



Insurance Core Principles

ICP 14 Valuation

The supervisor establishes requirements for the valuation of assets and liabilities for solvency purposes.

Introductory Guidance Application

- 14.0.1 The IAIS considers it is most desirable that the methodologies for calculating items in general purpose financial reports can be used for, or are substantially consistent with, the methodologies used for regulatory reporting purposes, with as few changes as possible to satisfy regulatory requirements. However, the IAIS also recognises that this may not be possible or appropriate in all respects, considering the differing purposes. The IAIS believes it is essential that differences between general purpose financial reports and published regulatory reports are publicly explained and reconciled.
- 14.0.2 The IAIS considers that differences between technical provisions for general purpose financial reports and published regulatory reports should be publicly explained and reconciled in terms of differences in data, discount rate, methodology and assumptions used together with the rationale for why any different approach is appropriate for solvency purposes.
- 14.0.3 To the extent that financial reporting standards, including IFRS, are consistent with the standards in this ICP, valuations that are in accordance with those financial reporting standards may be regarded as compliant with this ICP.



Insurance Core Principles

14.0.4 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 ICP considers the valuation requirements that should be met for the purpose of the solvency assessment of insurers within the context of IAIS risk-based solvency requirements that reflect a total balance sheet approach on an economic basis^[2] and address all reasonably foreseeable and relevant risks.

[2] An economic basis may include amortised cost valuations and market-consistent valuations that comply with this ICP.

14.0.5 Standard 17.1 states that the supervisor requires a total balance sheet approach to be used in the assessment of solvency to recognise the interdependence between assets, liabilities, regulatory capital requirements and capital resources and to require that risks are appropriately recognised^[3]. Such an approach ensures that the determination of available and required capital is based on consistent assumptions for the recognition and valuation of assets and liabilities for solvency purposes.

[3] The total balance sheet approach is an overall concept rather than one which implies the use of a particular methodology such as a cost of capital method or a percentile method.

14.0.6 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, but on the basis of their recognition and valuation for solvency purposes.

Solvency Purposes

14.0.7 The valuation "for solvency purposes" referred to in this ICP is the valuation of the assets and liabilities used within the broad concept of a risk-based solvency assessment of insurers.



Insurance Core Principles

14.0.8 Solvency assessment results from the application of supervisory judgment to various measures and estimates of an insurer's current financial position and future financial condition which serve to demonstrate the insurer's ability to meet its policyholder obligations when they fall due. Useful in this regard is a set of financial statements which may differ from those used for general purpose financial reporting. To distinguish them, this ICP refers to the financial statements used for solvency assessment as "regulatory financial statements". Such statements include a regulatory balance sheet and regulatory capital requirements. For the purposes of this ICP, "valuation for solvency purposes" refers to valuation of assets and liabilities in the regulatory financial statements. The overall solvency assessment may use information additional to the regulatory financial statements such as:

- stress and scenario testing;
- the insurer's own risk and solvency assessment; and
- relevant disclosure.

14.0.9 Technical provisions are a significant component of valuation for solvency purposes. They 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 probability of sufficiency required by the supervisor.

14.0.10 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 capital resources. Alternatively, a capital requirement may be set to cover the potential shortfall in value. Such adjustments are part of the process of determining capital requirements and/or capital resources and are covered by ICP 17 Capital adequacy. These adjustments are shown separately from asset values in the regulatory financial statements. This enables improved transparency, consistency and comparability.

