THE VALUATION OF ASSETS AND LIABILITIES FOR SOLVENCY PURPOSES IN LONG TERM INSURANCE

DISCUSSION PAPER
DP14-01
This Discussion Paper is issued by the Insurance and Pensions Authority (“the IPA”), the regulatory authority responsible for the supervision of the insurance and pensions sectors in the Isle of Man.

**What is it for?**

In June 2013 the IPA published its ‘Roadmap for updating the Isle of Man’s regulatory framework for insurance business’ and through that document set out its objective to implement a framework for the regulation and supervision of insurers and general insurance intermediaries that would enable the Isle of Man to maintain a high level of observance in respect of the Insurance Core Principles (ICPs) issued by the International Association of Insurance Supervisors (IAIS) and which is appropriate and proportionate to the risks of the different parts of the insurance industry that operate in and from the Isle of Man.

This paper sets out the IPA’s current thinking in respect of the valuation of the assets and liabilities for solvency purposes of insurers undertaking long term insurance business, in order that such insurers can prepare their valuation systems ahead of our planned Quantitative Impact Study later in 2014. It is accompanied by a draft Technical Specification which sets out further technical detail of the likely approach, to assist with this preparation.

At the time of introducing the IPA’s Corporate Governance Code of Practice for Regulated Insurance Entities (“the CGC”), the IPA indicated that the CGC represented the principles and outcomes expected of the systems of governance of regulated insurance entities, and that more detailed implementation measures would follow based on relevant international standards applied proportionately for the Island’s businesses. This paper is the first in a series of papers which will consider different aspects of those implementation measures and therefore represents an important part of the process for ensuring proportionality by enabling the businesses involved (notably long-term insurers in this case) to comment and help shape the Island’s future regulatory framework at this time of rapidly changing international standards.

**Who is affected by it?**

This document will be of direct interest to all existing and prospective insurance companies undertaking long term insurance business in or from the Isle of Man. In particular, it will be of interest to those with functional responsibility and oversight of the finance, actuarial and risk management functions within those companies. The accompanying draft Technical Specification will be of interest to those with responsibility for modelling, calculating, and reviewing and/or using the calculation of technical provisions.

Other parties with an interest in the Isle of Man life assurance sector may also find this discussion paper and the issues raised of interest.

**Issue date** 30 April 2014

**Closing dates for responses** 30 May 2014
1 Introduction

1.1 This paper sets out the IPA’s current thinking in respect of the valuation of the assets and liabilities for solvency purposes of an insurer undertaking long term insurance business (“insurer”). The issue of this paper accompanies the publication of the IPA’s draft technical specification detailing a possible approach to the valuation of long term insurance liabilities.

1.2 The draft technical specification is expected to form the basis of our first Quantitative Impact Study (“QIS1”). QIS1 will be launched in the second half of 2014 and will require all life insurers to produce, on a best efforts basis, balance sheets and capital requirements using an approach reflecting our current proposals for the framework for valuation and capital adequacy for the new regulatory regime.

1.3 We will issue a full consultation paper later in 2014 which will cover the proposed approach to valuation together with that for capital adequacy assessment.

1.4 Consistent with our stated objective, the content of this document has been derived from relevant ICPs, particularly ICP14. As a result and where relevant, reference is made in this document to applicable sections of the ICPs. In considering the requirements of the international standards, the IPA intends to adapt these, as appropriate, to recognise the particular characteristics of the Isle of Man life assurance sector. In some instances the ICPs allow a number of alternative approaches to the one we are intending to propose; where these are considered by us to be inappropriate for the Isle of Man life sector, we have set out the rationale for this.

1.5 Recognising that many of the Island’s insurers are members of a European Union (EU) insurance group or a group established in a jurisdiction with a stated policy objective of attaining equivalence to the EU’s Solvency II regime, the draft technical specification for QIS1 is based on the European Insurance and Occupational Pensions Authority (EIOPA)’s most recent technical specification for Solvency II, amended to reflect our intended approach and in particular to reflect the nature and risks of the Island’s life insurance sector in a proportionate manner. The resulting draft technical specification is therefore not only consistent with the ICPs but is likely to minimise the need for the Island’s insurers to calculate technical provisions on several bases for solvency purposes.

1.6 The full technical specifications to be issued for the QIS1 exercise will also specify the calculation of capital requirements to be tested – we anticipate that the capital aspects of the specifications will include more substantial customisation for the Island’s life sector compared with EIOPA’s specifications than the valuation aspects.
1.7 We are issuing this paper and draft technical specification following a request from industry, so that insurers may have an early indication of the changes that may be required to the insurers’ liability valuation models to produce reliable and meaningful QIS1 results. These changes to valuation models are likely to be more time consuming than those for the capital elements (which are likely to largely require stresses to the parameters rather than further model changes). However, it is important to understand that these documents represent our early thinking and are published to provide insurers with indicative proposals. It should be noted that the detailed content of this paper and the draft technical specification may change before the consultation paper on valuation and capital adequacy assessment and the full technical papers for the QIS1 exercise are finalised and issued in the second half of 2014.

