ACTUARIAL SOCIETY OF SOUTH AFRICA

APN 303: ADVICE TO SOUTH AFRICAN MEDICAL SCHEMES ON ADEQUACY OF CONTRIBUTIONS

Classification

APN 303 is an Advisory Practice Note (APN) and compliance with it is advisory. APN 303 replaces PGN 303. Where legislation or other documentation refers to PGN 303 it should be interpreted as APN 303.

Abstract

This APN sets out the considerations that pertain to a member of the Society's professional work in assessing the adequacy of medical scheme contribution rates.

Purpose

It is intended to describe a minimum level and quality of actuarial attention that is necessary to certify that contributions are adequate.

Legislation or Authority

Actuarial Society of South Africa Health Care Committee.

Application

Compliance with this APN is advisory for members (Fellows as well as other members) of the Actuarial Society offering advice on contribution rates to medical schemes. This APN also applies to the minimum standards that should be applied in other circumstances, e.g. peer reviews, responding to specific requests from the Registrar of Medical Schemes, budgeting processes and projections.

In order to prevent confusion between a "member" of a medical scheme and a member of the Actuarial Society, the term "actuary" is used in this document to denote a member of the Actuarial Society.

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Status

Version 1: Effective from 1 January 2005
Version 2: Effective from 1 March 2007
Version 3: Effective from 1 September 2011

1 DEFINITIONS

1.1 **Contribution:**

A consideration of money payable by or on behalf of a member to a medical scheme in exchange for medical benefits payable in accordance with the rules of the medical scheme in respect of a particular benefit option.

1.2 **Solvency Ratio:**

The solvency ratio of a medical scheme is defined as the accumulated funds (excluding the revaluation reserve) divided by gross annual contributions in respect of a particular accounting period.

1.3 **REF:**

REF is the abbreviation for Risk Equalisation Fund.

1.4 **DSP:**

DSP is the abbreviation for Designated Service Provider.

2 DATA REQUIREMENTS

2.1 The actuary shall require access to internal and external sources of data. The actuary should determine the relevant sources of data guided by the listing below:

2.2 **Internal data sources:**

- 2.2.1 Claims experience
- 2.2.2 Membership distribution
- 2.2.3 Registered scheme rules
- 2.2.4 Benefit descriptions
- 2.2.5 Communication material
- 2.2.6 Financial statements
- 2.2.7 Statutory returns
- 2.2.8 Administration process
- 2.2.9 Disease management process
- 2.2.10 Scheme history (e.g. recent scheme amalgamations and changes in the employer subsidy policy)
- 2.2.11 Marketing strategy/plan and projections
- 2.2.12 Reinsurance arrangements
- 2.2.13 Administration fee basis
- 2.2.14 Managed care arrangements and fee basis
- 2.2.15 Preferred provider contract(s)
- 2.2.16 DSP contract(s)
- 2.2.17 Brokerage commission structures and contract(s)
- 2.2.18 Emergency evacuation services contract
- 2.2.19 Capitation arrangements
- 2.2.20 Underwriting process
- 2.2.21 Details of Road Accident Fund and other recoveries
- 2.2.22 Other contractual arrangements

2.3 **External data sources:**

- 2.3.1 Details of competitor's products, marketing strategies, failures, successes, etc
- 2.3.2 The Medical Schemes Act and its accompanying Regulations, as amended
- 2.3.3 Circulars released by the Council for Medical Schemes
- 2.3.4 Tariffs (reference prices, provider tariffs)
- 2.3.5 Consumer Price Index

2.4 The required data should be obtained for the previous benefit year, and the current year to date, where available. The actuary should assess any trends and the impact of any changes in the source data described. The actuary should also consider how any of the data sources are likely to change in the future and the impact of these changes (if applicable).

2.5 The actuary should perform reasonability checks on the data; for example:

- 2.5.1 to reconcile data to independent data sources such as financial statements and statutory returns
- 2.5.2 to check consistency between claims data and the scheme benefits and
- 2.5.3 to perform spot checks for impossible/unreasonable values and distributions such as impossible ages or an improbable age profile

3 FACTORS TO CONSIDER

3.1 **Solvency ratio:**

3.1.1 Where the actuary is reviewing the pricing of a new medical scheme option, the actuary should consider the impact of and on existing medical scheme options (if applicable).

3.1.2 The actuary should consider the solvency ratioof the scheme. If a scheme falls below the statutory minimum solvency requirements, the actuary should consider an appropriate reserving strategy to accumulate reserves to the required level as part of the pricing process. This may include a review of an existing funding plan.

3.1.3 Where the scheme has reserves equal to or in excess of the statutory minimum level, the actuary should establish the reserving strategy of the Trustees.

3.1.4 The actuary should consider the assumptions used in the reserving strategy and whether these are reasonable. The actuary should comment on the appropriateness of these assumptions when communicating with the medical scheme (whether in terms of a written report, document, letter or any other form of communication).

