

Discussion paper

INTERNATIONAL ASSOCIATION OF INSURANCE SUPERVISORS



QUANTIFYING AND ASSESSING INSURANCE LIABILITIES DISCUSSION PAPER

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Quantifying and assessing insurance liabilities discussion paper

Contents

1. Background	3
2. Issues that apply to both life and non-life sectors	5
3. Quantifying claims provisions for non-life insurance	8
4. Quantifying life assurance provisions	12
5. Quantifying provisions for unearned premiums and unexpired risks and other provisions (life and non-life)	15
6. Reinsurance	17
7. Assessment of provisions by supervisors	18
8. Summary	19
Annex: Insurance liabilities and the future IAS standards	21

1. Background

1. The Technical Committee of the IAIS, at its meeting on 19 and 20 January 2001, commissioned the chairs of the Solvency Subcommittee and the Accounting Subcommittee to prepare a short paper on the “assessment and quantification of insurance liabilities” for review at the Technical Committee, which is the primary purpose of this paper. It should be noted that this paper discusses current practices, which will evolve over time. Such an evolution will be influenced by, among other things, the direction of efforts to harmonise international actuarial and insurance accounting standards. The Annex presents an analysis, prepared by the Accounting Subcommittee, of the potential impact of evolving international accounting standards on the practices described in this paper. The paper will also be used as a basis for a future paper by the Solvency Subcommittee on Principle 1 - Technical Provisions of the *Principles on capital adequacy and solvency*, which will include the role of insurance liabilities in covering risks and the level of risk coverage in the technical provisions.

2. The IAIS Glossary of Insurance Terms does not define “Insurance Liabilities”. It does, however, define Liability (item 3.358) as “A debt or responsibility: an obligation which may arise by a contract made or by a tort committed”.

3. Additional related terms that have relevance are:

- [3.626] Technical provision¹ – defined as the “amount set aside on the balance sheet to meet liabilities arising out of insurance contracts, including claims provision (whether reported or not), provision for unearned premiums, provision for unexpired risks, life assurance provision and other liabilities related to life insurance contracts (e.g. premium deposits, savings accumulated over the term of with-profit policies).”

¹ Equivalent Terms are listed in the Glossary as “Technical provision, technical liabilities, (technical) reserves”.

- [3.548] Reserve² – defined as the “amounts set aside to meet unforeseeable liabilities (i.e. an obligation that has not yet materialised) or statutory requirements, and stemming either from shareholders’ capital or, in the case of mutuals, members’ contributions and from accumulated surplus. Reserves are part of the own funds (in contrast to provisions that support liabilities to parties other than shareholders or other owners).”

4. In addition, an insurer’s balance sheet may, depending on the accounting methods and terms in the jurisdiction, have some form of other liabilities such as amounts set aside to meet payments to other creditors such as taxation authorities, and dividends declared but not paid and the like.

5. The difference between the total value of the assets and the total value of the liabilities noted above may be considered to be capital. However, it should be noted that there are, for accounting or tax reasons, certain provisions which are included in liabilities in some jurisdictions and which may be included in capital in other jurisdictions.

6. This paper will be restricted to focus on the technical provisions, as they are the most relevant for insurance operations. Other liabilities tend to be less material or are subject to less uncertainty in their estimation, or are subject to evaluation using the same accounting and valuation methods as are applied to all firms in a jurisdiction – that is, they are not subject to special issues.

7. As a result, we need to consider the quantification of the following list of items (again taking the definitions from the Glossary).

- Claims provision – defined as the “amount set aside on the balance sheet to meet the total estimated ultimate cost to an insurer of settling all claims arising from events which have occurred up to the end of the reporting period, whether reported or not, less amounts already paid in respect of such claims”
- Provision for unearned premiums – defined as the “amount on the balance sheet representing that part of premiums written which is to be allocated to the following reporting period or to subsequent reporting periods”
- Provision for unexpired risks – defined as the “amount set aside on the balance sheet in addition to unearned premiums with respect to risks to be borne by the insurer after the end of the reporting period, in order to provide for all claims and expenses in connection with insurance contracts in force in excess of the related unearned premiums and any premiums receivable on those contracts”
- Life assurance provision – defined as the “amount on the balance sheet which comprises the actuarially estimated value of an insurer’s liabilities for future benefit payments including bonuses already declared and after deduction of the actuarial value of that component of future premiums attributable to meeting those liabilities”
- Equalisation provisions – defined as the “amount set aside on the balance sheet in compliance with legal or administrative requirements to equalise fluctuations in loss ratios in future years or to provide for special risks.” Examples of types of business included hail, pollution or credit insurance. This item may also include catastrophe provisions

² Equivalent Terms are listed in the Glossary as “Reserve, appropriated surplus, segregated surplus, contingency reserve”. In some jurisdictions, notably North America, policy and claim liabilities have traditionally been referred to as “reserves”. However, this is not the usage intended in this paper.

- Other liabilities related to life insurance contracts (e.g., premium deposits, savings accumulated over the term of with-profit policies)³
- Other liabilities related to non-life insurance contracts (e.g., contingent commission liabilities, deductible recoverable assets, audit premium (and other late booking premium) assets/liabilities, and premium assets/liabilities resulting from retrospectively rated insurance contracts).

8. On the basis of these definitions, we will first discuss the methods used to quantify these amounts and then the assessment of their adequacy. We will restrict our discussion of the claims provisions, provisions for unearned premiums and for unexpired risks to those arising for non-life insurers. When considering the assessment of the adequacy of provisions, we will focus on the methods used by supervisors to make this assessment and also on any requirements or normal practices in jurisdictions about the “adequacy” of the provisions.

9. In each case, the paper will examine and discuss methods, assumptions and how they are established, and the effect of any regulation on the methods and assumptions.

2. Issues that apply to both life and non-life sectors

10. Before starting with the specific comments relevant to each sector, it is possible to make some comments on issues that apply to both sectors.

A cyclic process

11. The first matter is the importance of a cyclic process in the establishment of provisions, sometimes referred to as the actuarial control cycle.

12. The process of provisioning starts with an analysis of the actual experience compared to that which was expected for the insurer over the latest period and with reference to earlier periods. This is usually done at a detailed level, considering different business lines separately. It will also include analysis of the experience of the insurer with respect to the expenses and investment returns compared to the expectations built into the provisions.

