ACTUARIAL SOCIETY OF SOUTH AFRICA

APN 206: AIDS AND RETIREMENT FUNDING

Classification

APN 206 is an Advisory Practice Note (APN) and compliance with it is advisory. APN 206 replaces PGN 206. Where legislation or other documentation refers to PGN 206 it should be interpreted as APN 206.

Abstract

This advisory practice note discusses how the actuary should take into account the issue of AIDS when performing actuarial valuations on retirement funds.

Purpose

The purpose of this advisory practice note is to ensure that valuation reports and consulting advice comply with the requisite professionalism of ASSA and its members.

Authority

Retirement Matters Committee

Application

Any actuary giving advice or preparing valuation reports where AIDS may impact on the management of financial soundness of the retirement fund.

Author

Retirement Matters Committee, ASSA, January 2004

Status

First Version

Version 1 Effective from March 2004

1. BACKGROUND

1.1. This advisory practice note must be read together with SAP201, and APN 105 (Recommended AIDS Extra Mortality Bases).

1.2 The purpose of APN 105 is to recommend to actuaries in South Africa a basis for determining projected extra AIDS mortality for assured lives. This advisory practice note extends the principles introduced in APN 105 to retirement funds.

2. RETIREMENT FUNDS – THE IMPACT OF AIDS

2.1 Actuaries should consider the impact of HIV/AIDS when valuing a retirement fund.

2.2 Actuaries should consider the impact of HIV/AIDS on issues other than actuarial valuations, for example the effect of AIDS on individual accrued service actuarial liabilities when used as a benefit, and the projection of defined contribution benefits into the future.

2.3 The detailed approach set out below in Section 3 is applicable to large retirement funds where:

2.3.1 there is adequate information available to facilitate modelling the effect of the epidemic on the membership and the associated employee benefit costs; and

2.3.2 the cost of such an approach can be justified.

An approximation should be applied in other circumstances.

3. DETAILED APPROACH TO LARGE RETIREMENT FUNDS

3.1 The ASSA2000 model has been designed to indicate the effect of AIDS on population mortality. For valuation and other retirement funding purposes one is dealing with specific groups which will have different characteristics to the population as a whole. The ASSA2000 select population model was designed for such purpose. Several assumptions have to be made specifically relating to the HIV/AIDS risk within the particular sub-population. Actuaries are required to make judgements on appropriate risk factors for a sub-population.

3.2 The projected extra AIDS mortality for group lives (bases LG2 and HG2 in APN105) should be used as a starting point, together with adjustments for additional risk factors.

3.3 In considering the adjustments that should be made for specific sub-populations, the following should be considered where information is available: gender and age distribution, levels of salaries and incomes, occupation or industry, job grades, geographical distribution, family structures within the group, level of HIV/AIDS education, the outcome of any KAP studies (Knowledge, Attitude, Perceptions), the availability of HIV treatment and medication.

3.4 At present there is not sufficient data generally available to recommend specific adjustments for additional risk factors such as industry and occupation. The actuary should where possible obtain actual HIV prevalence figures from the client or adjust the standard bases (LG2 and HG2) with reference to the experience of similar clients or employees in similar occupations subject to similar HIV/AIDS policies in the workplace.

3.5 In terms of modelling the impact of HIV/AIDS on a retirement fund, the following four factors should also be considered:

- Underwriting
- Benefit design
- Management of disability within the fund and its associated employer
- Demographics/decrements

Note: any modelling should indicate the sensitivity of changes to assumptions. Ideally a range of results should be shown.

Underwriting

3.6 Take into account the practice of the fund: to what extent entry is restricted and whether the policy is expected to be continued.

3.7 If a fund underwrites in respect of HIV/AIDS, then the actuary can assume that HIV/AIDS prevalence would be relatively low at outset for new entrants, but that possible future infection built into assumptions would run its full course.

