CFO Forum

Market Consistent Embedded Value Basis for Conclusions

April 2016

Basis for Conclusions on CFO Forum Market Consistent Embedded Value Principles

This Basis for Conclusions accompanies the proposed Market Consistent Embedded Value Principles for supplementary reporting on Embedded Value prepared by the CFO Forum.

Contents

Amendment to the MCEV Principles April 2016

Solvency II was introduced as the primary solvency reporting regime for insurance companies within Europe on 1 January 2016. There are similarities between the methodology and assumptions used to determine the Solvency II balance sheet and those employed under MCEV reporting. Alignment of methodology and assumptions between Solvency II and MCEV may be beneficial for companies reporting under both approaches. Consequently, the CFO Forum has amended the MCEV Principles and Guidance to permit, but not require the use of certain aspects of Solvency II methodology and assumptions for MCEV reporting. A principles based approach to disclosure has also been adopted, with illustrative MCEV disclosures included in an appendix to the Principles. The changes to the MCEV Principles and Guidance issued in October 2009 are summarised in the following table.

Principle / Guidance	**Topic**
G3.6	Calculation of VIF
G5.2	Group capital requirement
G5.4	Required capital
G6.2, G10.3	Contract boundary
Principle 8	Frictional costs of required capital
G11.8	Expenses: Changes in unit costs
G11.13	Expenses: Look through basis
G11.17	Taxation
Principle 14, G14.2	Reference rate
G16.5	Participating business: Surplus funds
Principle 17, G17.1-G17.8	Disclosure requirements (largely moved to Appendix A)

There are no further changes to the MCEV Basis for Conclusions compared to the version published in October 2009.

Introduction

1 This Basis for Conclusions summarises the CFO Forum of European Insurers' (the CFO Forum) considerations in producing the Market Consistent European Embedded Value (MCEV) Principles and Guidance (the "Principles"). The Basis for Conclusions provides supporting rationale for the Principles.

2 The CFO Forum recognised a need for international guidance on the implementation of public MCEV reporting as:

- 2.1 The original European Embedded Value ("EEV") Principles allowed a wide range of practices and in addition MCEV reporting bases are diverse between companies and countries;
- 2.2 MCEV as a financial reporting method is published and used as an internal management tool by many of the large European-based financial services companies writing long-term insurance business; and
- 2.3 There is no international guidance in place for MCEV-based reporting;

3 There was a common interest in developing guidance to increase consistency of supplementary MCEV disclosures, provide useful information whilst Solvency II and IFRS Phase II reporting develop and provide information that would be considered useful in its own right to the investment community and appropriate by the management of the major European insurance groups. The CFO Forum's internally stated goals in producing the Principles are summarised as follows.

- 3.1 Primarily, to develop guidance to be applied by European insurance groups preparing supplementary financial information on an MCEV basis.
- 3.2 In developing this guidance, to consider the following key attributes:
  - 3.2.1 Ensure that the MCEV basis is calibrated to a market valuation of the cash flows.
  - 3.2.2 Addressing the current reservations/criticisms of existing EEV reporting by ensuring that the guidance:
    - 3.2.2.1 Is sufficiently credible and robust to address key concerns relating to consistent application between peer group companies;
    - 3.2.2.2 Explicitly includes guidance on investment returns and discount rates, the required movement analysis, the valuation of new business and the allowance for non-hedgeable risks; and
    - 3.2.2.3 Prescribes a minimum level of disclosure, including sensitivity analysis, to address analysts' concerns about comparability of the results of companies adopting different assumptions.
- 3.3 Consider the process of implementation.

4 The CFO Forum intends that MCEV reporting is the only recognised format of embedded value reporting from 31 December 2011. The Principles and this Basis for Conclusions have therefore been written as stand alone documents superseding the previous CFO Forum EEV documents.

5 In recognition of the importance of MCEV as a measure, published MCEV results must be subject to an independent external review.

General Approach and Philosophy

6 MCEV reporting focuses primarily on information relevant to users on the expected value and drivers of change in value of companies' existing business, as well as risks associated with the realisation of that value. Its prime focus is on the value of expected future cash flows distributable to shareholders from that business. The points described below were recognised as important attributes to improve existing embedded value reporting.

7 The MCEV basis defined in the Principles is designed to eliminate the current diversity of approaches and improve disclosures.

8 The Principles need to be applicable to a wide range of businesses managed globally in different ways by different companies. It is not practical for rules to be written to cover all eventualities. The Principles therefore must accommodate different measurement approaches appropriate to the nature of the business, but at the same time achieve a consistency across businesses and restrict the scope for arbitrage by changing between measurement approaches.

9 Companies have made significant investment in expertise, systems and understanding of existing EEV reporting. As far as possible, and subject to the goals described above, the Principles should build on existing best practice in EEV reporting.

10 MCEV reporting should allow users to understand management's views of the value, and changes in value, of the shareholders' interest in a specified part of the company's business, together with the main events influencing them during the reporting period. Managements' views are important as they have a significant impact on the MCEV value and related disclosures. However, while management's views do impact the value, MCEV reporting is designed to reduce the subjectiveness within EEV and align more closely with the value the market would place on the cash flows. So, for example, in mature economies management's views on how interest rates or equity markets will evolve in the future will not change the amount of MCEV.

11 The MCEV uses economic assumptions which are consistent with the current market where it is clear and unambiguous. For non economic assumptions, an entity specific approach is applied. This does not mean the non economic assumptions ignore the market which will provide useful additional information.

12 The application of the Principles should, in practice, consider shareholders' interest in the contract as a whole, rather than necessarily isolating different types of cash flow or different types of risk.

Principles, Guidance and Disclosures

13 For sufficient consistency of approach and credibility of the reporting, a certain amount of common ground is necessary to which all adopters must adhere. Therefore compliance with the 17 high level principles is compulsory.

14 To be applicable to a wide variety of business circumstances, these principles could be open to different detailed interpretations. The room for interpretation should be limited and different interpretations should be well understood by users. The Principles therefore incorporate the following items:

14.1 Guidance at a more detailed level for implementation of the Principles. This covers areas that should be common ground for most companies, non-compliance with which should be explicitly disclosed.

14.2 Extensive disclosure requirements in order that different interpretations and their impact on results can be well understood by users.

15 Throughout the Principles, the word “earnings” has been used for an amount and “return” has been used for a percentage. This is a naming convention for this document and is not intended to supersede naming conventions in other reporting measures such as IFRS.

16 Throughout the Principles an additive terminology has been used. Where items are described as additive it is assumed that the correct signage is attached to the items. For example the addition of a cost would assume that the cost was a negative number.

Principle 1 – Introduction

17 The Principles continue the focus of existing EV reporting on investors and potential investors, in companies and the analysts advising them. As the MCEV is a measure of the value of the covered business, the disclosure of a Group MCEV allows an understanding of how the MCEV fits within the overall group results. It allows users to understand the linkages and cross over between the MCEV for covered business and where it contains a look-through to investment management or service company margins reported under another segment for IFRS.

18 **G1.1** – MCEV Principles can be applied to a wide range of business, for example the entire business of a standalone life insurance company or one part of a diverse financial services company offering banking, services and non-life insurance products. It should be clear to users of accounts to what business the Principles have been applied (the 'covered business', considered in more detail under Principle 2).

19 **G1.2** – Currently, practice varies as to the inclusion of internal group agreements such as financial reinsurance or loan arrangements. Common uses of such arrangements are to transfer risk and/or optimise capital requirements between legal entities. Consistency in their treatment is required by relating the inclusion of such instruments directly to their relevance to cash flows from the 'covered business.' This reduces the scope for arbitrage between different accounting principles being applied according to the legal status of contracts rather than the economic reality of the covered business. The reference to "distortion" in this guidance relates to exclusion (inclusion) of such arrangements from the MCEV when the economic reality of the situation is that they relate to (do not relate to) covered business.

20 **G1.3** – 'Group MCEV' is a measure of the consolidated value of shareholder interests in 'covered business' and 'non-covered business.' Unless otherwise stated, Principles 1 to 17 refer to MCEV for covered business. Principle 17 also defines the Group MCEV and sets out the minimum disclosure requirements. As a minimum standard 'non-covered business' should be at the IFRS net asset value (considered in more detail under Principle 17). This enables a complete picture of the entity's financial results and a link to the primary reporting basis. Further disclosures may show adjustments to the IFRS valuation to adjust certain items to a more consistent basis with the covered business MCEV methodology.

21 **G1.4** requires compliance with the Principles except where non compliance results in an immaterial effect. Detailed consideration and application of the Principles to the global operations of large companies would require a great deal of time, effort and expertise. Against this cost, the benefit of consistent and reliable value-based reporting must be balanced. Judgment of 'materiality' is at the centre of this balance and should be made in the context of users of information reported publicly under the MCEV method. Judgment over the necessity to disclose an issue should be driven by its likely relevance to a user's decisions.