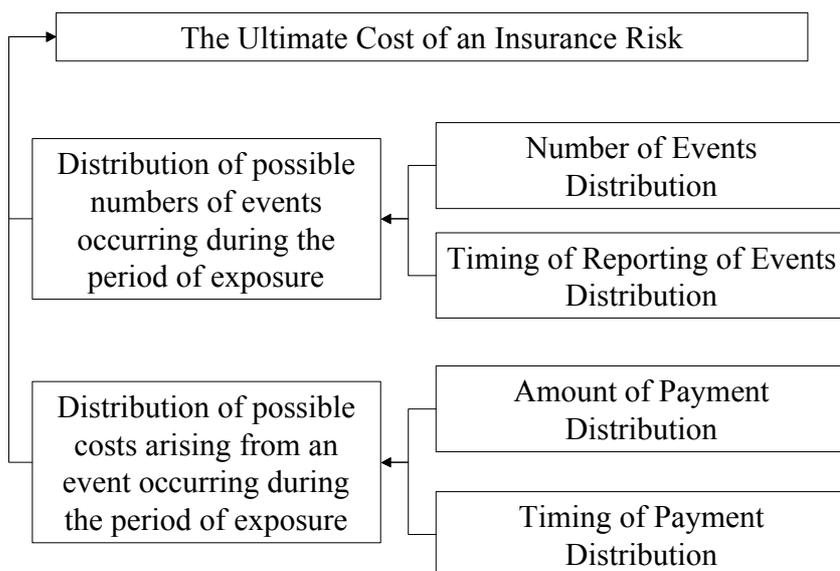
13. This process continues as a cycle of management of the business over time. This “experience based” process tends to be a strong feature of insurance management practices, perhaps more so than in other types of financial institutions. The process affects not only provisioning, but also the setting of premiums. However, past experience should be used with caution, as it is not always predictive of the future.

Stochastic thinking

14. Insurance is a business that is related to uncertainty and risk. As a result, the underlying approaches are often assessed or considered by reference to the underlying uncertainty in events, even though the specific method employed may not clearly show it.

15. By way of illustration, the ultimate cost of an insurance risk is considered as made up of a number of parts, all of which can be considered to be subject to statistical variation:

³ In some jurisdictions, technical provisions for life insurance make explicit allowance for constructive, but non-contractual, obligations to policyholders, such as dividends, which form part of policyholders’ reasonable expectations.



16. For a single line of business, uncertainty in the occurrence of the insured event can be analysed and the coverage valued while giving regard to the amount and timing of the benefit payment. The likely cost to the insurer, and the buffer necessary to protect against unexpected claims, can be considered to be a function of these events and their uncertainty. Aggregating over all lines of business will further involve the correlation among the various events that make up the total portfolio of the insurer.

17. As a result, there is a need to ensure that any approach used reflects the nature of the particular insurer, the volume and types of business that it has written, the particular terms of its contracts, and the environment in which it operates. Consequently, it is sensible that a number of the parameters of any model be determined with specific reference to the local conditions relevant for that insurer and jurisdiction.

Completeness of coverage

18. Whether it be life insurance or non-life insurance, it is important that the amounts set aside to provide for the payment of future liabilities represent a complete assessment of those liabilities. To this end, there is considerable effort as part of the valuation process to ensure that all liabilities from contracts currently or previously in force are included and that the data is accurate, comprehensive and suitable for the purpose of the valuation. Various approaches are used in different jurisdictions to ensure that records used for the valuation of liabilities are complete and accurate.

19. This means that liabilities should be determined to allow for:

- All current claims reported but not yet fully paid
- All claims that have occurred even though they have not been reported (the incurred but not reported, or IBNR, provision)
- All claims incurred but not enough reported (or IBNER; for example, in catastrophe insurance, where the claims as initially reported may not adequately reflect the ultimate liabilities)

- Inflation with respect to the cost of such claims
- Liabilities in respect of future risk periods arising from contractual commitments which exist at the balance sheet date (for example, in non-life by setting up a provision for unearned premiums and, if necessary, for unexpired risk)
- Any additional shortfall that may be expected because future premiums for future risk periods are known, or expected to be, inadequate
- Future maintenance and claim settlement expenses, including the effects of inflation
- The treatment of explicit and embedded options provided to policyholders under the contracts
- Future profit margins, when appropriate under the accounting system employed.

20. One important issue that contributes to the adequacy and completeness of coverage of the liabilities is the adequacy of the reporting of claims.

Uniformity

21. At present, there are no standards in place internationally for determining either the methods to be used for the establishment of provisions or the level of security that is implied by the provisions. Several generally accepted methods are described in this paper.

22. To a great extent, the reasons for variation between jurisdictions rest in the areas outlined below.

23. First, there is not currently a consistent set of international accounting methods that are applied in all jurisdictions. The result of this is that some supervisory regimes have established their own accounting requirements for the determination of provisions in the balance sheet of the insurers in their jurisdiction, which are different from those used for the purposes of shareholders or for other general purposes (for example, life insurance in the United States). In these circumstances, the statutory provisions tend to be established on a conservative basis and it can be considered that any solvency margin requirement has been set in the context of this conservatism.

24. Other supervisors have taken an alternative view when confronted with general-purpose accounts. In many of these cases, the accounts may be constructed with a focus on identifying profitability and to meet the needs of a more general reader of the accounts than an insurance supervisor. As a result, the provisions may have less margin for adverse development within them and, therefore, need to have a greater explicit solvency margin added to them to achieve the same degree of security.

25. The valuation of the assets may also have an effect on the valuation of liabilities and the solvency margin required. Where assets are valued at market value, different parameters may be applied as part of the liability valuation and the solvency margin, when compared to a jurisdiction where assets are valued at historic cost.

26. The second variation between jurisdictions arises from the level of complexity that exists in the marketplace. In advanced markets, the use of sophisticated risk management tools and the access to actuaries and other professionals provides the opportunity for more complex approaches to statutory

requirements for provisioning and solvency margins. In less complex markets, or where professional resources are scarce, more simplified methods tend to be used.

27. Third, the history of the jurisdiction may mean that apparently more simple approaches can be seen to apply in more complex situations. In these cases, it is usual that the risk assessment methods used are more detailed, to balance the seeming lesser complexity in the regulation itself. Despite the appearance of a “less sophisticated” approach, it is often the case that the approach has been subject to considerable practical experience and a large body of research, which means that the application of the method is made with a deep understanding of complex issues.

Selecting the method

28. The methods used to establish provisions, and the assumptions that are required, vary in their suitability depending upon the lines of business written by an insurer, the nature of the business in the particular jurisdiction, the prevailing economic conditions, and other contextual factors. For example, some methods perform well in stable conditions, but may be less suitable in periods where there is a sharp increase in the level of inflation.

29. The method to be used and the assumptions to be applied will be prescribed, to an extent at least, in many jurisdictions, whereas others will consider this as something to be established by the insurer or the insurer’s advisors, e.g., actuaries, and assessed by the supervisor, as appropriate, as part of the supervisory process.

30. It can be important to consider a range of methods or a mix of several methods. This is particularly the case with respect to non-life insurance portfolios.

