European Embedded Value Principles

CFO Forum
Introduction

Principle 1: Embedded Value (EV) is a measure of the consolidated value of shareholders’ interests in the covered business.

G1.1 The EV Methodology ("EVM") described here is applied to the calculation and reporting of the EV of the covered business.

G1.2 The EVM is to be applied to supplementary reporting in the accounts of proprietary companies that transact the types of business described in Principle 2.

G1.3 Adjustments must be made to ensure all covered business has been included appropriately. An example of such an adjustment might be in respect of a reinsurance or loan arrangement within the group to avoid distorting the EV.

G1.4 Except where they are not considered material, compliance with Principles (shown in bold) is compulsory and any non-compliance with underlying Guidance should be explicitly disclosed.

Coverage

Principle 2: The business covered by the EVM should be clearly identified and disclosed.

G2.1 The business covered by the EVM should include any contracts that are regarded by local insurance supervisors as long term or life insurance business.

G2.2 The EVM may cover other long-term life insurance, short-term life insurance such as group risk business and long-term accident and health business insurance business. Where short-term healthcare is regarded as part of or ancillary to a company’s long-term life insurance business, then it may be regarded as long-term business.

G2.3 The EVM may be applied to other business such as asset management operations.

G2.4 The EVM applies to the contract, rather than the entity selling the contract. For example the EVM should be applied to covered business provided by non-insurance groups and operations such as banking groups and pension funds.
EV Definitions

Principle 3: EV is the present value of shareholders’ interests in the earnings distributable from assets allocated to the covered business after sufficient allowance for the aggregate risks in the covered business. The EV consists of the following components:

- free surplus allocated to the covered business
- required capital, less the cost of holding required capital
- present value of future shareholder cash flows from in-force covered business (PVIF).

The value of future new business is excluded from the EV.

G3.1 EV is defined as the sum of the values of components defined in Principles 4, 5 and 6 and as illustrated in the Appendix. However, a different presentation of the components of embedded value is permitted.

G3.2 The value of future new business should be excluded from the EV. Principle 8 defines new business and, by implication, in-force business.

G3.3 The EV should reflect the aggregate risks in the covered business. For example, interactions should be considered between explicit allowances for financial options and guarantees, the prudence of the liability valuation, the level and cost of required capital and the risk discount rate. Their combined impact should, inter alia, be sufficient to allow for both financial options and guarantees and the cost of holding required capital to support any mismatching of assets and liabilities.

REINSURANCE AND DEBT

G3.4 Projected reserves and cash flows should be net of outward risk reinsurance.

G3.5 Financing types of reinsurance and debt, including subordinated and contingent debt, can create a leveraging effect which should be reflected in the allowance for risks to shareholder cash flows. Such debt should normally be deducted from the EV at a value consistent with that which markets would place on debt with similar characteristics.

FREE SURPLUS

Principle 4: The free surplus is the market value of any capital and surplus allocated to, but not required to support, the in-force covered business at the valuation date.

G4.1 Free surplus is determined as any excess of the market value of all assets attributed to the covered business but not backing liabilities for the covered business over the required capital to support the covered business.

G4.2 Free surplus not formally allocated to covered business should not be included in the EV.

REQUIRED CAPITAL

Principle 5: Required capital should include any amount of assets attributed to the covered business over and above that required to back liabilities for covered business whose distribution to shareholders is restricted. The EV should allow for the cost of holding the required capital.

G5.1 The level of required capital should be at least the level of solvency capital at which the supervisor is empowered to take action. It would also include any amount “encumbered” by local supervisory or legal restrictions that prevents its distribution or removal from supporting the covered business.

G5.2 The required capital may include amounts required to meet internal objectives, such as those based on an internal risk assessment or required to obtain a targeted credit rating.

G5.3 The cost of holding required capital is the difference between the amount of required capital and the present value of future releases, allowing for future investment return, of that capital.

G5.4 Where local supervisory or legal restrictions require the holding of an amount of capital in respect of specific financial options and guarantees within a legal entity which differs from that considered economically necessary, the difference in cost of required capital could be reflected in the allowance in the EV for those financial options and guarantees.

Future shareholder cash flows from the in-force covered business.

Principle 6: The value of future cash flows from in-force covered business is the present value of future shareholder cash flows projected to emerge from the assets backing liabilities of the in-force covered business (“PVIF”). This value is reduced by the value of financial options and guarantees as defined in Principle 7.

G6.1 Liabilities of the in-force covered business would normally be dictated by local regulatory requirements. The required capital should be consistent with the definition of liabilities used.

G6.2 The value of in-force covered business includes the value of renewals of in-force business.