1.8 As detailed above, the primary purpose of this paper is to provide industry with early indications of the IPA’s current thinking, thereby assisting insurers to plan and develop any model changes necessary to ensure the results of QIS1 are as reliable and meaningful as possible. However, the IPA is also interested to obtain the views of relevant stakeholders in a number of areas now, and these discussion points are clearly identified throughout this document and summarised at the end. As a consequence it would be helpful if respondents could limit their comments at this stage to the discussion points raised. Full opportunity to provide comments on other areas of this paper and the draft technical specification will be provided during the detailed consultation to be carried out later in 2014.

2 Financial reporting for regulatory purposes

2.1 The context and purpose of the valuation of assets or liabilities of an insurer are key factors in determining the values that should be placed on them. This paper outlines the valuation requirements for the purpose of the solvency assessment of insurers within the context of risk-based solvency requirements that reflect a total balance sheet approach on an economic basis, thus ensuring that the impacts of relevant material risks on an insurer’s overall financial position are appropriately and adequately recognised.

2.2 Recognising the need to limit the administrative burden on insurers, where International Financial Reporting Standards (IFRS) are not in consistent with the principles or specific requirements set out in this paper, a valuation of assets and liabilities for solvency purposes on a basis consistent with those financial reporting standards may be considered to comply with these principles.

2.3 The revised solvency and capital adequacy assessment framework will incorporate detailed reporting requirements for regulatory purposes. These reports will supplement and stand alongside the financial statements of the insurer for general accounting purposes. These regulatory reporting requirements will require the insurer to prepare and submit financial reports which reflect the insurer’s assessment of the adequacy of the capital and other financial resources of the company to meet its liabilities that might reasonably be expected to arise out of the risks to which it is exposed.
2.4 These financial reports will include:

- regulatory balance sheet;
- regulatory solvency and capital adequacy assessment;
- stress and scenario testing;
- the insurer’s own risk and solvency assessment;
- relevant disclosures; and
- reconciliations between reports for general accounting purposes and regulatory financial reports.

This paper is concerned with the first of these financial reports, which will form the underlying basis of the others.

2.5 Technical provisions are a significant component of the regulatory balance sheet and are considered further in this paper and in the accompanying draft technical specification.

2.6 Technical provisions include a margin for risk appropriate for solvency purposes. Regulatory capital requirements are another component of the solvency assessment, and they include further allowance for risk so that, when taken together, they are sufficient to ensure that policy obligations are satisfied with the level of probability (or confidence level) required to satisfy the regulatory objectives of the IPA. This level of probability (or confidence) will be the subject of consultation in the full consultation paper later in 2014.

2.7 In adverse circumstances, certain assets may be considered to have reduced or nil value. Consequently, in the capital adequacy assessment such assets may be excluded from or have reduced value in counting towards capital resources. Alternatively, a capital requirement may be set to cover the potential shortfall in value. These adjustments will be shown separately from asset values in the regulatory financial reports. This enables improved transparency, consistency and comparability. Such adjustments are part of the process of determining capital requirements and/or capital resources and will be developed as part of the consultation process on capital adequacy.

3 Consistent valuation of assets and liabilities in a total balance sheet approach

3.1 The overall financial position of an insurer should be based on consistent measurement of assets and liabilities and the explicit identification and consistent measurement of risks and their potential impact on all components of the balance sheet. The term “total balance sheet approach” is used to refer to the recognition of the interdependence between assets, liabilities, regulatory capital requirements and capital resources. A total balance sheet approach also requires that the impacts of relevant material risks on an insurer’s overall financial position are appropriately and adequately recognised.
3.2 To achieve consistency with this approach to setting capital requirements in the context of a total balance sheet approach, capital resources should broadly be regarded as the difference between assets and liabilities calculated on the basis of their recognition and valuation for solvency purposes which may differ from the bases used for general accounting purposes.

3.3 The revised solvency and capital adequacy assessment framework will be based on consistent valuation of assets and liabilities so that an insurer obtains a meaningful insight into their asset-liability position and an understanding of their financial position relative to other insurers (once elements of the assessment are publicly disclosed – see paragraph 5.9). It provides reliable information on which to base the actions that are taken by insurers, and the IPA as supervisor, in respect of those positions.

3.4 Undertaking valuation on consistent bases means that differences in values of assets and liabilities can be explained in terms of the differences in the nature of the cash flows including their timing, amount and inherent uncertainty, rather than differences in methodology or assumptions. Such consistency may be applied at different levels such as: segment within a company; a company or a group.

4 Recognition and derecognition of assets and liabilities

4.1 Assets and liabilities should be recognised and derecognised to the extent necessary for risks to be appropriately recognised.

4.2 This may result in different approaches being applied to asset and liability (de)recognition for regulatory and for general accounting purposes. However, as a general principle, except where explicitly stated otherwise (including, but not limited to, the consideration of the recognition or derecognition of assets and liabilities under an insurance contract [contract boundaries]), the (de)recognition criteria for assets and liabilities under IFRS should be applied to the regulatory balance sheet.

