2 The report must deal with:

- **the calculation method and key assumptions, with their derivations,**
- **any changes in the calculation method and key assumptions since the last similar report,**
- **the nature, sufficiency, accuracy and interpretation of the data,**
- **the analysis of experience,**
- **the results of the calculation,**
- **the uncertainty associated with the calculation result,**
- **the extent of any reliance on the opinions of others, and**
- **any qualifications.**

6.3 Where legislation, generally accepted accounting practice or other rulings require the Actuary to use specific assumptions other than those the Actuary would normally use under this Standard, the Actuary must clearly state the circumstances and discuss the implications of the divergence from this Standard.

6.4 Where the Actuary is required to use specific assumptions, or the Actuary is relying upon a provided interpretation of legislation, generally accepted accounting practice or other rulings, the Actuary must clearly state the circumstances and discuss the implications of the divergence from this Standard.

COMMENTARY

6.5 Reports may include ranges of acceptability as well as point estimates. With some types of business the conclusions will often be subject to margins of error which may be large. Notwithstanding such uncertainty it is acceptable for the Actuary to give positive opinions and provide estimates of the liabilities. The report should draw attention to the uncertainty, making it clear that the eventual outcome will almost certainly differ from any projections made. The Actuary should draw attention to particular unquantifiable contingent liabilities for which no explicit allowance has been made.

6.6 Sufficient detail of the calculation results should be available in the report or separately to enable the Insurer to comply with the disclosure requirements under generally accepted accounting practices and appropriate statutory returns, unless requested otherwise.

6.7 There may be factors which are relevant to the Insurer's financial condition but which are not necessarily within the Actuary's brief. These could include, for example, political risks, the adverse consequences of bad management or fraud. The Actuary should draw attention to such factors where they become known and may become material.

6.8 In some circumstances it may be necessary to prepare a short statement regarding the report. Considerable care is required to ensure that the statement contains the necessary relevant information and will not be misleading nor quoted out of context. The statement should include a reference to the Actuary's full report and the conclusions stated therein.

6.9 The report should indicate, where appropriate, how the following issues have been addressed:

- the steps taken to verify the data,
- the grouping of the data by class of business, category of risk and currency,
- comparisons of actual experience with that expected under the assumptions made in the previous report,
- the effect of underwriting, claims reporting and settlement, data processing and accounting procedures, with particular reference to any significant known changes therein,
- the nature and spread of the reinsurance arrangements, with particular reference to any significant changes therein,
- potential exhaustion of the reinsurance coverage and the possibility of non-performance of reinsurance,
- the effect of any significant known changes in the legal and social environments,
- future direct and indirect claims handling expenses, internal and external costs,
- the treatment of any abnormal types of claims, and
- the treatment of future premiums in and out (including reinstatement premiums), profit commission and portfolio transfers.

6.10 If the Actuary uses scenario testing or other similar analyses the report produced should contain the key assumptions of the various scenarios. Where relevant the report should identify any adverse scenario, or scenarios, which would result in the Insurer falling below a satisfactory level of Financial Soundness.

7. CALCULATION OF TECHNICAL LIABILITIES

STANDARD

7.1 It is the responsibility of the Actuary to select the most appropriate calculation models to estimate the Outstanding Claims Liabilities.

7.2 Outstanding Claims Liabilities must cover, unless specifically excluded:

- **amounts in relation to unpaid reported claims,**
- **amounts in relation to claims incurred but not yet reported,**
- **adjustments in the light of the most recently available information on claims development, for claims incurred but not enough reported,**
- **amounts in relation to claims which have been administratively finalised but which may be reopened, and**
- **direct and indirect costs that the Actuary expects the Insurer to incur in settling these claims.**

COMMENTARY

7.3 The Actuary would be expected to investigate the results of using more than one model before arriving at an estimate. The models should take into account the class or nature of the business, the form and quality of the data and the results of the analysis of experience.

STANDARD

7.4 The Actuary must consider the appropriateness of any approximations underlying the method of calculation of the Unexpired Risk Liabilities, in particular those relating to:

- **the choice and grouping of base dates of premium payments and policy terms,**
- **the adequacy of the premium rates,**
- **the treatment of non-annual premiums, and**
- **the incidence of risk over the policy term.**

COMMENTARY

7.5 An implicit or explicit lapse rate should be included in the calculation of the Unexpired Risk Liabilities. Where lapses have been ignored, the Actuary should consider whether it would be prudent to establish additional liabilities.

