



Society of Actuaries in Ireland

Actuarial Standard of Practice PEN-4 Funding Proposals and Actuarial Statements (where a Funding Proposal is in place) under the Pensions Act 1990

Classification

Mandatory

MEMBERS ARE REMINDED THAT THEY MUST ALWAYS COMPLY WITH THE CODE OF PROFESSIONAL CONDUCT AND THAT ACTUARIAL STANDARDS OF PRACTICE IMPOSE ADDITIONAL REQUIREMENTS UNDER SPECIFIC CIRCUMSTANCES.

Legislation or Authority

The Pensions Act 1990 together with Regulations issued from time to time under the *Act*.

Statutory Guidance issued by the Pensions Authority and prescribed by the Minister for Social Protection under the Occupational Pension Schemes (Funding Standard) Regulations 1993 to 2021 (as amended or replaced).

Application

Any Scheme Actuary responsible for:

- (a) certifying that a Funding Proposal being submitted to the Pensions Authority meets the requirements set out in the *Act*, or
- (b) preparing a statement for a scheme annual report under section 55(4) of the *Act*.

Version	Effective from
1.0	01.06.1995
2.0	15.07.2003
3.0	01.10.2004
4.0	21.12.2005
4.1	30.12.2006
4.2	01.07.2008
4.3	01.04.2010
4.4	01.11.2010
4.5	01.07.2011
5.0	01.01.2013
5.1	01.03.2015
5.2	09.08.2022

Definitions

Words in italics in this Actuarial Standard of Practice shall be construed in accordance with the following definitions:

Act: The Pensions Act 1990 (as amended).

ASP: Actuarial Standard of Practice issued by the Society of Actuaries in Ireland.

Member: A member of the Society of Actuaries in Ireland.

Risk-free Rate: means the gross redemption yield, of appropriate duration, of either a AAA Eurozone government bond index, or the Eurozone swap curve.

Society: The Society of Actuaries in Ireland.

Statutory Guidance: Guidance issued by the Pensions Authority and prescribed by the Minister for Social Protection under the Occupational Pension Schemes (Funding Standard) Regulations 1993 to 2021 (as amended or replaced).

Where the context requires, “should” is used to indicate that *members* to whom this *ASP* applies must comply with a particular requirement or prohibition, unless the circumstances are such that the requirement or prohibition is inappropriate or disproportionate and non-compliance is consistent with the standards of behaviour, integrity, competence and professional judgement which other *members* or the public might reasonably expect of a *member*.

1 Introduction

- 1.1 This *ASP* is the “applicable professional guidance issued by the Society of Actuaries in Ireland and specified in the regulations” referred to in section 49(2A) of the *Act*.
- 1.2 It is essential that the Scheme Actuary keeps informed on amendments to the *Act* as well as the Regulations pursuant to the *Act* and any amendments thereof as may occur from time to time. This *ASP* does not contain the full text of the relevant sections of the *Act* and does not give any interpretation of them. The Scheme Actuary must be satisfied that they have acted in accordance with the legislation as well as this *ASP*.
- 1.3 The Scheme Actuary in completing a Funding Proposal or Actuarial Statement (where a Funding Proposal is in place) must comply with this *ASP* or “with any other applicable guidance issued by any other person (including the Minister) and specified in the regulations.” It is essential that the Scheme Actuary keeps fully informed on any such additional applicable guidance including *Statutory Guidance*.
- 1.4 The requirements of *Statutory Guidance* are in addition to those outlined in this *ASP* and, in the event of any conflict, *Statutory Guidance* shall prevail.

