SUPERANNUATION PRACTICE COMMITTEE

# Technical Paper: Shortfall Limit in Superannuation Prudential Standard 160

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## A. Purpose and status of Technical Paper

1. Superannuation Prudential Standard 160 (Defined Benefit Matters) (SPS 160) deals with a range of matters affecting defined benefit funds. It is expected that any actuary providing advice in respect to a defined benefit fund, or sub-fund, will have a detailed understanding of SPS 160 (and the related Prudential Practice Guide SPG 160 (Defined Benefit Matters) (SPG 160)). This Technical Paper is based on, and refers to, the first versions of SPS 160 and SPG 160, which remain in effect at the date of preparation of this Technical Paper i.e. SPS 160 dated June 2013 and SPG 160 dated November 2013.

2. Guidance on the interpretation of aspects of SPS 160 is provided in SPG 160.

3. SPS 160 requires a Registered Superannuation Entity ("RSE") licensee (that is, a trustee) of a defined benefit fund to set a shortfall limit, and to determine and implement a monitoring process to detect when the fund has, or may have, breached the shortfall limit and/or moved into an unsatisfactory financial position. If the shortfall limit is, or may be, breached, SPS 160 outlines a range of actions that will need to be performed, which may include conducting an actuarial investigation.

4. This Technical Paper was prepared by the Superannuation Practice Committee ("SPC") of the Actuaries Institute ("Institute") and is intended to assist actuaries providing advice to RSE licensees in relation to determining an appropriate shortfall limit. It does not cover the broader requirements placed on actuaries by SPS 160.

5. This Technical Paper does not represent a Professional Standard or Practice Guideline of the Institute.

6. This Technical Paper does not constitute legal advice. Any interpretation or commentary within this Technical Paper regarding specific legislative or regulatory requirements reflects the expectations of the Institute but does not guarantee compliance under applicable legislation or regulations. Accordingly, Members should seek clarification from the relevant regulator and/or seek legal advice in the event they are unsure or require specific guidance regarding their legal or regulatory obligations.

7. Feedback from Institute Members is encouraged and should be forwarded to Paul Shallue of the SPC (paul.shallue@mercer.com).

8. This is the second version of this Technical Paper. The first version was dated June 2013 and was based (inter alia) on a draft of the initial SPG 160. The main updates relate to better reflecting the final wording of the initial (November 2013) version of SPG 160. Paragraph 6 has also been added in accordance with current Institute policy.

## B. The shortfall limit

9. The shortfall limit is defined in paragraph 10 of SPS 160 as:

> "… the extent to which an RSE licensee considers that a fund can be in an unsatisfactory financial position with the RSE licensee still being able to reasonably expect that, because of corrections to temporary negative market fluctuations in the value of fund assets, the fund can be restored to a satisfactory financial position within one year."

10. An unsatisfactory financial position is defined in paragraph 8 of SPS 160 as the situation where the assets of the defined benefit fund, or sub-fund, excluding the Operational Risk Financial Requirement ("ORFR"), is "not adequate to cover the liabilities of the fund or sub-fund in respect of the benefits vested in members of the fund or sub-fund".

11. Consistent with paragraph 12 of SPS 160, paragraph 19 of SPG 160 states that Reporting Standard SRS 160.0 (Defined Benefit Matters) ("SRS 160.0") sets out how the shortfall limit is to be calculated and expressed:

> "Reporting Standard SRS 160.0 Defined Benefit Matters sets out how the shortfall limit approved by the Board is to be calculated and expressed. The limit is the ratio of 'net assets available for member benefits (net of ORFR reserves) of defined benefit interests' to 'defined benefit interests in vested benefits' determined by the Board of the RSE licensee to be the shortfall limit within the meaning given in SPS 160, and designated as a percentage to one decimal place. If a defined benefit interest includes an accumulation

> component, it is acceptable to calculate and express the shortfall limit in terms of the defined benefit component of the defined benefit interest."

12. Accordingly the shortfall limit essentially represents a specified level of the defined benefit Vested Benefit Index ("VBI"), expressed as a percentage to one decimal place e.g. 97.0%.

13. While paragraph 19 of SPG 160 provides some flexibility, usual practice is for the shortfall limit to be determined in respect of the defined benefit component of a defined benefit member's benefit entitlement (that is, the defined benefit interest, excluding any purely accumulation add-on benefits).

14. Paragraph 22 of SPG 160 could be read as suggesting that a shortfall limit may be set above 100%, to provide a funding buffer in excess of vested benefits. Given the definition of the shortfall limit (see paragraph 9 above), the SPC's understanding is that a shortfall limit cannot exceed 100%, as a fund breaching a shortfall limit that is higher than 100% would not necessarily be in an unsatisfactory financial position. This does not, though, prevent a trustee establishing, or an actuary advising a trustee on the establishment of, a funding target that exceeds a VBI of 100%, to provide a funding buffer in excess of vested benefits as referred to in paragraph 22 of SPG 160 and with action determined by the trustee to be taken if the funding level falls below the target, even where the shortfall limit is not breached and no action is required by SPS 160.

## C. Interpretation

15. There are a number of aspects of the definition of shortfall limit that are open to interpretation – for example, the meaning of phrases such as "reasonably expect" and "temporary negative market fluctuations".