14.1 The valuation addresses recognition, derecognition and measurement of assets and liabilities.



Insurance Core Principles

- 14.1.1 Assets and liabilities should be recognised and derecognised to the extent necessary for risks to be appropriately recognised. Such recognition/derecognition principles may differ from those used for general purpose financial reporting in a jurisdiction.
 - 14.1.2 Recognition of insurance contracts as part of the valuation of technical provisions is a significant issue for insurers and supervisors. There are two key possible points of recognition – 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. However, in practice, these dates are only likely to be significantly different for certain classes of non-life insurance.
 - 14.1.3 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.
 - 14.1.4 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.
 - 14.1.5 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.
- 14.2 The valuation of assets and liabilities is undertaken on consistent bases.**



Insurance Core Principles

- 14.2.1 Solvency assessment based on consistent valuation of assets and liabilities is a prerequisite for obtaining a meaningful insight into the asset-liability positions of an insurer and an understanding of the financial position of an insurer relative to other insurers. It provides reliable information on which to base the actions that are taken by insurers and their supervisors in respect of those positions.
- 14.2.2 The overall financial position of an insurer should be based on the consistent measurement of assets and liabilities, the explicit identification and consistent measurement of risks and their potential impact on all components of the balance sheet. This consistency should apply to all assets and liabilities, including assets in excess of the liabilities, and extend across insurers and time periods so as to achieve comparability.
- 14.2.3 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.
- 14.2.4 Observed market valuations or amortised cost valuations may be used for some assets and liabilities, while valuation models, such as discounted cash flow models, may be used for other assets and liabilities. Calibration of such discounted cash flow models to market valuations or amortised cost of other assets and liabilities can be of assistance in achieving consistency.
- 14.2.5 The specific characteristics of insurance contracts, financial instruments and data available may vary within and across jurisdictions. Consistency in the valuation of assets and liabilities means that such variations can be explained in terms of the differences in the nature of the cash flows valued in each jurisdiction.

Insurance Core Principles

- 14.2.6 Regulatory capital requirements are determined using a consistent treatment of the valuation of assets and liabilities. Consistency in the valuation of assets and liabilities for solvency purposes does not necessarily mean that a single valuation basis is used for all assets and liabilities. The balance sheet, when taken together with capital requirements, should result in an appropriate recognition of risks.

14.3 The valuation of assets and liabilities is undertaken in a reliable, decision useful and transparent manner.

Reliability

- 14.3.1 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.
- 14.3.2 Objectivity is an important aspect of valuing assets and liabilities in a reliable manner, so that a valuation is not influenced inappropriately by an insurer's management. 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. The supervisor should require a valuation methodology which uses information provided by the financial markets 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



Insurance Core Principles

- 14.3.3 In the context of this standard, ‘decision useful’ means useful in making judgments for solvency purposes. It should be recognised 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.
- 14.3.4 In some jurisdictions, enforcement actions can only be based on objective calculations. In those jurisdictions, an objective calculation should take precedence over one based on subjective assumptions and methods. Supervisors may need to provide greater specificity on assumptions (e.g. mortality and interest) and methods for regulatory purposes. Specified methodology should include a margin for risk that is appropriate for a valuation done for solvency purposes.
- 14.3.5 Decision useful values may be derived from a range of sources, including market-consistent valuations, amortised cost valuations and other valuation models, such as discounted cash flow projection models.
- 14.3.6 Where there is a market for an asset or liability in which prices are quoted publicly and trades are readily available, the quoted prices could 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.
- 14.3.7 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. The supervisor should evaluate such circumstances and as a result may conclude that the use of an alternative economic valuation is appropriate.

Insurance Core Principles

- 14.3.8 Amortised cost could be a decision useful value for assets and liabilities where it is a reflection of the amount the insurer will pay and receive over time, and fluctuations in market values are not indicative of the insurer's ability to meet its obligations. Amortised cost may provide a pragmatic and decision useful value when other valuation approaches are no more useful or reliable. It is useful to complement such valuations with sensitivity and adequacy testing.
- 14.3.9 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. Supervisory comparisons or benchmarking of modelling practices can 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.)
- 14.3.10 The supervisor should evaluate the extent to which the time value and risk adjustments add decision useful information. Where this is not the case, the disclosure requirements may be relied upon. For liabilities subject to significant litigation uncertainty, it may not be appropriate to include estimates of time value and risk in the reported liability, due to the unreliability of such adjustments.