G6.3 The PVIF before deduction of the allowance for the time value of financial options and guarantees should reflect the intrinsic value of financial options and guarantees on in-force covered business. The time value of financial options and guarantees is discussed under Principle 7.
New Business and Renewals

Principle 8: New business is defined as that arising from the sale of new contracts during the reporting period. The value of new business includes the value of expected renewals on those new contracts and expected future contractual alterations to those new contracts. The EV should only reflect in-force business, which excludes future new business.

G8.1 New Business is defined as covered business arising from the sale of new contracts during the reporting period, including cash flows arising from the projected renewal of those new contracts.

G8.2 The projected cash flows (PVIF) valued under Principle 6 should anticipate renewal of in-force business, including any reasonably predictable variations in the level of renewal premiums but excluding any value relating to future new business. New business should include recurring single premiums and should be clear on how to distinguish new business from in-force business.

G8.3 Other methods of distinguishing between new and in-force business are allowable, but should be clearly defined in disclosure.

G8.4 Any variation in premium on renewal of in-force business from that anticipated, including deviations in non-contractual increases, deviations in recurrent single premiums and re-pricing of premiums for in-force business, should be treated as an experience variance on in-force business and not as new business.

G8.5 The projection assumptions used to value new business should be consistent with those used to value in force business.

G8.6 The contribution from new business can be valued at either opening or closing assumptions and variance due to experience, excluding investment experience, on new business during the year should be treated accordingly as experience variances or new business contribution.
Assessment of Appropriate Projection Assumptions

Principle 9: The assessment of appropriate assumptions for future experience should have regard to past, current and expected future experience and to any other relevant data. Changes in future experience should be allowed for in the value of in-force when sufficient evidence exists and the changes are reasonably certain. The assumptions should be actively reviewed.

G9.1 The projection assumptions should be determined using best estimate assumptions of each component of future cash flow for each policy group. Relevant data can be internal to the company or external, for example from experience analyses or inputs to pricing bases.

G9.2 Best estimate assumptions should be internally consistent and consistent with other forms of reporting such as (where relevant) those used for results on statutory, pricing or GAAP bases. They should, where appropriate, be based on the covered business being part of a going concern.

G9.3 The assumptions should be actively reviewed, and updated as appropriate, at least annually.

G9.4 Treatment of changes in future experience will be a matter of judgment. Favorable changes such as productivity gains should not normally be included beyond what has been achieved by the end of the reporting period. However, in certain circumstances such as start-up operations, it may be appropriate to assume that unit costs will reach their expected long-term levels within a defined period. The extent to which such changes in unit costs have been anticipated should be separately disclosed. In addition, any exceptional development costs excluded from the unit cost base should be separately disclosed.

G9.5 Projection assumptions should be considered separately for each product group.

DEMOGRAPHIC ASSUMPTIONS

G9.6 Appropriate allowance should be made in the value of in-force business for demographic assumptions such as mortality, morbidity, renewals and future levels of withdrawals of in-force business. Such allowance should be based on past evidence and expected future experience consistent with the assessment of other projection assumptions.

EXPENSES

G9.7 Future expenses such as renewal and other maintenance expenses should reflect the expected ongoing expense levels required to manage the in-force business, including investment in systems required to support that business and allowing for future inflation.

G9.8 Overheads should be allocated between new and in-force business in an appropriate way consistent with past allocation, current business plans and future expectations.

G9.9 Holding companies’ operating expenses should be allocated in an appropriate way.

G9.10 All expected expense overruns affecting covered business, including holding company operating expenses, overhead costs and development costs such as those incurred in start-up operations, must be allowed for.

G9.11 Where costs of managing the covered business are incurred within service companies, profits or losses to the service companies are to be valued on a “look through” basis, so as to give a best estimate of the impact on future shareholder cash flows of the expenses to the group of running the covered business. Actual and expected profit or loss to an internal group company on services provided to the covered business should be included in allowances for expenses in the EVM. Where an external service company is used, the actual and future expected fees or charges should be allowed for in calculating the EV.

TAXATION AND LEGISLATION

G9.12 Allowance in the projection must be made for all taxes and regulations in the relevant jurisdiction affecting the covered business. These should follow the local treatment and be based on best estimate assumptions, applying current legislation and practice together with known future changes.
SMOOTHING

G10.10 Asset values on which to base EV calculations must be consistent with values observable in investment markets and not be smoothed. Unrealised gains should be allowed for in the projections used to determine the projected shareholder cash flows. For the avoidance of doubt, this does not preclude the projection of book values according to local regulations in determining distributable earnings.

G10.11 Investment returns must be those actually earned on a market basis over the period and must not be smoothed.

