

## **PROFESSIONAL STANDARD 402 DETERMINATION OF ACCRUED BENEFITS FOR DEFINED BENEFIT SUPERANNUATION FUNDS**

### **APPLICATION**

1. This standard applies when an actuary is required to determine accrued benefits or the present (or actuarial) value of accrued benefits for a defined benefit superannuation fund. For this purpose a "defined benefit fund" is as defined in the Occupational Superannuation Standards Act (OSSA) or the Superannuation Industry (Supervision) Act (SIS) as appropriate.

### **LEGISLATION AND STANDARDS**

2. Various legislation, accounting standards and actuarial standards require the determination of accrued benefits or the actuarial value of accrued benefits for different purposes. This standard should be applied when determining accrued benefits or the actuarial value of accrued benefits for any purpose. However, in particular circumstances, other Standards or Guidance Notes may require adjustments to be made to the amounts determined using the approach set out in this standard or alternative methods may be required to be used.
3. Relevant actuarial standards and guidance notes which may need to be referred to in particular circumstances include:
  - PS 400 - Investigations of Defined Benefit Superannuation Funds;
  - PS 401 - Summaries of Actuarial Reports on the Financial Condition of Defined Benefit Superannuation Funds;
  - GN 450 - Cost of Death and Disability Benefits;

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- GN 454 - AAS 25 "Accrued Benefits" under Defined Benefit Superannuation Funds;
  - GN 455 - Pre 1 July 1988 Funding Credits;
  - GN 456 - Preparation of Benefit Certificates Required under the Superannuation Guarantee (Administration) Act 1992;
  - GN 459 - Payments from Superannuation Funds to Employers.

## **EFFECTIVE DATE**

4. This standard was first issued in November 1994.

## **TERMINOLOGY**

5. In this standard the terms set out below will be used and will have the meaning described below.

*"accrued benefit"* means:

- in the case of accumulation benefits, the amount to which a member is entitled in particular circumstances, based on contributions made up to the date of determination and assuming that all benefits are fully vested in the member, and
- in the case of defined benefits, the proportion of a prospective benefit entitlement, based on current salary or average salary, which may be considered to have accrued in respect of membership or service completed up to the date of determination.

*"actuarial value of accrued benefits"* means the present value of all *accrued benefits* determined in accordance with actuarial assumptions, including salary projection.

*"membership"* means, except where otherwise specified, the period used to determine benefits as appropriate in the particular circumstances.

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## APPORTIONMENT OF BENEFITS BETWEEN PAST AND FUTURE MEMBERSHIP

6. In some circumstances, for example when determining the Accrued Retirement Benefits ratio as part of an actuarial investigation in accordance with Professional Standard 400, it will only be necessary to calculate the accrued portion of a member's prospective entitlement at a single future date, usually the accrued portion of the normal retirement benefit. In other circumstances, for example when determining the *actuarial value of accrued benefits* for the purpose of AAS 25 reporting (the accounting standard for Financial Reporting by Superannuation Plans), it will be necessary to determine the accrued portion of a member's entitlement at various dates in the future, and in various circumstances, eg on early retirement, death, disablement and resignation, and to place a present value on each of these entitlements taking into account the probability of each potential future entitlement being paid. In either case, the methodology described below should be used to apportion the **amount** of benefit to which a member is entitled in any particular circumstance between past and future *membership*.
7. Note that the apportionment methods specified below will generally only be applied to defined benefits. In the case of accumulation style benefits the *accrued benefit* will usually be determined as the sum of the accumulated contribution account balances held in respect of the member at the date of determination, based on contributions made up to the date of determination only.
8. The relevant report or advice should briefly describe the approach used to apportion benefits between past and future *membership*. If the actuary adopts an approach other than one described in the following sections, then the actuary must describe the approach used and the reason for using it. If the approach used is changed from the approach previously used to determine *accrued benefits*, the report or advice should indicate the reason for making the change and, if material, quantify the effect of the change.

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## Retirement Benefits

9. Accrued retirement benefits would normally be determined using either a proportionate or actual accrual approach.

(a) Actual Accrual Approach

The accrued retirement benefit under the actual accrual approach is:

The product of the accrual percentage applicable to a member, the period of completed *membership* relating to the particular accrual percentage and the member's current salary or final average salary. If there is more than one accrual percentage, then the products are summed to obtain the total accrued retirement benefit for a particular member.

(b) Proportionate Approach

The accrued retirement benefit under the proportionate approach is:

$$\text{Retirement Benefit at Payment Date} \times \frac{\text{Membership to Date of Calculation}}{\text{Membership to Payment Date}}$$

"Payment Date" would be the *Normal Retirement Date* or, when calculating the *actuarial value of accrued benefits*, the retirement date (early or normal) to which benefits are being projected. If there is no single *Normal Retirement Date*, the actuary should, where necessary, choose the most appropriate "*Normal Retirement Date*" for the purpose of the calculation.