Transparency

- 14.3.11 The solvency regime should be supported by appropriate public disclosure and additional confidential reporting to the supervisor. For example, explicit determination of the components of the technical provisions supports the objectives of transparency and comparability and facilitates convergence. Standards for public disclosure including the valuation of assets and liabilities for solvency purposes can be found in ICP 20 Public Disclosure.
- 14.3.12 Insurers should provide sufficient information about the approaches they have taken to the valuation of assets and liabilities, describing how the principles of reliability, decision usefulness and consistency have been addressed. Transparency facilitates understanding and comparability within and across jurisdictions.

14.4 The valuation of assets and liabilities is an economic valuation.



Insurance Core Principles

- 14.4.1 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 risk-based solvency requirements which satisfy these ICPs and standards and shares their objectives of transparency and comparability.

14.5 An economic valuation of assets and liabilities reflects the risk-adjusted present values of their cash flows.

- 14.5.1 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. A current quoted market value or a current sale or purchase value may also reflect the prospective valuation of cash flows.
- 14.5.2 Supervisors should take into account all relevant information available about current market assessments of value and risk and the principles, methodologies and parameters used in the relevant markets for assessing the value of an asset or liability.
- 14.5.3 The historic cost of an asset or liability may not reflect a current prospective valuation of the future cash flows and may therefore not be consistent with the current economic valuation of other assets or liabilities. Historic cost generally does not reflect changes in value over time. However, amortised cost, which adjusts the historic cost of an asset or liability over time, may reliably reflect the value of future cash flows, when used in conjunction with an adequacy or impairment test.
- 14.5.4 Some jurisdictions utilise a subset of economic valuation known as market-consistent valuation which is described further in Guidance 14.5.5 to 14.5.11. Some jurisdictions use a subset of economic valuation known as amortised cost valuation which is described further in Guidance 14.5.12 to 14.5.15.

Market-Consistent Valuation



Insurance Core Principles

- 14.5.5 It may be appropriate to use market-consistent values 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.
- 14.5.6 It may be well known to financial markets that the approach taken to market assessments for some assets and some insurance liabilities or their components uses modelling based on certain assumptions and 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.
- 14.5.7 However, in exceptional circumstances there may be information additional to that on market assessments from the wider economy that should be taken into account e.g. where a market is anomalous, not operating effectively or is subject to intervention from the relevant authorities. For example, where a government/regulator intervenes in a major way e.g. 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.
- 14.5.8 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 in different jurisdictions. If such circumstances arise, supervisors should provide guidance as to the appropriate values or adjustments insurers should use for solvency purposes to reflect the risk-adjusted present value of their cash flows and maintain consistency, decision usefulness, relevance and transparency.



Insurance Core Principles

- 14.5.9 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.
- 14.5.10 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.

Insurance Core Principles

- 14.5.11 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 liquid market from which to determine a market consistent value for a risk component, the additional liquidity risk needs to be considered.

Amortised Cost Valuation

- 14.5.12 It may be appropriate to use an amortised cost method for economic valuation of assets and liabilities. Amortised cost methods determine the value of an asset or liability at any point in time as the present value of future cash flows discounted at an appropriate interest rate, with an appropriate adjustment for risk.
- 14.5.13 The discount rate used in valuing assets under an amortised cost method equates the present value of expected contractual cash flows with the amount paid to acquire the asset. The price paid for an asset usually equals the market value at time of purchase. Since the price paid reflects the risk of the instrument at the time of purchase, an adjustment for the risk assessed at that time is automatically included in the discount rate.
- 14.5.14 When valuing both assets and liabilities under an amortised cost method, there is a close relationship between the discount rate and the provision for risk. The discount rate used may be based on the expected yield, after making allowance for default, of the supporting asset portfolio. Other combinations of discount rate and risk adjustment are possible.