2 General

- 2.1 Only an actuary who holds a Scheme Actuary Practising Certificate issued by the *Society* may certify that a Funding Proposal meets the requirements of the *Act*. Each Scheme Actuary, before certifying that a Funding Proposal meets the requirements of the *Act*, must consider whether their experience is sufficient in the light of the circumstances pertaining at the time of certification. If there is any doubt, the Scheme Actuary must seek help from another Scheme Actuary with relevant experience or from the *Society's* Head of Actuarial Practice.
- 2.2 This *ASP* sets out the issues that must be addressed by the Scheme Actuary in certifying a Funding Proposal, including the considerations to be taken into account in the interpretation of the words "could reasonably be expected".
- 2.3 The Scheme Actuary must take particular care to notify the trustees and the employer of the key assumptions made and, in particular, of the factors to which the Funding Proposal is especially sensitive. The trustees and the employer must also be made aware of the need to obtain further advice if actual experience is out of line with the Scheme Actuary's assumptions in those key areas.
- 2.4 In certifying that a Funding Proposal satisfies the requirements of the *Act*, the Scheme Actuary must comply with *ASP* PEN-3 issued by the *Society*.
- 2.5 The Scheme Actuary must consider the likely experience of the scheme in the period between the effective date of the Funding Proposal and the intended effective date of the next Actuarial Funding Certificate and Funding Standard Reserve Certificate or, where applicable, any later date specified under section 49(3) or 49(3B) of the *Act*, in light of the requirement provided for in Section 55(4) of the *Act*.

3 Certification of the Funding Proposal

- 3.1 In certifying that a Funding Proposal meets the requirements of the *Act*, the Scheme Actuary certifies that, in their opinion, the scheme could reasonably be expected to satisfy the Funding Standard and the Funding Standard Reserve at the intended effective date of the next Actuarial Funding Certificate and Funding Standard Reserve Certificate or, where applicable, any later date specified under section 49(3) or 49(3B) of the *Act*. That date must be stated.
- 3.2 In certifying a Funding Proposal, the Scheme Actuary must include a statement to the effect that it has been prepared on the basis that the legislation governing the Funding Standard will not change in the period between the date of certifying the Funding Proposal and the intended effective date of the next Actuarial Funding Certificate and Funding Standard Reserve Certificate or, where applicable, any later date specified under section 49(3) or 49(3B) of the *Act*.
- 3.3 It would normally be appropriate to undertake a full actuarial valuation in order that the Scheme Actuary can certify the Funding Proposal. There may be circumstances where this is not necessary and the Scheme Actuary should exercise judgement on the approach that is necessary in the circumstances. The Scheme Actuary should disclose the approach adopted in certifying the Funding Proposal – whether a full valuation was performed and what adjustments were made, if any, to the data to project it to the effective date of the Funding Proposal.

- 3.4 The Scheme Actuary must set out the key assumptions on which their opinion is based. This disclosure must contain sufficient detail to allow an informed reader to form a judgement as to the appropriateness of the assumptions employed. Without prejudice to the generality of this requirement, the Scheme Actuary must disclose the following:
- (a) The assumed rate(s) of investment return used to project the asset value and any adjustment for expenses, having regard to the trustees' expected investment policy over the period of the Funding Proposal;
 - (b) The assumed rates of salary, state pension and scheme pension increases, if applicable, used to project the benefits;
 - (c) The assumed rates of mortality and any allowance for future improvements therein, and the discount rate or the annuity rates used to project the value of pension benefits;
 - (d) The allowance for options, such as commutation, which could have a significant impact on the liabilities;
 - (e) The assumed rates of change in the membership, including leavers and retirements and any allowance for new entrants.
 - (f) The assumed change in bond yields, if any, over the period of the Funding Proposal.
 - (g) The assumed approach in relation to any discretionary practices that may have a significant impact on the liabilities (for example, the granting of discretionary pension increases or the granting of early retirement options requiring the consent of either the trustees or the employer) over the period of the Funding Proposal. The Scheme Actuary must confirm what, if any, agreements have been reached with those in whom the power to exercise the relevant discretions are vested.
 - (h) The assumed characteristics of the assets for the purposes of determining the Funding Standard Reserve at the end of the Funding Proposal. In particular:
 - (i) The percentage of the assets assumed to be Qualifying Assets for the purposes of the Funding Standard Reserve (per section 44(2)(a) of the Act);
 - (ii) The assumed sensitivity of the assets to movements in interest rates (per section 44(2)(b) of the Act).

The Scheme Actuary must clearly state the rate(s) and/or amount(s) of contribution that should be paid to the scheme over the period of the Funding Proposal, the relevant earnings to which any such rate(s) should be applied (if appropriate) and the timing/frequency of contribution payments.