3.1.5 The projection of solvency ratios should incorporate expected changes within the scheme, and other factors listed in Section 4 should be considered.

3.2 **Membership:**

3.2.1 The actuary should review the membership distribution per benefit option according to key risk factors such as age, family size, income, occupation, industry, location, ethnicity and disease profile.

3.2.2 The actuary should include provision for increases and decreases in membership as well as the movements between options. These assumptions should consider the marketing strategy of the scheme (in the case of open schemes) or factors affecting the employer (in the case of a restricted membership scheme).

3.2.3 The actuary should provide for the selective effect of the membership movements above.

3.2.4 The actuary should consider the impact of membership movements - between benefit options and for the scheme as a whole – for reasons such as the following:

- 3.2.4.1 Marketing strategy and effects of marketing programme on membership selection/retention;
- 3.2.4.2 The proposed benefits and contributions of each benefit option;
- 3.2.4.3 Level of underwriting;
- 3.2.4.4 Legislative changes.

3.3 **Utilisation:**

3.3.1 The actuary should conduct a detailed analysis of utilisation for each benefit option.

3.3.2 The actuary should consider changes in utilisation as a result of factors such as:

- 3.3.2.1 Benefit changes
- 3.3.2.2 Technology changes
- 3.3.2.3 Changes in medical practices
- 3.3.2.4 Extensions of existing trends
- 3.3.2.5 Changes in medical tariff structures
- 3.3.2.6 Selective effects
- 3.3.2.7 Medical management and managed care arrangements
- 3.3.2.8 Regulatory changes such as prescribed minimum benefits

3.3.2.9 Impact of HIV/AIDS and other industry-wide diseases
3.3.2.10 Changes in disease profile
3.3.2.11 Changes in demographic profile, such as average age and family composition
3.3.2.12 The introduction of a preferred provider or DSP contract

3.4 **Price Inflation:**

3.4.1 The actuary should incorporate the expected impact of changes in claim costs as a result of:
3.4.1.1 Tariff adjustments and the timing thereof
3.4.1.2 Changes in prices of medicines and non-tariff items
3.4.1.3 Contractual arrangements
3.4.1.4 Currency changes

3.4.2 The actuary should consider the pattern of inflation (i.e. annual adjustments vs. uniform increases over the year).

3.5 **Expenses and Allowances:**

3.5.1 The actuary should ensure that adequate provision has been made for expenses. These include:
3.5.1.1 Administration fees and costs
3.5.1.2 Managed care fees
3.5.1.3 Investment charges
3.5.1.4 Audit and other professional fees
3.5.1.5 Regulatory and industry fees
3.5.1.6 Communication costs (where these are not included in the administration contract)
3.5.1.7 Bad debts
3.5.1.8 Marketing fees
3.5.1.9 Brokerage commissions
3.5.1.10 Trustee expenses
3.5.1.11 Principal Officer's fees
3.5.1.12 Other expenses, e.g. consultancy and legal expenses
3.5.1.13 Ex-gratia claims (if not already included in claims information)

3.5.2 The actuary should ensure that the loading is appropriate and whether expenses are of a fixed or variable nature or measured as a percentage of gross or net contributions.

3.6 **Investment and Other Income:**

3.6.1 The actuary should allow for the expected income earned on the scheme's assets.

3.6.2 The investment income estimate should consider the distribution of the scheme's assets between various asset classes.

3.6.3 The extent to which capital gains on the assets will be realised needs to be considered.

3.6.4 The actuary should consider other sources of income, such as third party recoveries, where appropriate.

3.7 **Contingencies:**

3.7.1 The actuary should consider the likely variation in projected claims costs. This will be affected by stochastic and systemic factors. The appropriate level of contingency margin should take into account:

3.7.1.1 Benefit design
3.7.1.2 Scheme size and number of members per benefit option
3.7.1.3 Membership distribution
3.7.1.4 Credibility of claims experience
3.7.1.5 Membership changes
3.7.1.6 Contractual arrangements
3.7.1.7 Whether the scheme is an open scheme or restricted membership scheme
3.7.1.8 Whether the scheme will have reinsurance in the next benefit year
3.7.1.9 Changes in managed care arrangements

3.7.2 The actuary should consider the likely variation in expenses.

3.7.3 The actuary should consider the overall risk exposure, particularly if the scheme is an open scheme. For example, the effects of HIV/AIDS, increase in pensioner ratio, etc.

3.7.4 The actuary should consider the likely impact of current and future changes in legislation and uncertainty in terms thereof.

3.8 **Other loadings:**

3.8.1 The actuary should ensure that pricing is consistent with the reserving strategy of the scheme. This may include a funding programme to achieve or maintain statutory solvency requirements.

3.8.2 The actuary should make appropriate allowance for reinsurance premiums and recoveries including reinsurance profit sharing, where applicable.

