SOCIETY OF ACTUARIES IN IRELAND

REPORT OF THE VALUATION REGULATIONS WORKING PARTY

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1 INTRODUCTION

1.1 The Valuation Regulations Working Party (VRWP) was established by the Life Committee of the Society of Actuaries in Ireland (SAI) in 2008. It is made up of members working in life assurance companies and actuarial consultancies that are active in the Irish domestic and cross-border markets. Its terms of reference are:

To review the appropriateness of the Solvency 1 liability and asset valuation regulations applying to companies licensed to write life insurance business in Ireland. Arising from this review, to recommend changes to actuarial guidance, regulatory guidance and the framework regulations for consideration by the Society of Actuaries in Ireland and ultimately, the Irish regulatory authorities.

We have not considered expanding guidance in relation to stochastic valuation approaches in this report. The SAI established a separate working party in 2009 to address issues raised by the Financial Regulator's discussion paper on capital requirements for Variable Annuity business. That working party's brief included consideration of appropriate methodologies for valuing guarantees and options on unit-linked contracts.

1.2 This VRWP succeeded the Working Party that reported its findings in 2000. A summary of the findings of the 2000 VRWP is included in section 6 of this report. The 2000 report recommended changes to actuarial guidance and the Life Assurance Framework Regulations. Proposed changes to actuarial guidance have been incorporated in ASP LA-3. However, the changes to Framework Regulations recommended in the 2000 report were not implemented. A review of the outcome of recommendations in the 2000 report is set out in section 6.

1.3 As part of the current review we surveyed all Appointed Actuaries for their views on a suite of potential changes to the Solvency 1 regime. The potential changes mirrored those introduced to the UK prudential regime in 2006. The survey, circulated in mid-2009, requested information on the quantitative impact of the proposed changes and provided an opportunity for Appointed Actuaries to provide feedback on the appropriateness of the proposed changes in an Irish context. Appointed Actuaries provided quantitative and qualitative responses on potential changes that would have involved:

- Allowing prudent lapse rate assumptions
- Permitting recognition of commission clawback
- Permitting portfolio-level 'cash reserve' calculations
- Permitting contracts without guaranteed surrender values to be valued as assets

1.4 The feedback provided on these changes is summarised in section 2 of the report and more detail is included in Appendix 1. For practical purposes, we have restricted this report to consideration of changes that could be implemented through actuarial guidance alone. The VRWP made the pragmatic decision to restrict this report to consideration of changes that could be implemented through actuarial guidance alone once the impracticality of implementing changes to regulations became clear in late 2009. Therefore, of the changes considered in the survey conducted earlier in 2009, only the potential change to expense reserve calculations has survived to be the subject of detailed discussion and specific recommendations in this report. The VRWP's recommendations in relation to expense reserves are set out and discussed in Section 3 and this is the most extensive section in the report.

1.5 Sections 4 and 5 of the report discuss issues relating to valuing benefits from reinsurance contracts and valuation interest rates respectively. In both cases the discussion concentrates on the interpretation of existing regulations and guidance. The reinsurance discussion is focused on elaborating the ASP LA-1 requirement to "take account of the likelihood of payment by the relevant reinsurer in valuing benefits from a reinsurance contract". There is limited scope to address apparent anomalies that the VRWP has identified in relation to deriving the valuation interest rate without changing the Framework Regulations. As a result, Section 5 of the report is included primarily to highlight problems that arise in the application of Annex 4 provisions relating to the valuation rate of interest to particular investments that Irish insurers use or have considered using to match policyholder liabilities.

A review of the recommendations of the 2000 VRWP is set out in section 6 of the report. Section 7 summarises the 2010 Working Party's findings and key recommendation.

1.6 The working party would like to thank all Appointed Actuaries who contributed to the survey and other members who provided input to our work. We would also like to thank Joanne Doran for her work on preparing the report and organising the many meetings involved in bringing our work to completion.

2 SURVEY OF APPOINTED ACTUARIES

2.1 In March 2009 the Working Party issued a survey to Appointed Actuaries, requesting their responses by the end of May 2009.

The specific changes to the current valuation regulations that were considered in the survey were:

1. Allowing prudent lapse rates in statutory reserve calculations
2. Permitting recognition of commission clawback in statutory cashflow projections
3. Permitting portfolio level 'cash reserve' calculations for non-attributed expenses
4. Permitting contracts without guaranteed surrender values to be valued as assets

2.2 These potential changes mirrored those introduced to the UK prudential regime in 2006. The survey requested information on the quantitative impact of the proposed changes and gave the opportunity for each Appointed Actuary to provide feedback on the appropriateness of the proposed changes.

2.3 The original intention had been to propose a coherent package of changes to the current valuation rules rather than a menu of potential stand-alone changes. For this purpose, and to limit the number of calculations required to complete the survey, it was suggested that each survey response show the incremental impact of the proposed changes on mathematical reserves and minimum solvency in a prescribed order. This was to facilitate aggregation of results to determine the market-wide impact of the changes on a consistent basis. Each Appointed Actuary was given the option to provide the quantitative impact of each proposed change on a stand-alone basis in addition to the incremental impact.

2.4 The survey also requested information on technical reserves and solvency capital requirement (SCR) as calculated for the QIS4 exercise. Where this information was available the survey asked for the Solvency 1 reserve and minimum solvency data (before and after the proposed changes) to be shown at the same valuation date. This data was to help to assess the impact of the proposed changes on reserves and capital in the context of the Solvency 1 regime and the best indication (at that time) of the proposed Solvency 2 regime.

2.5 Feedback was invited on each of the proposed changes individually and Appointed Actuaries were also requested to give their opinion on the most appropriate combination of changes to present as a coherent package.

The list of questions below was included to prompt possible topics for feedback:

- Do you think this change is sensible in the context of the existing Solvency 1 framework?
- Would this change compromise a fundamental principle of solvency valuations for life companies?
- Is this change congruent with a move towards risk-based solvency measures?
- Is this change congruent with a move towards Solvency 2 as currently envisaged?
- Would implementation of this change weaken policyholder protection provided by the existing regime materially?
- Is it necessary to introduce additional safeguards to the valuation along with this change to ensure continued prudence in the overall basis?
- Are prescriptive guidelines (e.g. tight actuarial guidance) required to ensure appropriate implementation of this change across offices?

- Is the proposed change consistent with international best practice in reserving / capital management?
- Would you support this change on a stand-alone basis (i.e. if this was the only change to the valuation regulations would it be an improvement)?
- Would introduction of this change present significant practical implementation issues for you?
- Would you support a particular subset of the proposed changes (e.g. "changes 1-3 but not 4")

2.6 The Working Party also wanted to consider changes beyond the specific amendments that were in focus for the survey, and included an additional section for feedback on other possible changes considered important to address shortcomings of Solvency 1.

The responses received from Appointed Actuaries showed broad support for each of the proposed amendments. Please refer to Appendix 1 for fuller detail of the survey results.

2.7 There was no opposition to proposals 1 (lapse rates) and 3 (cash reserving) at all. In relation to proposal 2 (commission clawback), one respondent voiced concern about recoverability in a wind-up situation. And in relation to proposal 4 (valuing contracts as assets), opponents cited potential conflicts with Solvency I principles, together with concerns about policyholder protection and liquidity. It was generally felt that strong prescriptive guidance would be required to accompany this change.

2.8 In terms of other potential changes that were considered important, it was generally viewed that a "soft move" towards Solvency II would be beneficial, with some acceptance of internal models and new methodologies for products where no appropriate guidelines exist under Solvency I. Specific issues were raised in some responses around the treatment of reinsurer default risk and asset yield calculations for inflation-linked assets and zero coupon bonds. These are discussed further in Sections 4 and 5 of this report.

2.9 It was difficult to draw strong conclusions from the aggregate data without a detailed understanding of the business mix within the sample. In particular, uncertainty existed as to whether the shape of the impacts might differ materially between domestic and cross-border insurers, and between open and closed funds. However, because the three largest respondents were responsible for approximately two-thirds of the total mathematical reserves, it was not considered appropriate to review the analysis at a more granular level.

2.10 Furthermore, in the light of the Regulator's and industry's focus on Solvency II in advance of its expected 2012 implementation, the Working Party decided to focus its recommendations on changes to expense reserving. It is the Working Party's view that the proposed changes could be implemented without a change to the 1994 Framework Regulations. On this basis, the change to expense reserving is the central recommendation of the report. For the same reason, we have not developed detailed recommendations of amendments to Regulations and Guidance in the case of other changes that would move Irish solvency valuations closer to UK practice and other international risk-based valuation regimes.

For the recommended change to expense reserving it was ascertained that, for the vast majority of respondents, the impact was less than 0.5% of mathematical reserves, with the largest impact being in the order of 1.5% of mathematical reserves.

3 EXPENSE RESERVING

Background

3.1 Other than Article 9 of Annex IV of the 1994 Framework Regulations, which states that "provision shall be made on prudent assumptions for meeting the expenses likely to be incurred in future in fulfilling the existing contracts", there is no further prescription in the 1994 Framework Regulations with regard to how the Appointed Actuary should provide for expenses in his or her valuation.

3.2 General practice amongst Irish actuaries has, however, been to fully allocate all maintenance expenses down to the level of the individual policy i.e. to derive a 'per policy' maintenance expense assumption for use in the statutory valuation. This seems largely to derive from a number of UK actuarial papers from the 1980s and 1990s which advocated this approach in the context of unit-linked business (notably Fine *et al.* (1988)[1]).

3.3 However, since 2006, the UK Regulator (FSA) has moved away from this approach and now permits that provision for "non-attributed expenses" (i.e. expenses which are not directly attributable to an individual contract and which do not vary with the volume of business for that type of contract) may be made at a higher aggregate level (at the level of "homogeneous risk groups"). The change was initially aimed at unit-linked business, where the previous approach could require significant cash ('sterling') reserves even when no expense shortfall was foreseen at the line of business level, but was subsequently extended by the FSA to cover all long-term business.

Our Work

3.4 We reviewed the UK changes with a view to considering if similar changes should be recommended in Ireland. We also considered what changes would be required to Irish legislation and professional guidance as well as the practical impacts on firms of making these changes. We also attempted to quantify the impact of making these changes through the survey of Appointed Actuaries.

Current UK Approach

3.5 The current UK approach is that expense reserves in the policy-by-policy reserving calculation may[2] take account only of those expenses directly attributable to a contract. Such directly-attributable expenses must include commission and those other expenses which vary with the volume of business for that type of contract.