4.3 For the avoidance of doubt, all contracts written by authorised insurers or permitted insurers within the definition of ‘long term business’ as currently defined by Regulation 3 of the Insurance Regulations 1986 are insurance contracts for the purposes of this document. This is notwithstanding the definition of an insurance contract under IFRS 4 for general accounting purposes which requires the transfer of significant insurance risk for a contract to be treated as a contract of insurance for accounting purposes. The classification of insurance contracts for regulatory solvency purposes (all long term business contracts written by an insurer) and insurance contracts for general accounting purposes (those with transfer of significant insurance risk) will therefore be one of the more significant differences between the two bases for the Island’s predominately unit-linked life assurance sector.
Contract boundaries – recognition of insurance contracts

4.4 There are two possible points of recognition for insurance contracts which we are considering for the revised solvency and capital adequacy assessment framework:

- on entering into a binding contract (the bound date); or
- the inception date of the contract.

In principle, the bound date is the date at which an economic obligation arises. In practice, for life insurance, these dates are unlikely to be significantly different.

DISCUSSION POINT 1

We would like to hear from insurers if they have any examples of situations where these dates are significantly different.

Contract boundaries – recognition of ceded reinsurance

4.5 Contracts for ceded reinsurance should be recognised and valued so as to correspond to the recognition of the risks which they are mitigating. Where a current reinsurance policy is contracted to cover future direct policies, the value of the reinsurance policy should not include any amount in respect of future direct policies that have not been recognised.

Contract boundaries – de-recognition

4.6 An insurance contract liability (or a part of an insurance contract liability) within technical provisions should be derecognised when, and only when, it is extinguished – i.e. when the obligation specified in the insurance contract is discharged or cancelled or expires.

4.7 The purchase of reinsurance should not result in the derecognition of technical provisions unless the purchase of that reinsurance results effectively in the extinguishment or novation of the insurance contracts.

5 Reliability, decision-usefulness and transparency

5.1 The valuation of assets and liabilities is to be undertaken in a reliable, decision-useful and transparent manner.

Reliability

5.2 The values placed on the assets and liabilities of an insurer for solvency purposes should be a reliable measure of their value at the date of solvency assessment.
5.3 Objectivity is an important aspect of valuing assets and liabilities in a reliable manner, so that a valuation is not influenced inappropriately by personal bias. The valuation of assets and liabilities typically involves judgment, e.g. expert judgment in assessing the relevance of data and deriving assumptions. Consistent with reliability of outcome, subjectivity in valuation should be reduced as far as practicable. This may be achieved by using information available from effective internal control processes, market valuations and other relevant current or factual information, by applying professional standards and subjecting valuations to independent review. We intend to implement a valuation methodology which uses information provided by the financial markets (where available and relevant) and generally available data on insurance technical risks. Company-specific information may be appropriate, for example, where the insurer’s business model and practices are sufficiently substantiated as representative of the portfolio and similar information is used in market valuations.

**Decision usefulness**

5.4 ‘Decision useful’ here means useful in making judgments for solvency purposes. We recognise that, in valuing assets and liabilities in a reliable manner, and in reducing the subjectivity in the valuation, it may not be appropriate to eliminate subjectivity completely. A method that provides a single value without the need for judgment may be less decision-useful than one that produces a range of reasonable values from which a value is selected by applying judgment. A method that produces a decision-useful outcome should take precedence over one that does not.

5.5 Where there is a market for an asset or liability in which prices are quoted publicly and trades are readily available, the quoted prices provide a decision-useful value of the asset or liability in the large majority of situations. Typically, there will be a range of market prices for the same item, and judgment will be needed in determining the final value to be used.

5.6 In some circumstances, a market price may not necessarily provide a decision useful basis for a valuation. If the reference market is dysfunctional or anomalous in its operation, a more reliable method of determining value based on more normal conditions may be appropriate. Such circumstances may occur, for example, if there is a high cost in making actual trades, trading is thin, independent pricing sources are not available or are limited, or the market is subject to distorting influences. Alternative approaches would also need to be adopted where an asset, or a liability which is determined by reference to such an asset (such as in a personal portfolio bond), is not traded frequently. The insurer and the IPA should evaluate such circumstances and as a result may conclude that the use of an alternative economic valuation is appropriate.

5.7 An insurer’s modelling of its assets and liabilities may also provide a decision-useful value. The reliability of model results is enhanced through the use of insurers’ and supervisors’ best practices surrounding model governance, controls and independent review. Where appropriate, we may produce supervisory comparisons or benchmarking of modelling practices which would further enhance the reliability of modelled results. Models can be used to apply common measurement criteria across all risks (e.g. same methodology, time horizon, risk measure, level of confidence, etc.).
5.8 ICP14 permits the use of amortised cost approaches for insurance liabilities as a possible alternative to approaches based on market value, when such market-based valuation approaches are no more useful or reliable. We have ruled out such amortised cost approaches as they would be a significant departure both from our current regime and from the risk-based approaches applied for internal capital adequacy purposes by many of our life insurers.