3.8.3 The actuary should consider the impact of the REF.

3.9 **Contribution rate structure:**

3.9.1 The actuary should consider the structure of the contribution table. For example,
3.9.1.1 Level of the adult and child rate relative to the principal member rate of a particular benefit option;
3.9.1.2 The relative shape of income-differentiated contributions for a particular benefit option;
3.9.1.3 Structure and percentages specified in 4.9.1.1 and 4.9.1.2 compared to other benefit options of the same medical scheme and competitors.

3.9.2 The actuary should consider how the structure will affect other assumptions. For example:
3.9.2.1 Membership and selective effects;
3.9.2.2 Claims experience and run-off;
3.9.2.3 Variations in type of claims and level of these claims;
3.9.2.4 Solvency forecasts.

3.9.3 Where necessary, the actuary should recommend changes to the structure of the contribution table, providing reasons for doing so and the impact this is likely to have on expected membership, risk profile and financial position of the medical scheme;

3.9.4 The actuary should consider contribution rate structures of competitor schemes and what effect this is likely to have on the proposed structure.

3.10 **Financial projections:**

3.10.1 The actuary should include at least an annual forecast for each benefit option and in aggregate.

3.10.2 The forecast should include contributions, claims (adjusted for seasonal variation) and other expenses. Claims and other expenses could be sub-divided into sub-categories. For example, claims could be sub-divided into in-hospitalisation, chronic medication and day-to-day medical expenses. Each sub-category could be further sub-divided, for example, in-hospitalisation costs could be subdivided into ward fees, theatre fees, medicines, specialists, etc. Each sub-category could also be divided into claims falling within or outside of the Prescribed Minimum Benefits. Expenses could be sub-divided in a similar manner.

3.10.3 The forecast should make appropriate allowance for membership.

3.10.4 The forecast should make suitable allowance for outstanding and incurred but not reported claims.

3.10.5 The forecast should make appropriate allowance for reinsurance, where applicable.

3.10.6 The forecast should include a projection of the solvency ratioof the scheme.

3.10.7 The forecast should include a projection of total investment income.

3.11 **Competitor Products**

3.11.1 The actuary should consider how the scheme's benefits and contributions compare with that of competitor schemes and how it impacts the factors considered above.

3.12 **Sensitivity testing:**

3.12.1 The actuary should identify key assumptions which are subject to variation.

3.12.2 The financial forecasts should include a projection of the underwriting results under a number of scenarios. These could include variations in the assumptions identified such as:

3.12.2.1 Membership changes

3.12.2.2 Claims experience

3.12.2.3 Expenses

3.12.2.4 Medical Inflation

3.12.2.5 Changes in reference prices and other tariffs

3.12.2.6 REF and any related changes

3.12.2.7 Reinsurance structure (including no reinsurance)

3.12.3 An indication of the likelihood of each scenario should be presented

3.12.4 The actuary should include advice on managing the risk of exposure to adverse scenarios.

4 REPORTING REQUIREMENTS

4.1 The report should specify the client and the purpose of the report. The report should also state that it should only be disclosed to other parties in an unabridged format.

4.2 The report should include:

- 4.2.1 Sources of data and outcome of reasonability checks
- 4.2.2 Analysis of data and experience
- 4.2.3 Discussion on the benefit structure
- 4.2.4 Analysis of the current and/or target membership profile
- 4.2.5 Assumptions employed, as well as how each of the major assumptions were derived
- 4.2.6 If pricing is defined to be on a breakeven basis, it should be disclosed explicitly whether this is on the basis of:
  - 4.2.6.1 Current membership
  - 4.2.6.2 Before or after investment income
  - 4.2.6.3 To maintain reserving level in accordance with the specified reserving strategy
- 4.2.7 Discussion on the benefit changes/scenarios considered by the scheme, especially where these were recommended by the actuary
- 4.2.8 Analysis of adequacy and sustainability of contributions
- 4.2.9 Breakdown of contribution increases faced by members. Contribution increase percentages faced by members could be broken into bands, showing the number/proportion of members falling into each band.
- 4.2.10 Impact on solvency
- 4.2.11 Identification of risk areas (sensitivity tests)
- 4.2.12 Disclosure of loadings and how these loadings were derived
- 4.2.13 Actuarial opinion and recommendations
  - 4.2.13.1 Where the contributions decided by the scheme would not result in an adequate level of funding, the actuary needs to highlight that higher than usual contributions or benefit reductions will likely be required in future years.

5 PRICING REVIEW

5.1 The pricing review should be planned so that there is adequate data available and adequate time to consider the actuarial opinion prior to the implementation of the contribution rates.

5.2 The actuary should recommend that a review of the proposed contribution rates be conducted within the first quarter following the implementation of those rates to assess the impact of:

- 5.2.1 Membership changes
- 5.2.2 Claims experience and runoff
- 5.2.3 Effects of introducing a new benefit option
- 5.2.4 Any deviations from assumptions

5.3 The actuary should further recommend that a pricing review is conducted in the event of significant deviation in experience from the assumptions. This might occur during the first quarter after the implementation of new contributions tables.