Degrees of conservatism

31. Whether the techniques used to quantify the technical provisions are being applied to life or to non-life portfolios, it is possible to establish these provisions on a more or less conservative basis. Appropriate and sufficient technical provisions should be established for each line of business.

32. The degree of conservatism may, in some jurisdictions, be consistent from insurer-to-insurer and over time, reflecting a consistent approach to this issue by those in a particular jurisdiction.

33. It is less desirable that the degrees of conservatism vary markedly among insurers within the same jurisdiction, as this can make comparisons difficult. Also, where the solvency margin is determined as a function of these provisions then this variation will undermine the solvency regime, if it is significant. The first principle for solvency and capital adequacy regimes prepared by the Solvency Subcommittee notes that it is desirable for technical provisions to be “calculated in a reliable, objective and consistent manner across insurers”.

3. Quantifying claims provisions for non-life insurance

34. Non-life coverage is often provided under short-term contracts, e.g., one year, as contrasted with life assurance, which is typically provided under multi-year contracts. While the contracts may be short-term, some resulting claims may be payable over several years. The most significant non-life provisions are generally those for claims, which are discussed in this section. There are also provisions for unearned premiums, unexpired risk and other provisions, which are discussed in Section V. Additional provisions may be appropriate for multi-year non-life contracts, e.g., those with level

premiums but an increasing incidence of claims; the valuation of such provisions is subject to the same considerations discussed in Section IV Life Assurance.

35. There are three main methods available to quantify the claims provisions for non-life insurance:

- Case estimates
- Deterministic methods based on run-off triangles
- Stochastic methods.

This listing of methods is not meant to be exhaustive. For example, for a new product line, only until sufficient data on actual experience is available, pricing assumptions may be applied to the earned premium revenue.

36. These three main methods can also be considered as part of a family of methods, as they are frequently used together. In particular, case estimates can be used as a basis for applying run-off methods and statistical and stochastic methods. Case estimates are also required in many jurisdictions.

Case estimates

37. The first method involves case estimates of the amounts that it is anticipated will be required to meet claim payments. This method relies on assessments made by the officers managing the claim as to the amount of the expected total cost of the claim less amounts already paid in respect of the claim. Substantial reliance is placed on access to detailed information as to the claim made and the manner in which it is proposed to settle the claim.

38. In some cases, the assessment of the amount needed to pay a particular claim may already be made with accuracy – the details of the claim and the method of settlement of the claim may be agreed but, for some reason, the payment may be outstanding.

39. These estimates are then aggregated to form a total amount.

40. In other circumstances the amount of the claim may involve a larger than normal element of uncertainty. For example, the claims notification may contain no details, or the claim amount may depend on future events, such as the results of court action that is incomplete at the time the estimate needs to be made.

41. The method of case estimates does not require a further set of detailed assumptions, as each claim is assessed on the basis of all the knowledge that the insurer has about the potential cost of meeting that claim.

42. The main advantage of the method is that it is relatively straightforward for an insurer to apply. As a result, it is most easily applied by less sophisticated insurers. The method also makes full use of the information that may have been gathered about the individual claim and the assessment of experts about the nature of the settlement of the claim. In addition, insurers will tend to need to have case estimates in place as part of the proper claims management procedures and because of the regulatory requirement of many jurisdictions, so there is usually no additional material cost to applying the method.

43. The method also tends to work well for short-tail classes of business and long-tail classes with more mature development, where there is less uncertainty in the estimation process. In cases where

there is more uncertainty, such as classes of business subject to outlier events, consideration should be given to establishing IBNER provisions.

44. The case estimate method is frequently used in order to obtain satisfactory data for stochastic and run-off models. It enables the supervisor to assess the level of provisioning, the quality of underwriting, internal claims procedures and management's prudence in provisioning.

45. A possible disadvantage of the method is that it involves a substantial reliance on the judgment of the claims officers. As a result, the precise level of prudence is difficult to determine. Supervisory regimes respond to this difficulty by performing assessments of the case estimates. One method that can be used to assess the adequacy of the case estimates is to examine how these estimates have developed over time. This technique makes use of actuarial methods. If the case estimates show a continuing trend to increase as the claim progresses toward settlement, then this would suggest that case estimates had a pattern of underestimation which should be addressed.

46. Similarly, for claims that have been paid, as far as the insurer is concerned, there remains a risk that the claimant may advise that the amount of the claim was not, as originally thought, paid in full and that there is an additional liability that is sought to be recovered against the policy. This problem of "reopened claims" is particularly relevant for long-tail business. The percentage of claims reopened can be an indicator of the quality of claims management.

Deterministic methods based on run-off triangles

47. There are a number of methods that may be applied utilising aggregated data about claims paid or about claims incurred in the past. These methods involve the construction of a table of past claims information, setting the amounts of claims paid or incurred or the number of claims separately for each year when the original cover was provided, and for each period after this when the actual claim was reported or payment made.

48. Different methods may be appropriate for different product lines.

49. The methods use various mechanical techniques that have been developed to estimate the future claims payments from the data on open claims and past claims experience. This data usually comes from case estimates, which have to be precise and objective to ensure that the models produce accurate results.

50. Often, required assumptions are generated from an analysis of the past experience. If the past experience is a good representation of the future then this is a sensible approach. Where the future is known to be different from the past for some reason – for example, a legislative change that will lead to a change in the claims outcomes – then it is necessary to apply judgment to the application of the assumptions generated in this way.

51. When analysing past experience under the run-off triangle method, consideration should be given to historical rates of inflation. Assumptions are also required for future inflation. Similarly, changes in recovery rates for salvage and subrogation should be considered.

52. The methods can be more complex to understand and communicate to an insurer's management than the case estimates method.

53. The methods are also reliant on adequate data being collected and maintained on past claims. For reinsurers, it can be difficult because of limited information provided by ceding insurers.

Stochastic methods

54. Another alternative is to construct a stochastic model of the insurance risks. In stochastic models, technical liabilities are calculated using a wide range of possible scenarios, taking into account variations in such factors as frequency, size and timing of claims and weighting them by probability distributions.

55. Many insurance risk models exist in literature. It is important that a model be chosen that is appropriate for the lines of business and the market conditions being modeled. It is essential that sensitivity tests be done to help assess the suitability of the model. An inappropriate model may produce results that are far from realistic best estimates.

56. The methods require very detailed assumptions to be made and ongoing review of these assumptions against the experience as it emerges.

57. The main advantage of these methods is that they can provide a detailed view of an insurer's situation. This view must be completed with sensitivity studies in order to assess the reliability of the model and to better understand the impact of different parameters.

58. A possible disadvantage of these methods is that they are complex to put in place and depend on the insurer having considerable expertise. Experienced personnel are required to build, maintain and utilise the models and interpret the results. As a result, smaller and less sophisticated insurers may have difficulty implementing stochastic methods cost-effectively.