3.8 Estimates of infection levels for existing staff prior to introduction of underwriting would have to be made.

Benefit design

3.9 Take into account the relation of death and disability benefits to normal member accrued liabilities. The financial impact of HIV/AIDS will depend significantly on the relationship of death and disability benefits to accrued liabilities, especially in respect of young members.

Health and Disability Management

3.10 This will affect the rate at which HIV infection translates into disability and death benefits. For some members there may be a long period of disability before death, and others much shorter.

3.11 The availability of HIV/AIDS disease management programmes to the fund and employer, as well as the way in which disability benefits are managed in the retirement fund, will have a critical impact on when HIV positive members become entitled to benefits. Practices relating to waiting periods, turn-around time for disability benefit applications, accommodation of HIV positive employees in the workplace, and adaptation of work duties for them, should be considered in determining whether it is likely that members will become entitled to disability benefits before death.

Decrements

3.12 It is suggested that valuation assumptions incorporate an additional decrement for AIDS, thus maintaining the normal ill-health and mortality assumptions for non-AIDS claims. The additional decrements would take into account the AIDS sickness rate (a rough rule of thumb is that AIDS sickness sets in typically when the CD4 count falls below 400, though a disability claim may only be admitted later) and its associated mortality. The post-AIDS sickness mortality would be dependent on duration and fund and employer management of the attitude to ill-health benefits, but should, in the absence of anti-retroviral treatment, be generally taken as 50% per year after becoming AIDS sick, with a maximum survival period of 4 years.

3.13 The possible impact of HIV/AIDS on other assumptions, such as withdrawal rates, should be considered and taken into account where relevant.

Cash flow

3.14 It is necessary to project cash flows to estimate the effect of the extra AIDS decrements on the magnitude and timing of outflows. Estimates are necessary of the significance of these on net cash flows, which could have implications for investment policy.

4. DEFINED CONTRIBUTION RETIREMENT FUNDS – THE IMPACT OF AIDS

4.1 Generally defined contribution retirement funds will fall into one of three main categories:

4.2 Category one – the employer pays for the cost of the risk benefits (i.e. death and disability benefits) over and above a fixed contribution rate for retirement benefits:

The actuary should advise the trustees on the likely impact of AIDS on the employer's required contribution rate.

4.3 Category two – the employer pays a fixed total contribution rate for risk benefits and retirement benefits, and the cost of risk benefits is not capped:

The actuary should advise the board of trustees on the likely impact of AIDS on the cost of risk benefits and the resulting contribution available for retirement benefits.

4.4 Category three – the employer pays a fixed total contribution rate for risk benefits and retirement benefits, and the cost of risk benefits is capped:

The actuary should advise the board of trustees on the likely impact of AIDS on the cost of risk benefits and the implications for what benefits can be afforded. There may be the need for a risk reserve to maintain risk benefits while reduced benefits are being discussed with the fund's trustees and members.

Generally this category of defined contribution fund does not need to hold a reserve in respect of any increases in costs, as such increases are being borne by the then generation of members. Therefore the only risk is the additional costs in the period during which additional contributions or reduced benefits are negotiated. The actuary should attempt to actuarially motivate any such reserve, and should take into account the interdependence between various contingencies and other reserve accounts that have been established which could serve the same purpose.

When advising trustees on the setting up of any reserve accounts, the actuary should consider any circulars or regulations issued by the Financial Services Board.

4.5 Any projected values communicated to members should carry appropriate warnings in respect of the possible impact of AIDS on future contribution rates and benefits.

5. SMALLER DEFINED BENEFIT FUNDS – THE IMPACT OF AIDS

5.1 For smaller defined benefit funds, the actuary will need to adopt a pragmatic approach with respect to the adjustments made to decrements and cash flow. Detailed adjustments as outlined in section 3 would not be necessary.

5.2 The actuary should advise the trustees on the likely impact of AIDS on the required contribution rate and/or benefits (as applicable).