7.6 The Unexpired Risk Liabilities should normally be calculated gross with an allowance for deferred acquisition costs shown separately as an asset. In some exceptional situations it may be more appropriate to calculate these liabilities net of an allowance for deferred acquisition costs.

STANDARD

7.7 When advising on Technical Liabilities or provisions, the Actuary must have regard to their reasonableness and consistency over time, between classes of business and between reports for different purposes.

COMMENTARY

7.8 Provisions for taxation purposes should be calculated on the same basis as that considered reasonable for the provisions in the published accounts. The only variation should be for matters specified in taxation rulings, taxation law or otherwise accepted by the taxation authorities (and based on independent taxation advice).

8. UNCERTAINTY

STANDARD

8.1 It is the Actuary's responsibility to provide a Central Estimate of the Technical Liabilities and to explain the practical consequences of the uncertainty of this estimate.

8.2 The Actuary must take into account the uncertainty associated with the Central Estimate of the Technical Liabilities when providing advice regarding an appropriate Prudential Margin.

8.3 The Actuary must not recommend or support an Outstanding Claims Provision that is less than the Central Estimate of the Outstanding Claims Liabilities.

COMMENTARY

8.4 The Actuary may decide that the total of the Outstanding Claim Liabilities and the Prudential Margins can be calculated by adjusting the assumptions used for the determination of the Central Estimate of those Outstanding Claim Liabilities.

8.5 In many cases, the range of uncertainty will be very large. There are a number of components of uncertainty in regard to the calculations, including:

- the models chosen for analysis and projection,
- past claims fluctuations,
- undetected errors in the data,
- future economic and environmental conditions, and
- future claims fluctuations.

8.6 The assessment of uncertainty will generally require use of one or more of:

- statistical analysis,
- sensitivity analysis,
- analysis of the outcomes of previous calculations,
- analysis of different scenarios and
- judgement.

9. DETERMINATION OF FINANCIAL SOUNDNESS

STANDARD

9.1 On those occasions when the Actuary is required to report only on the Technical Liabilities of an Insurer and not on the Financial Soundness of the Insurer, then the Actuary may disregard the provisions of this Section. If the Actuary is required to report on the Financial Soundness of the Insurer, then compliance with this Section is mandatory.

9.2 When the Actuary is required to comment on the Financial Soundness of an Insurer, an appropriate asset valuation method must be adopted for this purpose.

COMMENTARY

9.3 In the asset valuation calculations, consideration should be given to limiting admissibility for certain assets or asset classes such as:

- outstanding premiums,
- large individual properties,
- material holdings of listed shares and debentures in any one company,

- unlisted shares,
- material holdings of options in any one company, and
- intercompany loans.

STANDARD

9.4 In determining the amount of an Insurer's liabilities for the purpose of assessing Financial Soundness, the Actuary must include Technical Liabilities and non-insurance liabilities.

9.5 When determining the continuing Financial Soundness of an Insurer over a period, the Actuary must consider all relevant aspects including:

- **the expected volume, nature and profitability of new and renewed business, allowing for possible changes in the levels of premiums and costs,**
- **fluctuations in the claims experience, including the effect of inflation,**
- **the suitability and security of the reinsurance arrangements,**
- **the Insurer's ability to withstand adverse deviations, including catastrophe claims,**
- **the value of any guarantees provided to the Insurer,**
- **the allocation of assets and the investment strategies of the Insurer, and**
- **an assessment of the amount of the shareholders' capital and reserves,**

9.6 An Insurer will be considered to have achieved a satisfactory level of Financial Soundness if the Actuary has determined that the probability of ruin for that Insurer is at an acceptably low level.

COMMENTARY

9.7 When assessing Financial Soundness, liabilities should be calculated on a basis that allows for the possibility of adverse experience.

9.8 In determining the satisfactory level of Financial Soundness for an Insurer, the Actuary is required to consider all aspects of the Insurer's business, including those associated with its management and reinsurance arrangements. It should be noted that the above list in Section 9.5 is not exhaustive.

9.9 The Actuary may decide to investigate the Financial Soundness of an Insurer by utilising deterministic or stochastic methods.