Insurance Core Principles

14.5.15 When an amortised cost method is used, the values produced should be evaluated for adequacy at least annually. For assets, when the asset has been impaired to a significant degree, the carrying value of that asset should be adjusted to reflect that impairment. For liabilities, the value should be tested at least annually. When the liability value is found to be inadequate, it should be strengthened. Adjustments should also be made to reduce any significant, undue conservatism identified by the adequacy test.

14.6 The value of technical provisions and other liabilities does not reflect the insurer's own credit standing

14.6.1 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 are required to be met to the same level of confidence by all insurers in a jurisdiction and the value of an identical portfolio held by different insurers should not depend on the insurer's credit standing. This also applies to the technical provisions of a reinsurer.

14.6.2 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 could be covered either by the regulatory capital requirements or adjustments made to the value of assets in determining available capital. Alternatively, some allowance for the credit default risk could be made in valuing the reinsurance asset directly.

14.6.3 The valuation of liabilities, other than technical provisions, should also not reflect the insurer's own credit standing.

14.6.4 Where the terms of the 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.

Insurance Core Principles

14.7 The valuation of technical provisions exceeds the Current estimate by a margin (Margin over the Current estimate or MOCE).

- 14.7.1 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 (Margin Over the Current estimate or MOCE) to cover the inherent uncertainty of those obligations.
- 14.7.2 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.
- 14.7.3 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.
- 14.7.4 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 "current estimate of the cost of meeting the insurance obligations" (Current estimate). Actuarial and statistical techniques may be used in determining the current estimate, including deterministic, analytical and simulation techniques.
- 14.7.5 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 (e.g. through holding capital, or 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 current estimate of the cost of meeting the insurance obligations by an amount covering this uncertainty. This excess is the MOCE.

Insurance Core Principles

- 14.7.6 Where, for example, capital is required to give the level of confidence required by the solvency regime, the technical provisions should at minimum also cover the cost of holding that capital. In these circumstances, the MOCE might 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 MOCE will also reduce, gradually releasing it from the technical provisions. Equally, as uncertainty reduces, the required capital would also reduce in line with the revised risk profile.
- 14.7.7 It may not be necessary, in practice, to determine the current estimate and the MOCE separately. The solvency regime should require any method by which technical provisions are valued to be such that the value includes an explicit or implicit margin over the current estimate. For example, a reliable market valuation by reference to a sufficiently deep and liquid market may be expected automatically to include a MOCE.
- 14.7.8 A model which includes in its calculations an allowance for uncertainty up to the level of confidence required by the solvency regime is also capable of calculating the technical provisions directly. However, in this case, supervisors should consider whether the current estimate and MOCE should be separately reported to help ensure that technical provisions are consistent and reliable.
- 14.7.9 A change in underlying data or assumptions generating a change in current estimate and MOCE should be disclosed and justified so that consistency, reliability and relevance may be maintained and arbitrary changes over time are avoided.
- 14.8 The Current estimate reflects the expected present value of all relevant future cash flows that arise in fulfilling insurance obligations, using unbiased, current assumptions.**

Insurance Core Principles

- 14.8.1 The current estimate should reflect all future cash flows under an existing insurance contract to the extent that they are integral to the fulfilment of the obligations under that contract. This 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.
- 14.8.2 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.
- 14.8.3 To give clarity as to what constitutes an insurance contract for solvency purposes, the supervisory regime should specify the boundaries for insurance contracts which define the relevant cash flows to be included in determining the current estimate. The insurance contracts are subject to the following boundary constraints, if they exist^[4]:
- 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.

^[4] For certain types of long-duration life policy with an indefinite term, these would be evaluated through the potential life of the policyholder, allowing for lapse or surrender in the probabilities attached to each cash flow.