59. Stochastic modeling also requires a detailed and fairly extensive set of data, which may be difficult to develop when the model requires a long period of observation.

60. Stochastic methods give a wide range of results, which may be difficult to interpret and may require additional education of management of the insurer.

61. Models should be reviewed regularly and audited periodically to ensure their suitability and reliability, and adjusted accordingly. Given the complexity of these methods, the supervisor should assess appropriateness of the models and parameters used by an insurer.

Estimating claims incurred but not reported

62. When the method for determining the claims provision does not consider the potential cost of claims that have been incurred but have yet to be reported to the insurer, a separate estimate of such cost must be made. As a result, insurers use various methods (e.g., lag studies) to identify a provision for IBNR claims.

The question of discounting

63. There is not a consistent practice from one jurisdiction to another on the question of discounting of future cash flows to a present value before setting the provision for either reported claims or IBNR claims.

64. The application of discounting would only produce a material difference in result if the particular business line involved:

- substantial delays between the period the insurer was “on risk”⁴ and the reporting of claims
- substantial delays between the time the claim was reported and settled⁵
- claim settlements in the form of periodic payments, rather than lump sums.

65. As a result, the allowance of discounting is important in assessing the situation for an insurer that writes very long-term contracts or has long-term liabilities.

66. In some jurisdictions, there is a widespread use of discounting. In others, discounting is expressly prohibited for non-life insurance. Still others have a requirement that permits discounting but does not make it mandatory, or are silent on the requirement for discounting.

67. An undiscounted provision will tend to be more conservative than a discounted provision, all other things being equal. An undiscounted provision may have an implicit margin, whereas a discounted provision will tend to balance this lesser conservatism with other explicit additional requirements, such as provisions for adverse deviation.

68. Discounting should be explicit. When provisions are established without explicitly taking account of the effects of inflation, they should still be presented as discounted provisions, but with the simplistic assumption that the discount rate is equal to the assumed rate of inflation.

69. If discounting is permitted, then there is the need to determine the discount rate that should be used. The choice of the discount rate can be specified in the regulatory or accounting regimes, or be left open to professionals to determine. Care needs to be taken that the discount rate does not lead to lower provisions than would be reasonable considering the assets backing the insurance liabilities.

70. In order to apply discounting, the payout pattern must be estimated.

71. When discounting is permitted, the analysis of the run-off triangles is more difficult. Also, the presentation of investment income on the income statement will change.

4. Quantifying life assurance provisions

72. Life assurance provisions, as is indicated by the definitions, are determined by actuarial methods.

73. In particular, provisioning tends to be based on a discounted cash flow assessment. The methods used will, with the exception of the accumulation method identified below, involve the calculation of the present value of the future benefits and expenses. From this amount, an estimate of the present value of the future premiums will be deducted.

⁴ That is, the period of time that an event was required to occur within to be provided with cover under the contract of insurance.

⁵ This is most common for liability business where the precise determination of the amount of the claim and therefore the liability to the insurer may require considerable assessment of the evidence about the claim, or (in the case of claims involving injury) a period of time while the extent of the injury cannot be readily established by the medical profession. Another example would be where the precise determination involves legal processes, which have not concluded at the time the provision has to be established.

74. Valuation of provisions for claims, including IBNR, is subject to the same considerations discussed in Section III Non-Life. Once the provisions are established, the amount of profit will be identified. Many jurisdictions have restrictions on the distribution of this profit where there is an entitlement for life insurance policyholders to share in the profit distribution.

Net premium valuations

75. A net premium valuation determines the value of the liability to the insurer as the present value of the expected future death and maturity claims less the present value of future “net premiums”. Net premiums represent the premiums that would be required to provide the death and maturity benefits, ignoring expenses. Some net premium methods also include surrender benefits.

76. The method requires two or sometimes three assumptions: the rate of interest to be applied for discounting; the mortality table to be assumed; and (sometimes) an adjustment (e.g., zillmerisation) that would have the effect of reducing the amount of the provision in early years in recognition of the high establishment expenses that may be incurred in marketing, underwriting and issuing the insurance contracts.

77. The discount rate is reduced to allow for future expenses, profits and benefit options not included in the net premium, as well as to hold back the loadings in the premium, which represent a contribution for future profit distributions. In some jurisdictions, the discount rate is subject to regulation.

78. Main advantages of the method are that it is:

- in stable economic conditions, well suited to the management of traditional whole of life and endowment insurance contracts with a system of distribution of profits to policyholders through policyholder dividends or reversionary bonuses
- relatively easy to define in terms of parameters and is, therefore, amenable to legislative use
- capable of application in an environment where computer resources are limited.

79. The main disadvantages of the method are that it may not recognise risks from such sources as lapses or the provision of implicit or embedded guarantees and options. However, there are jurisdictions that compensate for these disadvantages through additional measures, such as including additional margins in the technical provisions or requiring additional provisions in respect of potential deficiencies identified through stress testing.

80. Also, the method can lead to results that are sound but are difficult for the management of the insurer to understand. For example, the mortality assumption and zillmer adjustment may not reflect an insurer’s actual mortality experience and acquisition costs. Therefore, although the resulting provisions may be adequate, they may have aspects that do not necessarily represent an accurate valuation of the insurer’s business.

81. The net premium valuation method has been the subject of very substantial research and is most useful for traditional endowment and whole life insurance business. However, new insurance products have appeared in more developed markets, resulting in the method becoming less common compared to the gross premium and projection-based methods.

Gross premium valuations

82. In contrast to the net premium method, the gross premium method makes specific allowance for the expenses that are expected to be incurred to support the contract and the full premium actually being charged to the policyholder.

83. The method will often also make explicit allowance for early surrenders of contracts and other policyholder options. As a result, the models tend to be more complex and require a greater capacity and infrastructure to implement.

84. Gross premium valuations are based on insurer-specific assumptions that reflect a more explicit approach to actual expectations. Cash flows from assets, and the extent to which they match liability cash flows, should be considered in setting the discount rate, although in some jurisdictions the discount rate is subject to regulation. Then, if appropriate, explicit margins are added for adverse deviation to produce the desired level of conservatism.

Accumulation method for investment-linked and investment account business

85. One additional method that is worth mentioning is the accumulation method. This method is most relevant to types of business that primarily act as investment vehicles for clients.

86. In this method, the technical provision is calculated based on the current value of the accumulated policyholder account.

87. In these cases, the prospective assessment of cash flows could, in some cases, be discounted to a value that would be less than the current value that would be available to the policyholder and, therefore, the insurer will hold the higher liability – simply adding together the totals of the surrender values of the policies.

Stochastic methods

88. Stochastic methods can be used for the valuation of life insurance liabilities. The considerations are the same as those listed in Section III of this paper.

89. This methodology is not yet widely used. However, its use is increasing, especially for the valuation of embedded options.