22 **G1.5** – For published MCEV results, an independent external review must be sought. The scope of the review should include, as a minimum, the methodology, assumptions, prescribed minimum results, sensitivities and compliance with the Principles. The prescribed minimum results mean the period end value and total movement analysis (right hand column of Appendix A to the Principles). The basis of the review, by whom it was performed and the opinion of the reviewer should be disclosed.

Principle 2 – Coverage

23 **G2.1, 2.2 & 2.3** – Companies currently apply MCEV methods to a wide variety of businesses of different legal forms and risk. This reflects how management view the business and so flexibility is important whilst providing users clarity of information to understand total group value. Normally, it is applied to long term business or particular legal entities writing such business. The Principles can be applied to a wider range of business meeting the needs of users to provide reconciliation to the total group value.

24 Primary reporting bases commonly apply different accounting methods to contracts (or other units of account) depending on their legal form, the type of entity into which they are written, or the underlying type of risk exposure. To allow flexibility and encourage application according to the nature rather than the legal form of business, the Principles are applied to business independent of its insurance risk content and irrespective of the type or identity of the legal entity within which it is written. Specifically, inclusion of business in MCEV covered business does not depend on IFRS classification under IFRS4 or IAS39.

25 **G2.2** provides examples of the type of ancillary business that MCEV reporting could cover.

26 Whilst companies should be reasonably free to determine the kind of business to which MCEV methods are applied, it should be clear to users what types of business are covered by the Principles and how the value of the covered business can be reconciled to the consolidated results under primary reporting. This reconciliation is performed as part of the Group MCEV analysis required under Principle 17.

27 The primary IFRS segment classification may be useful in distinguishing between covered and non covered business. However IFRS segments vary by entity and so do not, in isolation, provide an appropriate basis for consistently defining covered business. To aid clarity and comparability **G17.3.5** requires qualitative and quantitative disclosure to ensure that the MCEV value of the covered business and IFRS value of non covered business are available so an appropriate total MCEV can be constructed. Clarity of the type of business included under MCEV is required to enable the user to separately identify this business and make adjustments if they so require.

Principle 3 – MCEV Definitions

28 The MCEV represents the free surplus allocated to the covered business, the required capital and the value of in-force covered business. If calculated appropriately no further items are needed to provide for risk under the MCEV framework. That is, no further adjustments such as margins in the discount rates are permissible. Users of the MCEV report will of course form their own views, and might make adjustment for items such as agency costs and franchise value that are outside the scope of MCEV.

29 Some companies use an approach to calculating MCEV based on a balance sheet presentation. Where this is the case the balance sheet approach needs to produce materially the same results and be subdivided into the required constituents.

30 The value of in-force covered business is further subdivided and explained in Principle 6. As a minimum disclosure, the MCEV result should be shown as the components described in Principle 3.

31 The allowance for risk in the EEV Principles was contained in the risk discount rate, cost of required capital and time value of financial options and guarantees. The three components covered an array of risks. However, the MCEV Principles split the allowance for risk explicitly between hedgeable financial risks (subdivided by present value of future profits and time value of financial options and guarantees), the frictional costs of required capital and the cost of residual non-hedgeable risk. The cost of residual non-hedgeable risk reflects only those non-hedgeable risks where no allowance is made in the present value of future profits or time value of financial options and guarantees.

32 **G3.1** – The MCEV measure is applied to business types rather than, say, legal entities. The value of assets allocated to the covered business (from within the wider business) needs to be identified. These assets can be divided into a) those required to meet a liability measure for the business, b) additional capital considered by management to be encumbered in supporting the in-force business and c) additional 'free surplus' allocated to the business. Different companies present these components in different ways. However, this distinction is convenient when addressing methods by which to value their contribution to shareholders' interests in the business.

33 **G3.2** – Similar techniques could be applied to valuing future new business, and indeed have been used when estimating 'appraisal values'. However, the value added by new business is considered to be most closely related to events in the year in which it is written. The Principles are therefore directed at valuing business already written to the end of the period and not at an "appraisal value".

34 **G3.3** – The mark-to-market concept for insurance liabilities involves the valuation of the liabilities using methods and assumptions that generate a value that the liabilities would be traded at in a deep and liquid market. However insurance liabilities are generally not traded frequently. Such transactions that do exist tend to be ad-hoc in nature and reflect the structure, synergies and benefits to the entities involved. Insurance liability transactions are therefore not a reliable measure of the value in a deep and liquid market. In developed markets where a reliable, deep and liquid market exists transaction prices represent the market valuation. Therefore the value of assets whose cash flows most closely resemble the relevant insurance cash flows can be used to value the insurance liabilities.

35 **G3.4** – The requirement to mark-to-market debt and other financing may create a valuation that is different from the treatment under other reporting measures such as IFRS. The market consistent nature of MCEV makes valuing such items at a market value necessary. The

mark-to-market valuation to full market value includes credit rating and therefore uses as much market information as is available.

36 **G3.5** – The liabilities used in the calculation of the MCEV should be those dictated by the local supervisory regime. The use of "regulatory" in this guidance is intended to apply in its wider context and not intended to refer to a specific method of calculation such as the "regulatory peak" reserving basis in the UK.

Principle 4 – Free Surplus

37 Many companies write business other than that covered by MCEV reporting. Whilst practice varies as to the management and internal allocation of capital, some form of capital allocation to different types of business takes place in every company.

38 **G4.1** –The starting point for MCEV measures is the market value of assets allocated to the covered business. The free surplus unlike required capital is not required to support the in-force covered business at the valuation date and is therefore held at market value with no associated frictional costs. Under Principle 5 the assets supporting required capital are at market value but an adjustment is made to reflect the costs of holding the capital.

39 In certain jurisdictions it is common, particularly for participating business, for business to be managed based on (non-market) book values of assets and realisations of losses/gains, alongside a consistent liability measure. Typically in such cases, the realisation of gains/losses is a driver of bonus decisions and hence the emergence of cash flows to shareholders. Free surplus would normally be the market value of any excess assets remaining after attribution of assets at book values to support liabilities and attribution to the required capital.

40 Intangible assets should be removed from the free surplus to the extent that their recovery is supported out of future profits (such as deferred acquisition costs) or to the extent they represent the book value of acquisitions (such as transaction related goodwill).

41 Tax assets, other assets and minority interests whose value is not on a market value under IFRS should be restated to be on a market consistent basis. This should either be using observable market prices or where no observable market exists this should be on a basis consistent with the mark to model approach and assumptions used for the other components of the MCEV.

42 Under some forms of loan or reinsurance, shareholder access to cash flows emerging from the covered business is subordinate to the creditor. The subordination may increase the volatility of these shareholder cash flows. This effectively leverages the future cash flows to shareholders, increasing the risk associated with their earnings. This is one kind of risk to be allowed for in valuing cash flows. However, further guidance on the treatment of such loan or reinsurance arrangements has not been included due to their unique nature. The most appropriate treatment is left to the company with sufficient disclosure required to allow users to adjust the valuation for their own purposes.

Principle 5 – Required Capital

43 The distribution to shareholders of assets allocated to the covered business is commonly restricted at the valuation date but is expected to occur over time as the in-force business runs off. From the shareholders' viewpoint there is a cost due to restrictions on the distribution of required capital however that cost is allowed for under Frictional Cost of Capital (Principle 8)

44 However it is convenient to distinguish between those assets allocated to back the liabilities and those whose distribution to shareholders' is restricted in other ways: the 'required capital'. In practice this distinction can be rather arbitrary. For example a combination of a 'strong' liability measure with relatively low required capital is equivalent to a 'weaker' liability measure plus relatively high additional required capital.

45 **G5.1** - As MCEV is the value of the shareholders interest in the covered business frictional costs do not need to be calculated on other funding sources. For example, where allowance for the lock-in of capital in a participating fund has been made elsewhere (e.g. in the present value of future profits or time value of financial options and guarantees), there is no requirement to allow for frictional costs on that capital (to avoid double counting).

46 **G5.2** – The level of capital at which the supervisor is empowered to take action refers to the first level of action in which the supervisor will become involved in the management of the business and may force actions upon management such as closure to new business, requirement for additional business plans and more frequent reporting submissions.

47 **G5.3** – Furthermore, the required capital should include capital to meet internal management objectives. The management of such additional restrictions is of interest to investors. Examples include:

- Holding capital at a level higher than the regulatory minimum may be necessary to avoid closer attention from regulators;
- A certain level of financial strength may be sought for marketing purposes or to meet internal risk-based capital goals;
- Some companies publicly express goals to maintain a given credit or financial strength rating.