Insurance Core Principles

- 14.8.4 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 to extend the contractual termination date should be included. The current estimate should allow for the expected rate of exercising such options. This boundary constraint also excludes additional voluntary contributions 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 e.g. no-lapse and premium rate guarantees. The current estimate should reflect the expected rate of payment of additional contributions and the expected level of such contributions.
- 14.8.5 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 is the case with most non-life insurance contracts which are typically 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. 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.
- 14.8.6 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.

Discretionary Payments



Insurance Core Principles

- 14.8.7 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.
- 14.8.8 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.
- 14.8.9 In view of the wide variety of participating contracts and legal frameworks in different jurisdictions, supervisors should establish criteria appropriate to their jurisdictions for the allowance of discretionary elements associated with participating contracts in the valuation of technical provisions. These should nonetheless reflect the principles of a consistent, reliable and economic valuation and those that apply more specifically to technical provisions, as discussed in this ICP.
- 14.8.10 In many jurisdictions, accumulated profits attributable to a class of policyholders are accounted for separately by the insurer. Where such accumulated profits can be used to absorb losses to protect policyholder interests in a period of stress, they may possess all the characteristics of capital and may hence be recognised in the determination of capital resources for solvency purposes. In such a case, it is important to ensure that the criteria established by the solvency regime for the allowance of future discretionary benefits in the valuation of technical provisions are compatible with the criteria for determining capital resources in order to achieve a consistent overall assessment of the solvency position of the insurer.

Unbiased Current Assumptions



Insurance Core Principles

- 14.8.11 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, 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.
- 14.8.12 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.
- 14.8.13 Regular experience analysis, considering the individual entity 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.
- 14.8.14 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 the relevant industry experience are likely to be more decision useful as a basis for projecting its cash flows.



Insurance Core Principles

- 14.8.15 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 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.
- 14.8.16 With respect to expenses, the insurer's own expense experience in managing a portfolio is likely to be relevant in determining an economic value.
- 14.8.17 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.
- 14.9 The MOCE reflects the inherent uncertainty related to all relevant future cash flows that arise in fulfilling insurance obligations over the full time horizon thereof.**

Insurance Core Principles

- 14.9.1 Different methods may be used in practice to measure risk. For some risks, observable market prices for risk may be available. In choosing a methodology, due consideration should be given to the nature of the risks being measured. Other approaches being considered around the world include quantile, conditional tail expectation, cost of capital and explicit assumption methods. Where a mixture of appropriate methods is used, a consistency check should be considered. Calibration of the methods used should reduce the effect of methodological differences to a level sufficient to enable reliable solvency assessment to be undertaken. At present, there is no one common methodology. In practice, the results from different methods will not be identical and calibration and consistency checks should be applied so that methodological differences are reduced to an acceptable level for solvency assessment purposes. Once established, the methodology should not be changed from one valuation to the next unless there is a reasonable rationale for change.
- 14.9.2 The margin over current estimate (MOCE) represents an estimated measure of the uncertainty inherent in the cash flows associated with fulfilling an insurer's insurance obligations. To achieve a consistent, reliable and decision useful valuation, the margin over current estimate 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.
- 14.9.3 Only risk inherent to the policy obligations should be reflected in the MOCE. Other risks should be reflected in regulatory capital requirements. Where risks are reflected in both the MOCE and regulatory capital requirements to provide an overall level of safety, double counting should be avoided as far as practical.
- 14.9.4 In some jurisdictions it may be considered appropriate, due to inherent uncertainty in policy obligations and profit, that no component of premium related to such considerations should be recognised in profit at the inception of a contract. In those jurisdictions, the inherent uncertainty is effectively represented by the difference between premium received and the Current estimate. Other jurisdictions may take the view that one of the other methodologies described in this document provides a decision useful separate estimate of the level of uncertainty in determining the MOCE and may therefore allow potential gain at issue to be recognised.