Issues for additional consideration

90. Quite separately from consideration of the method used to value long-term life insurance contracts, it is often possible to calculate a technical provision that is negative in the first year of the life of a contract. In such cases, the regulatory regime needs to consider the treatment of these amounts; e.g., some jurisdictions require that they be set to zero. Specific rules may be determined as part of the rules for reporting profit and for determining the liability for solvency purposes.

91. The treatment of what is referred to as “future profit margins” is also an area where practices are varied. To a fair extent, the manner in which this issue is addressed in a jurisdiction depends on the fundamental premises underlying its accounting regime, particularly whether a deferral and matching approach is used or not.

5. Quantifying provisions for unearned premiums and unexpired risks and other provisions (life and non-life)

92. It is necessary for an insurer to establish a provision in respect of future risk periods arising from contractual commitments that exist at the balance sheet date. This is often done by setting up a provision for unearned premiums and, if necessary, a provision for unexpired risk. A provision is needed because when a premium is received it will be accounted for as income. The period that cover has been provided for will not usually have expired by the balance sheet date of the insurer, so there will be a proportion of the premium that was provided for the period that has passed, and a proportion that has been provided for the period that is still to be completed. In addition to the unearned premium, an additional provision may be established for the unexpired risk, reflecting the possibility that the unearned premium may not be adequate for the risk if the tariff scale is too low.

Proportionate methods

93. Proportionate methods allocate the premium evenly over the period that the risk is covered. For example, if a contract runs for 12 months and, at the balance sheet date, it is 3 months into this period, then $\frac{1}{4}$ of the period has passed and $\frac{3}{4}$ of the period is still to be completed. In this case, $\frac{3}{4}$ of the premium would be considered as unearned.

94. It is not unusual for these methods to make an allowance for the initial expenses, which will be incurred at the issue of the contract, for example 20% of the premium. In this case, 80% of the premium would be allocated evenly over the period.

95. This method assumes that the risk will be incurred evenly over the period for which the premiums have been paid. While this is usually a satisfactory assumption, it is not always valid, e.g., for some forms of credit insurance, weather insurance, or a contract with an aggregate deductible on which multiple claims are expected during the coverage period.

96. A disadvantage is that the method relies on the adequacy of the premiums charged for the risk. If the premiums are not adequate to cover the risk then the provision will be similarly inadequate to cover the risk that remains for the insurer.

Prospective methods

97. In the event that the proportionate unearned premium may not be adequate to cover the risk that is still to be borne by the insurer, then it is appropriate to consider an additional provision for unexpired risk.

98. It is usual that this additional provision for unexpired risk would be determined with reference to the unearned premium, but with an addition determined to reflect a claims ratio on the business that is higher than that which is assumed in the premium rates.

99. Alternatively, a prospective approach that makes an assessment of the cost of the risk based on the underlying factors (frequency, size and timing of claims) may be used.

Stochastic methods

100. Other types of provisions that could also be considered here would be allowances for specific embedded options, guaranteed renewability, guaranteed annuity options, guaranteed minimum investment returns, allowance for “increasing risk”, and “aging provisions” (which are particularly

relevant in health insurance products⁶). Stochastic methods are often useful in establishing such provisions.

Equalisation provisions and similar provisions

101. In addition, in some jurisdictions, there is a practice of establishing “equalisation provisions” over and above the claims provisions set out above. These provisions relate primarily to non-life insurance business and the practice is more common in European countries.

102. For example, in Germany, there are roles for both an “equalisation provision” and “similar provisions”. These are established in addition to the provisions for claims outstanding.

103. The provisions for the equalisation provision and similar provisions are compatible with the European Union Council Directive of 19 December 1991 on the annual accounts and consolidated accounts of insurance undertakings (91/674(EEC)), in short, the “Insurance Accounts Directive”, since Article 62 of that directive leaves the constitution and valuation of equalisation provisions to the Member States of the EU. By way of example, these provisions operate as follows:

- “Movements in these provisions for each class of business written depend on the pattern of claims and costs. If below-average claims have been incurred during a financial year, the corresponding amount must be transferred to the equalisation provision up to the maximum provision. If above-average losses have incurred, the corresponding amount must be withdrawn from the equalisation provision. The calculation of average claims in this context is based on an “observation” period of up to 15 years (30 years in hail, credit, guarantee and fidelity insurance).”

104. The aim of this provision is to equalise fluctuations in the loss pattern if, in particular:

- according to the experience in the relevant class of insurance substantial fluctuations of the annual costs of insured events are to be expected
- the fluctuations cannot be equalised through current premiums
- the fluctuations are not covered by reinsurance.

105. In Germany, where these provisions are applied, they must be set up for each class of property and casualty insurance. The maximum amount is determined by a mathematical/statistical method stipulated by the Supervisory Authority.

106. The German example of similar provisions also involves the establishment of a separate and additional cushion. “Similar provisions” are prescribed for risks of the same type for which a balance between costs and premiums cannot (because of the high individual risk of claim) be found – according to actuarial principles – within the financial year, but only over a period of time not assessable at the balance sheet closing date. The number of such provisions is not limited. At present, however, specific (valuation) regulations only exist for pharmaceutical (product liability) risks and atomic (property and liability) risks. “Similar provisions” are important to reduce the effect of natural and other catastrophes (storms, etc.).

⁶ For example, in Germany, private health insurance premiums may not be raised simply because an insured person is growing older. Part of the premium is accumulated with interest as an aging provision. If premiums prove to be insufficient to cover the emerging risk, then the provision is drawn upon to cover the shortfall.

107. In other jurisdictions, the use of equalisation and other provisions is not as common. In the extreme, they can be prohibited altogether under the local accounting standard. In many cases, taxation considerations influence the decision whether or not to establish these provisions.

108. It is noted that the provisions established for catastrophes can also be considered in a similar way to the more generally described equalisation provisions. The equalisation provision is to cover random fluctuation of claim expenses around the expected value of claims, and so equalises claims or claim ratios over the underwriting cycle. The catastrophe provision is a provision to cover future catastrophic claims from high-severity, low-frequency events. In Japan, the Insurance Business Law requires a provision for future catastrophic claims, including those due to earthquakes and typhoons.

6. Reinsurance

109. Principle 11 of the *Principles on capital adequacy and solvency* refers to the allowance for reinsurance and, in particular, emphasises the need to consider the extent to which risk is transferred and the quality of the security of the reinsurance counterparty. For example, the impact of financial reinsurance should be carefully assessed.

110. For supervisory purposes, the amount of technical provisions should be reported both on gross and net of reinsurance bases.

111. Amounts that are known to be due and recoverable from reinsurers but not yet received will appear as an asset in the balance sheet of the insurer and should be treated in a similar manner to any other receivable.