3.6 Other 'non-attributable' expenses, incorporating a margin for adverse deviation, may be reserved in relation to a group of contracts which have similar characteristics as regards expense risk, but there is a requirement that the reserve for these expenses in respect of each such group should not be less than zero.

This change was first mooted by the FSA in Consultation Paper CP06/16 and ultimately implemented in Policy Statement PS06/14.

[1] "Proposals for the statutory basis of valuation of the liabilities of linked long-term insurance business" by A,EM. Fine et al., Journal of the Institute of Actuaries JIA 115 (1988)
[2] Note that this is optional – firms may continue to apply the old "per-policy approach" if they so wish.

3.7 The FSA originally proposed that this change would only apply to business where the reserves are established on unit-linked principles (i.e. DCF calculations on a policy-by-policy basis). However, following consultation, the FSA extended it to all non-profits business.

3.8 With this new approach, certain margins may not be fully utilised on all policies when used to cover the directly-attributable expenses. These "unused" margins can then be compared, on a group basis, with future non-attributed expenses. A reserve may then be required at the group level to the extent that non-attributable expenses for the group exceed total available "unused margins" based on a period-by-period cashflow projection.

Detailed guidance on implementing this new approach to reserving for expenses has been set out by the FSA in INSPRU 1.2.54A G – see Appendix 2.

3.9 It is interesting to note that the UK Actuarial Profession was fully supportive of this change (even though it ran contrary to the views that had been expressed in earlier papers from Working Parties of the Profession) – the opening sentence of the Profession's response to CP06/16 was *"We agree that the proposals are generally sensible"*.

The Profession did sound a note of caution in relation to the way in which firms would allocate overheads across different product groups:

> *"Expenses need to be aligned with risk drivers and with the firm's method of allocating costs across product groups, so that the "non-attributable" expenses can be covered in an appropriate way ... all expenses attributed to a risk group should be treated as covering loadings arising from the products within that risk group rather than from a central reserve."*

Current Irish Approach

3.10 As noted above, the approach to reserving for expenses on unit-linked business in Ireland has generally been to fully allocate all maintenance expenses down to the level of the individual policy i.e. to derive a 'per policy' maintenance expense assumption for use in the statutory valuation. This approach seems to have derived from a number of UK actuarial papers from the 1980s and 1990s which advocated this methodology and which were therefore seen as "generally accepted actuarial practice".

3.11 As we will see later when we address the question of what changes might be required to current Irish insurance regulations, there does not appear to be any explicit requirement in Irish insurance regulations which forces Irish actuaries to adopt this approach.
Paragraph 2.1 of ASP LA-3 states that:

> *"A valuation method which is not in general use in the profession (whether to value a normal type of contract or in other circumstances) is not precluded, but an Appointed Actuary who uses such a method needs to be prepared to justify it by reference to actuarial principles."*

3.12 Prior to the introduction of PS06/14 in the UK (and its acceptance by the UK Actuarial Profession), it could be argued that this provision in ASP LA-3 was the key driver influencing Irish actuaries to adopt the per-policy approach to expense reserving, given that various UK Working Parties had advocated that approach. However, it seems to us that post-PS06/14, this no longer applies (if we interpret *"profession"* as including the UK Profession).

3.13 As an aside, the same paragraph of ASP LA-3 also includes the following provision which provides a useful starting point when it comes to drafting additional guidance on the new approach to expense reserving:

> *"In deriving the valuation basis it is permissible to group policies by category of contract. The term "category of contract" is used to mean contracts with similar types of benefit, including options and guarantees, that are considered to be sufficiently homogeneous by the Appointed Actuary."*

Views and Recommendations of Previous Working Party

3.14 The Working Party on Valuation Regulations which reported in May 2000 endorsed the view that non-unit reserves should be calculated on a policy-by-policy discounted cash flow basis (see §4.3 of the report).

In relation to the question of whether or not "renewal/claim expense loadings [should] be on a per policy basis", the Working Party (in §4.9 of the report) took the view that "most renewal/claim expenses are per policy and are generally loaded for in this way" and noted that "if they are loaded for via a fund-related or premium related expense allowance, selective lapses can cause problems". However, somewhat confusingly, the Working Party then went on to list a number of factors which "may permit a lower reserve than a flat per policy loading" including the observation that "it is extremely unlikely that all profitable policies will lapse and all unprofitable policies continue".

Our Proposal in Detail

3.15 Our proposal envisages that Appointed Actuaries may, if they wish and if they judge it appropriate to their business, move away from the current practice of "per-policy" expense reserving to an expense reserving methodology which operates at the level of "homogeneous risk groups" rather than at the individual policy level.

The calculation of reserves will continue to comply with the requirements of the 1994 Framework Regulations. In particular, the following requirements relating to the avoidance of future valuation strain and the prohibition on taking credit for profits from voluntary discontinuance will continue to apply:

(a) Avoidance of future valuation strain

> *"4. (1) The amount of the liability determined in respect of a group of contracts shall not be less than such amount as, if the assumptions adopted for the valuation were to remain unaltered and were fulfilled in practice, would enable liabilities similarly determined at all times in the future to be covered from resources arising solely from the contracts and the assets covering the amount of the liability determined at the current valuation."*

(b) No credit for profits from voluntary discontinuance

> *"12. Allowance shall not be made in the valuation for the voluntary discontinuance of any contract if the amount of the liability so determined would thereby be reduced."*

3.16 However, for many companies, requirement (a) above will become significantly less onerous after our proposed change. Requirement (a) above is the basis for the current cash reserving methodology that determines the reserve needed to eliminate all future negative cashflows. When applied to cashflow projections allowing for fully-loaded per-policy maintenance expenses, this ensures reserves are sufficient to support each policy without further capital injections. Reserves at an individual policy level will now only be required to eliminate negative cashflows that may arise from costs directly attributable to that policy. This is likely to lead to significantly lower individual policy reserves on both open and closed to new business bases (but there may be an additional expense reserve for the non-attributed expenses at the level of the homogeneous risk group).

3.17 The effect of (b) above will mean that the default basis for expense reserve calculations will continue to be an assumption of zero lapses, as a non-zero lapse assumption will usually have the effect of reducing overall expense reserves. However, when setting expense reserves at the homogeneous risk group level, the Appointed Actuary should check that reserves remain prudent when specific exposures within the company's portfolio – such as bulk lapses – are taken into account. Whilst it has always been a requirement for the Appointed Actuary to ensure that all reserves contain a prudent margin for adverse deviations, the consideration of bulk lapses becomes more relevant under the new group-level approach that we are proposing.

3.18 Finally, it should be noted that requirement (a) above will remain in place for all reserve calculations. Accordingly, both the individual policy level calculations (based on attributable expenses) and the subsequent calculations at group level will have to comply with the standard cash reserve technique of projecting expected future income and expenditure and taking the maximum value of successive summations of the discounted values of the projected net outflows.

3.19 Our proposal envisages the calculation of expense reserves proceeding as follows:

3.19.1 **Segmenting the portfolio of in-force business into homogeneous risk groups**

The first task is to segment the in-force business into appropriate homogeneous risk groups.

The FSA has provided guidance within the FSA Handbook (in INSPRU 1.2.54AG – see Appendix 2) setting out high-level principles for the determination of homogeneous risk groups.

The FSA's guidance (with which we generally agree) indicates that, for policies to be grouped together they would have to have similar expense risk characteristics. In identifying its homogeneous risk groups, a firm should consider all risks that impact on the level of expenses borne by contracts including persistency risk (and, in particular, bulk lapse risk) and expense inflation risk.

The FSA has also commented that it would expect expense assumptions to be aligned with risk drivers and with the firm's method of allocating costs across product groups and so would not consider it appropriate, for example, that unit-linked business and protection business would be in the same homogeneous risk group, as these types of business tend to have different expense risk drivers; nor would they consider it appropriate for firms to group business simply according to the way it is administered and serviced, as this would not necessarily be in line with the risk drivers of this business. From our review of UK practice in this area, it seems that general practice is typically to group contracts into a relatively limited number of homogeneous risk groups e.g. life savings (RP) / life investments (SP) / pensions / protection.

We note that, for practical purposes, Appointed Actuaries may wish to avoid creating homogeneous risk groups which conflict with the way in which business has been segmented for other purposes (e.g. IFRS or US GAAP contract groupings). While this is understandable, the selection of homogeneous risk groups for expense reserving purposes must be justifiable based on the factors outlined above rather than simply being adopted on the basis of administrative convenience.

Finally, we note that under the FSA rules a firm must document and justify its approach to identifying homogeneous risk groups. We consider that such documentation should be provided by Appointed Actuaries to the Financial Regulator when first establishing homogeneous risk groups and on any subsequent revision of those groups.

3.19.2 **For each risk group, identifying directly-attributable per-policy expenses and separately identifying the remaining non-attributable expenses**

The definition of which expenses are directly attributable to a contract and which are non-attributable will depend on the way that a firm carries out its business.

Directly-attributable expenses are those expenses which vary with the volume of business for that type of contract. Commission payments, charges to a fund on a 'per policy' basis and investment management fees are generally directly attributable. For expenses of the fund which are calculated directly based on actual expenses (and not calculated in accordance with a management services agreement), the attributable expenses will also include those costs which vary with the volume of business for that product, for example, salaries and accommodation costs of staff in a processing centre, printing and postage of communications to policyholders and associated computer services.

Non-attributable expenses will typically comprise overheads which are relatively insensitive to the volume of business for the type of contract in question and an apportionment of central/group overheads. Examples of expenses that Appointed Actuaries may consider non-attributable include salaries of head office staff involved in monitoring products and drafting standard communications to policyholders and allocated overheads for centralised functions such as human resources, finance and IT.

3.19.3 **Deriving suitable allowance for total non-attributable expenses for each homogeneous risk group**

Once all maintenance expenses have been allocated to homogeneous risk groups and then classified as either attributable or non-attributable, the next step is, for each homogeneous risk group, to take those maintenance expenses that have been classified as non-attributable and quantify the projected level of those expenses in each future projection year.

Given the requirements in ASP LA-3 to consider both the "open fund" and "closed fund" expense position as well as the requirement to use a zero lapse assumption unless it would be more prudent to assume otherwise, this projection of non-attributable expenses for each future year for each homogeneous risk group will be required on both an open and closed to new business basis and on both a zero lapse projection basis and a prudent (non-zero) lapse projection basis.

In projecting the total non-attributable expenses for a homogeneous risk group on an "open fund" basis, it will be necessary to allow for the run-off of expenses relating to the existing in-force portfolio as policies exit by death or maturity (and by lapse in the event that lapses are being assumed). This should be done by selecting an appropriate metric to which the expenses may be linked – depending on the nature of the business this might be the number of policies, the sum at risk or the mathematical reserves (or some other measure). The projected non-attributable expenses may then be assumed to reduce as the chosen metric is projected to reduce over time.