- 3.5 The Scheme Actuary must comment on the sensitivity of the scheme's funding position over the period of the Funding Proposal. Such comments should cover the assumptions to which the funding position is most sensitive and must include the following:
- (a) Future investment market changes – having particular regard to the relationship between the assets held and the form and incidence of the liabilities, seeking to convey a reasonable understanding of the nature and extent of the investment risk.
 - (b) Where the Scheme Actuary has assumed that bond yields will increase over the period of the Funding Proposal, the potential impact if actual experience does not reflect this assumption.
 - (c) The Scheme Actuary must comment on the potential impact on the funding position if actual practice in relation to discretionary practices deviates from the assumed approach. The Scheme Actuary must also comment on the potential impact of any early retirement or other options which do not require the consent of the trustees or the employer.
- 3.6 If part of the assets of the scheme to be taken into account for the purpose of meeting the Funding Standard take the form of contingent assets – as defined in *Statutory Guidance* published by the Pensions Authority - the Scheme Actuary must comply with the relevant *Statutory Guidance*. Given that contingent assets may only be in place for a fixed period, the Scheme Actuary must carefully consider whether it is appropriate to take account of such assets as well as the impact their inclusion may have on the funding position over the term of the Funding Proposal.
- 3.7 If part of the assets of the scheme to be taken into account for the purpose of meeting the Funding Standard Reserve take the form of an Employer Undertaking, as defined in *Statutory Guidance* issued by the Pensions Authority, the Scheme Actuary must comply with the relevant *Statutory Guidance*.

4. Actuarial Statements where a Funding Proposal is in place

- 4.1 Section 55 of the *Act* requires that an Actuarial Statement be included in the trustees' annual report in specified circumstances.

The form of Actuarial Statement will attest as to whether the Scheme Actuary is reasonably satisfied that, at the last day of the period to which the trustees' annual report relates, the scheme will satisfy the Funding Standard and Funding Standard Reserve at the effective date of the next Actuarial Funding Certificate and Funding Standard Reserve Certificate or, where applicable, any later date specified under section 49(3) or 49(3B) of the *Act*. In giving this opinion, the Scheme Actuary should have regard to legislation, regulations, Pensions Authority guidance and *ASPs* in force at the last day of the period to which the trustees' annual report relates.

- 4.2 It is not required that a full actuarial valuation be undertaken in order that the Scheme Actuary can sign the Actuarial Statement. Approximate projections may be used based on previous funding calculations for the scheme.

The Scheme Actuary must decide in the light of the funding level at the previous valuation and prevailing conditions, together with those experienced since the previous calculations, as to whether an approximate projection or a full valuation is appropriate.

- 4.3 In deciding whether to use approximate projections or not, the Scheme Actuary should take into account that, even with very stable financial conditions ruling over the period of projection, the value of liabilities in respect of active and deferred members can rise rapidly and that the value of pension liabilities can rise as well as fall depending on the nature of the pension payments, on mortality experience and on annuity rates.
- 4.4 The Scheme Actuary should satisfy themselves that the value of the assets represents their true value (usually they will have been audited or can be verified from statements from investment managers). Adjustments should then be made, if necessary, to reflect the estimated distributable proceeds on an orderly wind-up of the scheme commencing on the effective date. In determining whether an adjustment is necessary, it would normally be acceptable to rely upon the bid value provided by the appropriate party (e.g. investment manager). Where the Scheme Actuary is aware that additional adjustments are warranted, this should also be taken into account.
- 4.5 The Scheme Actuary should be aware that there are certain circumstances as set out in *Statutory Guidance* and guidelines issued by the Pensions Authority in which there is a negative Actuarial Statement but where the Trustees may not be required to submit a Funding Proposal under Section 49.

5. Considerations

- 5.1 Attention is drawn to the following particular considerations (this list should not be taken to be exhaustive).
 - 5.1.1 The meaning which the Scheme Actuary attaches to the words 'could reasonably be expected' must comprehend a view of future events that is not more optimistic than best estimate, taking into account the considerations surrounding the certification of a Funding Proposal including, in particular, those set out below, but not taking into account every conceivable unfavourable development. The Scheme Actuary should be conscious that an excessively cautious approach could result in an unnecessary reduction in benefits. 'Events' includes events external to the scheme, e.g. economic and financial developments.
 - 5.1.2 The actuarial assumptions used by the Scheme Actuary for the purpose of the Funding Proposal must be determined by reference to the Appendix to this *ASP* and to *Statutory Guidance* issued by the Pensions Authority. In interpreting the limits prescribed, the Scheme Actuary must bear in mind that in aggregate the basis must be no more favourable than a best estimate of future events. It would be highly unlikely to be appropriate to set each element of the basis at the most optimistic level allowed.