112. The likely security of the reinsurance counterparty should always be considered in determining whether, and to what extent, allowance should be given for reinsurance.

113. The ability to assess the impact of reinsurance depends on the type of reinsurance cover that the insurer has as well as the actual experience that the insurer has incurred at the point of the assessment.

114. For example, where facultative reinsurance covers the excess in a claim on a per event basis, then it is reasonably straightforward to determine the impact of reinsurance on the claim estimate. In contrast, for whole of account cover where the overall experience of the insurer is expected to be within the excess, but where adverse development of IBNR claims could push the account over the excess, then it is more difficult to determine the impact of reinsurance.

115. Quite apart from the assessment of the potential recoveries from reinsurers, there is then the question of whether the provisions established will make allowance for such potential recoveries.

116. In some jurisdictions, provisions are established on a net-of-reinsurance basis. The provisions have to take into account both the expected amounts of the reinsurance recoveries as well as the likelihood that these amounts will be recovered.⁷

117. In other jurisdictions, provisions are determined on a basis that makes no allowance for reinsurance. However, for presentational purposes, provisions may be calculated on a net basis and then presented gross of reinsurance with an offsetting allowance for reinsurance recoveries as an asset on the balance sheet of the insurer.

⁷ As a result, it is not possible to allow for a recovery from a reinsurer that is known to have failed.

118. A range of other options exists between these two extremes. These include: allowance for a specified and consistently-applied proportion of expected reinsurance recoveries; allowance for recoveries related to contracts with a specified list of insurers or from insurers with a particular quality standard; and allowance also taking into account security through collateralisation or other domestic laws.

119. The particular issue of the nature of the reinsurance is important. In particular, the adequacy and extent of risk transfer is a valid consideration in determining whether or not there should be allowance made for reinsurance arrangements. Credit for reinsurance in a solvency regime should have regard to the extent to which risk is transferred.

120. The emerging market of risk securitisation and alternative risk transfer products also involves similar issues to more conventional reinsurance contracts and new issues, such as: legal; documentation; and basis risk.

7. Assessment of provisions by supervisors

121. Supervisors need to assess the adequacy of the provisions set by an insurer.

122. The supervisory tools used to make these assessments include:

- Comparison with a calculation using conservative assumptions
- Placing obligations on actuaries and auditors
- Rules about disclosure of information
- Off-site analysis, including ratio analysis and peer comparisons or run-off methods that can be used by the supervisors with data provided in documents filed
- On-site inspection, including assessment of personnel, procedures, controls and models
- Requiring the use of specific assumptions
- Requiring review by another expert
- Testing the past against the actual experience
- Review by actuaries of the supervisory authority.

123. The supervisor needs to make this assessment, as it is not sufficient to rely on the assessment of the insurer without subjecting it to some form of review.

124. The challenge for the supervisor is to have a clear understanding of the extent to which the technical provisions are adequate. That is, there is a need to determine if the provisions are sufficiently prudent. It is not as much of a priority for the supervisor to assess the precise level of adequacy, as long as the supervisor can form the view that the level is over and above that which is sufficient for supervisory purposes.

125. The supervisor will also be interested in considering the criteria that have been used in selecting the method used to value the provisions.

126. Finally, the supervisor will have an interest in the method used for more general accounting purposes and for public reporting. This will have an influence on the insurer, since market discipline is enhanced by public disclosure. The supervisor may be particularly interested in whether and, if so, how the methods and assumptions used differ from those used for regulatory purposes.

8. Summary

127. Assessment of liabilities is a complex topic. This paper has provided a broad overview of the field to provide a vehicle for discussion amongst the IAIS Technical Committee and members.

128. In preparing the paper, the IAIS Accounting and Solvency Subcommittees have identified a number of key points:

- Provisions should be established within a cyclic process that considers the results of an analysis of the actual experience of the insurer.
- Regardless of the complexity or simplicity of the mechanical application of the process for establishing provisions, the underlying stochastic nature of the insurance risk must be considered.
- It is desirable that a number of the parameters of any model be determined with specific reference to the local conditions relevant for that insurer and jurisdiction.
- It is important that the amounts set aside to cover future liabilities represent a complete assessment of the risks associated with those liabilities.
- The lack of uniformity in practices reflects variations in accounting methods as well as differences in the levels of complexity that exist in various markets and the history of the jurisdiction. Accounting methods can also vary within a jurisdiction between general-purpose accounts, public reporting, and statutory provisioning.
- Where less complex methods are used in regulation, it is usual that the risk assessment methods used by the supervisor are more detailed to balance the seeming lesser complexity in the regulation itself.
- Despite the appearance of a less sophisticated approach, it is often the case that the approach has been subject to considerable practical experience and a large body of research, which means that the application of the method is made with a deep understanding of complex issues.
- For non-life business, while a range of methods is available, the use of case estimates can be both practical and, for short-tail classes, particularly suitable provided that there is adequate assessment of the reliability of the case estimates.
- There is a varied practice with respect to discounting for future investment earnings when establishing non-life insurance claims provisions. Where discounting is applied, care needs to be taken that the discount rate does not lead to lower provisions than would be reasonable considering the assets backing the provisions.

- Allowance for reinsurance, where applied, needs to take into account the potential concentration of exposure to the reinsurer and the credit risks to the reinsured.
- The supervisor needs to make an assessment of the provisions as part of the oversight of the insurer, as it is not sufficient to rely on the insurer's own assessment without subjecting it to some form of review.
- Uniformity of practice may not, of itself, be a desirable situation, as there can be a benefit in allowing a regime to respond to the changing nature of the market and the experience of policies written by the insurers. At the same time, only a limited number of methods are accepted as appropriate practice in the valuation of insurance liabilities.

Annex: Insurance liabilities and the future IAS standards

This analysis aims at pointing out the descriptions or assumptions in the paper “Quantifying and Assessing Insurance Liabilities” that might appear contradictory with the future IAS insurance standard. This paper is an exercise by the IAIS Accounting Subcommittee and does not intend to express a position of insurance supervisors on IAS standards. This does not either intend to evaluate IAS standards or to imply whether supervisors should or should not apply IAS standards for supervisory purposes.

NB: The comments provided are based on the Draft Statement of Principles (hereafter DSOP) and the International Accounting Standard Board’s (IASB) tentative conclusions as exposed in the project summary on Insurance Contracts (Phase I and Phase II) published in November 2002. These conclusions are only tentative and may be subject to change. The paper deals only with accounting issues for those contracts defined as insurance contracts. Contracts defined as financial instruments will be dealt with under IAS 39.