In projecting the total non-attributable expenses for a homogeneous risk group on a "closed fund" basis, the Appointed Actuary should have regard to the requirements of ASP LA-3 and to the wider discussion of this topic in Caslin *et al.* (2003). In particular, it would normally be considered appropriate, when looking at the ultimate level of expenses in a "closed fund" scenario, to have regard to the fees which a third-party outsourcer might charge to take over the administration of the remaining in-force policies. In addition to the cost of outsourcing the core administration functions, provision will also need to be made for the overheads which will remain within the insurance company.

3.19.4 **Calculating reserves individually for each policy only allowing for the directly attributable expenses**

The calculation of policy-by-policy reserves will follow the same approach as currently employed, except that only directly attributable expenses will be valued. As is currently the case, reserves will need to be calculated on the central set of valuation assumptions as well as on the basis of the minimum prescribed resilience scenarios (plus any additional resilience scenarios that the Appointed Actuary may consider appropriate).

3.19.5 **Producing a schedule of projected "unused policy margins" for each homogeneous risk group for each future projection year**

After establishing reserves to eliminate negative cashflows at the individual policy level, only positive cashflows will remain, and therefore be available to cover non-attributable expenses brought into account for the next stage of calculations.

In other words, after establishing any reserves required to cover attributable expenses at the policy level, the cashflow profiles of individual policies will become either:

(a) a series of zero net cashflows for the lifetime of the policy; or,

(b) a series of zero cashflows for an initial number of years followed by positive cashflows.
These zero / positive cashflows will be summed across all policies within the homogeneous risk group in order to provide a schedule of projected "unused policy margins" for that group.

3.19.6 **Calculating a non-attributed expense reserve for each homogeneous risk group**

The calculation of the reserve for non-attributed expenses at the level of each homogeneous risk group essentially involves applying the usual unit-linked cash reserving methodology.

A series of net cashflows is generated at the group level by taking the projected unused policy margins (from 5 above) and subtracting the projected expenses (from 3 above). The resulting net cashflow is then used to determine the expense reserve at the level of the homogeneous risk group, using the standard technique of taking the maximum value of successive summations of the discounted values of the projected net outflows. The resulting reserve must have a minimum value of at least zero.

As with the reserves for attributed expenses (see 3.19.4 above), the reserve for non-attributed expenses will need to be calculated on the central set of valuation assumptions as well as on the basis of the minimum prescribed resilience scenarios (plus any additional resilience scenarios that the Appointed Actuary may consider appropriate.

3.19.7 **Calculating a total company-level reserve for non-attributed expenses**

The company-level reserve for non-attributed expenses is the sum of the reserves for non-attributed expenses, summing over all homogeneous risk groups. As noted in step 3 above, both the open and closed fund situations will need to be considered.

It should be noted that in the explanation of the proposed new methodology as set out above, we have implicitly assumed a two-level expense reserve calculation i.e. expense reserves first calculated at the level of homogeneous risk groups and then at the overall company level. This approach has been adopted for ease of illustration. It should not be taken as implying that companies must adopt a two-level approach – companies may, if it is considered appropriate or necessary, adopt a multiple-level approach with hierarchies of homogeneous risk groups. In this case, the methodology proceeds as outlined above except that there are multiple iterations of steps 5 and 6 before finally proceeding to step 7.

Simple Example

3.20 The following simple example shows how the proposed method for expense reserving is intended to operate. Please note that this example is included as a simple introductory guide to the main point of difference between our proposed approach and the current generally applied approach, and is not intended to be comprehensive. In particular, it does not consider the no lapse / lapse and open /closed tests which would be required in practice.

The example shows a simple unit-linked company with only two policies, one large and one small. For simplicity, the unit growth and discount rates are assumed to be zero, as is the lapse rate, and policies are assumed to exit (by death or maturity) at a rate of 5% per annum. Fee income comprises a 2% per annum management charge on the fund and a €2.50 per annum policy fee. Expenses comprise commission, administration costs of €50 p.a. per policy, and other expenses not directly attributable to policies of €65 p.a.

Under the existing methodology, the two policies each bear expenses of €82.50 (made up of the €50 plus half of the €65). They also each bear the commission attributable to each policy. This leads to a cash reserve of €1,571 on the small policy and €0 on the large policy.

Under the proposed methodology, the policies only bear the per-policy administration expenses (and the commission), while the non-attributable expenses are reserved for separately. The small policy still has a cash reserve, but this is lower (now €925) than under the old methodology (was €1,571).

The non-attributable expenses are projected into the future. For the purpose of this example we have simply assumed that they reduce in proportion to the total liabilities. The unused margins from the large policy are used to meet some of the cost of the non-attributable expenses which arise each year. This results in a cash reserve of €249 for the non-attributable expenses.

The total cash reserve required under the proposed methodology is therefore €1,173 (the sum of €925 and €249).

Valuation Assumptions

Valuation Decrements incl Maturity and Mortality	5%
Valuation Interest Rate	0%
Valuation Lapse Assumption	0%

Expenses

Attributable Expenses	
Commission (% fund)	1.0%
Per Policy Administration costs	50
Total Non Attributable Expenses	65
Old style per policy expenses	82.50

Old Method of Expense Reserving

Small Policy	0	1	2	99	100
Unit Reserve	100.00	95.00	90.25	0.62	0.59
Pol Fee	2.50	2.38	2.26	0.02	0.01
Mgt Charge	2.00	1.90	1.81	0.01	0.01
Total Income	4.50	4.28	4.06	0.03	0.03
Expenses	82.50	78.38	74.46	0.51	0.49
Commission	1.00	0.95	0.90	0.01	0.01
Income less expenses	(79.00)	(75.05)	(71.30)	(0.49)	(0.47)
Cash Reserve	**1,571.11**				

Large Policy	0	1	2	99	100
Unit Reserve	10,000.00	9,500.00	9,025.00	62.32	59.21
Pol Fee	2.50	2.38	2.26	0.02	0.01
Mgt Charge	200.00	190.00	180.50	1.25	1.18
Total Income	202.50	192.38	182.76	1.26	1.20
Expenses	82.50	78.38	74.46	0.51	0.49
Commission	100.00	95.00	90.25	0.62	0.59
Income less Expenses	20.00	19.00	18.05	0.12	0.12
Cash Reserve	**0.00**				

Total Cash reserves	**1,571.11**

Proposed Method of Expense Reserving

Small Policy	0	1	2	99	100
Unit Reserve	100.00	95.00	90.25	0.62	0.59
Pol Fee	2.50	2.38	2.26	0.02	0.01
Mgt Charge	2.00	1.90	1.81	0.01	0.01
Total Income	4.50	4.28	4.06	0.03	0.03
Expenses	50.00	47.50	45.13	0.31	0.30
Commission	1.00	0.95	0.90	0.01	0.01
Income less expenses	(46.50)	(44.18)	(41.97)	(0.29)	(0.28)
Cash Reserve	**924.77**				

Large Policy	0	1	2	99	100
Unit Reserve	10,000.00	9,500.00	9,025.00	62.32	59.21
Pol Fee	2.50	2.38	2.26	0.02	0.01
Mgt Charge	200.00	190.00	180.50	1.25	1.18
Total Income	202.50	192.38	182.76	1.26	1.20
Expenses	50.00	47.50	45.13	0.31	0.30
Commission	100.00	95.00	90.25	0.62	0.59
Income less Expenses	52.50	49.88	47.38	0.33	0.31
Cash Reserve	**0.00**				
Total Cash reserves for attributable expenses	**924.77**				
Reserve for non attributable expenses					
Non Attributable expenses	65.00	61.75	58.66	0.41	0.38
Unused margins	52.50	49.88	47.38	0.33	0.31
Margins less expenses	(12.50)	(11.88)	(11.28)	(0.08)	(0.07)
Cash reserve for non attributable expenses	**248.59**				
Total Cash reserves	**1,173.36**				

Documentation and Disclosure

Documentation

3.21 We recommend that Appointed Actuaries document and justify their choice of homogeneous risk groups. We do not envisage that this documentation would be publicly disclosed.

Disclosure

3.22 The 1994 Framework Regulations requires the following disclosure to be made in the Abstract of Valuation Report Prepared by the Appointed Actuary:

"8. For each category of linked contract—

...

(c) *where explicit provision has been made for meeting the expenses likely to be incurred in future in fulfilling the existing contracts, full particulars of that provision."*

Current market practice is to disclose the per-policy expense allowances which have been used in the policy-by-policy non-unit reserve calculations for each category of linked contract.

If Appointed Actuaries move to adopt the approach to expense reserving as outlined above, then we suggest that it would be necessary for the Appointed Actuaries to disclose the per-policy allowances for directly attributable expenses for each category of contract (similar to the current practice) as well as disclosing the total non-attributable expense allowance for the first year of projection for each homogeneous risk group.

Feedback from survey respondents

3.23 The feedback from survey respondents on our proposal was universally supportive. However, many Appointed Actuaries commented that further actuarial guidance should provide clear definitions of "non-attributed expenses" and "homogeneous risk groups" as well as guidance on the calculation of the group-level expense reserves for non-attributed expenses (particularly in relation to an appropriate allowance for lapses). Comments are summarised in Appendix 4.

Changes required to 1994 Framework Regulations

3.24 We do not believe that any change is required to the 1994 Framework Regulations in order to facilitate this change in approach. The 1994 Framework Regulations state that *"liabilities shall be calculated separately for each contract"* but, in our view, this does not preclude the approach proposed by this Working Party. The approach proposed by the Working Party is to continue calculating liabilities on a policy-by-policy basis but to restrict the expense allowance in these calculations to those expenses directly attributable to individual contracts. Remaining "non-attributable" expenses would be allowed for separately via additional provisions which would be calculated in relation to appropriate groupings of policies with similar expense characteristics.

For the avoidance of doubt, it would be helpful to expand Article 2(c) of Annex IV with the addition of the following underlined text:

"Liabilities shall be calculated separately for each contract. The use of appropriate approximations or generalisations is allowed, however, where they are likely to give approximately the same result as individual calculations. The principle of separate calculation shall in no way prevent the establishment of additional provisions which are not individualised, including provision for expenses attributable to contracts with the same or similar expense risk characteristics but which are not directly attributable to individual contracts and are thus not included in the contract-level liability calculations."

However, even if it is not possible to amend the 1994 Framework Regulations in this fashion, our view is that this would not in any way prevent a move to the approach outlined above.

