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# SAP L03



# Introduction

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## 1 Background and Scope

1.1 For the purpose of this document, an Appointed Actuary is defined as a member of the Singapore Actuarial Society (SAS) who is appointed as the Appointed Actuary of any life insurance company registered in Singapore and approved by the Monetary Authority of Singapore (MAS) under section 31 of the Insurance Act.

This document has been prepared as a Standard of Actuarial Practice (SAP) for members of the SAS appointed as appointed actuaries of direct life insurance companies advising on the management of participating fund business.

This SAP governs the conduct and practice of any member who accepts an appointment as an appointed actuary. If a member has any concerns about the operation of this SAP then the issue should be referred to the Council of the Singapore Actuarial Society.

1.2 This SAP is meant to supplement the Insurance (Valuation and Capital) Regulation 2004, MAS Notice 133 - Notice on Valuation and Capital Framework for Insurers and MAS Notice 320 - Management of Participating Life Insurance Business.

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# Grouping of Policies

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2.1.4 The more homogeneous the product groupings are, the lesser is the extent of cross subsidies between policyholders. The Appointed Actuary should consider the need to ensure equitable treatment between classes of policyholders with the practical constraints of having too fine a grouping. The Appointed Actuary may also consider the consistency between the grouping of policies for the purpose of bonus determination and the Homogeneous Risk Grouping(s) (HRGs) used for the computation of C1 requirement under RBC 2.

*The consideration of HRGs in relation to the grouping of policies for bonus determination.*

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# Calculation of Asset Share (1)

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- 2.2.4 An Appointed Actuary may roll forward the asset share at the beginning of the year to the end of the year using actual cash flows that were extracted from the insurer's internal revenue accounts, or use any other equivalent methodology, to derive the asset share as at the end of the year. Examples of these include actual payouts of benefit payments and management expenses incurred for the year. The cash flows are then attributed either directly (for example, the actual benefits paid out for each product grouping) or by means of some drivers or proxies, to each product grouping. In the rolling forward of asset shares, the asset share at beginning of the year should be stable and not subject to re-determination. For practical reasons however, a re-computation of the beginning of year asset share would be allowed for example, due to updates to the data at the end of the previous year which was only known after the finalisation of the previous asset share calculations.

*The asset share at the beginning of year should be stable and robust, and not subject to a re-computation each time the asset shares are rolled forward from the previous period.*

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# Calculation of Asset Share (2)

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- 2.2.6 It is important for an Appointed Actuary to continually look for ways to refine the way in which the asset share is being determined for each product grouping, to ensure equitability and fairness to policyholders and that the calculation method is robust. In particular, the asset share calculations should reflect any constraints imposed by the application of Matching Adjustment. For example, the returns of equities supporting a Matching Adjustment portfolio should only be allocated to products in the Matching Adjustment portfolio.

*The consideration of any Matching Adjustments within the asset share calculations.*

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# Calculation of Asset Share (3)

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- 2.2.7 An Appointed Actuary may adopt different approaches in allowing for the cost of guarantees. For example, the Appointed Actuary may either make an explicit deduction for the cost of guarantees **(subject to policy conditions and treating customers fairly)** in the asset share formula, or allow for the cost of guarantee implicitly by declaring bonuses such that the ratio of the asset share to gross premium reserve is more than 100%, say 105%. In determining the approach to adopt, the Appointed Actuary should have regard to the reasonableness of the explicit deductions or target ratios, the impact on the policyholders of the product group over time, and the overall level of prudence.

*Additional considerations in respect of explicit deductions for the cost of guarantees.*

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# Comparison of Asset Share with GPV

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basis, such as the product grouping's share of the total policy liabilities or calculated asset share. This would give the 'grossed-up' asset share for each product grouping. If an Appointed Actuary is of the view that the calculated asset share of a particular product group is accurately tracked from inception, then discretion may be exercised not to allocate back any proportion of the excess to that particular product grouping. Similar to the rolling forward of asset shares as described in paragraph 2.2.4, the excess of policy assets over the calculated asset shares which had been allocated to a product grouping in previous years should not be reallocated to another product grouping.

*The asset share at the beginning of year should be stable and robust, and not subject to a re-computation each time the asset shares are rolled forward from the previous period.*

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# Non-participating business written into the par fund

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3.2.2 Where such products are written in the participating fund the Appointed Actuary should justify:

- why this is necessary instead of writing them under the non-participating fund;
- how this decision is intended to benefit the participating policyholders;
- under what conditions such products would be removed from the participating fund.

An example of a rider that is appropriate to be written in the participating fund is on an accelerating critical illness product where the benefits from the rider are linked to the benefits of the basic participating policy.

*To avoid doubt, MAS discourages such practice which is carried out without any good reasons especially if it is clear a particular product rightly sits under the Non-Par Fund.*

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# Investment

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- 4.4 In formulating the advice, the Appointed Actuary should take into account the following factors:
- available and authorized asset classes;
  - accounting and other reporting considerations;
  - degree of asset/liability mismatch and the associated hedging strategy (if any);
  - policy terms and conditions, including any embedded options or guarantees;
  - liquidity and credit quality of assets to meet policy claims, particularly in stressed scenarios;
  - credit or counterparty exposure risk;
  - company solvency and financial resources (capital);
  - required returns and discretionary actions available to the company;
  - requirements for the assets needed to maintain or achieve Matching Adjustment status under RBC2, in particular for when the current assets are part of a Matching Adjustment or there is desire to create a Matching Adjustment portfolio; and
  - for assets which are used to support bonuses, any constraints on the allocation of investment returns arising from the inclusion of such assets into a Matching Adjustment portfolio. For example, the portion of returns of equities supporting a Matching Adjustment portfolio should only be allocated to products in the Matching Adjustment portfolio.
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# Appendix

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## Calculation of asset share

Let:

AS[t] = asset share at time t

$i_t$  = actual investment return earned on the participating fund or sub-fund,  
where relevant, during year t

$$\begin{aligned} \text{AS}[\text{end of year}] = & \text{AS}[\text{beginning of year}] * (1 + i_t) + \\ & \{ \text{Premiums received during the year} \\ & - \text{Benefit payments paid during the year} \\ & - \text{Commission paid during the year} \\ & - \text{Expenses (incl. management expenses) incurred during the year} \\ & - \text{Deduction for cost of guarantees*} \\ & - \text{Tax payable during the year} \\ & - \text{Shareholders' transfers during the year} \} * (1 + 0.5 * i_t) \end{aligned}$$

The above formula assumes that the cash flows happen in the middle of the year.

\*Subject to policy conditions and treating customers fairly.

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