In May 2002, the Board split its project on insurance contracts into two phases. Phase I, is an interim step, designed to assist insurers who are adopting IFRSs in 2005. The Board has agreed tentatively that phase I should include the following components of the project:

- (a) definition of insurance contracts;
- (b) presentation and disclosure;
- (c) application of IAS 39 to contracts issued by insurers that do not qualify as insurance contracts for accounting purposes;
- (d) elimination of a limited number of existing practices that are incompatible with the IASB Framework, for example, the elimination of catastrophe and equalisation provisions; and
- (e) temporary exemption for entities that issue insurance contracts from applying the criteria of paragraphs 5 and 6 of (draft) IAS 8 to (i) insurance contracts issued by the entity and (ii) reinsurance contracts issued to the entity⁸. Paragraph 9 of the (draft) IAS 8 prohibits a change in accounting policies, unless the change will result in a more relevant and reliable presentation. In practice, this means that insurance companies will continue to use their local accounting rules during phase I, except when IAS rules explicitly prohibit them to do so (as will be the case for equalisation and catastrophe provisions).

Phase II covers the aspects of the IASB Insurance Contracts Project not already covered in Phase I. This project addresses accounting for insurance contracts by both parties to those contracts (insurer and policyholder). It does not address other aspects of accounting by insurers or policyholders, such as accounting for investments held by insurers (accounting for financial instruments is covered by IAS 39 Financial Instruments: Recognition and Measurement).

In addition to the analysis of the descriptions or assumptions in the paper “Quantifying and Assessing Insurance Liabilities” that might appear contradictory with the future IAS standard, this paper contains a short development on performance reporting under IAS standards. Performance Reporting is currently an active project for the IASB; the timing and form of the document to be issued in this project is yet to be determined. (The official timetable foresees the publication of an Exposure Draft in the second quarter of 2003).

⁸ However, an entity should apply those paragraphs (that specify criteria an entity should use in developing an accounting policy if no IFRS or Interpretation applies specifically to an item) to all its other assets and liabilities for which no IFRS or Interpretation applies specifically. Furthermore, an entity should apply those paragraphs to direct insurance contracts issued to it by another entity.

Background

Definition of insurance liabilities

Under the DSOP, a liability and insurance liabilities and insurance assets are defined as follows:

- *Liability*: A present obligation of the enterprise arising from past events, the settlement of which is expected to result in an outflow from the enterprise of resources.
- Insurance assets and insurance liabilities: *Insurance assets and insurance liabilities are assets and liabilities arising under an insurance contract. An insurer or policyholder should recognise:*
 - *an insurance asset when, and only when, it has contractual rights under an insurance contract that result in an asset; and*
 - *an insurance liability when, and only when, it has contractual obligations under an insurance contract that result in a liability.*

Definition of insurance contracts

The Board has agreed tentatively to define an insurance contract as “a contract under which one party (the insurer) accepts significant insurance risk⁹ by agreeing with another party (the policyholder) to compensate the policyholder or other beneficiary if a specified uncertain future event (the insured event) adversely affects the policyholder or other beneficiary”.

In some jurisdictions, a significant proportion of contracts that have the legal form of insurance contracts and are considered as insurance contracts for supervisory purposes do not meet this definition. Examples are many life insurance contracts in which the insurer bears no significant mortality risk, some group life or group motor contracts in which the policyholder bears all the significant insurance risk through the experience rating mechanisms, as well as many financial reinsurance contracts. Under the IAS framework, such contracts are non-insurance financial instruments and are accounted for under IAS 39.

The IASB staff will research whether scope exclusions are also needed for financial guarantees (including insurance that covers credit risk).

Definition of reinsurance contracts

The Board has agreed tentatively to define a reinsurance contract as “an insurance contract issued by one insurer (the reinsurer) to indemnify another insurer (the cedant) against losses on an insurance contract issued by the cedant”.

This wording seems to exclude reinsurance contracts under which the reinsurer indemnifies the cedant against losses arising from a group of insurance contracts (for example stop-loss reinsurance defined at a branch or company level) and contracts under which the reinsurer indemnifies the cedant against losses arising from a single insured event (for example catastrophe reinsurance). It also seems to exclude coverage against losses on a contract that does not qualify as an insurance contract.

Issues that apply to both life and non-life sectors

⁹ Insurance risk is significant if, and only if, there is a reasonable possibility that an event affecting the policyholder or other beneficiary will cause a significant change in the present value of the insurer's net cash flows arising from that contract. In considering whether insurance risk is significant, it is necessary to consider both the probability of the event and the magnitude of its effect.

- Under the DSOP, a single recognition and measurement approach would be applied for all forms of insurance contracts regardless of the type of risk underwritten (i.e., the same approach will be applied for life and non-life, short-term and long-term contracts, direct insurance and reinsurance).
- Under the future IAS insurance standard, it will be important to verify estimated values with actual figures since the new future IAS insurance standard depends more on assumptions. Variations on insurance liabilities due to changes in assumptions will be put through the income statement.

Quantifying claims provisions

- Under the DSOP, insurance liabilities will be measured at entity-specific value while IAS 39 is still in place and at fair value afterwards.
- Entity-specific value and fair value should always reflect risk and uncertainty. At this stage of the IAS project, it is not clear how this will be done.
- Under IAS 39 and the DSOP, a liability measured at fair value should reflect the own creditworthiness of the insurance company. On the contrary, when measuring a liability at entity-specific value, one should not reflect the own creditworthiness of the company
- The starting point for measuring insurance liabilities will be the expected present value of all future pre-income tax cash flows arising under existing contracts (payments to policyholders, related claims expenses, recoveries...). The DSOP prefers the stochastic approach to deterministic approaches, however the DSOP acknowledges that in some cases, deterministic methods or relatively simple modelling will provide a reasonable approximation to the expected present value.
- In determining the discount rate that should be applied, the DSOP suggests that the discount rate should be calculated by first considering the pre-tax market yield at the balance sheet date on risk-free assets, and then adjusting this starting point to reflect risks not reflected in the cash flows from the insurance contracts. Discount rates for insurance liabilities should reflect the characteristics of that liability and not the characteristics of some other instrument with different features. In particular, the DSOP expressly prohibits the calculation of a discount rate based on the insurer's incremental borrowing rate, cost of capital, or the return on assets held (except in the case of participating and unit-linked contracts, as the DSOP never considers the assets backing the insurance liabilities when measuring the liabilities). As a consequence, there will be no such test on the discount rate as mentioned in paragraph 69 of the "Quantifying and Assessing Insurance Liabilities" paper¹.
- Insurers will not be able to set a discount rate considering future interest movements nor a conservative rate with room for volatility (when the rate is decreasing, liabilities would increase).