Changes required to regulatory/professional guidance

3.25 We believe that the proposed change would need to be accompanied by additional guidance for Appointed Actuaries. We believe that it would be preferable to amend the existing actuarial guidance rather than introduce regulatory guidance.

The relevant actuarial guidance – Actuarial Standard of Practice LA-3: Additional Guidance for Appointed Actuaries on valuation of Life Assurance Business ("ASP LA-3")[3] – was recently updated (in 2006 and 2008) and, as a result, there is a clear and well-defined process for making any changes. Furthermore, the status of ASP LA-3 is clear – under the 1994 Framework Regulations, Appointed Actuaries are required to certify compliance with this ASP.

3.26 In summary, therefore, we recommend that ASP LA-3 should be amended to include additional guidance on expense reserving.

Guidance on this topic has already been provided in the UK via the FSA Handbook (INSPRU 1.2.54A G). The relevant sections of the FSA Handbook dealing with expense reserving are set out in Appendix 2 (with section 1.2.54A G, which deals with attributable and non-attributable expenses highlighted).

Our suggested amendments to ASP LA-3 largely mirror the UK guidance but also include a list of issues that an Appointed Actuary should normally consider when applying this reserving methodology.
Our suggested amendments to ASP LA-3 are set out in Appendix 3.

[3] ASP LA-3 replaced GN8.

4 VALUING BENEFITS FROM A REINSURANCE CONTRACT

4.1 The Framework Regulations state that "Reserves may … be established and maintained after the deduction of reinsurance cessions". ASP LA-1 requires Appointed Actuaries to "take account of the likelihood of payment by the relevant reinsurer in valuing benefits from a reinsurance contract" but actuarial guidance does not elaborate on the factors that should be considered in the Appointed Actuary's valuation of the reinsurance offset to gross reserves that are calculated according to Annex IV of the Regulations.

4.2 Guidelines issued by the Financial Regulator[4] identify criteria for evaluating the security of reinsurance cover and provide direction for insurers on strategies for managing reinsurance security. The guidelines do not provide specific direction on how the security of reinsurance cover should be reflected in the calculation of an insurer's net reserves. This section of the report sets out considerations specifically relevant to the Appointed Actuary's assessment of the value of benefits from a reinsurance contract for the calculation of Solvency 1 reserves net of reinsurance. Therefore, the following discussion can be regarded as an elaboration of the ASP LA-1 requirement to "take account of the likelihood of payment by the relevant reinsurer in valuing benefits from a reinsurance contract".

Considerations relevant to the valuation of reinsurance offsets to reserves

4.3 It is appropriate for the Appointed Actuary of a ceding company to take the following factors into account in determining the value to place on benefits from a reinsurance contract:

4.3.1 **Risk of reinsurer default**

The Appointed Actuary should consider historic default experience of institutions with financial strength ratings similar to those that apply to the undertaking's reinsurers. This would involve assessing proposed reinsurance offsets to gross reserves in a similar way to that envisaged in paragraph 3.3.4 of ASP LA-3 for securities subject to default risk. This assessment of default probability and severity (i.e. loss-given-default) should take into account a range of factors, including:

- Any credit support arrangements in place between insurer and reinsurer—specific issues to consider in assessing the significance of credit support arrangements are discussed in more detail in 4.3.3 below.
- The implications of any positive correlation between the creditworthiness of a reinsurer and the value of the reinsurance cover provided to the insurer by that reinsurer[5]. The insurer should also consider the implications of any concentration of reinsurance cover with individual reinsurers.
- The insurer's own assessment—separate to the assessment of credit rating agencies—of the security of its key reinsurers. This separate assessment may be particularly relevant where the insurer has a significant 'wrong way risk' exposure to a key reinsurer.
- Potential loss-given-default exposure of the insurer to each reinsurer; allowing for:
    i. Unrecoverable outstanding claims under existing reinsurance arrangements
    ii. Fees payable to recapture ceded business (where a recapture option exists)

[4] 'Guidelines on the Reinsurance Cover of Primary Insurers and the Security of their Reinsurers' available at http://www.financialregulator.ie/industry-sectors/insurance-companies/Documents/Guidance%20-%20Reinsurance%20Cover.pdf
[5] This exposure is often referred to as a 'wrong-way risk' exposure. An extreme example is a situation where debt issued by a reinsurer is used as collateral for future benefits payable to the ceding company by the same reinsurer.

iii. Incremental cost of replacement reinsurance cover, or the cost of raising capital from alternative sources, if either course of action is possible in impairment scenarios when reinsurance capacity and alternative financing options may be restricted

4.3.2 Cost of Reinsurer Impairment

The Appointed Actuary should also consider the potential costs associated with impairment or deterioration in the quality of existing reinsurance cover—even in situations where this may not result in a default event. The costs associated with recapturing ceded business and replacement cover mentioned above will also be relevant in this scenario.

4.3.3 Credit Support

It is common practice for reinsurance arrangements on certain lines of business—such as annuities in payment and variable annuities—to include a requirement for the reinsurer to provide credit support to the ceding company as security for future benefits payable to the ceding company. Reinsurance benefits that are underpinned by strong collateral or other credit support agreements may justify an assumption of a high likelihood of payment under the reinsurance contract. The Appointed Actuary should examine the details of all credit support arrangements in coming to a decision on the likelihood that reinsurance cover will perform. Issues to be considered include:

- Quality of assets underpinning credit support arrangements
- Duration of credit support arrangement (e.g. does the credit support apply for the lifetime of the business reinsured?)
- Frequency of rebalancing of credit support arrangements
- Procedure for maintaining or strengthening credit support in adverse scenarios (e.g. in the event of a reinsurer downgrade)
- Procedure for taking control of collateral following the occurrence of triggering events specified in the credit support arrangement
- Insurer's capacity to offset receivables under one reinsurance contract against payables under another contract with the same reinsurer

4.3.4 Required Solvency Margin (RSM) and Other Restrictions on Reinsurance Benefits

Annex II of the Regulations restricts the benefit that an insurance undertaking can recognise for reinsurance cover in determining the RSM. In situations where an undertaking's RSM would be lower without the 85% restriction on net reserves and 50% restriction on net amounts-at-risk, it seems reasonable that the difference between the actual RSM and the lower requirement that would apply based on taking full credit for reinsurance cessions can be taken into account when an Appointed Actuary is valuing benefits from a reinsurance contract.

Similarly, if the restriction in Annex VII, paragraph 2. (1) on reinsurance offsets to reserves applies, it seems reasonable that the Appointed Actuary take this into account when assessing the prudence of the value placed on reinsurance offsets to reserves in the valuation.

4.3.5 Margins for Prudence in Net Reserves

Ultimately, the Appointed Actuary should be satisfied that there are sufficient margins for prudence in net reserves to cover net benefits and a prudent allowance for the risk of reinsurance default or impairment. Alternatively the Appointed Actuary may decide to hold a prudent reserve for benefits net of reinsurance and a separate reserve for costs related to potential reinsurance default or impairment.

4.3.6 Reinsurer Approval

The Appointed Actuary should confirm that reinsurance offsets to reserves are only recognised in relation to approved reinsurers. In the case of third-country reinsurers, an insurer must apply to the Financial Regulator before taking credit for reserve offsets in respect of reinsured benefits. The relevant regulations are set out in the European Communities (Life Assurance) Framework (Amendment) Regulations 2007 (SI no. 352 of 2007)—available at http://www.irishstatutebook.ie/2007/en/si/0352.html

4.3.6 Actuarial Guidance

We recommend that existing actuarial guidance in relation to valuing benefits from a reinsurance contract be strengthened to take account of considerations outlined in this report.

5 VALUATION RATE OF INTEREST

Background

5.1 This section of the report describes the issues that the VRWP has identified in relation to setting the maximum valuation rate of interest for deterministic calculations. As noted in the introduction there is limited scope to address these issues without changing the Framework Regulations. Therefore the objective of this part of the report is to highlight the issues that can be encountered and not to specify how the legislation could be changed.

Requirements

5.2 The maximum valuation rate of interest is outlined in Paragraph 7, Annex V of the Framework Regulations. The legislation is supplemented by mandatory actuarial guidance in paragraph 3.3 of ASP-LA3. Both the legislation and the guidance make it clear that the maximum rate of interest should have regard to

- the yield on existing assets; and
- where appropriate, the reinvestment rate; and
- include adjustments for risk and tax.

Yield on Existing Assets

5.3 Paragraphs 7(6) of Annex IV of the Framework Regulations specifies that the yield on variable interest investments should only take income in the next twelve months into account. In contrast, Paragraph 7(5), specifies that the yield on fixed interest investments is the gross redemption yield. The yield on assets therefore depends heavily on whether it is classified as fixed interest or variable interest.

The definition of variable interest investments is investments that are not fixed interest securities as defined in Annex V. This results in certain assets being classified as variable interest despite the asset providing for both income and maturity payments.

Index Linked Bonds

5.4 The payments under index linked bonds can be structured so that either the nominal increases or that the coupon and redemption rates increase. Economically both may provide the same return and, in such cases, from a first principles approach the relevant yield should be the expected gross redemption yield. If the nominal increases then it is generally accepted that the asset can be classified as a fixed interest investment resulting in the calculated yield being the gross redemption yield. However, where the coupon/redemption rates increase, the asset could be classified as a variable interest security. This would result in the yield only taking income over the next twelve months into account.

Zero Coupon Deposits

5.5 Zero coupon bonds meet the definition of fixed interest securities and therefore the gross redemption yield can be used. It is not clear that zero coupon deposits meet the definition of fixed interest securities. However, a reasonable approach would be to treat zero coupon deposits as being equivalent to zero coupon bonds of the same term and use the gross redemption yield.

Options

5.6 The impact of investing in options can be to increase reserves despite improving risk management. For example the base valuation yield on long term at the money swaptions would be zero under an assumption of a valuation interest rate derived from current market yields. Although an at-the-money option may have significant time value the option will not give rise to any income under the basic valuation assumption of stable investment conditions. This can give rise to a lower valuation rate of interest when determining minimum reserve requirements for liabilities such as guaranteed annuity options that are backed by swaptions.

Reinvestment Rate

5.7 Paragraph 7(1) requires the maximum rate of interest to take into account the yield on existing assets and if appropriate the yield on amounts that will be invested in the future. In isolation it might be inferred that allowing for the reinvestment rate can either increase or reduce the maximum rate of interest.

However, Paragraph 7(9) explicitly restricts the valuation rate of interest to not exceed the adjusted yield on existing assets. In other words the allowance for reinvestment cannot result in an increase in the maximum valuation rate of interest.