The prescribed limits set out in the Appendix will be reviewed by the *Society* periodically to take account of changing economic circumstances, and the Scheme Actuary must also take account of any revisions to *Statutory Guidance*.

- 5.1.3 The *Act* places the responsibility on the trustees of a scheme for submitting an Actuarial Funding Certificate and Funding Standard Reserve Certificate to the Pensions Authority and, as a consequence, the trustees must decide on the effective date of each Certificate within the requirements of the *Act*. Given that the Funding Proposal is designed to relate to the position at the date of the next Actuarial Funding Certificate and Funding Standard Reserve Certificate (or, where applicable, any later date specified by the Pensions Authority), the Scheme Actuary must discuss with the trustees the intended effective date of the next Certificates prior to preparing a Funding Proposal.
- 5.1.4 The Actuarial Funding Certificate and Funding Standard Reserve Certificate relate to the position in the event of the winding up of the scheme, so that in certifying a Funding Proposal the Scheme Actuary must have particular regard to the priority rule and to the effects on priority of the following:
- (a) Certain benefits will naturally advance in priority during the period of a Funding Proposal, e.g. on a retirement, the pension coming into payment under the scheme is advanced in priority over the corresponding previously held statutory preserved benefit. Also, increases in the amounts of benefits arising from increases in earnings or increases in pensions in payment and deferred pensions must be taken into account.
 - (b) When a winding-up occurs, some scheme members might well have options which they would otherwise have no occasion to take or exercise. Included here might be a unilateral right to immediate early retirement pensions on wind-up or an option which is only available subject to the consent of the trustees or employer. In this context, the definition of normal pensionable age as contained in the *Act* must be carefully noted.

If the Scheme Actuary is in any doubt as to the interpretation of the winding-up rule (or any other relevant rules) of the scheme, appropriate advice must be sought before the Funding Proposal is certified.

- 5.1.5 (a) The Scheme Actuary must make appropriate enquiries to be satisfied that they have been supplied with all the relevant data and information to enable them to certify the Funding Proposal.
- (b) In addition, the Scheme Actuary must make appropriate enquiries to be satisfied that they have been supplied with information concerning changes likely to materialise in future, in any aspect of the scheme that may affect its ability to satisfy the Funding Standard at the intended effective date of the next Actuarial Funding Certificate and Funding Standard Reserve Certificate (or, where applicable, any later date specified under section 49(3) or 49(3B) of the *Act*). Those could include (this list is not necessarily exhaustive):

- (i) Any change in the rules of the scheme affecting contribution or benefit levels or the degree of priority accorded to benefits in the event of the winding up of the scheme;
- (ii) Any change in the definition of pensionable earnings and any unexpected change in the general remuneration levels of scheme members, any group of scheme members or any individual scheme member which causes the scheme liabilities to be materially affected;
- (iii) Any increase or decrease in the number of members or pensioners resulting, for example, from the acquisition or sale of participating companies, through early retirement, or the closure of the scheme to new entrants;
- (iv) Any discretionary augmentations of benefits on early, normal or late retirement or on the death of a member;
- (v) Any discretionary increase to pensions in payment and/or deferred pensions;
- (vi) Any material change in investment policy.

The Scheme Actuary need not allow for possible changes which are not currently envisaged by the trustees or employer and which would not be in keeping with recent experience.