Transparency

5.9 The solvency regime will be supported by appropriate public disclosure and additional confidential reporting to the IPA. We will consult on these aspects after the QIS1 exercise.

6 Economic valuation of assets and liabilities

6.1 Insurance assets and liabilities shall be valued using an economic valuation. An economic valuation is a valuation such that the resulting assessment of an insurer’s financial position is not obscured by hidden or inherent conservatism or optimism in the valuation. Such an approach is appropriate in the context of a risk-based solvency requirement which satisfies transparency and comparability objectives.

7 Risk-adjusted present values of cash flows

7.1 An economic value should reflect the prospective valuation of the future cash flows of the asset or liability allowing for the riskiness of those cash flows and the time value of money. An asset or a liability may have both cash inflows and cash outflows, the net effect of which is a positive or negative value. Such a valuation is not necessarily determined directly using a discounted cash flow calculation, as a current quoted market value or a current sale or purchase value may also reflect the prospective valuation of cash flows.

7.2 Wherever possible, a market-consistent valuation should be used for the economic valuation of assets and liabilities. A valuation that is based upon principles, methodologies and parameters that the financial markets would expect to be used is termed a market-consistent valuation. Where a range of assessments and approaches is evident from a market, a market-consistent valuation is one that falls within this range.

7.3 It may be well known to financial markets that the approach taken to market assessments for some assets and insurance liabilities or their components uses modelling based on certain assumptions, techniques and portfolio specific information as well as generally available data on insurance technical risks. A calculation consistent with this approach would be market-consistent.
7.4 However, in exceptional circumstances, there may be information additional to that on market assessments from the wider economy that should be taken into account in the valuation, e.g. where a market is anomalous, not operating effectively or is subject to intervention from the relevant authorities. An example would be where a government/regulator intervenes in a major way, including by injecting money or taking control. Such action may be in response to or the cause of distortions of supply and demand in relevant markets so that values determined in a market-consistent way may also be distorted temporarily. In addition alternative approaches will be needed in the case of assets, or liabilities which are determined by reference to such assets (as may be the case for personal portfolio bonds for example), which are not frequently traded.

7.5 A market-consistent value may not then be appropriate and a different value, which may, for example, be expected to be market-consistent under more normal market conditions, may need to be determined to arrive at an economic valuation for solvency purposes. The extent to which this is appropriate is likely to vary according to market conditions.

7.6 A sufficiently active market may exist for an asset or liability that in itself provides a measure of value that is market-consistent. For other assets and liabilities or when the market becomes illiquid, there may be no direct measure of value. However, relevant market information may be available regarding the assessment of components of the rights, obligations or risks of the asset or liability. If, for example, a component of the obligations of an insurance liability can be replicated using financial instruments for which there is a reliable market value, that value provides a reliable indication of the value for this component.

7.7 The market-consistent value of an asset or liability may be determined using different techniques, or a combination thereof. For example, in valuing technical provisions:

- If the insurance obligations are traded in a sufficiently deep and liquid market, the observed prices may be used to arrive at a market-consistent value. The availability, decision usefulness and reliability of the prices should be taken into account when deriving the market-consistent value;

- If some or all of the cash flows associated with the insurance obligations can be replicated using financial instruments, the market value of the replicating financial instruments may be used as the value of those cash flows;

- If the cash flows associated with the insurance obligations cannot be replicated perfectly, then the remaining cash flows may be valued using a discounted cash flow model. To be market-consistent, the methodology used needs to deliver a proxy for market value based on market-consistent valuation principles and to reflect the uncertainty or unavailability of market information.
7.8 This approach to valuation is sometimes termed the “components approach”, under which risk components are valued at market value where such a value is ascertainable, decision useful and reliable; other components may need to be valued using marked-to-model methods. Separate components may, for example, be identifiable for insurance contracts which have an investment or deposit component and an insurance risk component. The components approach helps to improve market consistency and reduce modelling error. It should be noted that where there is no sufficiently deep and liquid market from which to determine a market-consistent value for a risk component, the additional liquidity risk needs to be considered.

7.9 Where liabilities are illiquid, in that they cannot be surrendered by the policyholder (such as in the case of immediate annuities), and are closely matched by suitable assets, consideration will be given as to whether adjustments to the market-consistent approach will be applied, to reduce or smooth out some aspects of possible mismatches in the valuation approach between assets and liabilities. These adjustments might apply to the valuation of the liabilities (e.g. by adjusting the risk-free discount rate) or to the valuation of assets (by marking to model rather than to market) or both. We will develop and consult on possible approaches later in the consultation process, given that such liabilities do not form a significant part of the Island’s life sector.

**DISCUSSION POINT 2**

*We request insurers to inform us to what extent they have liabilities which they consider to be illiquid. Please provide details of the type(s) of contract and an indication of the size of the in-force book (e.g. number of policies, reserve under current regime).*

8 Technical provisions consist of the Best Estimate Provision (BEP) plus a margin (Risk Margin)

8.1 Technical provisions are assets or liabilities that represent the economic value of the insurer fulfilling its insurance obligations to policyholders and other beneficiaries arising over the lifetime of the insurer’s portfolio of insurance policies. This includes a margin (Risk Margin) to cover the inherent uncertainty of those obligations.