This restriction may bite where a company invests short and the yield curve slopes upwards.

Adjustment for Risk on Fixed Interest Investments

Risk Free Rates

5.8 The legislation and guidance both make reference to having regard to the yields on risk-free investments of a similar term in the same currency. However they are silent on what constitutes a risk-free investment.

Prior to the introduction of the euro general practice was to base the risk free rate on yields on bonds issued by the Irish state. Therefore no reduction for credit risk was applied to the yield on these bonds. The WP believes that this practice has continued for valuation of liabilities to Irish policyholders despite the introduction of the euro but practice is not uniform across life offices.

5.9 The introduction of the euro resulted in a significant increase in the number of sovereign states that issue bonds in a common currency and it could be argued that the risk free rate should be based on more highly rated sovereigns (e.g. the euro area yield curve published by the ECB). Alternatively it could be argued that swaps are more suitable.

5.10 If swaps or the yield on highly rated sovereign bonds was used as the risk free rate then there would be potential impacts on investment policies including demand for bonds issued by the Irish state. Given that the appropriate risk free rate is currently the subject of lengthy debate in Europe, the complexity of the considerations surrounding any change and the relatively short time horizon before the introduction of Solvency 2 the WP decided not to give the subject further consideration.

Spreads on Fixed Interest Investments

5.11 Paragraph 7(3) requires the yield on all assets to be reduced by 2.5% (after allowing for risk). Paragraph 7(7) requires an adjustment to be made to the yield on fixed interest investments to "exclude that part of the yield estimated to represent compensation for the risk that the income from the asset might not be maintained or that capital repayments might not be received as they fall due".

The yield on fixed interest investments represents, inter alia, a premium to compensate for expected defaults and a premium to compensate for uncertainty in the estimate of expected defaults as well as a premium to compensate for any restrictions on liquidity. It could be argued the premiums related to expected default and uncertainty in the estimate of expected default represent compensation for the risk that payments might not be made as they fall due and should therefore be excluded from the yield.

5.12 ASP-LA3 Paragraph 3.3.4 provides some guidance on the adjustment to be made in respect of Paragraph 7(7). It states that the adjustment "should normally be made by reference to historic default rates of securities with a similar credit rating". The WP notes that the guidance does not restrict the scope of considerations required to make this adjustment. In particular the premium to compensate for uncertainty in the estimate of expected defaults should not be included in the risk adjusted yield on assets.

6 RECOMMENDATIONS FROM 2000 VRWP REPORT

Recommendations from 2000 VRWP report

6.1 A Society working party report was completed in May 2000 reviewing the valuation regulations and actuarial guidance. Recommendations on both changes to regulations and changes to guidance were made by this report. Most of the recommended changes to guidance have been incorporated into the ASP- LA3. Below is a summary review of the recommended changes to actuarial guidance made by this report and whether or not they have been allowed for in ASP-LA3 (*if allowed for in LA3 the references are shown below in Italics).*

The recommended changes to regulations that the report recommended were not implemented and are not covered below.

Conventional With Profits Business

6.2 The following recommendations were made:

(a) A strengthening of the requirement to consider PRE when setting reserves and their relationship to surrender values.
LA3 References: 2.4, 3.6.1, 3.6.6

(b) A requirement to consider the approach adopted with altered policies.
LA3 References: 2.10

(c) It is not readily apparent from a net premium valuation how adequate the allowance for future bonus is. The current provision in GN8 should be strengthened to emphasise the need to match the calculation of the mathematical reserves to PRE.
LA3 References: 2.3

(d) Additional reserve for glide path of changing bonuses.
LA3 References: 2.4

(e) Greater attention should be paid to the reserves for options in the light of developments on Guaranteed annuity options.
LA3 References: 2.6, 3.6

Unitised With Profit

6.3 The following recommendation was made:

The guidance notes should be amended to require a multi scenario prospective valuation method with glide path bonus method. A minimum of Nominal value should apply in relevant (usual) circumstances.

LA References: There is no direct reference to UWP in the guidance, some of the issues that were mentioned in the report under UWP, also applied to conventional with profits and therefore these should have been covered under the changes to LA3 mentioned in 6.2 above.

Unit Linked Business

6.4 The following recommendations were made :

(a) GN8 should make it clear that discounted cash flow calculations are required as a minimum for the calculation of non unit reserves for unit linked business.

LA3 References: No direct reference to having to use a discounted cash flow calculation method, 3.2.8 mentions future cash flows in respect of unit linked business which indirectly suggests some kind of cash flow methodology. 2.1 requires that if method is not in general use that an Appointed Actuary will need to justify such a method.

(b) The effect on non unit reserves when policies become paid up must be considered.
LA3 Reference: 3.6.9

(c) Any allowance for future increases in charges must be in line with PRE.
LA3 Reference: 2.9

(d) The Appointed Actuary must consider the applicability of guidance on calculating valuation interest rates to unit linked business. Appropriate relationships should exist between the interest rate used and other economic rates, e.g. inflation.
LA3 Reference: No direct reference except in context of mismatch test in 3.2.8.

(e) Allowance should be made for regular withdrawals.
LA3 Reference: 3.6.8

(f) The impact of selective lapses must be considered where the expense allowance is not on a per policy basis.
LA3 Reference: No direct reference but is probably implied by 3.7.1.

(g) Guidance is required on mismatching on unit linked policies.
LA3 Reference: 3.2.8 indirectly refers to but does not explicitly cover the issue of offsetting positive units and negative units.

Non Linked Business

6.5 The following recommendations were made:

(a) The standard method of valuation per the regulations should be moved to a gross premium basis from a net premium basis and guidance changed accordingly.
LA3 Reference: Regulations were not changed and hence guidance for this point was not changed.

(b) The impact of selective lapses must be considered where the expense allowance is not on a per policy basis.
LA3 Reference: No direct reference but is probably implied by 3.7.1 .

(c) Where no future premiums are payable an explicit expense assumption is required.
LA3 Reference: 3.5.4

PHI Business

6.6 The following recommendations were made:

(a) The standard method of valuation per the regulations should be moved to a gross premium basis from a net premium basis and guidance changed accordingly.
LA3 Reference: Regulations were not changed and hence guidance for this point was not changed.

(b) Where practical valuations should use the inception/annuity methodology.
LA3 Reference: 2.8

Reviewable Rates

6.7 The following recommendation was made:

The Appointed Actuary should be required to have regard to PRE and intended company practise in establishing valuation assumptions for policies with reviewable rates
LA3 Reference: Not directly mentioned in 2.9 but meant to cover it, 2.9 could be changed to explicitly mention it.

Valuation Yields

6.8 The following recommendations were made:

(a) Revised formula method for calculation of reinvestment yield.
LA3 Reference: Not covered by actuarial guidance but regulator does guide a reinvestment yield each year which may be based on the formula recommended.

(b) Actuary has to consider whether a lower reinvestment rate is more appropriate.
LA3 Reference: 3.3.6

Mismatching

6.9 The following recommendations were made :

(a) Section on resilience testing in GN8 should be expanded.
LA3 Reference: 3.2 was expanded to take into account the recommendations.

(b) A formula approach to the establishment of parameters should be considered. This could form part of guidance provided by the Regulator.
LA3 Reference: No reference in LA3. Not clear on whether formula is used by regulator in determining annual resilience guidance.

(c) GN2 relating to FCR should be made Practise Standard.
Guidance note LA2 on FCR is now mandatory.

Closed Fund Expenses

6.10 The following recommendations were made:

(a) The feasibility of selling the closed book of business should be considered.

LA3 Reference: Not clear if covered in guidance

(b) Costs of Staff retention and redundancy should be allowed for in moving to a closed fund basis.
LA3 Reference: 3.5.6

(c) Costs of known future projects should be allowed for.
LA3 Reference: 3.5.6

(d) Margins arising from existing business should be allowed to be offset against the level of expenses likely to be incurred on a closed fund basis.
LA3 Reference: 3.5.5

Assets

6.11 The following recommendations were made:

(a) Guidance on Permitted links for unit linked funds should be introduced.
Unclear whether this guidance should come from Regulator or covered in an ASP from the Society.

(b) Clearer guidance for the use of derivative assets is required.
Unclear whether this guidance should come from Regulator or covered in an ASP from the Society.

Summary

6.12 Nearly all the recommendations on changes to guidance made by the 2000 VRWP report have been captured in the current ASP-LA3. There are two guidance items recommended by the 2000 VRWP report that have not been addressed in either Actuarial or Regulatory guidance. The working party recommend that guidance notes be drawn up by the Society in conjunction with the Financial Regulator on (a) Permitted links for unit linked funds and (b) Acceptable derivative use in life assurance funds.

7 SUMMARY OF FINDINGS

Key Recommendation

7.1 The terms of reference of the current Working Party included recommending changes to Framework regulations and regulatory guidance in addition to recommending changes to actuarial guidance. Only the latter is within the control of the Society. As the Valuation Regulations Working Party's work approached a conclusion it became increasingly apparent that the likelihood of changes to Framework Regulations being implemented in advance of the introduction of Solvency II was low. Therefore, this report focussed on changes to the solvency valuation framework that could be effected without requiring changes to legislation. This decision is reflected in the report's focus on potential changes to current expense reserving practice. The key recommendation of this report is that Appointed Actuaries may move away from the current practice of "per-policy" expense reserving to an expense reserving methodology which operates at the level of "homogeneous risk groups".

Survey of Appointed Actuaries

7.2 It was difficult to draw strong conclusions from the aggregated survey responses without a detailed understanding of the business mix within the sample of response from Appointed Actuaries. The three largest respondents were responsible for approximately two-thirds of the total mathematical reserves. Therefore, it was not considered appropriate to review the analysis at a more granular level.

7.3 After survey results were analysed, it became clear to the Working Party that there was a low likelihood of implementing changes to Framework Regulations ahead of their replacement by a Solvency II regime in 2012. On this basis, the change to expense reserving is the central recommendation of the report. For this reason, we have not developed detailed recommendations of amendments to Regulations and Guidance in the case of other changes that would move Irish solvency valuations closer to UK practice and other international risk-based valuation regimes.

7.4 For the recommended change to expense reserving it was ascertained that, for the vast majority of respondents, the impact was less than 0.5% of mathematical reserves, with the largest impact being in the order of 1.5% of mathematical reserves.