48 There may be situations where for one part of the covered business the regulatory minimum is higher than the internal capital requirement and for another part the converse is true. In such situations an offsetting effect can be realised, but the overall level of aggregation used in determining such offsets should be disclosed. For example, this offset may apply between different product lines in the one long term fund or between funds or legal entities within a group where group policy on internal capital objectives and constraints on fungibility allow this.

49 Principle 17 requires disclosure of the MCEV with the level of required capital set equal to the regulatory minimum. This is to enable greater comparability between entities. This does not imply the entire disclosure should be reworked on an alternative basis.

Principle 6 – Value of In-Force Covered Business

50 The listed components establish a conceptual framework for the VIF. Because there are different acceptable approaches for arriving at the VIF, it does not establish a particular approach to its calculation.

51 The assets held to back liabilities are required to meet future liability cash flows, with any release of prudential margins emerging for the benefit of shareholders. The level required by local regulators has been the norm for the liability measure. This usually, although not always, contains margins from which cash flows to shareholders would be expected to emerge over time.

52 Under the MCEV method the arbitrage free principle means that there is not a time value of capital. However allowance needs to be made for Frictional Costs of Capital (Principle 8).

53 **G6.1** – In considering reinsurance there is no need to directly consider 'gross' and 'reinsurance' cash flows separately as cash flows to shareholders will be net of the impact of outward reinsurance. Nevertheless risks such as credit risks associated with claims from reinsurers form part of aggregate risk in the business and should therefore be considered.

54 **G6.2** – Where shareholders expect, and the business is managed in anticipation of, renewal of in-force business (for example the receipt of future premiums even where this may not be contractual, refer to discussion in Principle 10) this should be reflected in the MCEV. The extent to which such renewals actually occur can be a key factor in the performance of the business.

55 **G6.3** – In performing a certainty equivalent projection an element of the "moneyness" of options and guarantees is captured in the PVFP. The additional amount over and above this to get to the total value of the options and guarantees is referred to as the time value of financial options and guarantees.

Principle 7 –Financial Options and Guarantees

56 Consideration was given as to what kind of feature should be explicitly covered as 'financial option or guarantee'. These should include those features whose value is driven mainly by changes in financial markets. The Glossary definition covers a wide variety of such features. The key elements are that the feature allows the policyholder the more valuable of two (or more) benefits[1] and that the value of the feature to the policyholder varies as economic indicators or financial markets vary. (It therefore includes most guaranteed annuity options, guarantees underlying participating contracts and guarantees underlying unit-linked contracts but does not include some common insurance-based options such as those to increase insurance cover.)

57 Financial options and guarantees also include fund or company level guarantees and these should be allowed for.

58 Principle 7 directly addresses the need for the recognition of the time value of such features.

59 Stochastic variation or future volatility in economic variables is a key determinant of time value for such features. For example the time value of guarantees underlying unit-linked or participating contracts invested in non-fixed assets is closely correlated to the expected future volatility of those assets. Shareholders often earn a share in the upside of movements in financial markets but meet the full cost of the downside below a certain level. In this way the Principles recognise the asymmetric impact of financial options and guarantees on cash flows to shareholders as market conditions change. Because a market-consistent valuation makes a risk adjustment that on average removes any future returns in excess of the reference rate, a riskier asset mix can not increase the MCEV. However, as a second-order effect it may decrease the MCEV due to the additional volatility causing an increase in the value of policyholder guarantees.

60 Consistency with the valuation of the whole contract was considered a high priority. This avoids discontinuities in results as an option moves from "out of the money" and "into the money" and vice versa. Valuing the expected cost of option-like features using stochastic techniques is considered a suitable measure.

61 The allowance for the time value of financial options and guarantees (TVFOG) is based on economic variables that are valued in line with the price of similar cash flows that are traded in the capital markets. Principles 12, 13, 14 and 15 provide guidance on calibration of stochastic models using market consistent methods.

62 The time value of financial options and guarantees is determined as the difference between the following two components:

- Stochastic valuation of the present value of future shareholder cash flows projected to emerge from the assets backing liabilities of the in-force covered business (PVFP);
- Deterministic valuation of the PVFP for the equivalent business.

Alternative approaches, according to materiality, may be appropriate. For example, the use of "closed form" solutions.

[1] A guarantee is considered to be a form of option in that the holder will receive the higher of a) the guaranteed amount and b) the benefit payable had the guarantee not been in place.

63 The cash flows to be valued in the time value of options and guarantees should be based on assumptions that take into account the historical experience and are consistent with the economic environment implied by the projection.

64 In a certainty equivalent projection (if used to achieve the market consistency required by Principles 12, 13 and 14) the assets will be projected at the reference rate. For assumptions that depend on the market performance (such as crediting rates or bonus rates) the appropriate assumption is that which management would apply at that time in the knowledge that historic experience has been in line with the reference rate and all market participants are in the same market environment. Market participants might not be limited to other insurers. The relevance of other market participants comes in evaluating what alternative vehicles are available to policyholders and might impact their behaviour.

65 Although the time value of options and guarantees is designed to capture the impact of financial options and guarantees it is sometimes appropriate to model non-hedgeable non financial risks as part of this calculation. An example of this is the inclusion within the time value of options and guarantees for policyholder actions such as dynamic lapsing. The dynamic nature is most closely dependent on the level of "moneyness" of the guarantee and therefore modelling this within the stochastic valuation allows the interaction of the investment scenario and the lapse rates. This is therefore an area where allowance for non-hedgeable risks will arise in the time value of options and guarantees rather than in the cost of residual non-hedgeable risks.

66 **G7.1** – The assets held at the valuation date are used as the starting point for the valuation.

67 **G7.2** – Management may have some discretion in managing exposure to guarantees/options, particularly within participating business. For example, decisions over investment mix can influence asset volatility and in scenarios of adverse economic conditions, management may choose an asset mix where guarantees are more closely matched. Where economic/financial scenarios would lead to such discretion being exercised, this can be reflected in the valuation of financial options/guarantees providing that such discretion has passed through an appropriate approval process. Management discretion is also subject to any contractual guarantees and regulatory or legal constraints, for example, in the UK, policyholder reasonable expectations as expressed in the Principle and Practices of Financial Management or policy literature. Furthermore, the allowance should consider the market and policyholders' reaction to such actions.

68 Products where management has discretion over future crediting rates or bonus declarations need special attention. These can be considered along a continuum bracketed at one end by products like fixed payout annuities where all financial terms are fully guaranteed at issue and at the other end by participating products where credited rates are declared based at the end of a period upon actual historical performance with a defined shareholder margin.

- At the first end, since all financial terms are locked in, to the extent the credited rate relies on expected returns in excess of the reference rate, the present value of profits will be impacted because no value can be taken for expected asset returns in excess of the reference rate. Because all terms are locked in generally no stochastic projection is needed. If returns in excess of the reference rate actually emerge in the future, these will appear in the MCEV earnings as they arise.

- At the other end, since the flexible bonus rates reflect historical performance and are built around a targeted shareholder spread, the present value will reflect the targeted spread (subject to any policyholder guarantees eroding the spread). In general the policyholder bonus will arise as the difference between the reference rate and the targeted shareholder spread. Where these products have implicit or explicit minimum guarantees, for example a 0% floor which prevents policyholder benefits from reducing following a negative investment return, stochastic projections (reflecting policyholder behaviour) should be used.

- In between the two brackets, a variety of participating or other adjustable-rate products exist. In modelling them normally the current management practices for the business (for example determining bonuses or credits or flexible charges, setting asset mix, etc) would continue. For a product where rates are set predominantly by considering future expected asset performance, relying on expected returns in excess of the reference rate, at each renewal date the situation will be like the fixed payout annuity, and the present value will be impacted because of these renewals. Any modelling of a management decision to change crediting practices and not anticipate future asset returns in excess of the reference rate must be appropriately supported as discussed above.

The key consideration is appropriate modelling of the management discretion, subject to any guarantees and restrictions, and considering policyholder behaviour, while not taking value for expected asset returns in excess of the reference rate. Models for the choices management and policyholders will make at future projection periods should consider the conditions at a given period and the path taken to get there, but with no special knowledge of what path will be taken after that.

69 In the market consistent valuation the reference rates as specified in Principle 14 should be used and this implies that the valuation does not allow for own credit standing. Management actions should therefore assume that the shareholder always meets policyholder claims even if the assets of the insurer are exhausted.

70 **G7.3** An allowance should be made where material for policyholder behaviour in different market environments as such behaviour can impose significant extra cost.

71 **G7.4** – Disclosure of the models and valuation techniques used to calculate the resulting values and their sensitivities, where appropriate or material, will serve to enable users to understand how the risks associated with these features are valued.