Insurance Core Principles

- 14.9.5 It is important to be clear about the extent to which risk factors should be reflected when valuing the MOCE and to what extent. It is appropriate to differentiate between the risks specific to the portfolio of insurance obligations and the risks associated with the operations of the particular insurer. Risks that are portfolio specific are inherent to the policy obligations and should be taken into account in the MOCE.
- 14.9.6 In determining the appropriate methodology for determining the MOCE in a solvency regime, the supervisor should consider the extent to which possible methodologies promote transparency and comparability between insurers and insurance markets.
- 14.9.7 An appropriate method for the determination of the MOCE would be expected to exhibit the following characteristics:
- Insurance obligations with similar risk profiles have similar MOCEs;
 - The less that is known about the cash flows; the higher the MOCE;
 - For the same level of probability, risks with higher impact have higher MOCEs than those with lower impact;
 - Risks with low frequency and high severity will generally have higher MOCEs 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 MOCEs than those of shorter duration;
 - Risks with a wide probability distribution have higher MOCEs than those risks with a narrower distribution; and
 - To the extent that emerging experience reduces uncertainty, MOCEs should decrease, and vice versa.
- 14.9.8 In establishing appropriate criteria or methods for determining the MOCE, the supervisor should consider the diversification of the inherent risk factors reflected in the MOCE.

Insurance Core Principles

- 14.9.9 Consideration should be given to the segmentation of the insurance policies of the insurer into separate portfolios and the impact this has on the diversification of inherent risk factors that is taken into account. Segmentation, e.g. by line of business, may be undertaken for calculation purposes and may mean that diversification within portfolios is taken into account in the MOCE but diversification across portfolios is left out of account. The calculation method may also mean that diversification within portfolios is only partially taken into account. Any residual diversification within portfolios and all diversification across portfolios could for example be addressed as an offset to regulatory capital requirements, if appropriate. The MOCEs for the total business of the insurer would simply be the sum of the MOCEs of its portfolios.
- 14.9.10 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 MOCE. 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. Such practice should be encouraged by supervisors.
- 14.10 The valuation of technical provisions allows for the time value of money. The supervisor establishes criteria for the determination of appropriate rates to be used in the discounting of technical provisions.**
- 14.10.1 The solvency regime allows for the time value of money to be recognised in the determination of technical provisions and should establish criteria for the determination of appropriate interest rates to be used in the discounting of technical provisions (discount rates). In developing these criteria, the supervisor should consider the following:
- the economics of the insurance obligations in its jurisdiction including their nature, structure and term; and



Insurance Core Principles

- the extent (if any) to which benefits are dependent on underlying assets.

- 14.10.2 The criteria for determining appropriate interest rates to be used in the discounting of technical provisions should recognise that the appropriate interest rates may not be directly observable and apply adjustments based on observable economic and market data of a general nature as appropriate.
- 14.10.3 To the extent that a risk is provided for elsewhere in the balance sheet by alternative means, there should be no allowance for that risk in the chosen discount rates.
- 14.10.4 As the discount rates should reflect the economics of the insurance obligations, any observed yield curve should be adjusted to account for differences between the economics of the observed instrument with those of the insurance obligations.
- 14.10.5 The criteria should also allow appropriate interpolation and extrapolation for non-observable market data and maturities. To provide for consistent, reliable, economic values, the criteria for discount rates should utilise the entire interest rate term structure.
- 14.10.6 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.

14.11 The supervisor requires the valuation of technical provisions to make appropriate allowance for embedded options and guarantees.

- 14.11.1 The determination of the current estimate and MOCE should make explicit allowance for any options of the policyholder or insurer and for guarantees embedded in the insurance contract, such as guaranteed minimum benefits and interest rate guarantees. 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.

Insurance Core Principles

- 14.11.2 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 current estimate and MOCE. The uncertainty associated with lapses and surrender may not be fully diversifiable across insurance contracts as the level of lapses and surrenders 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.
- 14.11.3 Technical provisions are not required to be 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, a form of surrender value minimum may be considered appropriate, to provide additional protection in the event of a high level of surrenders. This should be reflected in regulatory capital requirements, as appropriate.