Expense Reserving

7.5 Our proposal envisages that Appointed Actuaries may move away from the current practice of "per-policy" expense reserving to an expense reserving methodology which operates at the level of "homogeneous risk groups" rather than at the individual policy level. On this basis, reserves at an individual policy level will only be required to eliminate negative cashflows that may arise from costs directly attributable to that policy. This is likely to lead to significantly lower individual policy reserves on both open and closed to new business bases. There will be an additional expense reserve for non-attributed expenses at the level of the homogeneous risk group.

It is the Working Party's view that it is not necessary that the Framework Regulations be amended to accommodate the proposed change. We recommend that ASP LA-3 be amended to include additional guidance on expense reserving and the suggested changes are set out in Appendix 3.

Valuing Benefits from a Reinsurance Contract

7.6 Section 4 of the reports elaborates on the ASP LA-1 requirement to "take account of the likelihood of payment by the relevant reinsurer in valuing benefits from a reinsurance contract". The discussion provides a list of factors that an Appointed Actuary should take into account in determining the value to place on benefits from a reinsurance contract. These considerations relevant to the valuation of reinsurance offsets to reserves are:

- Risk of reinsurer default
- Cost of Reinsurer Impairment
- Credit Support
- RSM and Other Restrictions on Reinsurance Benefits
- Margins for Prudence in Net Reserves
- Reinsurer Approval

The Working Party has recommended that existing actuarial guidance be strengthened in relation to valuing benefits from a reinsurance contract.

Valuation Rate of Interest

7.7 The discussion of issues associated with deriving the valuation rate of interest in this report highlights anomalies that arise in practice. The Working Party has not specified changes to legislation that would be required to address the issues highlighted.

7.8 Differences between the prescribed derivation of valuation interest rates for variable and fixed interest securities result in anomalies in the valuation of liabilities represented by index-linked bonds with increasing coupons and liabilities represented by zero-coupon deposits. In the case of zero-coupon deposits we propose the practical approach of treating these assets as being equivalent to zero coupon bonds of the same term and using the gross redemption yield as the valuation rate of interest. The report also highlights how the prescribed approach for deriving the valuation interest rate can result in an increased reserve requirement for liabilities represented by a portfolio of assets including options that provide an effective hedge against the liability.

7.9 Issues associated with interpreting the practical meaning of "risk-free" in the context of a solvency valuation are discussed in this section 5 without proposing firm conclusions on this widely-debated topic. We also considered the practical issues associated with interpreting the requirement in the Framework Regulations to "exclude that part of the yield estimated to represent compensation for the risk that the income from the asset might not be maintained or that capital repayments might not be received as they fall due". The Working Party recommends that the premium to compensate for uncertainty in the estimate of expected defaults should not be included in the risk adjusted yield on assets.

Review of the 2000 VRWP Report

7.10 Section 6 of the reviews the changes to actuarial guidance recommended by the 2000 VRWP report and identifies whether or not they have been allowed for in subsequent changes to ASP-LA3. Nearly all the recommendations on changes to guidance made by the 2000 VRWP report have been captured in the current ASP-LA3. There are two guidance items recommended by the 2000 VRWP report that have not been addressed in subsequent guidance. The working party recommend that guidance notes be drawn up by the Society in conjunction with the Financial Regulator on (a) Permitted links for unit linked funds and (b) Acceptable derivative use in life assurance funds.

APPENDIX 1 DETAILED SURVEY RESULTS

Quantitative feedback was as follows:

TOTAL FOR YEAR END 2007 (4 companies)

Incremental Impact of Proposed Changes (€000s)

		Form 20 Mathematical Reserves	Form 20 Available Assets	Form 20 Minimum Solvency Margin
1	Current Statutory Valuation Basis	19,187,580	622,378	266,242
1.1	1.0 amended to include allowance for prudent lapse rates	19,071,076	738,882	262,227
1.2	1.1 amended to permit recognition of commission clawback	19,061,076	748,882	262,227
1.3	1.2 amended to permit portfolio level 'sterling reserve' calculations for non-attributed expenses	19,001,595	808,363	260,190
1.4	1.3 amended to permit contracts without guaranteed surrender values to be valued as assets	18,947,995	861,963	258,138
		Technical Provisions	**Available Assets**	**Solvency Capital Requirement**
2	QIS4 estimate of Solvency 2 reserves, assets & capital	17,738,862	2,091,687	636,444

TOTAL FOR 31/12/2008, 31/3/2009 and 30/4/2009 (13 companies)
- includes STG figures for 1 company, at £1 = €1; 0.6% of reserves, 0.4% of available assets, 4.5% of MSM on current statutory valuation basis

Incremental Impact of Proposed Changes (€000s)

		Form 20 Mathematical Reserves	Form 20 Available Assets	Form 20 Minimum Solvency Margin
1	Current Statutory Valuation Basis	52,934,211	1,392,950	678,681
1.1	1.0 amended to include allowance for prudent lapse rates	52,589,970	1,737,191	656,866
1.2	1.1 amended to permit recognition of commission clawback	52,579,303	1,747,858	656,840
1.3	1.2 amended to permit portfolio level 'sterling reserve' calculations for non-attributed expenses	52,489,905	1,837,256	654,322
1.4	1.3 amended to permit contracts without guaranteed surrender values to be valued as assets	52,444,130	1,883,031	652,350
		Technical Provisions	**Available Assets**	**Solvency Capital Requirement**
2	QIS4 estimate of Solvency 2 reserves, assets & capital	48,249,051	3,422,769	1,210,559
	"Current Statutory Valuation Basis" figures i.r.o. companies (9) that provided QIS4 figures	48,908,752	1,362,466	666,614

TOTAL FOR 31/12/2008, 31/3/2009 and 30/4/2009 i.r.o. companies that provided both "incremental" and "stand-alone" impacts (4 companies)

Incremental Impact of Proposed Changes (€000s)

		Form 20 Mathematical Reserves	Form 20 Available Assets	Form 20 Minimum Solvency Margin
1	Current Statutory Valuation Basis	12,058,495	483,990	151,628
1.1	1.0 amended to include allowance for prudent lapse rates	11,990,383	552,102	149,205
1.2	1.1 amended to permit recognition of commission clawback	11,989,716	552,769	149,179
1.3	1.2 amended to permit portfolio level 'sterling reserve' calculations for non-attributed expenses	11,957,671	584,814	148,003
1.4	1.3 amended to permit contracts without guaranteed surrender values to be valued as assets	11,957,671	584,814	148,003
		Technical Provisions	**Available Assets**	**Solvency Capital Requirement**
2	QIS4 estimate of Solvency 2 reserves, assets & capital	9,455,340	829,866	327,676
	"Current Statutory Valuation Basis" figures i.r.o. companies (3) that provided QIS4 figures	9,995,927	478,242	148,428

Stand-alone Impact of Proposed Changes (€000s)

		Form 20 Mathematical Reserves	Form 20 Available Assets	Form 20 Minimum Solvency Margin
1	Current Statutory Valuation Basis	12,058,495	483,990	151,628
1.1	1.0 amended to include allowance for prudent lapse rates	11,990,383	552,102	149,205
1.2	1.1 amended to permit recognition of commission clawback	12,055,236	487,249	151,618
1.3	1.2 amended to permit portfolio level 'sterling reserve' calculations for non-attributed expenses	11,973,320	569,165	148,508
1.4	1.3 amended to permit contracts without guaranteed surrender values to be valued as assets	12,029,312	513,173	150,623

Notes

- 17 companies provided data in response to the survey
- 13 respondents quantified the incremental impacts as the proposed changes were stepped through in order
- 4 respondents further quantified the stand-alone impact of each change
- It is difficult to draw strong conclusions from the aggregate data without a detailed understanding of the business mix within the sample
- In particular, the shape of the impacts may differ materially between domestic and cross-border insurers, and between open and closed funds
- However, because the three largest respondents were responsible for approximately two-thirds of the total mathematical reserves, it was not considered appropriate to review the analysis at a more granular level

- For the proposed change in relation to non-attributed expenses it was ascertained that, for the vast majority of respondents, the impact was less than 0.5% of reserves, with the largest impact being in the order of 1.5% of reserves

Note that the change from the statutory position to the QIS4 position is much greater for the assets than the liabilities. While we did not investigate this in detail, it is worth noting that asset values increased in most companies' results, while liabilities increased for some companies but reduced for others. This dampened the change in the liabilities compared with the statutory results at an overall level. The large increase in asset values may be as a result of reinsurance or VIF being reflecting as assets rather than as negative liabilities.

Qualitative feedback was as follows:

1. Allowing prudent lapses in statutory reserve calculations

Supporting	13
Opposing	-
N/A	2

- Reinforces rather than compromising solvency principles
- Produces relevant assumptions rather than arbitrary ones
- Only reduces reserves in areas where they are currently excessive
- An additional safeguard might be to use higher per policy expenses, especially where lower expenses are allocated to PUPs
- Differing views on the need for additional guidance, though most thought the appointed actuary's judgement would be sufficient
- Consistent with UK practice and other international risk-based systems
- Some offices would need to build surrender charges into valuation systems
- To achieve prudence, lapse assumptions may need to be dynamic
- This change could remove perverse incentives to over-reinsure
- Improves the credibility and relevance of the statutory valuation
- Closed fund reserve test may become more likely to bite
- Need to consider how prudent this assumption should be

2. Permitting recognition of commission clawback in statutory cashflow projections

Supporting	10
Opposing	1
N/A	3

- Respondents felt this was congruent with moves towards risk-based solvency and did not compromise Solvency I principles
- Generally, policyholder protection would not be materially weakened nor would additional safeguards be required. However, one respondent was concerned about recoverability in a wind-up situation
- Guidelines would be useful to suggest level of allowance for recoverability
- Consistent with (but not identical to) UK practice
- Many respondents not materially affected by this, so few practical difficulties
- For cashflow projections, this only makes sense in conjunction with 1

3. Portfolio level cash reserves for non-attributed expenses

Supporting	13
Opposing	-
N/a	2

- Constitutes not so much a move towards a new solvency regime, but a tweaking of the existing regime to remove arbitrary prudence
- Prudent lapse assumptions by cohort would be required

- Resilience test could expand to include lapse sensitivity
- Reserving should have reference to closure situation and potential outsourcing costs
- Some guidance required around the definition of non-attributed expenses and how to project, especially in a closed fund situation
- Consistent with UK practice
- Can be applied stand-alone from the other proposed changes
- Some respondents would need to build functionality to track unused margins and to model company-level cashflows
- Not relevant for companies with 100% attributed expenses (e.g. via a management services agreement)
- Need to consider incidence of margins vs. expense outflows and what happens if margins emerge later
- Similar treatment may already be in place for younger companies due to the way closed fund provisions are calculated?