Principle 8 – Frictional Costs of Required Capital

72 **G8.1, 8.2** – The CFO Forum concluded that an allowance for frictional costs in relation to the required capital should be made in the MCEV. Frictional costs are defined to include taxation on investment return (income and gains) and associated investment costs. Consideration was given to include agency costs and cost of financial distress under frictional costs. However, the CFO Forum believed that these are general corporate risks that individual investors should assess rather than general business risks that management of the company should assess.

73 **G8.3** – Projecting the required capital over the lifetime of the business can be time and system consuming and depending on methodology may not be practically possible. Where key drivers are used to project capital, they should be appropriate and robust. Where the projection is not practically possible, the frictional costs should be determined so that the amount is consistent with the level of capital, and release of that capital, along with investment expenses and taxation on investment return expected over the projection period.

74 As set out in paragraph 48 above there may be cross subsidy between product lines in the one long term fund or between funds or legal entities within a group when ensuring sufficient required capital is allocated. In determining the frictional costs the appropriate charge for tax should depend on the actual tax incurred on the assets and this should therefore reflect the jurisdiction where the assets are held. This may necessitate different levels of frictional cost on different bands of capital if capital is held to meet regulatory minima within local entities and amounts to reach internal objectives held centrally.

75 The frictional cost of capital should be offset from the PVFP and should be independent of the non-hedgeable risk allowance.

76 Significant additional disclosures of the methodology used to determine the frictional cost of capital is required and will serve to enable users to understand the features of the calculation.

Principle 9 – Cost of Residual Non-Hedgeable Risks

77 The overall MCEV result should make sufficient allowance for non-hedgeable risks. The inclusion of future profits in the MCEV accounting methodology sets the insurance industry apart from other industries. Allowance should be made to reflect the fact that profits arising from insurance business are not certain. The valuation techniques used in calculating the PVFP and TVFOG include allowance for hedgeable financial risks. Additional allowance should therefore be made for non-hedgeable financial risks and non financial risks.

78 Non-hedgeable financial risks include illiquid or non existent markets where the financial assumptions used are not based on sufficiently credible data. Non financial risks include, mortality, longevity, morbidity, persistency, expense and operational risks.

79 **G9.1** – Allowance for non-hedgeable risks may be included in the TVFOG as discussed in paragraph 65 above or in the PVFP through implicit allowance in the best estimate assumptions (for example, expense assumptions may implicitly assume that realisation of operational risks continue at the historic levels in the expense analysis). Care should be taken to ensure that there are no omissions or double counting of the non-hedgeable risk allowance.

80 The best estimate assumptions used in calculating the PVFP and TVFOG should represent at least the expected outcome of the risk variable. For example, mortality assumptions should represent at least the mean of the distribution of likely claim outcomes. However the overall allowance in the MCEV for non-hedgeable risks should represent the mean shareholder impact reflecting any asymmetry that is inherent in the shareholder earnings. For example, the overall allowance in the MCEV for mortality risk of business written in a with-profits fund should reflect the mean of the scenarios where the shareholder suffers a charge as a result of claim outcomes. This may represent the mean of the tail of the distribution of likely claim outcomes where the shareholder is impacted. An allowance for the additional cost due to the difference in the risk in these two measures should therefore be included in the cost of residual non-hedgeable risk.

81 Experience will inevitably vary from projection assumptions and this variation is one element of risk to be considered in the allowance for the Cost of Residual Non-Hedgeable Risk.

82 Allowance should also be made for any risks not included in the PVFP or TVFOG such as operational risks.

83 **G9.2** – In determining the allowance for residual non-hedgeable risks consideration should be given to a charge for uncertainty within both symmetric and asymmetric risks. Valuing the allowance for non-hedgeable risks from the perspective of a theoretical market which allows full diversification would suggest that no additional allowance is required. However valuing the allowance for non-hedgeable risks from the perspective of a practical market participant may recognise that full diversification of some insurance risks is not possible and investors generally do not have a zero risk aversion to these variables. Due consideration should therefore be given to whether it is appropriate for no charge for uncertainty within the cost of residual non-hedgeable risk.

84 **G9.3** – Non-hedgeable financial risks include illiquid or non existent markets where the financial assumptions used are not based on sufficiently credible data.

85 Similarly the distinction between what is regarded as mark to model and what requires further allowance in non-hedgeable risks needs careful consideration and disclosure. Where, for example, interpolation of a yield curve is required to derive a term 4 discount rate from term 3 and term 5 this could reasonably be regarded as mark to model. However, if in a market where the longest duration yields were available to 15 years and a term 30 rate is extrapolated then whilst this may be the best available assumption there is considerable risk of incorrect calibration which should be considered in the non-hedgeable financial risks. A market is regarded as sufficiently deep and credible if participants can rapidly execute large-volume transactions with little impact on prices. This will require that transactions occur frequently and across the full range of durations where cash flows arise.

86 **G9.4** – Different companies will approach the calculation of the cost of residual non-hedgeable risk from different perspectives depending on how they internally determine risk based capital and how much non-hedgeable risk is allowed for in the PVFP and TVFOG. The approach to allowing for the cost of residual non-hedgeable risks is therefore not prescribed by the Principles. However to enable comparability the resulting cost of residual non-hedgeable risk should be re-presented as an equivalent average charge on the cost of capital method. Although some differences in detail are likely, the cost of capital methodology is consistent with the current proposed requirements for Solvency II.

87 The cost of capital method is an approach to determine the risk margin. It is a proxy for the risk margin over the best estimate liability which would be demanded by the market to take over the non-hedgeable risks of a specific book of insurance liabilities. It is determined, by taking the present value of the cost of capital charge for all future non-hedgeable risk based capital requirements until run-off. As such the average charge provides a method of comparing the allowance for residual risk and is itself not a physical charge applied to the cash flows.

88 If the cost of capital approach is used to determine the cost of residual non-hedgeable risk then the approach and charge applied may vary by risk type. Where a cost of capital approach is followed the charges levied on the projected non-hedgeable risk based capital should be developed by management with reference to the risk measure, the level of diversification, the nature of risk in different sub divisions of the business and where identifiable the level that represents the return above the reference rates that the market would require for providing this capital.

89 **G9.5** – The capital that should be considered in deriving the equivalent average charge is the capital that would be required from an economic perspective to cover the non-hedgeable risks borne. In other words, companies should be considering the economic capital associated with the distribution of profits and losses resulting from non-hedgeable risks.

90 To ensure as much consistency as possible and aid comparability in determining the average charge, the level of capital is required to be set consistent with a 99.5% confidence level over a one year time horizon. Additionally, allowance should be made for management actions in determining the capital where appropriate. Consistency with a 99.5% in one year confidence level does not preclude other run off approaches that are not based on a one year time horizon, but still allow for a consistent margin for risk.

91 **G9.6** – The projection of the run off of risk based capital is a practically difficult area and some form of pragmatic approach will be necessary. The use of key metrics which can act as a proxy for the run off of the risk is one approximate method. The most appropriate metrics to represent the risk should be investigated and used to project the risk based capital.

92 **G9.7** – Diversification will depend on the company's approach to managing its capital and how risks are managed. Diversification within the covered business non-hedgeable risks should be allowed for. However further diversification benefits are not felt appropriate. The level of benefit from diversification may change over the projection period and this should be allowed for.

93 **G9.8** – The disclosure of the non-hedgeable risk methodology including interactions with the time value of financial options and guarantees and the PVFP required by the Principles will serve to enable users to understand how the risks associated with these features are valued.

Principle 10 – New Business and Renewals

94 The MCEV guidance on new business and renewals is largely unchanged from EEV. This aimed to give practical guidance as to typical treatments of new business and renewals. It is a sensitive area as the contribution from new business is a key indicator for users analysing the future prospects for the company. Both new business volumes and margins are closely monitored and multiples often applied to estimate 'appraisal values' for companies.

95 **G10.1** – An expectation of renewals, including non-contractual renewals, is inherent in management of the business being measured under the Principles and in the expectations of investors in that business. Long-term profitability is often sensitive to the continuation of renewals, which may be at the option of the policyholder. The Principles therefore aim to capture the value to shareholders of business already written, including expected future renewals of that business, to separately identify the value of new business written during the period and to analyse the actual variation in renewals against those anticipated by the previous valuation. Expected future renewals would allow for expected lapses and expected rates of policies becoming paid-up.

96 **G10.2, 10.3 and 10.4** – The cash flows associated with each premium, and each variation against previous assumptions, should be counted once and only once. Guidance sets out typical indications as to the categorisation of premium and the value of its associated cash flows between those representing new business and those representing renewal of existing business.

97 **G10.3** – Recurrent single premiums are regarded as pre defined if there is an existing mandate for collection of a fixed amount, albeit the policyholder has option to vary.