An appropriate adjustment may be made where benefits accrue at different rates in respect of different periods of *membership*.

The period of *membership* used for pro-rating would be the period over which the retirement benefit accrues unless the actuary believes that this would not be appropriate. For example, it may be more appropriate to use the period over which the benefit is being funded in some circumstances.

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10. Under either the proportionate or actual accrual approach, *membership* should include an appropriate allowance for membership of any previous fund if assets of the previous fund have been incorporated in the current fund and used to provide defined benefits. The approach used must also be appropriate having regard to the definition of benefits under the governing rules of the fund, in particular the early retirement benefits.
11. For a pension fund, one of the approaches outlined above should be used to determine the members' accrued pension and the accrued retirement benefit should then be determined as the commuted value of that pension, valued at normal retirement date (or an earlier date if appropriate) using assumptions which the actuary considers appropriate in the particular circumstances.

### **Death and Disablement Benefits**

12. As for retirement, there are two frequently used approaches to determining accrued death and disablement benefits.

(a) Accrued Retirement Benefit Approach

The accrued death (or disablement) benefit would be determined to be either:

- (i) the accrued retirement benefit determined in a manner consistent with paragraph 9 above (using the appropriate definition of salary); or
- (ii) the same proportion of the death (or disablement) benefit as the accrued retirement benefit bears to the retirement benefit at normal retirement date.

(b) Proportionate Approach

The accrued death and disablement benefit at time  $t$  under the proportionate approach is:

$$\text{Total Death or Disablement Benefit Payable in year } t \quad \times \quad \frac{\text{Membership to Date of Calculation}}{\text{Membership at end of year } t}$$

“ $t$ ” is the variable for each future year up to the Normal Retirement Date.

An appropriate adjustment may be made where benefits accrue at different rates in respect of different periods of *membership*.

13. For a pension fund, one of the approaches above should be used to determine the accrued death and disablement benefit, based on the lump sum value of the pension using assumptions which the actuary considers appropriate in the particular circumstances.

**Resignation Benefits**

14. In determining accrued resignation benefits, resignation benefits which are based on the accumulation of member or employer contributions with interest should only relate to contributions payable up to the date of determination. Similarly, where resignation benefits are based on a defined benefit (such as a percentage of final average salary for each year of *membership* or vesting into the accrued retirement benefit), the accrued resignation benefit should only relate to *membership* up to the date of determination.
15. There are two approaches which may be used with regard to vesting in determining *accrued benefits* where a vesting scale applies and resignation benefits are being projected into the future.

(a) Vesting Factor at Projected Resignation Date

Under this approach the vesting factor is determined based on membership or service completed at the projected date of resignation.

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(b) Vesting Factor at Date of Calculation

This approach uses the vesting factor based on membership or service up to the date of determination of the *accrued benefit* only.

## **DETERMINATION OF ACTUARIAL VALUE OF ACCRUED BENEFITS**

16. Either as an alternative to, or in addition to, *accrued benefits* the actuary may be required to determine the *actuarial value of accrued benefits*.
17. The *actuarial value of accrued benefits* is the present value of expected future payments, based on projected salaries and other assumptions, arising from *membership* up to the date of determination. The method of apportioning benefits between past and future *membership* should generally be consistent with the methods described in paragraphs 9 to 15 of this standard. Decrements and compound interest discounting should then be applied to determine the present value of these benefits. If current salary is used to determine *accrued benefits*, appropriate allowance for salary averaging should be made when projecting current salary.

## **OTHER LIABILITIES**

18. When determining *accrued benefits*, or the *actuarial value of accrued benefits* for a superannuation fund, the actuary is usually measuring the benefits to which members of the fund are entitled in respect of *membership* completed at the date of determination. In measuring these amounts the actuary will need to consider both the normal fund benefits payable in respect of active members and also other benefit liabilities which may include the following:
- any former members' or dependants' pensions (including allowance for pension increases provided by the governing rules, in accordance with precedent or the intentions of the trustees and/or employer-sponsor),
  - any former members' or dependants' outstanding allocated pension balances,

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- benefits for members past retirement age, but not retired,
  - deferred benefits for former members or dependants, and
  - additional benefits of an accumulation nature held in respect of active or former members.
19. Allowance should be made for any additional liabilities such as those listed in paragraph 18 above in determining total *accrued benefits* and/or the *actuarial value of accrued benefits* in a manner which the actuary believes to be appropriate in the particular circumstances or in accordance with other relevant standards or guidance notes.

## **OTHER ADJUSTMENTS**

20. When determining both *accrued benefits* and the *actuarial value of accrued benefits*, the actuary should consider whether it is appropriate to make adjustments where the vested benefits exceed the *accrued benefits* or *actuarial value of accrued benefits* being measured. This may be done either on an individual member basis or a group basis. The actuary should state in the relevant report or other advice whether such an adjustment has been made and explain the nature of any adjustment.

## **END OF PROFESSIONAL STANDARD 402**