4. Permitting contracts without guaranteed surrender values to be valued as assets

Supporting	10
Opposing	2
N/a	3

- Opponents felt that it conflicts with the principles of Solvency I to an extent
- Also that it might weaken policyholder protection and lead to liquidity issues
- However, broadly seen as a sensible move towards solvency II which removes excessive prudence required by the existing regulations
- General agreement that prescriptive guidelines would be required to ensure sufficient prudence and consistency between companies
- Resilience test should be enhanced to include shock lapses stress along with a test to ensure that overall reserves on a block of business are not negative
- Careful consideration is needed to determine what liabilities this “negative reserve asset” would support
- Lapse assumptions should be set appropriately as prudence margins may move in opposite directions for positive and negative reserves
- Minimum zero solvency margin should be held on this business
- If this leads to prudence being removed in a number of areas, there will need to be greater focus on other assumptions in the basis to ensure adequate overall prudence

5. Other changes considered important to address shortcomings

Changes with broad agreement

- 11 companies commented, of which 8 supported a move towards UK-style “twin peaks” approach with internal models, as existing regulations are a very prudent interpretation of the Life Directive
- This would also ensure that companies don’t have a sudden strain when Solvency II is introduced

Other changes

- Introduce an admissible DAC asset
- Relax asset localisation rules
- Introduce Solvency II methodology for new products where no specific guidelines exist
- Allow better for reinsurer default risk

- Provide more guidance for asset yield calculations on inflation linked assets, zero coupon bonds, etc.
- Remove net premium valuation approach as no longer appropriate
- Allow directors to set a Strategic Solvency Target rather than imposing 150% requirement on all

Our suggested amendments to ASP LA-3 are set out in Appendix 2.

APPENDIX 2 FSA GUIDANCE ON EXPENSE RESERVING

Extract from INSPRU6 re expenses

The section of the FSA's INSPRU Handbook which deals with expense reserving, is reproduced below. The section dealing with attributable and non-attributable expenses is in section 1.2.54A (which is highlighted below).

Record keeping

INSPRU 1.2.20

A firm must make, and retain for an appropriate period, a record of:

1. the methods and assumptions used in establishing its mathematical reserves, including the margins for adverse deviation, and the reasons for their use; and
2. the nature of, reasons for, and effect of, any change in approach, including the amount by which the change in approach increases or decreases its mathematical reserves.

Valuation of individual contracts

INSPRU 1.2.22 R

Subject to (2) and (3), a firm must determine the amount of the mathematical reserves separately for each long-term insurance contract.

Approximations or generalisations may be made:

1. in the case of non-attributable expenses, in relation to a group of contracts with the same or similar expense risk characteristics, provided that the mathematical reserves in respect of such expenses established by the firm in relation to that group of contracts have a minimum value of at least zero; and
2. in any other case, where they are likely to provide the same, or a higher, result than a determination made in accordance with (1).
3. A firm must set up additional mathematical reserves on an aggregated basis for general risks that are not specific to individual contracts.
4. For the purpose of (2), non-attributable expenses are expenses which are not directly attributable to a particular long-term insurance contract.

Expenses

INSPRU 1.2.50 R

1. A firm must make provision for expenses, either implicitly or explicitly, in its mathematical reserves of an amount which is not less than the amount expected, on prudent assumptions, to be incurred in fulfilling its long-term insurance contracts.

2. For the purpose of (1), expenses must be valued:

   a. after taking account of the effect of taxation;

[6] http://fsahandbook.info/FSA/html/handbook/INSPRU/1/2

b. having regard to the firm's actual expenses in the last 12 months before the actuarial valuation date and any increases in expenses expected to occur in the future;
c. after making prudent assumptions as to the effects of inflation on future increases in prices and earnings; and
d. at no less than the level that would be incurred if the firm were to cease to transact new business 12 months after the actuarial valuation date.

3. A firm must not rely upon an implicit provision arising from the method of valuing future premiums except to the extent that:

   a. it is reasonable to assume that expenses will be recoverable from future premiums; and
   b. the expenses would only arise if the future premiums were received.

INSPRU 1.2.51 G

For with-profits insurance contracts where the net premium valuation method applies, an implicit provision arises because the future premiums valued are limited to the net premium adjusted as permitted by INSPRU 1.2.43 R. This excludes the allowance within the gross premium for expenses (other than recoverable acquisition expenses). It also excludes other margins within the actual premium that are a prudential margin in respect of the risks that arise under the contract or that are needed to provide for future discretionary benefits. To the extent that these other margins are not needed for the purpose for which they were originally established, they may also constitute an implicit provision for expenses.

INSPRU 1.2.52 G

An implicit provision may also arise for other types of long-term insurance contract where, for example, no value is attributed to future premiums, but the firm is entitled to make deductions from future regular premiums before allocating them to secure policyholder benefits.

INSPRU 1.2.53 G

A firm should only reduce the provision for future expenses to take account of expected taxation recoveries related to those expenses where recovery is reasonably certain, and after taking into account the assumption that the firm ceases to transact new business 12 months after the actuarial valuation date. An appropriate adjustment for discounting should be made where receipt of the taxation recoveries is not expected until significantly after the expenses are incurred.

INSPRU 1.2.54 G

The firm's actual expenses in the 12 months prior to the actuarial valuation date may serve as a guide to the assumptions for future expenses, taking into consideration the mix of acquisition and renewal expenses. The expense assumptions should not be reduced to account for expected future improvements in efficiency until such efficiency improvements result in a reduced level of actual expenditure. However, the assumptions should take account of all factors which might increase costs including earnings and price inflation.

INSPRU 1.2.54A G

1. [2] A firm should attribute to an individual contract at least those expenses which are directly attributable to that contract including expenses which vary with the volume of business for that type of contract.

Commission payments, charges to a fund on a 'per policy' basis and investment management fees are generally directly attributable. For expenses of the fund which are calculated directly based on actual expenses (and not calculated in accordance with a management services agreement), the attributable expenses will also include those costs which vary with the volume of business for that product, for example, salaries and accommodation costs of staff in a processing centre, printing and postage of communications to policyholders and associated computer services.

2. Non-attributable expenses may include overheads which are relatively insensitive to the volume of business for the type of contract in question and an apportionment of group overheads. Examples of expenses that firms may consider non-attributable include salaries of head office staff involved in monitoring products and drafting standard communications to policyholders and allocated overheads for centralised functions such as human resources, finance and IT. Where non-attributable expenses arise in relation to a homogeneous risk group of contracts sharing the same or similar expense risk characteristics, a firm may determine the reserve for those expenses at the level of that risk group, provided that the reserve so established has a minimum value of at least zero (see INSPRU 1.2.22R (2)(a)). In identifying its homogeneous risk groups, a firm should consider all risks that impact on the level of expenses borne by contracts including persistency risk and expense inflation risk. For example, business that is subject to bulk lapse risk, such as any large group contract that would give rise to a reduction in surplus on lapse, should be considered as forming a homogeneous risk group of its own. A firm must document and justify its approach to identifying homogeneous risk groups in accordance with the record-keeping requirements of INSPRU 1.2.20 R. This approach to reserving for expenses ensures that prudent reserves are established in respect of both directly attributable and non-attributable expenses arising in relation to the firm's long-term insurance business.

INSPRU 1.2.54B G

[2] In valuing cash flows in respect of commissions, a firm may wish to take into account any contractual arrangements for the "clawback" or repayment of commissions already paid in the event of voluntary discontinuance of a contract of insurance. In deciding how to treat such arrangements in determining the mathematical reserves for a contract of insurance, the firm must use assumptions which meet the general requirements for prudent assumptions as set out in INSPRU 1.2.10 R and INSPRU 1.2.13 R. For example, the firm should establish prudent margins for adverse deviation in respect of the credit risk of the intermediary by whom the commission would be repayable.

INSPRU 1.2.55 R

The provisions for expenses (whether implicit or explicit) required by INSPRU 1.2.50 R must be sufficient to cover all the expenses of running off the firm's existing long-term insurance business including:

1. all discontinuance costs (for example, redundancy costs and closure costs) that would arise if the firm were to cease transacting new business 12 months after the actuarial valuation date in circumstances where (and to the extent that) the discontinuance costs exceed the projected surplus available to meet such costs;
2. all costs of continuing to service the existing business taking into account the loss of economies of scale from, and any other likely consequences of, ceasing to transact new business at that time; and
3. the lower of:
    a. any projected valuation strain from writing new business for the 12 months following the actuarial valuation date to the extent the actual amount of that strain exceeds the projected surplus on prudent assumptions from existing business in the 12 months following the actuarial valuation date; and

b. any projected new business expense overrun from writing new business for the 12 months following the actuarial valuation date to the extent the projected expenses exceed the expenses that the new business can support on a prudent basis.

INSPRU 1.2.56 G

The provision for future expenses, whether implicit or explicit, should include a prudent margin for adverse deviation in the level and timing of expenses (see INSPRU 1.2.13 R to INSPRU 1.2.19 G). The margin should cover the risk of underestimating expenses whether due to, for example, initial under-calculation or subsequent increases in the amount of expenses. In setting the amount of the margin, the firm should take into account the extent to which:

1. an appropriately validated method based on reliable data is used to allocate expenses[2], as between attributable and non-attributable expenses or between[3], acquisition and non-acquisition expenses and by product type, by distribution channel or by homogeneous risk group, as appropriate[2];
2. the volume of existing and new business and its distribution by product type or distribution channel is stable or predictable;
3. costs vary in the short, medium or long term dependent upon the volume of existing or new business and its distribution by product type or distribution channel; and
4. cost control is well-managed.

INSPRU 1.2.57 G

In setting the margin, the firm should also take into account:

1. the length of the period over which it is necessary to project costs;
2. the extent to which it is reasonable to expect inflation to be stable or predictable over that period; and
3. whether, if inflation is higher than expected, it is reasonable to expect that the excess would be offset by increases in investment returns.

INSPRU 1.2.58 G

Where a firm has entered into an agreement with any other person for the sharing or reimbursement of costs, in setting the margin it should take into account the potential impact of that agreement and of its discontinuance.

APPENDIX 3 SUGGESTED AMENDMENTS TO ASP LA-3

Our suggested amendments to ASP LA-3 in relation to expense reserving are highlighted below.

3.5 Paragraph 9 of Annex IV

3.5.1 Paragraph 9 of Annex IV must be interpreted as requiring the Appointed Actuary to make provision for the future increases considered likely in expenses for existing business, based, inter alia, on prudent assumptions as to the future rates of increase in prices and earnings. In considering such provision, it would be reasonable for the Appointed Actuary to take into account margins arising from, and restrictions on, interest rate assumptions.