Appendix Actuarial assumptions used for the purpose of Funding Proposals

Projecting the fund value

1. The assumed rate of investment return should be no greater than the Scheme Actuary's best estimate of the return which can reasonably be expected on the assets of the scheme but should not exceed the limits set out below. The assumed rate of investment return is also subject to the maximum limits specified in *Statutory Guidance*.
2. The Scheme Actuary may set either a composite assumed rate of investment return for the assets as a whole or specific rates for the principal asset classes.
3. The assumed rate of investment return should reflect the nature and likely distribution of the assets of the scheme over the period in question. In particular, it may be reasonable to base the expected return on:
 - (i) the current asset distribution
 - (ii) the long term benchmark distribution as determined by the trustees, or
 - (iii) another distribution, provided that the Scheme Actuary is satisfied that this reflects the investment policy that the trustees will pursue.
4. The assumed rates of investment return on the various investment classes and on the fund as a whole must not exceed the following limits:
 - (i) The assumed rate of return for government bonds must reflect the actual gross redemption yield on such bonds or the yield on a government bond index of appropriate duration relative to the bonds held or the benchmark for the fund subject to adjustment to reflect possible risk of default where the bonds held are not investment grade.
 - (ii) The assumed rate of return for corporate bonds must reflect the gross redemption yield on a corporate bond index of an appropriate duration relative to the bonds held or the benchmark for the fund subject to adjustment to reflect possible risk of default where the bonds held are not investment grade.
 - (iii) The assumed rate of return on investments held under liability-driven investment (LDI) strategies must reflect the actual net yield on the underlying swap contracts or other instruments used.
 - (iv) The Scheme Actuary may assume that the rate of return on equity investments will exceed that available on fixed interest investments. In considering the extent of equity outperformance, the Scheme Actuary may take into account historic norms together with the prevailing level of markets. The assumed return on equities must not exceed the *Risk-free Rate* plus 5.0% per annum.

- (v) The Scheme Actuary may assume that the return on property investments will exceed that available on fixed interest investments. In considering the extent of property outperformance, the Scheme Actuary may take into account historic norms together with the prevailing level of markets. The assumed return on property must not exceed the *Risk-free Rate* plus 4.0% per annum.
- (vi) The assumed rate of return on cash investments must reflect the Scheme Actuary's expectation of deposit rates and must be consistent with the *Risk-free Rate*.
- (vii) The assumed rate of return on alternative assets must reflect the return on cash investments unless the Scheme Actuary has sufficient reason and evidence to adopt a different rate of return. If a higher return than that on cash investments is chosen, the risk premium must be commensurate with the level of risk associated with the alternative assets, subject to the provision that the rate of return chosen must not exceed the *Risk-free Rate* by more than 5.0% p.a.

For this purpose, "*alternative assets*" mean assets or funds where returns are generated through investing in non-traditional assets classes (such as private equity, infrastructure and commodities) and funds which typically target absolute returns (i.e. returns in excess of cash) through the use of various asset classes, investment techniques and derivative instruments (e.g. hedge funds, active currency funds and market neutral equity funds); and "*alternative assets*" exclude other assets or funds referred to elsewhere in this section 4 of the Appendix.

- (viii) The assumed rate of return for other asset classes must be consistent with the principles set out above.
 - (ix) Regardless of the assumed distribution of the assets, the Scheme Actuary must not assume that the rate of return on the fund as a whole will exceed the *Risk-free Rate* by more than 4.0% p.a.
 - (x) The above limits apply before any allowance is made for investment expenses. The Scheme Actuary must reduce the assumed gross rates to reflect anticipated investment expenses.
5. In projecting the fund value over time, the Scheme Actuary must take account of the amount and timing of contributions paid to and benefits, expenses and taxes paid from the fund. Where cashflows are expected to be reasonably uniform, the Scheme Actuary may assume an appropriate weighted average.

Projecting the liabilities

- 6. In determining the value of the liabilities of the scheme at a future date, the Scheme Actuary must have regard to the principles of ASP PEN-2 and ASP PEN-3 as currently constituted.
- 7. The value of liabilities at a future date will depend on the prevailing yields on long dated bonds at the effective date of that valuation. It is reasonable for the Scheme Actuary to assume that

these yields will remain unaltered between the effective date of the Funding Proposal and the effective date(s) of the future valuation(s).