8.2 The cash flows associated with fulfilling an insurer’s insurance obligations include the premiums receivable, the claims payable under the insurance policies, any other policy cash flows (e.g. future distributions under participating contracts) and the future expenses of administering the policies.

8.3 Acquisition costs are usually a significant component of an insurer’s cash flows. After acquisition costs have been paid, future cash inflows may exceed future cash outflows.
8.4 Because an insurer’s obligations under an insurance policy are inherently uncertain as to amount and/or timing, the present value of the cash flows associated with fulfilling them has a range of possible values with varying probabilities. The probability-weighted average of these present values is their expected present value (also called the statistical mean) and is termed the “best estimate of the cost of meeting the insurance obligations” (Best Estimate Provision or BEP). Actuarial and statistical techniques may be used in determining the best estimate, including deterministic, analytical and simulation techniques.

8.5 In addition to covering the cash flows associated with fulfilling insurance obligations, an insurer incurs the cost of covering the uncertainty inherent in those cash flows (through holding capital), or by mitigating such uncertainty through hedging, reinsurance or other forms of risk mitigation. Insurers are required to maintain an amount such that the obligations under insurance policies will be fulfilled with the claimant or beneficiary when they fall due. In principle, therefore, an economic value of the technical provisions exceeds the best estimate of the cost of meeting the insurance obligations by an amount covering this uncertainty. If risk mitigation is in place, the expected cost of this mitigation is added to the BEP. To the extent that there is residual unmitigated risk for which capital needs to be held, this excess is the Risk Margin.

8.6 As capital is required to give the level of confidence required by the solvency regime, the technical provisions should, as a minimum, also cover the cost of holding that capital. In these circumstances, the Risk Margin could be seen as a provision for rewarding the capital committed to the business over the outstanding lifetime of the policy. As the uncertainty reduces over time, so the Risk Margin will also reduce and be gradually released from the technical provisions. Equally, as uncertainty reduces, the required capital would also reduce in line with the revised risk profile.

8.7 A change in underlying data or assumptions generating a change in BEP and Risk Margin should be disclosed and justified so that consistency, reliability and relevance may be maintained and arbitrary changes over time are avoided.

9 Best Estimate Provision

9.1 The BEP should reflect the expected present value of all relevant future cash flows under an existing insurance contract to the extent that they are integral to the fulfilment of the obligations under that contract, using unbiased, current assumptions.

9.2 The BEP encompasses all cash flows, including non-guaranteed optional or discretionary cash flows, where they are established as stemming from the contractual relationship between the insurer and the policyholder. This reflects the commercial substance of the contract and therefore reflects economic reality.
9.3 An insurance contract should be considered as a whole. In particular, where the contract provides for the payment of future premiums, such premiums are integral to the fulfilment of the obligations under that contract. Neither the company nor the policyholder is able to deal with one without simultaneously dealing with the other. To recognise one, the other must also be recognised. Valuation of the insurance liability requires consideration of all of the associated cash flows, including the contractual premium inflows. The uncertainty associated with those cash flows along with that of the other relevant cash flows are reflected in the probability weightings applied in calculating the current estimate.

**Boundary constraints**

9.4 We will specify the boundaries for insurance contracts which define the relevant cash flows to be included in determining the current estimate. This specification will be subject to more detailed consultation, however ICP14.8.3 states that insurance contracts are subject to the following boundary constraints, if they exist:

- contractual termination as extended by any unilateral option available to the policyholder; or
- the insurer having a unilateral right to cancel or freely re-underwrite the policy; or
- both the insurer and policyholder being jointly involved in making a bilateral decision regarding continuation of the policy.

9.5 The first boundary constraint excludes new business arising from the “rolling-over” of the existing contract, except where such “roll-over” is due to the exercising of an explicit option available to the policyholder under the current contract. Contractual cash flows arising from policyholders’ unilateral in-the-money options (i.e. options which may be onerous for the insurer) to extend the contractual termination date should be included. The best estimate should allow for the expected rate of exercising such options (which may vary according to economic conditions). This boundary constraint also excludes additional voluntary contributions or premiums, except where provided for as a unilateral option under the contract. For insurance contracts with variable premiums (such as universal life contracts), the cash flows should include voluntary contributions above the minimum required to the extent that there are guarantees, under the current contract. The current estimate should reflect the expected rate of payment of additional contributions and the expected level of such contributions (which may vary according to economic conditions).
9.6 The second boundary constraint clarifies that future cash flows arising from events beyond the point where the insurer can unilaterally cancel the contract (for example, by re-underwriting) are not included in the valuation. This would typically be the case with non-life insurance contracts which are usually written for only one year. Although there might be a high expectation that they would be renewed, the insurer is not bound to do so, and accordingly only cash flows arising in respect of the currently in-force or in run-off contracts, are included for valuation purposes, whereas the impact of new business might be considered in capital requirements or capital resources by the solvency regime. However it is unusual for life insurance contracts and hence by contrast, future cash flows under a life or disability contract which the insurer cannot unilaterally cancel should be included, even if the future premiums under such a contract are planned to increase, or able to be varied by the insurer in respect of the entire class of contracts without individual underwriting.