16. In relation to the intent of the shortfall limit requirements and the issue of temporary market fluctuations, guidance in SPG 160 paragraph 17 states:

> "The effect of market volatility on asset values may cause a fund to move in and out of an unsatisfactory financial position on a short term basis. The requirement for a shortfall limit in SPS 160 allows for some fluctuation in the value of fund assets without automatically triggering the need for a restoration plan in the period between regular investigations. The intent of the requirement is to avoid the need for additional and perhaps unnecessary remedial action between regular investigations when a shortfall caused by market volatility is not material in the fund circumstances and it could be reasonably expected that the financial position would recover within a short period without intervention. In APRA's view, an immaterial fluctuation due to market volatility could be for a period of several months, but is more likely to be a period of days or weeks."

17. Both SPS 160 and SPG 160 indicate that the shortfall limit is to be established principally by reference to volatility of investment returns. Whether or not the shortfall limit is breached, of course, will also be affected by factors other than investment returns (for example, the level and adequacy of contributions, salary increases and (potentially) aspects of the fund's benefit design such as where members become entitled to salary-related defined benefits only on reaching a certain age and/or service threshold etc).

18. The final sentence in paragraph 20 of SPG 160 suggests that a trustee should also, when setting a shortfall limit, assess the financial strength of an employer sponsor and their willingness and capability to pay contributions in accordance with the actuary's recommendations to meet the shortfall. The SPC's view is that the shortfall limit recommendation made by the actuary should reflect investment return volatility alone, and not the assessment mentioned in this paragraph. However, the actuary should point out to the trustee the guidance in this paragraph, as the trustee may wish to adjust the shortfall limit recommended by the actuary to reflect the assessment suggested in this paragraph of SPG 160.

19. The SPC's view is that there is no single or obvious methodology that must be applied to determine a shortfall limit. Key factors for actuaries to take into account in advising trustees on shortfall limits include:

    - the investment strategy:

      The expected volatility of investment returns is typically a function of the proportion of the fund's defined benefit assets invested in growth-oriented investments (for example, shares and property). In general, the higher the allocation to growth-oriented assets, the greater the expected volatility of investment returns.

      Hence, all other things being equal, a fund with a higher allocation to growth-oriented assets would be expected to have a lower shortfall limit (for example, say, a VBI of 95.0%) than the shortfall limit of an "equivalent" fund with a lower allocation to growth-oriented assets (being, say, a VBI of 98.0%).

    - the defined benefit component of the vested benefit design:

      Defined benefit funds may have benefit designs that are purely defined benefit in nature (where the vested benefits are not influenced by investment returns) or benefit designs where vested benefits may be either the greater of a defined benefit and an accumulation benefit, or accumulation in nature up to a certain age or service threshold. A fund with a pure defined benefit vested benefit design would be expected to experience greater volatility in its VBI position compared to a defined benefit fund that has accumulation elements (the value of which is linked to the fund's actual investment returns) in its vested benefit design.

Hence, all other things being equal, a fund with a pure defined benefit design would be expected to have a lower shortfall limit (for example, say, a VBI of 95.0%) than the shortfall limit of an "equivalent" fund with a benefit design that has both defined benefit and accumulation components (being, say, a VBI of 98.0%).

- the relationship between the vested benefits and the minimum requisite benefits:

  A defined benefit fund's solvency is measured by the coverage of its minimum requisite benefits by its net assets. Paragraph 11 of SPS 160 requires that the shortfall limit must not be such that a fund could become technically insolvent before the shortfall limit is breached. Hence the nature of the minimum requisite benefits, and their relationship to the vested benefits, need to be taken into account in setting the shortfall limit.

20. SPG 160, in paragraph 20, identifies some other factors that may be considered when setting the shortfall limit.

## D. Potential shortfall limits

21. Potential methodologies for determining the shortfall limit may include:

- using the expected return and volatility characteristics of the investment strategy to make an assessment of the probability of achieving a required return over a time period of up to one year (based on the definition of shortfall limit in paragraph 10 of SPS 160). Adoption of a shortfall limit of less than 100% is likely to require acceptance of a probability of achieving the required return in the range of 30% to 50%;

- examining the volatility of investment returns for a relevant investment strategy over short time periods, to make an assessment of the likelihood of the recovery of any negative returns over a reasonable time period (up to one year).

22. Modelling work undertaken by several actuaries involved in the SPC when SPS 160 was first introduced indicated that, for a defined benefit fund with purely defined benefit vested benefits, shortfall limits of the following order may be reasonable:

| Growth oriented investments* | Shortfall Limit |
|---|---|
| 85% or more | 96.0% |
| 65% to 84% | 97.0% |
| 35% to 64% | 98.0% |
| 10% to 34% | 99.0% |
| 9% or less | 100.0% |

* Typically equities, property and return seeking alternative investments.

23. The above modelling does not take into account the fund's solvency position. As required by paragraph 11 of SPS 160, the shortfall limit must be set at a level at which minimum requisite benefits would at least be 100% covered.

24. The results in paragraph 22 are provided for members' information, not as recommendations. Members may use these results in advising on shortfall limits, as long as they have considered the specific circumstances of the fund, and have made any adjustments required for each fund's circumstances (for example, the extent to which vested benefits are linked to investment returns, having regard to minimum requisite benefits etc) but are not compelled to do so. It is quite possible that shortfall limits different from those indicated in paragraph 21 may reasonably be produced depending upon the circumstances of the fund and the methodologies employed.

## END OF TECHNICAL PAPER