98 Distinguishing between new and existing business can be challenging. For example, where there is a separate accumulation and payment phase (such as deferred annuities vesting), the treatment of new members to group schemes or lapse and re-entry through churning activity. The CFO Forum felt that no further guidance could meaningfully be provided other than the examples in **G10.2** and **G10.3** as the distinction between new and existing business is highly dependent on policy type which varies by territory.

99 **G10.5** – The assumptions used to value the new business should be consistent with those used to value the in-force business. This does not require the assumptions to be the same as for the in-force, however, differences should be justifiable and explainable due to the features of the new business.

100 **G10.6** – Practice varies as to whether new business is valued at point of sale, opening or closing assumptions. This should not affect the overall result. However, it would affect elements of experience/change being recorded in different lines in the analysis of MCEV earnings.

101 While point of sale is theoretically the correct approach a practical assumption setting approach is needed. Non economic assumptions are typically reviewed on an annual basis, so point of sale could only reflect the then most recent update. In addition, system and process constraints mean separate daily economic valuations are not always practical and analysis of the effect of changing economic conditions could be more difficult with a pure point of sale approach. Companies may therefore use different timing of assumptions with appropriate disclosure. There is no requirement to restate any previous new business value results from interim publications in the financial year (e.g. for subsequent assumption or model changes in the year). Any reporting of new business value into the public domain (for example, in isolation from the MCEV) should be treated as an interim publication and not require subsequent restatement.

102 **G10.8** – New business margins have been defined to be the ratio of the value of new business to the PVNBP. The use of the PVNBP has been chosen as it is conceptually closely aligned with the numerator. Some companies use different measures such as the use of annualised new business premium (annual premium and one-tenth of single premium) as the denominator in new business margins. Such measures could also be disclosed as further information.

103 The Principles do not recommend whether the value of new business should be calculated at point of sale or at the end of year. There are a variety of valid approaches adopted in the market at present. It is not expected that the difference in value will be significant (being on average half a year of discounting) and the additional consistency achieved would not justify the potentially significant change to processes. Furthermore, some product lines, where asset blocks are purchased to provide a replicating portfolio, are more naturally valued at point of sale whilst for others an end of year valuation is more appropriate. The PVNBP is specified at point of sale so correspondence with this would imply a point of sale valuation; however, this is potentially out of line with the valuation of the business. In conclusion, due to the insignificance of the point the potential for further guidance was not taken further.

104 As described in paragraph 94, the value of new business is a key indicator for users analysing the future prospects for the company. One approach to placing a value on a company is to add the value of future new business to the embedded value. Commonly, the value of future new business is determined based on a multiple of the value of new business of the previous year where it is believed to be sustainable. Therefore the value of new business should reflect the additional shareholder value created through the activity of writing new business.

105 The value of new business should represent the value added or created from writing new business. This does not allow new business value to be presented using marginal expenses. Permitting a marginal approach to expense setting would potentially introduce scope for arbitrarily inflating new business contribution by altering expense allocations.

106 Where new policies are written into an existing fund and where the new and existing business are managed on a common block of assets or where a common crediting strategy based on the overall result is applied, the value of new business and the movement in value of existing business need to consider material interactions between existing and new business, for example:

- Where the company has the option to cross subsidize between different generations of business with different guaranteed rates.
- Where there is an impact due to intangible assets such as deferred tax losses.

107 There are a variety of valid methods in the market to allow for such interaction features in the value of new business and the movement in value of existing business. The methods reflect the territory concerned and the nature of the business. To enable the user to understand material interactions there should be disclosure of the nature of the interactions.

108 To assist the user in determining an appraisal value, **G17.3.12** requires any material one-off features in the new business value and any associated impacts in the movement in value of existing business to be disclosed. One-off features are those that occur relative to a sustainable level defined in the normal course of business.

109 For the purpose of **G10.8** "misleading" would relate to a situation where the value of new business would not be representative of the likely value achieved on future new business sales. An example of this could be where a company writes business on a co-insurance basis.

Principle 11 – Non Economic Projection Assumptions

110 A wide variety of assumptions regarding future experience is necessary in order to project cash flows associated with covered business and extract (and value) those available for distribution to shareholders.

111 A value-based measurement of long-term business will be sensitive to the assumptions chosen. The non-economic projection assumption should be specific to the entity and will rely on a combination of analysis of past experience and judgment of future trends. In each case they represent the judgment of, and should be justifiable by, management.

112 **G11.1** – Whilst recognising that there can be different valid views of future expectations, the Principles seek to limit the extent of variation in those views by basing projection assumptions on current expectations, requiring objective justification for changes in assumptions and requiring changes where objective justification exists for them.

113 Some companies use margins in one element of the measurement or contract type to implicitly offset weakness or uncertainty in another. Such practices can cause misunderstanding, particularly where they are not documented or disclosed. The requirement to set assumptions for 'each component of future cash flow for each policy group' is intended to remove such practices.

114 **G11.2** – Some companies incorporate margins in assumptions, particularly where there is little reliable evidence on which to base expectations for future experience. Such uncertainty is a risk to shareholders that should be considered and to the extent it is appropriate should be reflected in the Cost of Residual Non-Hedgeable Risk. Introducing such implicit or explicit margins in some assumptions and not in others is potentially confusing. The requirement that assumptions should be 'best estimate' removes this possibility and reduces scope for arbitrary changes in assumptions.

115 Assumptions should be considered as a coherent projection of cash flows from the business and not be varied in isolation. The Principles require consistency of projection assumptions within the MCEV and with other measurement bases, where relevant. This will also serve to reduce scope for arbitrary changes in assumptions. Examples of where this consistency is expected to be followed are:

115.1 Expense inflation, interest rates, lapse rates, participation rates and investment returns for different asset classes tend to be correlated.

115.2 Variations in economic or financial circumstances impact on policyholder behaviour and management actions. Where stochastic variation in financial markets forms a part of the valuation, its impact on lapses, option take-up and bonus participation should be consistent.

116 **G11.3** – Some companies have in the past adopted a set of relatively passive assumptions despite actual experience indicating otherwise, giving smoothed embedded value results. The requirement to 'actively review' assumptions is intended to disallow this practice where it does not reflect the reality of the impact of changes in experience on expected shareholder cash flows. This does not mean that assumptions have to be set equal to the most recent experience rather that the long term assumption should be set with regard to the most recent experience.

117 **G11.4** – Experience can vary widely depending on the type of product being considered, how it is sold and the extent of underwriting. For example, some types of contract are more expensive to administer, others experience relatively high or low persistency. Assumptions should be considered separately where these characteristics are significantly different.

118 **G11.6** An allowance should be made, where material, for policyholder behaviour in different market environments as such behaviour can impose significant extra cost.

EXPENSES

119 The treatment of expenses is an area in which practice varies between companies. To some extent this reflects different ways of managing business and operations in different stages of development. The Principles seek to ensure that assumptions recognise all those future costs necessary to manage the covered business as a going concern within the group. The expense assumptions should consider for example the following:

119.1 **G11.7** – Continuing investment necessary, especially in systems, to maintain productivity levels and ensure service levels meet customer expectations in line with assumed persistency and renewal levels.

119.2 **G11.7** – Expense inflation consistent with the types of expenditure (such as office space, different types of staff, IT systems).

120 **G11.8** – Practice has varied regarding the treatment of future changes in experience. Current experience can be a good guide, but trends can be observed and current events might be expected to cause changes in future. For example, investment in new systems incurs cost today in return for which efficiency improvements might be hoped for in future. Whilst this is an area for judgement, particular constraints are seen as necessary to ensure improvements are not assumed before they can realistically be demonstrated.

121 Specific guidance and disclosure is considered necessary for start-up operations as these are often the subject of significant investment with potentially several years before their long-term operating performance can be judged with confidence.

122 The expense assumptions should also consider for example the following:

122.1 **G11.10** – Future overhead expenses for functions such as finance, human resources and senior management that will have to be met by a combination of new and in-force business. The expense analyses should appropriately allocate costs between those for acquiring new business, manage in-force business and those related to development projects.

122.2 **G11.1** – Recharge of holding company functions that will have to be met by subsidiaries. Even if no recharge mechanism is actually set up an appropriate allocation of holding company expenses to covered business is necessary.

122.3 **G11.12** – Expenses currently in excess of previous assumptions (overruns), recognising that without action/investment the overrun situation may prevail in future. Only maintenance expense overruns should be anticipated in the in-force value.

122.4 Expenses currently in excess of long-term assumptions where an operation is in a start-up/development phase, recognising that this situation may take several years to reach expected long-term expense levels.

122.5 Investments in the cost of setting up new operations carrying out covered business, noting that any value added from new business in these operations will be recognised only when it is written.