9.7 The third boundary constraint clarifies that even if the policyholder has an option to continue or increase the contract, if it requires the insurer’s consent then cash flows arising from events beyond that point should not be included for valuation purposes, whereas the impact of new business might be considered in capital requirements or capital resources by the solvency regime.

9.8 The IPA’s detailed consultation on boundary conditions will cover not only the period over which insurance contracts are deemed to be “live” for valuation purposes, but also in what circumstances future premiums should be taken into account. We will be keen to hear insurers’ views in that consultation, including any comparisons with boundary constraints used in reporting to their parent groups or other regulators. It would be advisable for insurers to be allowing for some flexibility in this regard if adapting their valuation models or data extraction processes at this stage.

**Discretionary payments**

9.9 Some insurance contracts give the policyholder both guaranteed benefits (e.g. a minimum amount payable on death and/or maturity or any insured event) and for example, a right to participate in the performance of the relevant class of contracts, related assets or both. The insurer has some discretion over the amount or timing of the resulting distributions to policyholders, but there are often constraints over that discretion.

9.10 When establishing the future cash flows to include in the determination of technical provisions for solvency purposes, consideration should therefore be given to all payments whether or not these payments are contractually guaranteed under an insurance contract. For example, future discretionary bonuses which the insurer expects to make should be included.
The valuation of assets and liabilities for solvency purposes

9.11 The IPA will establish criteria appropriate for the allowance of discretionary elements associated with participating contracts in the valuation of technical provisions. If appropriate, we will establish rules for the treatment of accumulated profits attributable to a class of policyholders which can be used to absorb losses to protect policyholder interests in a period of stress. Such accumulated profits may possess all the characteristics of capital and may hence be recognised in the determination of capital resources for solvency purposes. The criteria established by us for the allowance of future discretionary benefits in the valuation of technical provisions will be compatible with the criteria for determining capital resources in order to achieve a consistent overall assessment of the solvency position of the insurer. These aspects will be subject to consultation at a later stage, as participating contracts do not currently form a significant proportion of the liabilities of Isle of Man life insurers.

DISCUSSION POINT 3

We request insurers to confirm what proportion, if any, of their current in-force portfolio contains discretionary aspects, and to provide details of the discretion available in determining benefits.

Unbiased Current Assumptions

9.12 Unbiased current assumptions are derived from a combination of relevant, credible experience as well as judgment about its expected future development, e.g. improving mortality rates or inflation of expenses, that neither deliberately overstates nor understates the expected outcome. Reconsideration of data and assumptions should occur every time the technical provisions are valued, with revisions made as appropriate to ensure data and assumptions remain appropriate to current conditions.

9.13 Observable data, such as interest rates, financial market prices and inflation rates may be expected to be different each time the current estimate is determined. In particular, cash flows are sensitive to inflation rates. Where assumptions are derived from observed values in the market, these should be the observed values current at the date of the valuation.

9.14 Regular experience analysis, considering the individual insurer and relevant industry experience where appropriate, should be undertaken to support the assumptions used for insurance technical risks. Where assumptions depend on the results of such experience analyses, the most recent experience for the portfolio need not necessarily represent the most credible current assumption for that portfolio. Greater credibility may be achieved by the analysis of several years’ experience, smoothing out fluctuations in experience and allowing appropriately for any trends in experience that may be evident. However, care should also be taken that historical experience remains relevant to current conditions.

9.15 Where the credibility of an insurer’s own experience is low, for example for a small or new portfolio of insurance contracts, assumptions based on relevant industry experience are likely to be more decision useful as a basis for projecting its cash flows.
9.16 The assumptions used should, in principle, reflect the characteristics of the portfolio rather than those of the particular insurer holding that portfolio. However, it is important to note that, in practice, the characteristics of the portfolio underwritten by an insurer may reflect aspects of an insurer’s specific business practices, particularly with regard to its underwriting, claims handling and expenses. Company-specific information may be appropriate, for example, where the insurer’s business model and practices are sufficiently substantiated as representative of the portfolio and similar information is used in market valuations.

9.17 With respect to expenses, the insurer’s own expense experience in managing a portfolio is likely to be relevant in determining an economic value.

9.18 Acquisition costs are typically a major component of an insurer’s expenses. For most insurance contracts, acquisition costs will already have been incurred so that future cash flows include only maintenance and claims costs. An appropriate analysis of the insurer’s expense experience is needed to separate out acquisition costs in order to model future expenses. Care is needed to allow for expenses that do not vary directly with the level of new business so that expenses that will continue to be incurred for a period if new business ceases are taken into account.

10 Risk Margin

10.1 The Risk Margin reflects the inherent uncertainty related to all relevant future cash flows that arise in fulfilling insurance obligations over the full time horizon thereof.