Quantifying life assurance provisions

- Contracts sold by insurance companies that do not create sufficient insurance risk will not qualify as insurance contracts and will thus be valued under IAS 39 at amortised cost or at fair value if the company chooses to designate the contract as a financial instrument held for trading (provided the Board adopts this option as proposed in the Exposure Draft on Improvements to IAS 39).
- Under the DSOP, life insurance provisions will make explicit allowance for early surrenders of contracts.
- All implicit or embedded guarantees and options will be valued.
- Under IAS 39, an entity is required to separate an embedded derivative from the host contract, if three conditions are met a) the economic characteristics and risks of the embedded derivative are not closely related to the economic characteristics and risks of the host contract; (b) a separate

instrument with the same terms as the embedded derivative would meet the definition of a derivative; and (c) the hybrid instrument is not measured at fair value with changes in fair value reported in profit or loss. The separated derivative is then accounted for at fair value. The Board has discussed how this requirement applies to derivatives embedded in a host insurance contract and agreed on the following examples:

a) a derivative embedded in an insurance contract is regarded as closely related to the host insurance contract if payment is made only if an identifiable insured event occurs (provided that the derivative is not leveraged in relation to the host insurance contract). For example, a derivative component that can only be obtained by the policyholder on death is regarded as closely related to a host insurance contract.

b) an embedded floor on the interest rate on a debt instrument (or, by analogy, a minimum guarantee rate on an insurance contract) is closely related to the host debt instrument, provided the floor is at or below the market rate of interest when the instrument is issued, and the cap or floor is not leveraged in relation to the host instrument.

- Deferred acquisition costs will not be recognised for investment contracts or insurance contracts in Phase II, as they do not meet the definition of an asset.
- The Board has agreed tentatively that Phase I should not prohibit “shadow accounting”ⁱⁱ for insurance contracts as defined under IFRSs. In Phase II however, such adjustments will be prohibited as the measurement of the investment contract liabilities should be independent of the asset measurement. The Board has also agreed not to introduce “shadow accounting” adjustments under IAS 39 for investment-type contracts.
- For participating contracts, the policyholders’ share in the unallocated surplus will be determined by considering both legal and constructive obligations (arising, for example, from the policyholders’ reasonable expectations on the insurer policy on allocating profits).

Quantifying provisions for unearned premiums and unexpired risks and other provisions

- No provisions for unearned premiums are to be found under an asset and liability measurement approach, which defines income and expenses in terms of changes in the measurement of insurance assets and insurance liabilities.
- In the “Quantifying and Assessing Insurance Liabilities” paper, provision for unexpired risks is defined as the “amount set aside on the balance sheet in addition to unearned premiums with respect to risks to be borne by the insurer after the end of the reporting period, in order to provide for all claims and expenses in connection with insurance contracts in force in excess of the related unearned premiums and any premiums receivable on those contracts”. As a consequence, this additional provision is only established when the unearned premium is not considered adequate for the risk because the tariff scale is too low and a loss is expected from the contract.
- Under the IAS framework, provisions for unexpired risks are defined as the present value of expected claims for the unexpired part of the contract period. This amount may be more or less than the premium paid by the policyholder and thus the unearned premium provision set under a deferral and matching model. If the insurer expects a net loss on initial recognition the unexpired risk provision will be more than the unearned premium. In a symmetric way, if the insurer expects a net profit on initial recognition, the unexpired risk provision will be less than the unearned premium. The provision for unexpired risk decreases as the insurer is released from risk.
- Under the DSOP, an insurer should not recognise catastrophe or equalisation provisions for future contracts. These items do not meet the Framework’s definition of assets and liabilities, and the insurer has no present obligation for catastrophic losses that will occur after the contract period.

- The DSOP specially indicates that the accounting for reinsurance by reinsurers and cedents should follow the recognition, derecognition and measurement provisions previously established by the DSOP, and that differential treatment or specific measurement guidance is not appropriate.
- The DSOP proposes that any gain that originates from the establishment of a reinsurance contract (i.e., the cedent pays the reinsurer an amount that is less than the liability previously recognised) should be recognised immediately and not deferred and amortised.
- The Liabilities Paper currently addresses both the gross and net presentations of reinsurance provisions. Per principle 8.3 of the DSOP, a cedent should present assets generated from reinsurance contracts as assets and not as a deduction in the related direct insurance liability. This presentation is required as a reinsurance contract does not remove the cedent's responsibility to the policyholder and a net presentation would be inconsistent with the offsetting provisions established in IAS 1, IAS 32, and IAS 37. The DSOP also stipulates that the insurer should present reinsurance premiums as an expense and the reinsurer's share of claims expense as income. The gross presentation on the income statement is required to provide a clear picture of the insurer's activities.

NB: performance reporting

- Under the future IAS standard, the income statement is likely to include the following items arising from insurance contracts:
 - *Underwriting-new business*: this line includes the net gain or loss arising from the new insurance contracts issued during the year representing the expected present value of premiums, claims, expenses, risk provision and all other future pre-income tax cash flow arising from the closed book of insurance contracts;
 - *Underwriting-previous years' business*: this line includes the release of risk on insurance liabilities, changes in estimates and assumptions and changes in adjustment for risk and uncertainty; and
 - *Financing*: unwinding of the discount and effects of changes in the discount rates.

Items included in the income statement under IAS standards

	Cash flow except re-measurements	Re-measurements
Business	New business: + Present value of current and future cash inflow (premiums, etc.) - Present value of current and future cash outflow (claims payments, administrative expenses, etc.)	Business in force: ± Difference on estimation and actual figures ± Change of expectations and assumptions ± Change of risk and uncertainty ± Carry on/back of provisions
Financing	Corresponding: + Present value of current and future cash inflow (interests received, etc.) - Present value of current and future cash outflow (interest paid, etc.)	Corresponding: ± Difference on estimation and actual figures ± Change of expectations and assumptions (Discounting rates, etc.) ± Change of risk and uncertainty ± Carry on/back of provisions

- The income statement will include all the net future gain or loss arising from the new insurance contracts issued during the year.
- As the income statement would no longer include information about premiums, claims and expenses determined on an accrual basis (earned premiums, claims incurred, etc.). Information on premiums received, expenses paid and claims paid will be found in the cash flow statement. Information on earned premiums and claims incurred will be found in the notes.

ⁱ Paragraph 69 “If discounting is permitted, then there is the need to determine the discount rate that should be used. The choice of the discount rate can be specified in the regulatory or accounting regimes, or be left open to professionals to determine. Care needs to be taken that the discount rate does not lead to lower provisions than would be reasonable considering the assets backing the insurance liabilities”.

ⁱⁱ In the United States, the pattern of amortisation of deferred acquisition costs (DAC) associated with some insurance liabilities is affected by the pattern of realised investment gains. After that requirement was introduced, the accounting for available for sale assets changed and insurers were required to recognise unrealised gains and losses. Insurers commonly adjust their DAC (with a corresponding entry to comprehensive income) to the amount that would have been recognised if the unrealised gains were realised. This practice is often known as “shadow accounting. Similar adjustments are often made to the loss recognition requirements (“shadow loss recognition”).