122.6 Investments in unit cost productivity improvements that are at risk of not being realised.

123 The nature of development expenditure in non start-up operations should be considered when deciding whether development cost should be included in the expense assumptions. To the extent that development expenditure is recurring in nature and arises to maintain the in-force book of business and allow administration within the existing cost base this should be reflected in the expense assumptions. Some development expenditures are to enable future new business and therefore their inclusion in the current year costs should be considered. Development expenditure may also be to improve systems and processes such that future savings are expected as a result. In this case consideration should be given to whether it is appropriate or not to reflect the development expenditure in the assumptions given that the savings cannot be anticipated until they are evidenced. Expected overruns in the current year should be allowed for in the derivation of the expense assumptions.

124 The allocation of expenses between acquisition and maintenance should be consistent with other analyses such as reserving bases and product pricing.

125 **G11.13** – Significant proportions of the costs for services to the covered business are commonly incurred as charges from service companies. These services can be operationally located outside the group, as part of the covered business or within the group but in a profit centre separate from the covered business. Typical examples include investment management services, distribution channels and some administration functions where outsourcing or centralisation is considered by management to be more effective than multiple local operations. In all such cases the Principles require measurement of the cost to the group of operating the covered business, i.e. including any profit or loss elsewhere in the group.

126 **G11.14** – The allocation of company pension scheme deficits to covered business should be done in an appropriate way. In particular, care is needed to ensure pension costs are taken account of and that double counts do not exist. The extent to which the deficit is allowed for in the free surplus needs to be taken account of when considering the future expense due to increased pension contributions. Pension schemes that are for the benefit of staff not involved in the covered business need not be allocated to covered business. An appropriate allocation of the costs between covered and non covered business could be made using drivers such as accrued benefits, service or salary.

TAXATION AND LEGISLATION

127 **G11.15** – Future cash flows are subject to the impact of tax and other legislation in each jurisdiction. Local interpretation of regulations can be important factors affecting the timing and amount of shareholder cash flows. All aspects of tax and regulation should be considered and a 'best estimate' interpretation made and followed. As the Principles are applied to valuing cash flows to shareholders, 'allowance for tax' means deducting those taxes that would be incurred on the covered business before distributions to shareholders.

128 There can be uncertainty over future legislation, for example, where changes are announced but have not been ratified. Disclosure should clarify the 'best estimate' future situation assumed.

129 The basis for setting the tax rates on debt should consider the local regulations for the relevant instruments.

Principle 12 – Economic Assumptions

130 In a market-consistent valuation, all projected cash flows are valued in line with the prices of similar cash flows that are traded on the open market. The concept is set out in Principles 12 and 13. For example, the cash flows arising from a property are valued in line with the market price of the property. This is extended to liability cash flows, which are not usually traded, by valuing them in line with traded assets that have similar characteristics. For example, a fixed liability due in 20 years would be valued in line with a 20 year zero coupon government bond. The complexity of the liability cash flows often results in there not existing tradable assets with similar characteristics. In such circumstances, a valuation is performed using a combination of economic theory and extrapolation of asset data that does exist. The key is to ensure that the principle of no arbitrage is maintained

131 **G12.1, 12.3 & 12.4** – Assumptions, including economic assumptions, are actively set and not passive or 'smoothed' and are internally consistent.

132 **G12.2** – Price inflation assumption should be set in a manner consistent with the market as described in paragraph 130. This does not necessitate the use of an inflation curve however consideration should be given to the consistency with the reference rates as specified in Principle 14. Where such market instruments do not exist then it is acceptable to model inflation as a reasonable spread compared to the reference rate. Other types of inflation (e.g. salary or expense) should be derived on a consistent basis.

Principle 13 – Investment Returns and Discount Rates

133 As described in paragraph 130, the economic assumptions should be set in a market consistent manner. In theory, a market consistent valuation requires each individual cash flow to be valued separately. However, there are a number of techniques in economic theory that can be applied. These include certainty equivalent valuation, risk-neutral valuation and state price deflators.

134 **G13.1** – There are a number of practical difficulties in valuing each individual cash flow with a different discount rate. Certainty equivalent approaches look to address this by risk adjusting the individual cash flows rather than the discount rate. For cash flows that depend linearly upon market movements (or are independent of them), it is appropriate to use the reference rate for both the investment return and the discount rate. Principle 14 provides guidance on setting the reference rate.

135 Certainty equivalent techniques are based on the assumption that all assets earn the risk free rate. In reality we would expect equities to earn more than bonds on average over time (and across all scenarios). However, the risks of higher or lower return mean that the extra yield can not be taken account of in a market consistent valuation. For example, over time CU 100 of equities may be expected to return more than CU 100 of cash, however, due to the extra risk it is not appropriate to take account of the higher return in its current value. Assuming assets earn the reference rate does not, however, imply that all assets have been exchanged for risk free assets.

136 **G13.2** – For financial options and guarantees which do not move linearly with the market, economic theory provides two methods - the application of scenario specific discount factors (state-price deflator method) or risk-adjusted cash flows (risk neutral method). Both methods are appropriate provided the model is calibrated to be market consistent. For both methods, the risk free rate should be set equal to the reference rate as defined in Principle 14.

137 In certainty equivalent techniques, the actual investment expenses relating to asset classes held by the company, rather than those for notional assets required to achieve the reference rate should be used.

Principle 14 – Reference Rates

138 For MCEV purposes, the reference rates should be regarded as a proxy for risk free used in the calibration of the models. Where the liabilities are liquid the reference rate should, wherever possible, be the swap yield curve appropriate to the currency of the cash flows. Where the liabilities are not liquid the reference rate should be the swap yield curve with the inclusion of a liquidity premium, where appropriate. A liability is liquid if the liability cash flows are not reasonably predictable. The choice of the reference rate for liquidity liabilities is largely driven by the need to ensure consistency in approach across companies reporting on an MCEV basis.

139 Consideration was given to alternatives, however, it seemed clear that the tendency in the market is for companies to use swap rates as the risk free rate with an addition of a liquidity premium where appropriate. Several potential advantages and disadvantages of swap rates are listed below.

ADVANTAGES

- Swap markets are more liquid than government bond markets.
- Swaps are synthetic instruments which do not suffer from systematic distortions due to insufficient supply or regulatory factors.
- Swap prices are consistent with how traded options are quoted which is the basis for the market-consistent valuation approach.
- Many companies are already using swaps and this is aligned with where the market appears to be heading.
- The use of swaps is consistent with using implied volatilities.

DISADVANTAGES

- Swap yields contain a small margin for credit risk.
- In some markets (for example, in Asia), swaps are not available at long (e.g. over 10 years) durations or at all.

Considering the advantages and disadvantages of using swaps and subject to the comments earlier in this paragraph, the CFO Forum concluded that the former outweighed the latter.

140 The use of bid, mid or offer swap rates is not prescribed as the difference is likely to be small. IFRS asset valuations are, however, based on bid values where available.

141 **G14.1** - In evaluating the appropriateness of the inclusion of a liquidity premium (where liabilities are not liquid) consideration may be given to regulatory restrictions, internal constraints or investment policies which may limit the ability of a company to access the liquidity premium.

142 The liquidity premium is assessed and quantified based on financial market data.

143 **G14.2 & G14.3** – The Principles propose that companies fill in gaps in the financial market data used to set the reference rate (at the short end, long end or in the middle) using

appropriate methodologies. Some examples have been provided, but there is no mandated approach. There is currently no industry standard for filling in gaps in the financial market data used to set the reference rate.

144 Consideration was given to products without options and guarantees where the liabilities are backed with assets yielding less than the reference rates. Such a situation would create a profit at inception and losses thereafter as the assets will earn less than the unwind of the liabilities. It was concluded that this was a natural consequence of using the reference rates.

145 **G14.5** – Where swap curves do not exist then it would be necessary to use some other bases such as the local government yield curve. There may be situations, for example, in developing economies, where the available swap curves are not robust or available. In these situations companies can use an alternative. However, this situation should be kept under review and swap rates used as soon as they become suitably robust. Companies should disclose where they have made use of this exception.

Principle 15 – Stochastic Models

146 Implied volatilities from derivatives should be used in order to be consistent with market pricing techniques.

147 **G15.2** – In checking the accuracy of market consistent stochastic models both sampling and calibration error should be considered. The martingale test ("1 = 1" test) should be performed for material asset classes (e.g. equities, property, bonds etc.). Other statistical tests should be performed to check the fit of scenarios to the reference rates, implied volatility surfaces and correlations between asset classes. Multiple techniques for ensuring the quality of the calibration of stochastic model are acceptable and these techniques may evolve over time.

