APN 107: EMBEDDED VALUE REPORTING

Classification

This Advisory Practice Note (APN) provides guidance for actuaries in preparing embedded value financial disclosures of long-term insurers registered in South Africa, or parent companies of such insurers registered in South Africa. APN 107 has replaced PGN 107. Where legislation or documentation refers to PGN 107 it should be interpreted as APN 107.

Abstract

This APN provides a framework encompassing the derivation of assumptions, calculations and reporting of embedded values.

Purpose

Embedded value reporting provides the investment community, as well as others, with valuable information relating to the value and performance of long-term insurance companies over and above the information disclosed in their primary financial statements. In particular, embedded values capture the expected value and key drivers of change in value to shareholders of long-term insurance business. The purpose of this APN is to assist members of the Actuarial Society of South Africa in preparing embedded value information disclosures and to encourage consistency and transparency of embedded value reporting.

Legislation or Authority

Actuarial Society of South Africa

Application

The APN is intended for the routine financial reporting of embedded value information, but for other situations the basic principles should still apply. The APN only applies if such information is published and in itself does not require the publication of embedded value information.

Although the APN does not apply to business other than long-term insurance business, it does not preclude the use of these techniques and principles in the valuation of other types of business.

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Status

Version 1	Effective 2001
Version 2	Effective from 31 December 2003
Version 3	Effective from 31 December 2005
Version 4	Effective from 31 December 2008
Version 5	Effective from 31 December 2009
Version 6	Effective from 31 December 2011
Version 7	Effective from 31 December 2012 (APN 107)
Version 8	Effective from 31 December 2018

TABLE OF CONTENTS

Additional documents accompanying the guidance in APN107

Market Consistent Embedded Value (MCEV) Principles

APN 107 (Version 8) is accompanied by an informational note highlighting some of the key differences between the Actuarial Society APN107 guidance and the CFO Forum's MCEV Principles.

1. INTRODUCTION

1.1. BACKGROUND

1.1.1. In a typical life insurance contract, policyholders pay premiums over a number of years and then receive a pay-out of their claim upon an insured event or surrender or survival or upon the maturity of their policy.

1.1.2. Accordingly, policy reserves must be established in order for the company to be able to fulfil its obligations (i.e. reserves are so calculated that, together with future premiums and interest earnings, they will enable the company to pay all future claims).

1.1.3. The embedded value (EV) of an insurer is an actuarial calculation estimating the value of shareholders' interests in long-term insurance business.

1.1.4. The EV calculation is based on a projection of the value of assets the company needs to support the business, which can be divided into a) those required to meet a liability measure for the business, b) additional capital considered to be encumbered in supporting the in-force business and c) additional 'free surplus' allocated to the life business. Different companies present these components in different ways. This distinction is however required for calculating EV. The assets backing the liability measure and required capital are commonly restricted at the valuation date and as the in-force business runs off.

1.1.5. EV reporting provides the investment community, as well as others, with valuable information relating to the value and performance of long-term insurance companies over and above the information disclosed in their primary financial statements and/or statutory returns. In particular, EV captures the expected value and key drivers of change in value to shareholders of long-term insurance business.

1.1.6. In discharging their professional responsibility, actuaries have been using actuarial techniques to determine the value of a long-term insurer's assets and liabilities, within a well-established valuation framework. The Actuarial Society of South Africa ("Actuarial Society") in response to the need for a similar framework encompassing the derivation of assumptions, calculations and EV reporting of long-term insurance business, published EV guidance (PGN 107) for the first time in 2001. Revised versions of the guidance note were published in 2003, 2005, 2007 and 2009. The previous revision, APN 107 (Version 7), was published in 2012.

1.1.7. The purpose of the guidance is to assist Actuarial Society members in preparing EV information disclosures and to encourage consistency and transparency of EV reporting.

1.1.8. In this version the guidance is updated to reflect the evolving insurance financial and regulatory reporting landscapes both in South Africa and abroad. The guidance clarifies certain aspects following the introduction of the Solvency Assessment and Management (SAM) framework in South Africa with effect from 1 July 2018 but essentially remains largely the same as in previous versions.

1.2. RATIONALE AND GOALS

1.2.1. The APN sets out an EV reporting framework that is intended to:

- Provide assistance to actuaries in preparing and calculating EV information disclosures;
- Encourage consistent application between peer insurance companies;
- Improve consistency and transparency of EV disclosure;
- Keep up with evolving professional practice standards worldwide;

- Allow local insurance companies to report EV results under this guidance note, which are also consistent with the European Embedded Value EEV Principles; and

- Adapt the guidance for SAM.