10.2 To achieve a consistent, reliable and decision-useful valuation, the Risk Margin should consider all of the inherent uncertainty attached to the policy obligations over the full period of those obligations i.e. the variability of all relevant future cash flows to the extent to which this uncertainty is borne by the insurer and not the policyholder.

10.3 In determining the appropriate methodology for determining the Risk Margin in the revised solvency and capital adequacy assessment framework, ICP14 expects us to consider the extent to which possible methodologies promote transparency and comparability between insurers and insurance markets.

10.4 Under ICP14, an appropriate method for the determination of the Risk Margin is one which can be expected to exhibit the following characteristics:

- Insurance obligations with similar risk profiles have similar Risk Margins;
- The less that is known about the cash flows, the higher the Risk Margin;
- For the same level of probability, risks with higher impact have higher Risk Margins than those with lower impact;
- Risks with low frequency and high severity will generally have higher Risk Margins than risks with high frequency and low severity;
For risks of the same or a similar nature, contracts that persist over a longer timeframe will have higher Risk Margins than those of shorter duration;

- Risks with a wide probability distribution have higher Risk Margins than those risks with a narrower distribution; and

- To the extent that emerging experience reduces uncertainty, Risk Margins should also reduce, and vice versa.

10.5 ICP 14 proposes a range of possible approaches to the methodology that supervisors may require to be used to establish the Risk Margin. These include observable market prices for risk, quantile approaches, conditional tail expectation, cost of capital and explicit assumption methods. The IPA proposes to take an approach analogous to that adopted under Solvency II, as described below, and not to test alternative approaches. This is on the basis that many life insurers are already using a Solvency II style approach in their internal capital adequacy work for Corporate Governance Code compliance and/or for reporting to parent groups.

10.6 The IPA intends to adopt a cost of capital approach to the determination of the risk margin, as follows:

- The risks to be taken into account are non-hedgeable risks such as insurance risk, credit risk, operational risk and any non-hedgeable market risks;

- The risk margin for a particular contract is the present value, discounted using the relevant risk-free yield curve, of the required capital (as determined under our capital adequacy approach, to be consulted on later in 2014) for the relevant risks at the beginning of each future year, multiplied by a cost of capital rate;

- The cost of capital rate to be used is to be consulted on;

- The risk margin can be calculated at an aggregate level and reallocated back down to individual contracts or product groups, or it can be calculated at individual contract or product group level. In either case the insurer may, where appropriate, make reasonable allowance for the effects of diversification of these non-hedgeable risks within the insurance entity when calculating the risk margin. Diversification of non-hedgeable risks with hedgeable risk is not permitted – it should be assumed (for the purposes of the calculation and allocation of the Risk Margin) that all hedgeable risk is hedged.

10.7 Where an element of an insurance liability, i.e. an insurance obligation or risk in whole or in part, can be replicated or hedged by a financial instrument which has a reliable value, the value of that instrument provides a reliable value for that element of the liability including an implicit Risk Margin. In practice, such hedging is rarely perfect in all scenarios and there are some differences between the insurance cash flows and those of the replicating instrument which need to be valued separately. Where a model is used for this valuation, calibration of the model to the value of hedging instrument used is likely to assist in achieving overall consistency and reliability.
11 Discount rates

11.1 The valuation of technical provisions allows for the time value of money using discount rates based on the relevant risk-free curve.

11.2 The starting point for the risk-free curve should be the swap yield curve appropriate to the cash flows at the valuation date. Unlike in many “domestic” jurisdictions, it is common for Isle of Man life insurers to have cash flows denominated in more than one currency within the same contract. Where different cash flows arising under the same contract are denominated in different currencies they should be discounted using different yield curves, or forward exchange rates derived from the two yield curves used to convert cash flows in one currency into cash flows in the other.

11.3 If the relevant swap yield is not of an adequate duration, then other reference points, such as government bond yields, should be used.

11.4 Extrapolation and interpolation of the yield curve is allowable, and we will develop guidelines on this. In their absence, the insurer would need to justify their approach as reasonable.

11.5 For the QIS1 exercise we will prescribe the risk-free curves to be used for a range of currencies. Note that, for liability cash flows that are linked to the performance of underlying assets, we will be consulting on the approach to be taken in respect of which currency/ies the underlying assets are assumed to be invested in. For the QIS1 exercise it is likely that the base approach will be to assume that the underlying assets are in the same currency as the premiums under the contract. However some flexibility in the model in this respect would be desirable.

**DISCUSSION POINT 4**

*We request insurers to provide us with a list of the currencies in which their contracts, or liability cash flows within those contracts, are expressed, together with the estimated proportion of liabilities which each currency comprises.*

11.6 As noted earlier, the IPA will consult on whether there is any need to provide for the use of a liquidity adjustment in the discount rate for liabilities (or adjustment to the value of assets) for products with highly-predictable liability cash flows which are closely matched by suitable assets.