148 **G15.3** – Where available, market data at the valuation date should be used to determine the implied volatility assumptions. Care should be taken in this determination due to the different factors involved in derivative pricing. The provision in the Principles for using historic market data and consulting expert option is to allow for the following circumstances:

- Practicalities in producing the valuation in the timescale where, for example, data a number of weeks before the valuation may need to be used.
- Illiquid markets where the data available is not sufficiently robust and reliable.

In such circumstances, management should disclose the approach taken.

149 **G15.4** – Where material and practical, the stochastic model should be fitted most closely to the appropriate duration to maturity and moneyness of the underlying liabilities. Approximations such as the average durations can be considered. Furthermore, maturity and moneyness are considerations in the selection of model points (if such an approach is used) in determining the time value of financial options and guarantees.

150 **G15.5** – Correlation assumptions between asset classes are not directly observable from current market prices. The assumptions should be set based on the relationship between historic market prices over a period appropriate to the business and should be consistent year-on-year. There is no current external source of correlation assumptions. The sentence "check the reasonableness of their correlations against externally available correlations" is included in case such sources are available in future. Consideration was given to the materiality of the correlation assumptions to the MCEV. It was concluded that for many companies it was not a material driver. As such further explicit guidance or additional sensitivities were not deemed necessary.

151 **G15.6** – Closed form solutions can be used where such methods are sufficiently accurate, for example, where there are no policyholder actions, management actions or path dependency.

Principle 16 – Participating Business

152 This is a type of business that is core to many of the largest European financial services groups, but that other accounting measures struggle to accommodate in a meaningful way. MCEV approaches are helpful in focussing on the shareholders' viewpoint – the expected future cash flows to the shareholder from that business and risks associated with those cash flows – rather than separate measures of asset and liability.

153 It is impractical to lay down detailed rules covering the various types of contract in operation as the drivers of profit participation and shareholders' interests therein:

153.1 are complex, in that they are formed from the interaction of a wide variety of factors including historic and future premiums, investment returns, expenses, demographic experience, policyholder behaviour, participation practice, guarantees and options; and

153.2 vary greatly depending on contract design, local regulation and local market practice, and individual company or fund participation philosophy or rules.

154 Judgment as to future bonus participation and management action in different scenarios will remain an important driver of reported MCEV for this business and the nature of shareholders' interest will vary by market, company and fund. The Principles seek to restrict the scope of this judgment by requiring valuation in line with the main types of limitation common to most contracts:

154.1 **G16.1** – Consistency with local regulation and contractual obligations, including schemes governing management of a participating fund, for example those that have been formed on demutualisation, merger or acquisition of companies.

154.2 **G16.2** – Consistency with other projection assumptions, especially future investment returns. In setting bonus assumptions the appropriate assumption in the certainty equivalent projection will take account of the actual free assets at the start of the projection period. In each subsequent year the bonus rate should be set on the assumption that historic investment returns in line with the reference rate have been achieved and expectations of future real world returns will be achieved from that point forward.

154.3 **G16.3** – Influence of past company practice on future discretion (e.g. in realisation of gains, awarding bonuses or smoothing changes in benefit levels).

154.4 **G16.4** – Influence of market practice so that, for example, where projections diverge from expected market norms this is reflected in policyholder behaviour.

155 In some scenarios in the projection situations may arise that have never been encountered in the practical experience of the fund. In these cases past actions may not be wholly relevant. It is important in these cases that the assumed management actions are justifiable and evidence exists of validation by management.

156 In common with other types of business the valuation of participating business typically projects cash flows from the run-off over time of in-force business, including renewals of that business. Future new business is ignored except to the extent that a certain level is implicit in maintaining projected expense levels.

157 Where current benefit levels are higher than can be supported by existing fund assets together with projected investment returns, it will be necessary to project a downward 'glide path' in benefit levels so that the fund would be exhausted on payment of the last benefit.

158 **G16.5** – Some funds are in the situation of having historically built up 'orphan' assets not considered to belong to current or future generations of policyholders or shareholders. Others, as an element of their management, maintain surplus assets that, on realisation of the projection assumptions, would not be paid out to existing policyholders or shareholders. Whilst it may be unrealistic to assume their distribution in the short term, within the boundaries set out above, such assets can be considered to have a value to shareholders. For example they might be distributed over time between policyholders and shareholders, be available to meet adverse experience which would otherwise have to be met by shareholders or allow greater freedom of operation of the fund that could attract profitable business. The guidance sets out one feasible valuation method for such 'residual' assets. Consideration should be given to the circumstances of the fund and whether the going concern approach implicit with the MCEV valuation would mean that new business may defer the release of orphan assets.

159 **G16.6** – When sharing investment income on required capital with policyholders, profits from assets backing liabilities and assets backing required capital can often not be determined separately because of interdependencies. The MCEV components of required capital, frictional cost of required capital and PVFP are split out only for reporting purpose. The PVFP can be defined as the residual of the present value of total profits from assets backing liabilities and assets backing required capital less the required capital after allowance for frictional cost. The TVFOG should reflect any asymmetries in profit arising form asset backing liabilities and income from required capital, e.g. in case of using investment income on required capital to cover policyholder guarantees.

Principle 17 – Disclosures

160 Principles 1 to 16 set out the approach to be used in calculating an MCEV. The calculation exercise would be of little worth without disclosure and communication of the valuation results, the factors affecting them and how they interact with changes in the business and its management.

161 The volume, style and quality of historic public reporting on EV has improved following the introduction of EEV. Commonality of content and layout benefit users both in understanding disclosures from individual companies and in making comparisons between companies. In each area covered the Principles aim to bring disclosures to at least the level of the current good practice, balanced by the cost of producing that information.

162 Disclosures should enable users to:

- Understand the impact of different events, experiences and decisions during the period on the expected value of the business.
- Understand the main risks to and drivers of the realisation of that value, including its main sensitivities.
- Understand management's view of the business and its interpretation of the Principles, with particular attention to areas in which these leave room for different approaches, to enable the credibility of the valuation to be judged.
- Make valid comparisons with other companies.
- Reconcile the covered business to values in primary financial statements in order that covered business can be put in the context of a broader group.

163 **G17.1** – Companies may choose not to adopt some elements of Guidance. Users will want to understand both the existence and reasons for such non-compliance.

164 **G17.2** – Regular calculation and disclosure is necessary for a reporting tool to fulfil and credibly meet the needs of both internal management and external reporting. Annual calculation and disclosure are a minimum requirement under the Principles.

165 Users pay particular attention to volume and expected margin on new business as a signal of future performance prospects. New business value or the change in EV due to writing new business during the year is a commonly used measure in this respect. As noted under Principle 10, different interpretations of the definition of new business and its contribution are possible. Particular attention should be paid in disclosures to the definition of new business used and calculation of new business value. Separate technical guidance sets out expectations for definitions of new business volumes and margins reported under the Principles. The disclosure requirements necessitate new business margins to be calculated using a common approach.

166 The credibility of financial reporting is significantly enhanced by its explicit sign-off by management and review or audit by an independent third party. The requirements for external review are detailed in paragraph 22.

167 The requirements of the Principles set out the minimum information that companies need to present. However other than Appendix A and B that set out the analysis templates for the MCEV and Group MCEV results the method of presenting that information is left to companies.

168 At present there are two main calculation approaches used by companies:

- The distributable earnings.
- The market value balance sheet.

169 Both of these calculations are acceptable under the Principles. Further additional information beyond Appendix A and B may be presented in a balance sheet or distributable earnings format

ANALYSIS OF MCEV EARNINGS

170 A movement analysis template for covered business has been set out in the required disclosures (refer to Appendix A). This is to improve comparability and ease of understanding of entity's results. Analysts find the variety of disclosures confusing and in particular the line item labels vary between companies. A requirement to use the standard template will therefore improve this situation. The template lines are fixed with further lines added only as subdivisions which total to the template lines.

171 Opening adjustments should consist of only capital and dividend flows, foreign exchange variance and acquired/divested business. These three items can also be shown as closing adjustments in a manner designed to best reflect the economic return the company has achieved in the period. For example, an acquisition on day 1 of the financial reporting year would be best presented as an opening adjustment so that the variances arising on this business can be separately identified in the remainder of the template. In calculating the percentage return on MCEV, it would be normal to assume that these adjustments occur at the timing implied by the schedule (e.g. either on the first or last day of the period), but in some circumstances (such as a significant capital flow in the middle of the period) it may be warranted to use a more exact cash flow timing in calculating the return.

172 As noted in **G17.3.29**, changes to models to reflect improvements or rectify errors, where no restatement is made, should be included under "Other operating variance" and not under opening adjustments. There may be times when judgement is required regarding whether something in an assumption change or a model change; this could create differences between individual line items, but in both cases MCEV Operating Earnings will be impacted.

173 In most circumstances, the impact on MCEV earnings of a variation during the reporting period in the experience of the covered business, when compared to the opening projection assumptions used for that area of experience, would be included under "Experience variance".