PARTICIPATING BUSINESS

Principle 11: For participating business the method must make assumptions about future bonus rates and the determination of profit allocation between policyholders and shareholders. These assumptions should be made on a basis consistent with the projection assumptions, established company practice and local market practice.

G11.1 Where regulatory/contractual restrictions or bonus participation rules are clear they should be applied to projections of participating business.

G11.2 Projected bonus rates should be consistent with the assumed future investment returns used.

G11.3 Where the company has an established bonus philosophy, this should be applied to projections of participating business.

G11.4 Where management has discretion over allocation of bonuses, including the realization of unrealized gains, projection assumptions should have regard to the past application of discretion, past external communication, the influence of market practice regarding that discretion and any payout smoothing strategy in place.

G11.5 It is possible that some of the assets (residual assets) allocated to the participating business would remain at the end of the projection (after all bonuses have been allocated) as unallocated surplus. This surplus should not be negative. Acceptable valuation treatments are to assume that such unallocated surplus would be distributed over time via final bonus to in-force business, or as bonuses to both in-force and future new business, and to value any shareholders participation in its distribution at discounted value.
Disclosure

Principle 12: Embedded value results should be disclosed at consolidated group level using a business classification consistent with the primary statements.

G12.1 Compliance with the EVM Principles is compulsory and should be explicitly disclosed. When the EVM is referred to and Principles have been complied with but underlying Guidance has not been complied with in its entirety, the areas of non-compliance and reasons for non-compliance should be disclosed.

G12.2 Disclosure of sensitivities is intended to allow an informed analyst to make valid comparisons on different assumption sets. Sensitivity scenarios should include consistent changes in cash flows directly affected by the changed assumption(s), for example future bonus participation in changed economic scenarios.

G12.3 Embedded value is to be calculated at least once a year. It is an option to disclose the value of in-force business or new business more frequently.

G12.4 The following items should be disclosed as a minimum in the format shown. Additional disclosures to enable understanding of the reasons for movement in EV, and future sustainability of return on EV, are encouraged.

Assumptions

(a) The principal economic assumptions, the investment assumptions on all major asset classes including any assumption of future change in investment mix, inflation rates and the discount rates used at the start and end of the accounting period.

(b) How economic and other business assumptions (e.g. mortality, persistency, expenses and future asset allocation) are determined.

Methodology

(a) A clear, brief description of the covered business.

(b) The methods used to calculate the operating return on EV, including the shareholder cash flows underlying the PVIF, and whether the operating return is calculated using opening or closing assumptions.

(c) Treatment of consolidation adjustments, including inter-company arrangements such as reinsurance or loans associated with covered business and allocation of holding company and overhead expenses to covered business.

(d) For companies writing participating business, the approach used to determine future bonuses and the treatment of any residual assets.

(e) The basis on which allowance has been made for the amount of, and cost of holding, both required capital and any additional amount regarded as encumbered in respect of both new business and in-force business separately.

(f) The reasons for any changes in the risk margins in the risk discount rate.

(g) The method used to determine the value of new business including:

i. definitions of new business;

ii. any changes in the definition of new business and the impact of such changes on the value of new business;

iii. whether new business contribution has been calculated on opening or closing assumptions, at point of sale or year-end.

(h) The published new business premium volume and whether it is consistent with the definition of new business.

(i) Where new business margins are disclosed, these should be calculated as the ratio of the value of new business to the present value of new business premiums. Alternative calculations of new business margins may be disclosed as further information.

(j) The basis on which any memorandum disclosure of prior year comparatives on current assumptions has been made. The new business contribution, expected return and opening EV should be restated on consistent economic assumptions.

(k) Treatment of any development costs included in the result.

(l) The extent to which future productivity gains are anticipated.

(m) The approach used to allow for tax.

(n) The nature of, and techniques used to value, financial options and guarantees. The amount of, and reason for, any alteration to the allowance for financial options and guarantees made under G5.4.

(o) The basis of translation used for foreign exchange.

Analysis of Return on EV; Reconciliation of opening and closing values

(a) The opening and closing EVs, together with a breakdown of the change in EV over the period. Presentation of the breakdown is at the discretion of the company, however the following items would be typical:

Capital raised

Capital distributed

New business contribution

Return on in-force business

Expected return

Experience variances

Operating assumption changes

Development costs

Expected return on Free surplus

Operating return before [after] tax and [before] exceptional items

Investment return variances

Effect of currency movements
Effect of economic assumption changes
Exceptional items
Return on EV before [after] tax
Attributed tax
Return on EV after [before] tax

(b) The supplementary information or the operating and financial review should identify and explain any variance between the actual experience and that anticipated in the projection assumptions (variance analysis). The effect of any change to the method or approach for reassessing expected experience should also be quantified and disclosed (model changes). Similarly, any impact resulting from changes in experience assumptions or risk margins should be disclosed and explained (assumption changes).