1.2.2. The APN uses several EEV concepts and wording from the CFO Forum's EEV Principles and Guidance and Basis for Conclusions. The EEV Principles and Guidance and related documents are copyright of the CFO Forum, and can be found on the CFO Forum website: http://www.cfoforum.nl./ For avoidance of doubt compliance with the CFO Forum EEV or MCEV Principles is not required.

1.2.3. The paragraphs marked in **bold** in this document are quoted verbatim from the the **core EEV Principles**. Application of these principles should enable companies to claim compliance with the CFO Forum's EEV Principles.

1.2.4. For companies that want to report in accordance with the MCEV Principles APN 107 (Version 8) is accompanied by an informational note highlighting some of the key differences between the Actuarial Society APN107 guidance and the CFO Forum's MCEV Principles.

1.3. APPLICATION

1.3.1. This APN shall apply for reporting periods ending on or after the effective date however companies can choose to adopt this version of APN107 at an earlier date.

1.3.2. The Actuarial Society does not have the authority to prescribe the nature of the EV disclosure in annual financial statements, but the actuary is nevertheless encouraged to seek to influence the calculations and content of such EV disclosure to be consistent with APN 107. The 'Statement from the Directors' and 'Statement by an Actuary' (in sections 5.10 and 5.11) are aimed to further encourage compliance with APN107.

1.3.3. The APN mainly sets out requirements for supplementary reporting to the primary financial statements of South African long-term insurance companies.

1.3.4. EV calculations are performed in varying circumstances and for varying purposes other than routine financial reporting, for example in connection with a proposed corporate transaction. An actuary associated with a statement of EV and/or *value of new business* should be acutely aware of the fact that buying and selling decisions are likely to be based on these values. All the normal rules of professional conduct will apply. If the actuary's name is associated with the published value, professional liability issues may arise.

1.3.5. It is emphasised that every actuary bears a personal professional responsibility for the reports he or she signs. The actuary must take all relevant facts into account and consider them in the light of the unique and specific circumstances applying to the insurer at the time the report is compiled. This APN cannot cover all possibilities and should therefore be interpreted and followed in the spirit of the guidance given where a particular circumstance is not covered specifically.

1.4. CROSS-BORDER WORK

1.4.1. The actuary should bear in mind that these guidelines have been drawn up in a South African context. Accounting standards and regulatory requirements vary from one country to another.

1.4.2. Often, such standards and requirements have been carefully crafted to take account of product features that are popular in that country. The actuary should be aware of resulting difficulties in cross-border work.

2. EV DEFINITIONS AND COVERAGE

2.1 INTRODUCTION

2.1.1 **Embedded Value (EV) is a measure of the consolidated value of shareholders' interests in the covered business.**

2.1.2 The *EV methodology (EVM)* described here is applied to the calculation and reporting of the EV of covered business. It should include all (or the relevant proportion of) the covered business in any subsidiary (or joint venture).

2.1.3 There are similarities between the methodology and assumptions used to determine the SAM balance sheet and the EVM. Companies may therefore align components of the EVM to the SAM methodology and assumptions as described throughout the APN. Alignment of other areas of the EVM to the SAM methodology and assumptions is permitted provided that all components underlying the EV calculation are consistently aligned and that it is adequately disclosed.

2.2 COVERAGE

2.2.1 **The business covered by the EVM should be clearly identified and disclosed.**

2.2.2 The business covered by the *EVM* should at least include any contracts that are regarded by the regulator as long-term insurance business, subject to the paragraphs below.

2.2.3 Whilst the APN allows a broader definition of *covered business* to include non-life, healthcare administration business and other ancillary businesses (e.g. unit trust business), it should be made clear to users what types of business are covered by the EVM.

2.2.4 While 2.2.2 requires covered business to include all long-term insurance business, it is permissible to exclude certain long-term insurance contracts from *covered business*. This may be done where the profit earned on these contracts is reported separately, such as institutional market linked business written through a long-term insurance policy, where the profit is reported in the asset management business. Any long-term insurance business excluded from *covered business* must be adequately disclosed.

2.2.5 The *EVM* applies to shareholder cash flows generated within the entity issuing the contract, rather than the total value of insurance contracts to entities of the group, subject to the paragraphs below. A typical example would be projected profits or losses made by investment management companies from services in respect of *covered business*. The main advantage of such an 'entity' approach is that it is only concerned with the profit that emerges in the entity issuing the contract, which is in line with the way in which *covered business* is typically managed in South Africa.