174 There is no required restatement of published interim new business value in the financial year. If no restatement for the full year is made the expected return and experience variance after each new business publication will be included in the existing business line items in the analysis.

175 The CFO Forum observed varying practice in the market in the rate used to determine the expected earnings on free surplus and required capital and the expected change in VIF. To improve comparability and ease of understanding, guidance has been provided together with further disclosure of methodology to improve this situation. The expected contribution is split into two components:

- The earnings over the year on a deterministic basis assuming that the investment return is the beginning of period reference rate (as defined in paragraph 138).
- The expected excess investment return over the beginning of period reference rate on a deterministic basis according to managements' expectation of the business. The purpose of this additional element is to reflect that the return should be on a "real world" basis set at managements' best estimate for the business. The key investment assumptions underlying the excess investment return should be disclosed.

176 The use of the reference rate in determining the VIF is a simplification in the certainty equivalent methodology (as noted in paragraph 134 and 135). For the purpose of calculating the expected return on MCEV, the CFO Forum felt it more appropriate to additionally reflect managements' expectation of the investment return on the assets held.

177 The earnings in excess of the reference rate could in certain circumstance be negative, for example, where managements' expectation is for earnings less than the reference rate.

178 There is no requirement to separately disclose economic experience variances and changes in economic assumptions. The two items are presented under "Economic variances" in Appendix A. This was felt appropriate by the CFO Forum as an explicit split is not a natural subdivision and the MCEV methodology implicitly includes allowance for changes in economic assumptions over time (as market consistent). There may be some items, such as impacts of changing valuations of employee benefit plans, where a practical simplification (such as including all changes in the economic experience impact rather than separating demographic and economic impacts) is warranted.

179 Consideration was given as to whether guidance should include:

- The order of the analysis. Whilst the standard template will create a consistent presentation of the results, companies may still perform their analyses in a different order and second order effects may therefore fall into different line items. The improved comparability at the second order level was not felt by the CFO Forum to justify the potential additional production costs.
- The timing of assumptions. Whilst the standard template will create a consistent presentation of the results, companies may still calculate some line items using start of period, inter-period or end of period assumptions. The CFO Forum concluded that a consistent approach should be used throughout unless specific line items merit different treatment.

SUPPLEMENTARY MEASURE TO PRESENT THE MOVEMENT IN MCEV AS PART OF PRE-TAX PROFITS

180 The Principles permit companies to publish a supplementary measure so as to present the movement in MCEV as part of pre-tax profits, by grossing up the after-tax movement by attributable shareholder tax, and adding this attributable tax to other tax in the income statement. The CFO Forum felt that companies should be allowed to adopt this presentation to enable comparison to IFRS reporting, but that the main presentation is more useful on a net of taxation basis. The Principles are not prescriptive as to the approach that should be applied for determining the attributable tax.

181 By way of example, two conceptual approaches may be considered. One approach is to consider that the pre-tax result is determined by grossing-up at the standard rate of tax applicable to the companies generally in the territory in which the business is written. Under this approach the gross-up may be considered:

181.1 either solely presentational in nature, with the pre-tax results representing amounts that would have applied had the net of tax results been determined after absorbing tax at the standard rate as applied by other types of companies;

181.2 or may in some circumstances represent the tax at the normal shareholder rate, or an approximation thereof, absorbed by the business concerned.

182 An alternative approach may be to determine the gross-up by projecting pre-shareholder tax cash flows and associated shareholder tax separately, with the attributable tax being taken as the movement on the present value of the shareholder tax cash flows. Under this direct approach the grossing-up of tax for the new business result will reflect the tax attaching; and the attributable tax for the result for business in force will include the effect of variances between actual and previously projected tax cash flow in the same way as for other elements of experience such as expenses.

183 Other alternative approaches may be acceptable provided the basis is disclosed.

184 Companies may consider that one of these or a combination of these approaches is appropriate to its circumstances for individual territories, types of business, or other relevant groupings. However, it is important that users of the MCEV financial statements understand the basis of application and that it is applied consistently from period to period. Accordingly, the Principles require appropriate disclosure in this regard.

IMPLIED DISCOUNT RATES AND NEW BUSINESS INTERNAL RATE OF RETURN

185 Calculation and disclosure of an implied discount rate ('IDR') is not required by the Principles. However, if voluntary disclosure is made compliance with the approach specified in the Principles is required. Further, the CFO Forum believes that IDR should be calculated using distributable earnings rather than statutory profit.

186 For companies calculating the MCEV, the IDR is a calculated metric that equates the MCEV to the traditional embedded value and enables comparison. The IDR provides a simple single metric, enabling a linkage of the MCEV to a single discount rate. This metric is found useful by many analysts, but considered confusing or misleading by some companies.

187 The CFO Forum agreed that the IDR was a useful metric to provide comparability to a traditional embedded value result. However, despite this is was felt that over time the IDR will fade in importance as users become more comfortable with MCEV reporting. Further, the use of IDR for comparison between companies is limited due to the lack of consistency in investment return assumptions and the mix of products and associated risks in each disclosed category. The CFO Forum has therefore not mandated a calculation that is technically difficult and onerous to prepare.

PREPARATION OF 'GROUP MCEV' ACCOUNTS

188 A Group MCEV presents the MCEV results from the covered business and the IFRS results from the non covered business. This enables a complete picture of the entity's financial results and a link to the primary reporting basis.

189 A number of adjustments to the IFRS net asset value have been common when compiling a Group MCEV. These typically mark the IFRS value to a market value and include: real estate, loans, debt, subsidiaries and own equity in investment funds. Other adjustments such as removal of intangibles, allowing for the full employee pension scheme deficit and allowing for unrealised gains and losses not in the IFRS net asset value are also often made.

190 These adjustments whilst improving the technical consistency of the overall Group MCEV result create inconsistencies in presentation between companies and they require further analysis. It is therefore a requirement that the Group MCEV for non covered business is presented as the IFRS net asset value without adjustment (except for employee pension schemes if relevant). This allows a direct comparison to the primary balance sheet for this business.

191 The Principles do allow presentation adjustments to the IFRS net asset value to ensure consistency between the value allocated to covered and non-covered business (for example, before or after tax).

192 A movement analysis for Group MCEV is required. This is to improve comparability, ease of understanding of entity's results and better enable investors / analysts to value whole groups that are involved in business outside of life insurance. Aligning the analysis of earnings for non covered business to the specified format for covered business in Appendix A is not required, however, Appendix B sets out the required presentation. The template lines are fixed with further lines added only as subdivisions which total to the template lines.

193 Movement between covered and non-covered business should be included as "Capital & Dividend flows" or "Acquired/Divested Business" depending on the nature of the change. It is advisable to disclose the rationale for any such material changes.

194 Sufficient quantitative and qualitative disclosure is required by the Principles to provide a bridge between the non covered business IFRS net asset value and operating earnings; and that in the IFRS segment results in the primary financial statements.

SENSITIVITIES

195 **G17.4, 17.5** – Sensitivities provide very useful information, but they are very demanding of company resources to produce. Accordingly, attention should be focussed on those whose information value justifies the cost of production. In some jurisdictions the reserving basis that underlies shareholder distributable cash flows is dynamic, and in theory some or all sensitivities could change not only future experience but also reserving levels. Because modelling dynamic reserves is extremely complex and the effect on value is second-order, it is recommended that in performing sensitivities companies keep reserving bases constant and only vary future experience assumptions, unless it is misleading to do so. Similar considerations apply to required capital. In any case, the choice of methodology should be clearly disclosed. For companies that publish MCEV results more frequently than annually, it is not necessary to update sensitivities for interim periods unless there is a substantial change in the nature of the business that leads to a significant change in the sensitivities during the course of the year. Due to significant practical difficulties with the preparation of segmental level sensitivities, the preparation of sensitivities at segmental level is not required.

196 New business sensitivities are required to assume that the scenario arises after the point of sale of the contract. It is reasonable to take account of hedging strategies on new business that may not be in place at the point of sale, but which are intended by the company to be implemented shortly afterwards.

197 **G17.6** – Changes in one experience factor can have a series of knock-on effects through correlations or changes in behaviour. Practice has varied as to the extent to which these knock-on effects are allowed for. The Principles require the direct cash flow implications of a changed assumption to be reflected in sensitivity disclosures. For example the direct implications of a shift to higher long-term interest rates could include:

- An immediate reduction in the value of fixed interest assets.
- Possible knock-on effects for other types of asset.
- Changes in future bonus rates.
- Change in value of guarantees/options.
- Possible changes in policyholder behaviour, for example in persistency or take-up of guarantees/options.

198 **G17.7** – Sensitivities apply only to covered business. Non covered business is not included and employee pension scheme liabilities need not be included.