



**GUIDANCE NOTE 259
INVESTMENT EARNINGS AND DISCOUNT RATES
UNDER ACTUARIAL STANDARD 1.01**

APPLICATION

Appointed Actuaries of Life Insurance Companies.

LEGISLATION

This Guidance Note ("GN") provides supplementary guidance on the application of Actuarial Standard 1.01 "Valuation of Policy Liabilities" issued by the Life Insurance Actuarial Standards Board (*LIASB*), as updated, amended or replaced from time to time (referred to in this GN as "AS1.01"). This GN is concerned with policy liability valuations that are to be published and provides guidance in relation to the setting of best estimate investment earnings and discount rates.

FIRST ISSUED

September 1999

CLASSIFICATION

While AS 1.01 is not a professional standard of the Institute of Actuaries of Australia, it is a legislative instrument in accordance with Section 101(3) of the Life Insurance Act (1995). This Guidance Note should not be read in any manner which would sanction departure from AS 1.01.

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1. PURPOSE

- 1.1 The purpose of this Guidance Note is to assist actuaries in the valuation of policy liabilities with respect to the selection of investment earnings rate assumptions and discount rates.
- 1.2 Actuarial Standard 1.01 (AS1.01) issued by the Life Insurance Actuarial Standards Board (LIASB) sets out principles for the selection of investment earnings rates and discount rates for the valuation of policy liabilities for the purposes of the Life Insurance Act 1995. The LIASB has also provided various public comments (e.g. via the LIASB Newsletter) on the interpretation and application of AS1.01.
- 1.3 The use of inappropriate methodology for setting investment earnings rates and discount rates can lead to inappropriate volatility in reported profit results and may also result in an inappropriate value of policy liabilities.
- 1.4 In considering the interpretation and application of AS1.01 and LIASB comments, three generic liability structures can be identified:
 - 1.4.1. Those providing benefits related to the experience of supporting assets (eg investment account, unit linked, participating traditional business).
 - 1.4.2. Those providing benefits determined independently of supporting assets but where the asset holdings are relatively large and investment earnings are a fundamental driver of profitability (eg annuities, disability claim reserves, fixed rate insurance bonds, non-participating traditional business).
 - 1.4.3. Those providing benefits determined independently of supporting assets and where the asset holdings are relatively small or where the liabilities are negative and investment earnings are not a material driver of profitability (eg risk business active lives).
- 1.5 Each of these structures is considered in turn below, with each potentially requiring a different approach to setting investment earnings and discount rates.
- 1.6 In addition to investment earnings and discount rates, the importance of other economic variables to the valuation process is also noted and discussed.

2. LIABILITIES FOR BENEFITS RELATED TO ASSET EXPERIENCE

- 2.1 These products can be thought of as essentially “fee” based products. While in some cases there may be a short term asset/liability mismatch with corresponding risk to the company, over the long term the investment performance risk primarily reverts to the policyholder.

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- 2.2 The principal requirement of the investment earnings rate is to project, explicitly or implicitly, the expected fee income on a best estimate basis (for comparison, inter alia, with future expense levels).
 - 2.3 The discount rate must then be consistent with the investment earnings rate assumption and thus maintain an appropriate link between the value of assets and liabilities.
 - 2.4 It is noted that in practice the actual discount rate, provided it is consistent with the investment earnings rate, is often not critical to the policy liability determined. In addition, the actual assets held, which will drive the actual policy benefits provided, are in effect the “matching assets” for the portfolio.
 - 2.5 The AS1.01 approach of deriving the discount rate based on the yields implied by the current asset portfolio is sound in this case. It is also consistent with LIASB publicly stated views on this subject.

3. LIABILITIES FOR BENEFITS INDEPENDENT OF BACKING ASSETS, WITH LARGE ASSET SUPPORT

- 3.1 For these products, the investment performance risk rests with the company. The profit to the company will be substantially affected by the difference between the discount rate reflected in benefits promised and the investment earning rate achieved on the actual investment assets held.
- 3.2 There is a theoretical case for valuing liabilities assuming that matching assets are held, thereby allowing mismatch profits and losses to emerge as they arise.
- 3.3 However, simply adopting a “riskless” discount rate for such a portfolio can also give rise to anomalies. The situation of an annuity portfolio priced on the basis of achieving expected longer term returns above riskless yields, with no short term policyholder withdrawal options, is a case in point. Liabilities determined on the basis of a riskless discount rate would be inconsistent with the AS1.01 principle of “best estimate” and may potentially give rise to unreasonable capitalised losses at point of sale.
- 3.4 Particular care is therefore required in the application of AS1.01 in deriving discount rates for determining liabilities. In determining the average expected investment earnings rate, appropriate allowance needs to be made for credit and default risks, changes in asset mix and the outlook for reinvestment rates.

4. LIABILITIES WITH SMALL ASSET SUPPORT

- 4.1 A particular feature of the products within this structure is that investment performance is not a driver of the profit result, in terms of either interest

margins or the level of future fee income. It is thus anomalous if minor investment market changes can give rise to significant volatility of profit results.

- 4.2 Anomalies can arise in particular where the policy liability is negative. A typical example relates to stepped premium risk business. The negative policy liability relates to the component of the future premiums that funds the Acquisition Expense Recovery Component ("AERC").
- 4.3 Given these issues, particular care is required in determining a discount rate. There can be a range of perspectives that will influence the selection of the discount rate, such as the following:
 - 4.3.1. It is arguable that any change in discount rate is inappropriate as there are little or no real assets involved. There is no "matching asset" to consider for discount rate determination.
 - 4.3.2. An alternative may be to consider a negative liability as an asset of the statutory fund. The appropriate return would be based on the opportunity cost of this "policy" asset being held instead of holding matched assets to back retained profits or other policy liabilities.
- 4.4 Under this second alternative, where the retained profits or policy liabilities are, for example, held in short dated fixed interest securities, the relevant discount rate would be the projected market rate of return on such securities.

It is noted in this context that this projected market rate may well not simply equal the current long term bond rate. The long term average rate should be based on a combination of the current rates on such securities and a reinvestment rate assumption. The best estimate reinvestment rate may be an econometric based forecast which would be expected to show some stability over time and not necessarily respond to all short term economic conditions.

- 4.5 It is also noted that the return on the AERC asset is funded from the policy premiums. Thus any increase in the required investment return on this asset must come at the cost of a reduction in the residual profit margin available. On this basis, some actuaries have treated a change in the required discount rate as a post valuation assumption change. The effect of the change in discount rate is then offset against the profit margin liability (or the AERC is recalculated to maintain its value). However, this approach is not directly supported by AS1.01.

In this , as in all situations, it is the principles of the valuation which are paramount in determining the policy liability. In adopting a particular calculation approach the Actuary needs to be able to demonstrate that the principles have been met.

5. OTHER ECONOMIC VARIABLES

- 5.1 The importance of other economic variables and assumptions is also noted.
- 5.2 It is important that changes in these factors, to the extent that they are linked to projected investment earnings rate and discount rate changes, should be treated consistently in the valuation process.
- 5.3 For example, a change in the basic projected inflation rate assumption, which is consistent with the change in the discount rate adopted, should normally be dealt with together with the change in discount rate. It should thus be applied to the valuation immediately, and not be treated as a “change in assumption” under the re-equating process.
- 5.4 This can be very important in the case of policies with inflation linked premiums and benefits (e.g. certain categories of step premium risk business). Inconsistent treatment of inflation and discount rates can give rise to inappropriate volatility of results.

END OF GUIDANCE NOTE