2.2.6 While 2.2.5 requires the EVM to apply to shareholder cash flows generated within the entity issuing the contract, it is permissible to exclude profits and losses generated within certain divisions of the insurance entity, provided this is adequately disclosed. This may be done where the profit earned by, for example, an asset management division, is not reported in the life insurance segment.

2.2.7 The APN does not require, but also does not prohibit, the EVM to be applied to any profit relating to the *covered business* that may emerge in entities other than the insurer, provided this is adequately disclosed.

2.2.8 Adjustments should be made, if required, to ensure all covered business is included appropriately; for example to allow for reinsurance or loan arrangements between group entities.

2.3 EMBEDDED VALUE OF COVERED BUSINESS ("EV")

2.3.1 ***EV of covered business* is the present value of the contribution of the *covered business* to shareholder distributable earnings after sufficient allowance for the aggregate risks in the covered business.**

2.3.2 **At a high level the EV consists of the following components:**

- **The *free surplus* attributed to the *covered business* (FS);**
- **PLUS The *required capital* identified to support the in-force *covered business* (RC);**
- **PLUS The *present value* of future shareholder cash flows from in-force *covered business* ("*PVIF*");**
- **LESS the *cost of required capital (*CoRC*).***

2.3.3 **The value of future new business is excluded from EV.**

2.3.4 Future shareholder cash flows is defined as the movement in free surplus over the period.

2.3.5 Each of the components of the EV is defined below.

2.4 FREE SURPLUS

2.4.1 **The free surplus is the market value of any assets allocated to, but not required to support, the in-force business at the valuation date.**

2.4.2 It is determined as the market value of the excess of all assets attributed to the in-force business but not backing liabilities or the required capital to support the covered business.

2.5 REQUIRED CAPITAL

2.5.1 ***Required capital* should include any assets attributed to the *covered business* over and above the amount required to back liabilities for covered business whose *distribution to shareholders is in practice restricted.***

2.5.2 The level of required capital must be based on the insurer's own internal capital targets. It should be noted that, regardless of the method used to determine this capital target, the combined value of the EVM internal capital target and EVM policy liabilities must always exceed the combined value of actuarial liabilities and solvency capital on the regulatory solvency basis.

2.5.3 **The EV should allow for the cost of holding the required capital.**

2.6 ADJUSTED NET WORTH ("ANW")

2.6.1 The sum of the free surplus and required capital is the adjusted net worth. This is the value of all assets allocated to the covered business that are not required to back the liabilities of the covered business.

2.7 PRESENT VALUE OF FUTURE SHAREHOLDER CASH FLOWS FROM IN-FORCE COVERED BUSINESS ("*PVIF*")

2.7.1 **The PVIF is the present value of future shareholder cash flows projected to emerge from the assets backing liabilities of the in-force covered business.**

2.7.2 The level required by local regulators has been the norm for the liability measure. This may contain margins from which cash flows to shareholders would be expected to emerge over time. The guidance however does not preclude the use of other liability measures such as an IFRS basis or tax basis (or any justifiable basis). The actuary must adequately disclose the basis being used as well as the justification for using that basis.

2.7.3 Where the EVM has been aligned to the SAM methodology and assumptions (i.e. risk neutral), the PVIF may be implicitly included within other components of the EV.

2.7.4 PVIF includes the value of expected renewals of the in-force business (for example group risk business renewals). The actuary needs to determine whether the contract boundaries used when determining the liabilities are suitable for use in an EV calculation, for instance, in some cases regulatory solvency calculations may be based on short or zero contract boundaries whereas longer contract boundaries may more appropriately reflect shareholder economic value where renewals are reasonably expected.

2.7.5 The PVIF should include reinsurance accepted, be net of reinsurance ceded and net of tax.

2.7.6 Note that as such SAM projections do not represent a view of future free cash flows available for distribution to shareholders which would be based on the free cash flows under management expectation for future economic conditions (or real world free cash flows) rather than risk-neutral cash flows.

2.8 COST OF REQUIRED CAPITAL

2.8.1 The cost of required capital is the difference between the amount of required capital and the present value of future releases of this capital, allowing for future net of tax investment returns expected to be earned on this capital.