(c) The amount of any positive or negative return in respect of services provided to the covered business by another part of the Group that is not reflected in the reported EV or value of new business should be disclosed.

(d) Foreign exchange gains and losses and any other recognised gains and losses not reported as part of the return.

(e) Amount and cost of required capital at the start of year and end of year and the amount and cost of holding the minimum solvency margin.

**EV Free surplus**

(a) An analysis of the movement in any EV Free Surplus over the reporting period.

(b) The amount of any Free Surplus at the beginning and end of the reporting period. Reconciliation of free surplus or, in the absence of any free surplus, of required capital to consolidated group GAAP equity.

**Sensitivities**

(a) The sensitivity of the new business contribution and the EV (including the value of financial options and guarantees) to changes in assumptions.

**Segmentation**

(a) For companies with more than one business or geographical area of operation, the business classifications disclosed should be consistent with those used for primary statements.

(b) The following information should be provided for each segment:
   - new business contribution
   - operating return (note that some companies will determine everything after tax.)
   - development costs
   - EV Free Surplus and/or Required Capital
   - main economic assumptions

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*Some companies may choose to present this on an after-tax basis rather than attributing tax at the end.*
GAAP equity
Under the accounting standard applied for reporting the group’s primary financial statements (GAAP), the amount reported as consolidated equity or net assets for the group.

Guidance
Guidance providing preferred interpretation of the EVM Principles, as set out under each principle. Compliance with guidance is preferred but not compulsory in order to comply with the EVM, but the nature of, and reason for, any non-compliance with guidance must be disclosed if claiming compliance with the EVM.

Holding Company
A legal entity with a function of being a consolidating entity for primary financial reporting of covered business.

Look-through basis
A basis via which the impact of an action on the whole group, rather than on a particular part of the group, is measured.

Participating Business
Covered business in which policyholders have the right to participate (receive additional benefits) in the performance of a specified pool of assets or contracts, fund or company within the group.

Present Value
The value of a future cash flow at the valuation date, discounted at the risk discount rate applied to that cash flow.

Principle
Compliance with the EVM requires compliance with each of the 12 Principles.

Product Group
A product group is a set of contracts with similar risk characteristics.

Reasonably predictable
Variations in future non-contractual premiums relating to an existing contract or recurrent single premiums creating contracts are reasonably predictable when assumptions regarding their amount and timing can be made that are consistent with other projection assumptions and based on reliable evidence. Where such predictions are made, any future variation in premium levels relating to such contracts should be treated as variance in experience of in-force business rather than as new business.

Renewal
A contract is renewed when a policyholder takes whatever action is required, typically payment of a premium, in order to maintain their benefits under the contract.
Appendix – Presentation of EV under EVM

Under the EVM, EV can be derived from a breakdown of assets allocated to the covered business as illustrated below:

Required Capital
The amount of assets, over and above the value placed on liabilities in respect of covered business, whose distribution to shareholders is restricted defined in Principle 5.

Residual assets
That part of the free assets allocated to the participating business which would remain at the end of the projection (after all future bonuses have been allocated).

Risk Free rates
Prospective yields on securities of suitable term considered to be free of default or credit risk, for example based on swaps.

Service Companies
Service companies are companies providing services to the covered business, or operations within the covered business providing services outside the covered business. Service companies and their clients can be internal or external to the group.

Statutory Basis
The valuation basis and approach used for reporting financial statements to local regulators.

Stochastic Techniques
Techniques that incorporate the potential future variability in assumptions affecting their outcome.

Supplementary reporting
Reporting within financial statements that is a) not covered by audit opinion, or b) produced using a methodology other than that on which the primary financial statements are based.

Time Value and Intrinsic Value
An option feature has two elements of value, the time value and intrinsic value. Intrinsic value is that of the most valuable benefit under the option under conditions at the valuation date. Time value is the additional value ascribable to the potential for benefits under the option to increase in value prior to expiry.

FS = Free surplus (on market value of assets; FS* is on statutory value)
RC = Required capital
L = Liabilities in respect of in-force business
CoC = Cost of holding RC
VRC = Value of RC = RC-CoC
PVIF = Present value of in force, the value of distributable surplus emerging from assets backing L
OG = Explicit value placed on options and guarantees

Note that alternative presentations are acceptable. For example:
- Commonly L would include the statutory minimum solvency margin (SM) and the value of SM would be included in PVIF
- Alternatively, SM might be combined with RC and the value of SM with VRC
- VRC could be presented as RC – CoC
- OG might be deducted from PVIF, or presented as a separate component