3.5.2 The Appointed Actuary must make provision for expenses having regard to how the life assurance contracts will be fulfilled in the future, and must make clear what he or she has assumed in this regard. In determining the minimum provision, the Appointed Actuary must allow for any contractual obligations imposed on the Company including those arising from third party administration agreements, where a third party administrator is being used to fulfil the existing contracts.

3.5.3 Where there are service agreements with other companies (whether or not within a group structure) the Appointed Actuary must consider whether any additional provision is appropriate for the contingency that such agreements might cease. This is particularly relevant where a subsidised or preferential agreement exists.

3.5.4 In providing for the expenses likely to be incurred in future in fulfilling the existing contracts, it is permissible to take credit to the extent appropriate for the difference between the gross premium and the valuation net premium. The Appointed Actuary must be satisfied in this instance that the provision on such an implied basis is prudent. Explicit allowance for future expenses is required for all contracts under which no future premiums are receivable where these are not provided by disclosed margins in the valuation rate of interest.

3.5.5 Whether or not the Appointed Actuary performs the valuation under Paragraph 2 of Annex IV on the assumption that the Company will continue to transact new business, Paragraph 9 of Annex IV requires an assessment of the provision for future expenses against the total (net of tax) cost that would be incurred in fulfilling existing contracts if the Company were to cease to transact new business. In assessing the required provision, the Appointed Actuary may take account, on a prudent basis, of outstanding margins on the existing business projected to emerge on the valuation assumptions over the period that the additional expenses are incurred.

3.5.6 Experience has shown that the transition to a closed fund is likely to be costly and that more than twelve months may elapse from such closure before the lower level of expense appropriate to a closed fund is achieved. The Appointed Actuary must provide for any expense overruns, particularly in relation to business assumed to be written in the period from the valuation date to the assumed date of closure to new business. In addition, the Appointed Actuary must allow, on a prudent basis, for the costs of staff retention, redundancy and the costs of future known projects and other fixed, accelerated or other additional costs arising from closure to new business. In addition, the future tax position of the fund may be affected.

3.5.7 In the case of non-attributable expenses (being those expenses which are not directly attributable to a particular long-term insurance contract), in relation to a group of contracts with the same or similar expense risk characteristics, the Appointed Actuary may make aggregate provision for such expenses at the level of the group of contracts, provided that the mathematical reserves established in respect of such expenses in relation to that group of contracts have a minimum value of at least zero.

3.5.8 In determining which expenses may be considered to be attributable to individual long-term insurance contracts and those which may be considered non-attributable, the Appointed Actuary should attribute to an individual contract at least those expenses which are directly attributable to that contract including expenses which vary with the volume of business for that type of contract. Commission payments, charges to a fund on a 'per policy' basis and investment management fees are generally directly attributable. For expenses of the fund which are calculated directly based on actual expenses (and not calculated in accordance with a management services agreement), the attributable expenses will also include those costs which vary with the volume of business for that product, for example, salaries and accommodation costs of staff in a processing centre, printing and postage of communications to policyholders and associated computer services.

Non-attributable expenses may include overheads which are relatively insensitive to the volume of business for the type of contract in question and an apportionment of group overheads. Examples of expenses that may be considered non-attributable include salaries of head office staff involved in monitoring products and drafting standard communications to policyholders and allocated overheads for centralised functions such as human resources, finance and IT.

Where non-attributable expenses arise in relation to a homogeneous risk group of contracts sharing the same or similar expense risk characteristics, the Appointed Actuary may determine the reserve for those expenses at the level of that risk group, provided that the reserve so established has a minimum value of at least zero (see 3.5.7).

In identifying homogeneous risk groups, the Appointed Actuary should consider all risks that impact on the level of expenses borne by contracts including persistency risk (and, in particular, bulk lapse risk) and expense inflation risk.

APPENDIX 4 QUALITATIVE FEEDBACK ON EXPENSE RESERVING PROPOSALS

Questions Asked

We asked respondents to comment in terms of any or all of the questions below and to add any other comments that they believed to be important. Their replies are shown below, edited to remove some of the repetition that naturally existed.

1. Do you think this change is sensible in the context of the existing Solvency 1 framework?
   - Yes, I think it is sensible, provided "non-attributed expenses" are clearly defined.
   - A sensible change in the context of Solvency I – allowing unused expense loadings from some policies to be used against portfolio level expenses – thereby avoiding unnecessary reserves.
   - The principles according to which reserves are calculated at a per policy level are no longer appropriate for the calculation of technical provisions. Current practice arose out of the recommendations of a SAI working party a number of years ago. Even though cash reserves and resilience reserves are generally calculated on a per policy basis, closed fund reserve provisions are often calculated at a portfolio level. Hence, in effect, some companies (particularly new start-ups or companies that have not yet achieved 'critical-mass') may already be ultimately calculating reserves which take this change into account.
   - I would strongly support this change.

2. Would this change compromise a fundamental principle of solvency valuations for life companies?
   - Not really, it's more to do with tweaking the current regime.
   - I do not believe that there is any legislative requirement to attribute all maintenance expenses to individual policies for the purposes of calculating "cash reserves". In my view Article 9 of the 1994 Life Framework Regulations does not require a strict per-policy expense attribution. (In fact, as far as I can see, the practice of allocating all expenses on a per-policy basis arises from recommendations in a number of UK actuarial papers from the 1970s and 1980s). This change could, therefore, be effected with a change to actuarial guidance.
   - The principles according to which reserves are calculated at a policy level, with all maintenance expenses allocated to individual policies, are in my view overly prescriptive and conservative.
   - This does not compromise a fundamental principle of solvency rather it reinforces it – using sensible methodologies rather than non-realistic ones.
   - Would support immediate adoption of this general approach to setting cash reserves as standard actuarial practice for statutory reserving
   - No, unless you argue that a fundamental principle is you look at each policy on an individual stand alone basis but this does not make sense in that fundamentally insurance is about sharing risks among groups of policyholders.

3. Is this change congruent with a move towards risk-based solvency measures? Is this change congruent with a move towards Solvency 2 as currently envisaged?
   - This change is very sensible in the context of Solvency II.
   - As for the prudent lapse assumption, the current practice for calculation of cash reserves introduces arbitrary prudence in the valuation and moves away from a genuinely risk-based prudent valuation.
   - We believe this change is sensible in the context of Solvency 1, and is in-line with moves to both risk-based solvency measures and Solvency 2. This change allows for a more realistic calculation of future expenses, as non-attributable expenses (overheads) can be forecasted without reference to volumes of policies.

4. Would implementation of this change weaken policyholder protection provided by the existing regime materially?
   - This should not weaken policyholder protection – it may increase it as overheads are more sensibly calculated at a company or divisional level rather than being assigned to individual contracts.
   - As it reduces reserves, it is reducing policyholder protection but reserves and Solvency margin mean policyholder is still adequately protected.

5. Is it necessary to introduce additional safeguards to the valuation along with this change to ensure continued prudence in the overall basis?
   - If cash reserves for inforce business were to be calculated at a portfolio level then there would be a requirement to expand the resilience test. Such an expansion might involve testing the sensitivity to changes in lapse rates. This would require some guidance in order to ensure consistent application of the methodology.
   - Need to be happy in a run down scenario that it is possible when number of policies reach a certain level that policies could be transferred and maintained by a third party outsourcer at the projected expense levels.
   - This method is indirectly bringing in margins on some policies which are effectively assets i.e. there is a cross subsidisation on expense loading between policies/products. Therefore need to have more prudent lapse assumptions(higher lapses) on policies which are giving positive margins but it may not be practical to do this at policy level and may be can only consider at product level.

6. Are prescriptive guidelines (e.g. tight actuarial guidance) required to ensure appropriate implementation of this change across offices?
   - Prescriptive guidelines are required to ensure consistent treatment between companies.
   - This proposed change would require some further, more concise, definition of non-attributed expenses and would require some guidance regarding the projection of such non-attributed expenses over time.
   - We don't believe further prescriptive guidelines or additional safeguards are required within this area.
   - Guidance is probably necessary to ensure Appointed Actuaries are prompted to ensure portfolio level cash reserves are sufficiently prudent after this change (e.g. expense / cashflow aggregations are consistent with the expense dynamics of each business)
   - If cash reserves for business were to be calculated at a portfolio level then there would be a requirement to expand the resilience test to ensure that the reserves would be sufficient in "stress scenarios". Such an expansion might involve testing the sensitivity to lapse and mortality risks as well as market risk. This would require some guidance in order to ensure consistent application of the methodology.
   - This proposed change would also require some further, more concise, definition of non-attributed expenses and would require some guidance regarding the projection of such non-attributed expenses over time (especially in a closed to new business situation).
   - If there is some outsourcing of some services which is on a per policy basis then these per policy costs have to be attributed to the policies. There may be a min overall outsourcing payment charge and this will need to be considered.
   - It would require addition thought / guidance in respect of elements such as bonuses, expected policyholder behaviour on wind-up, and likely future expenses on wind-up.

7. Is the proposed change consistent with international best practice in reserving / capital management?
   - Yes, I believe so.

8. Would you support this change on a stand-alone basis (i.e. if this was the only change to the valuation regulations would it be an improvement)?
    - Yes this change could be implemented on its own.
    - Yes, this would be an improvement but in doing this portfolio expense approach you would need to allow for lapses on available margins to cover the expenses.

9. Would introduction of this change present significant practical implementation issues for you?
    - Implementation would require development, particularly re production of unused margins for comparison against projected non-attributed expenses, at portfolio level. A once-off cost. Not impossible.
    - No practical implementation issues.
    - There may be some issues regarding the implementation of this change (mainly in respect of the accurate determination of 'unused' margins and the modelling of cash flows at a company rather than policy level).
    - Yes, there would be some practical implementation issues but nothing significant.
    - Some adjustments would need to be made to models to incorporate this change and in particular coming up with a reasonable run off profile for non attributed expenses.

Additional Comments

- Many companies have per policy expense agreements with management services companies so the proposed change may not have much impact on them.
- Allowing for a portfolio level cash reserves calculation for non-attributed expenses resulted in sizeable reduction in reserves, before applying the closed fund reserve test. Applying this test however resulted in a lower reduction as the closed fund reserve was higher than the "portfolio level non-attributed expenses reserve", noting that this reserve already allows for lapses.
- There is an implicit assumption therefore that either (i) overall expense levels will continue at current levels plus inflation with future new business making up the gap in expense loadings from existing business that lapses or (ii) the company closes to new business and overall expense levels fall in line with the reducing expense loadings.