2.8.2 The SAM risk margin provides a measure of the additional cost a reference insurer would require as compensation for accepting the non-hegdeable portion of risk to take over the obligations to policyholders. In some cases there are similarities between the SAM risk margin and the EV Cost of Requirement Capital concepts (e.g. where both are calculated using a cost of capital approach) but there may also be some important differences. Thus, where companies want to base the Cost of Required Capital on the SAM risk margin the actuary needs to consider whether:

- The risk margin is a suitable measure of the Cost of Required Capital from a shareholder perspective and adjust appropriately;
- The SAM cost of capital rate is appropriate and if not, determine an appropriate rate;
- He/she is comfortable that the frictional cost of capital (e.g. cost of double taxation and asset management costs) on the total targeted level of capital (including internal buffers) has been adequately allowed for in the risk margin and adjust appropriately; and
- The Cost of Required Capital must allow appropriately for any changes made to contract boundaries.

2.9 VALUE OF NEW BUSINESS ("VNB")

2.9.1 Value of new business is defined as the present value of the expected after tax shareholder cash flows less cost of required capital arising at the point of sale in respect of new covered business contracts sold in the reporting period.

2.10 GROUP EV

2.10.1 Holding companies may want to publish EV results for the entire Group with non-covered business being included. The term Group EV is used to refer to any total Group value that includes covered business on an EV basis and non-covered business, regardless of the method used for valuing non-covered business. However, in order to enhance comparability of reported Group EVs some recommendations are provided in Section 6 of this APN.

2.10.2 The Group adjusted net worth ("Group ANW") is the ANW of covered business plus the value to shareholders of excess assets and operations other than those relating to covered business.

3. METHODOLOGY

3.1 GENERAL

3.1.1 The assets relating to existing *covered business*, policyholder liabilities and *required capital* should be projected until the *covered business* is expected to no longer be in force.

3.1.2 The *EV* and *VNB* are calculated by performing a projection of future shareholder cash flows. The starting point is usually a deterministic projection, that is, only one possible future best estimate outcome is considered.

3.1.3 The EV should reflect the aggregate risks in the *covered business*. For example, interactions should be considered between explicit allowances for embedded investment guarantees, the level and cost of *required capital* and the risk discount rate. Their combined impact should, inter alia, be sufficient to allow for both embedded investment guarantees and the *cost of required capital* to support any mismatching of assets and liabilities.

3.1.4 The guidance provided in this document relates to a real-world approach, where investment returns and risk discount rate(s), used to discount the projected cash flows, are set equal to a risk-free rate plus a risk margin.

3.1.5 However, it is emphasised that the APN does not preclude the use of a direct market consistent approach such as MCEV or SAM.

3.1.6 The EV should be based on the discounted value of free cash flows to shareholders from the assets allocated to covered business.

3.2 PRESENT VALUE OF FUTURE SHAREHOLDER CASH FLOWS FROM IN-FORCE COVERED BUSINESS ("*PVIF*")

3.2.1 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.

3.2.2 In calculating the projected value of assets at future time periods, any profits already released in earlier time periods should be excluded. The shareholder cash flows valued at the end of each time period then represent the change in the excess of projected assets over projected liabilities of the in-force *covered business*.

3.2.3 For business other than life insurance included under *covered business* (for example asset management or health business), projected shareholder cash flows may be based on expected profits arising in future periods. These profits would be projected until the business is expected to no longer be in force. Future new business must be ignored.

3.3 TAXATION AND LEGISLATION

3.3.1 The valuation must allow for all taxes which would affect the cash flows prior to distribution to shareholders, in the relevant jurisdiction affecting the business. These should follow the local treatment and be based on best estimate assumptions, applying current legislation and practice together with known future changes.

3.3.2 As the APN is applied to valuing cash flows to shareholders, '*allowance for tax*' means deducting those taxes that would be incurred by the insurer or other group entity on the *covered business* until ultimate distribution to shareholders.

3.3.3 In projecting future tax cash flows in respect of in-force covered business on a going concern basis, no credit should be taken for any reduction in taxes from future expenses or statutory deficits (on applicable tax basis) which are properly attributable to future new business. The projections should allow for actual policyholder tax on a tax liability valuation basis which may be different to the liability valuation basis chosen for EV purposes.

3.3.4 Where appropriate, the actuary should discount deferred tax assets and liabilities on the balance sheet relating to the covered business including any deferred tax assets or liabilities on the balance sheet resulting from differences between the chosen valuation basis for EVM projection purposes and the tax basis. In deciding whether or not to discount the actuary may consider materiality.

3.3.5 The EV projections should not allow for any expected taxes incurred in the hands of the shareholders. The rationale here being, if each party (either the company reporting EVs or the investor) only allows for the taxes on their respective tax returns, the likelihood of double counting or omission of any taxes is greatly reduced. Thus, allowance for tax is made by the party with access to all relevant information to do an accurate calculation.