8. Alternatively, it may be appropriate for the Scheme Actuary to assume that a different rate or rates will apply over the period, provided that the alternative rate(s) can be justified either by examination of the yield curve for the euro denominated bond market as a whole or by reference to historic norms, and provided further that:
 - (i) In no circumstances may yields be expected to increase by more than 1.5% p.a.
 - (ii) Where a yield other than the current yield is adopted, the Scheme Actuary must make appropriate adjustments to the assumed future rates of price and wage inflation and investment return.
 - (iii) The Scheme Actuary may assume that different yields may increase at different levels.
 - (iv) Any assumed increase in yields must be phased over a period of not less than five years.
9. In extrapolating the liabilities from the effective date of the Funding Proposal to the effective date of the future valuation:
 - (i) The assumed future rate of price inflation should reflect the Scheme Actuary's best estimate of prevailing levels.
 - (ii) The assumed rate of future salary inflation should reflect price inflation, together with a further allowance for general productivity or promotional increases, or alternatively the employer's expectation as appropriate. In particular, where the employer participates in a national pay agreement, the rate of salary inflation should reflect the terms of that agreement. Equally, if an employer has implemented a pay freeze or pay reduction, the Scheme Actuary may take this into account; however, the Scheme Actuary should consider the possibility of exceptional salary increases at the end of a pay freeze or pay reduction.
 - (iii) The Scheme Actuary must take account of the impact of advances in priority occasioned by the retirement of members during the projection period. The Scheme Actuary may assume levels of commutation consistent with the scheme's experience.
 - (iv) Unless the Scheme Actuary has reason to believe otherwise, it may be assumed that leavers will be replaced by new entrants. However, where the Scheme Actuary is aware of a significant event, such as an acquisition or redundancy/early retirement programme or scheme closure, account should be taken of the expected impact of these events.
 - (v) The Scheme Actuary should make an appropriate allowance for expected future improvements in mortality for the purposes of projecting the liability value at the end of the period.

Material changes between the effective date of the Funding Proposal and the date of certification

10. The Scheme Actuary must be satisfied at the date of certification that the Funding Proposal is on-track to meet its objective at the date of certification, having taken account of

- (i) changes in legislation, regulations, Pensions Authority guidance or *ASPs* and
- (ii) material changes in the value of the assets and/or the liabilities

between the effective date of the Funding Proposal and the date of certification.

In considering the impact of a change in the value of the assets, the Scheme Actuary should take account not only of the change in the value of assets but also any corresponding change in the assumed future rate of investment return, subject to the maximum rates of return permitted under this *ASP*.

EXPLANATORY NOTE

ACTUARIAL STANDARD OF PRACTICE PEN-4, VERSION 5.2

This Explanatory Note does not form part of the ASP.

This ASP applies to Funding Proposals certified by a Scheme Actuary on or after 9 August 2022, and also applies to actuarial statements (where a Funding Proposal is in place) with an effective date on or after 9 August 2022. Funding Proposals certified before 9 August 2022, or actuarial statements (where a Funding Proposal is in place) with an effective date prior to 9 August 2022 should be prepared in accordance with version 5.1 (effective 01.03.2015)

The changes from the previous version (5.1) are as follows:

- In a number of places, the wording has been amended to make requirements clearer, to reflect updated legislative requirements or to adopt gender-neutral language.
- Section 4.4 requires the Scheme Actuary to make an adjustment to the asset value to reflect the estimated distributable proceeds on an orderly wind-up. The wording has been amended to clarify that it would normally be acceptable to rely upon the bid asset value provided by the appropriate party (e.g. investment manager). Where the Scheme Actuary is aware that additional adjustments are warranted, these should also be taken into account.
- Section 4 of the Appendix applies certain limits on the investment returns that can be assumed as part of a Funding Proposal. A number of updates have been made to this section:
 - Previously the limits were set relative to a AAA Eurozone government bond index; this has been updated so that the maximum returns are set by reference to a Risk-free Rate. The Risk-free Rate is defined at the start of the ASP and refers to either a AAA Eurozone government bond index or the Eurozone Interest Swap Curve.
 - The maximum risk premia (relative to the Risk-free Rate) have been increased by 1.0%. For equities and alternative assets, the maximum risk premium increases from 4.0% to 5.0%. For property, the maximum risk premium increases from 3.0% to 4.0%
 - The maximum assumed return on equities and property was previously allowed to increase up to the “Discount-rate – pre retirement” set out in Section 34 Statutory Guidance. This option has been removed - the maximum returns on equities and property are now set only by reference to the risk premia mentioned above.
 - The overall cap on the maximum return that can be assumed has increased – the risk premium has increased from 3.5% to 4.0% (and is now relative to the Risk-free Rate).
- Section 10 of the Appendix deals with material changes between the effective date of the Funding Proposal and the date of certification (applies to new Funding Proposals only). Some wording changes have been made to make the requirements clearer; however, the principle of

Section 10 is unchanged from version 5.1 – the Scheme Actuary must still be satisfied that a Funding Proposal remains on-track to achieve its objective at the date it is certified by the Scheme Actuary.