11.7 In principle, if an investment has a reliable market value and fully replicates or hedges an element of the insurance obligations or risks, such a value is presumed to reflect the time value of money associated with that element of those obligations or risks (and also to reflect its Risk Margin).
12 Allowance for embedded options and guarantees

12.1 The determination of the Best Estimate Provision and Risk Margin should make explicit allowance for any options exercisable by the policyholder or insurer and for guarantees embedded in the insurance contract, such as guaranteed minimum benefits and guaranteed maturity values. The method used to value embedded options and guarantees should be appropriate to the nature, scale and complexity of risk and may include stochastic simulation or simplified methods as appropriate.

12.2 Where the guarantee is very remote in time (as often is the case for capital redemption products at issue) a simplified method may be appropriate.

12.3 An important policyholder option is the option to lapse and, for some life products, to receive payment of a surrender value. Explicit allowance for lapses and surrenders should be incorporated in the projections of future cash flows that are used to determine technical provisions. The risks of lapse and surrender need to be considered over the full time horizon of the insurance contract. Historical experience of lapses and surrenders is decision useful in considering the setting of assumptions about future experience used for calculating a Best Estimate Provision and Risk Margin. The uncertainty associated with lapses and surrenders may not be fully diversifiable across insurance contracts as their level may depend on economic conditions or perceptions about the performance of the insurer which apply generally to policyholders. This is offset by variations in policyholders’ responses to such conditions or perceptions and their personal motivation for lapse and surrender. Such factors should be taken into account when assessing the risk of lapse and surrender.

12.4 It is not intended to require that technical provisions are subject to a surrender value floor equal to the total surrender values payable if all policies were to surrender immediately. Such an approach would not be an economic valuation as the effect of surrenders is already allowed for in the technical provisions by incorporating assumptions about the future rate of surrender and associated risks. However, in the determination of the overall financial requirements for solvency assessment purposes, the IPA is considering whether to apply a limited form of surrender value minimum, by incorporating a mass lapse stress in the capital requirement calculation, and/or to limit the extent to which capital represented by the difference between surrender values and the technical provisions is allowable for solvency coverage.

13 Future management actions

13.1 The valuation of technical provisions should take into account potential future management actions where appropriate.

13.2 Management actions should be reflected in the value of the technical provisions, provided that these management actions:

- Are clearly documented;
• Have been approved by the Board;
• Are consistent with representations made to policyholders;
• Reflect the time and cost required to implement; and
• Are consistent with past evidence of similar actions (and inactions) in similar circumstances.

14 Insurer’s own credit standing

14.1 To achieve consistent and reliable economic values of insurance portfolios for solvency purposes, the value of technical provisions should not reflect an insurer’s own credit standing. Insurance obligations will be required to be met to the same level of confidence by all life insurers, irrespective of their credit standing.

14.2 However, the credit standing of a reinsurer should be taken into account when considering the solvency of a ceding (re)insurer even if the contractual cash flows are the same. The risk of reinsurer default should be reflected in the net best estimate provision by making allowance for the expected level of future defaults.

14.3 The valuation of liabilities other than technical provisions should also not reflect the insurer’s own credit standing.

14.4 Where the terms of debt make it subordinate to the insurer’s obligations in respect of insurance contracts, the value of the debt may reflect the lower probability of repayment under subordinated debt and the lower capital needed to cover the risk of non-payment.

15 Use of the valuation model in the calculation of capital requirements

15.1 We will issue detailed consultation later in 2014 (before the QIS1 exercise) on the Standard Model approach to calculating capital requirements under the solvency and capital adequacy assessment framework. When constructing their valuation models, insurers should aim to build in sufficient flexibility such that the value of assets and liabilities can be recalculated after stresses of the risk factors likely to be included in the standard model. These risk factors are likely to include (not in order of importance, nor intended to be exhaustive):

• The value of equities (separately by type – e.g. listed / unlisted)
• The value of property
• Interest rates
• Currency exchange rates
• Credit spreads
• Concentration of counterparty exposure
16 Summary of discussion points

1. There are two key possible points of recognition for an insurance contract – on entering into a binding contract (the bound date) and the inception date of the contract. In principle, the bound date is the date at which an economic obligation arises. In practice for life insurance these dates are unlikely to be significantly different. We would like to hear from insurers if they have any examples of situations where the dates are significantly different.

2. We request insurers to inform us to what extent they have liabilities which they consider to be illiquid. (Illiquid means that the liability cash flows are predictable, cannot be surrendered by the policyholder, and are capable of being closely cash flow matched by suitable assets). Please provide details of the type(s) of contract and an indication of the size of the in-force book (number of policies, reserve under current regime).

3. We request insurers to confirm what proportion, if any, of their current in-force portfolio contains discretionary aspects, and to provide details of the discretion available in determining benefits.

4. We request insurers to provide us with a list of the currencies in which their contracts, or liability cash flows within those contracts, are expressed, together with the estimated proportion of liabilities which each currency comprises.

Responses on the above discussion points should be provided by email or letter to Neil Taverner, Senior Actuary, Isle Of Man Insurance and Pensions Authority, Ground Floor, Finch Hill House, Bucks Road, Douglas, IM1 3DF / neil.taverner@ipa.gov.im by 30 May 2014.