3.4 FREE SURPLUS

3.4.1 Free surplus not formally allocated to covered business should not be included in the EV of covered business but could, however, be included for purposes of calculating Group EV.

3.4.2 The value placed on assets should exclude intangible assets to the extent that their recovery is supported out of future profits recognised in the PVIF (such as deferred acquisition costs or net negative policyholder reserves) or to the extent they represent the book value of acquisitions (such as transaction related goodwill). Any value placed on intangible assets may be included in assets backing required capital or liabilities, but not free surplus, as the assets are not immediately distributable.

3.4.3 The total market value of assets should include all assets attributed to the *covered business*, including those that may be excluded under statutory reporting.

3.4.4 Assets should be valued at their fair value (which in the case of listed instruments is market value). Where a market price is not readily available, assets should be valued at an estimate of their fair value calculated using generally accepted asset valuation techniques on a basis consistent with observable market data. Examples of assets that may fall into this category include: private equity, over-the-counter options, collateralised debt obligations, leveraged loans, holdings in non-life subsidiaries and mortgages.

3.4.5 The value placed on the assets in the financial statements is the responsibility of the Board of Directors (Board) of the company. The actuary may however where necessary make adjustments to the value of assets for EV purposes as needed. Any such adjustments must be explained and reflected appropriately in the *ANW*.

3.5 *REQUIRED CAPITAL*

3.5.1 The guiding principle that should be applied is that required capital should include any assets attributed to the covered business (over and above that required to back liabilities for covered business) where distribution to shareholders is restricted.

3.5.2 Where the EVM has been aligned to the SAM methodology and assumptions, the required capital may be aligned to the SAM Solvency Capital Requirement provided the liability metric is also aligned with the SAM liability metric.

3.5.3 The required capital should include amounts required to meet internal objectives, for example internal objectives could be based on an internal risk assessment or that capital required to obtain a targeted cover ratio (1.5 times CAR/SCR cover). Where the required capital reflects internal objectives the approach used to determine the required capital should be disclosed.

3.5.4 The amount of required capital should be presented from a shareholders' perspective and so should be net of funding sources other than shareholder resources, for example subordinated debt or policyholder funds.

3.5.5 The level of required capital allocated to each regulated entity should meet at least the shareholders' portion of the level of solvency capital at which the supervisor is empowered to take any action. The required capital would also include any amount "encumbered" by local supervisory or legal restrictions that prevents its distribution or removal from supporting the covered business.

3.5.6 In some cases a minimum amount of capital required over and above a calculated solvency capital requirement may apply, for example for smaller insurers. The actuary may in such cases choose not to apply the minimum for purposes of the EV calculation provided the impact of this and the rationale for the approach is adequately disclosed.

3.6 COST OF REQUIRED CAPITAL

3.6.1 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. However that capital is at risk during this period. Economic theory and market reality imply that investors would prefer cash in hand rather than capital at risk under the management of a third party. From the investors' viewpoint there is a cost due to restrictions on the distribution of capital.

3.6.2 The *cost of required capital* is the difference between the amount of *required capital* and the present value of future releases of that capital, allowing for future net of tax investment returns and investment expenses.

3.6.3 The projected releases of required capital should be based on the underlying risk driver(s) of the covered business. Approximate projection methods such as the use of key capital drivers to determine the run off pattern of the required capital may be used.

3.6.4 The timeframe chosen to run off the *required capital* for purposes of determining the *cost of required capital* should be consistent with the term of the in-force *covered business* (or new business for *VNB*). It may be that the projected *required capital* is expected to increase initially after the valuation date before running off – if so, this should be allowed for in the projections.

3.6.5 For purposes of setting the investment return assumption (refer 3.6.2 above), the assumed composition of the assets backing the *required capital* should reflect actual company practice in investing these assets.

3.7 NEW BUSINESS AND RENEWALS

3.7.1 **New Business is defined as *covered business* arising from the sale of new contracts and one off premium increases in respect of in-force business during the reporting period. This definition includes business written during the reporting period that has subsequently gone off the books, but excludes policies cancelled at inception. The EV should only reflect in-force business, which excludes future new business.**

3.7.2 Typical examples of one off premium increases defined as new business include:

- The continuation beyond the original term of individual policy contracts with a fixed maturity date (unless continuation of a proportion of maturities has previously been assumed when calculating the *PVIF*);
- Non-contractual premium increases at the request of the contract owner;
- Renewable single premiums; and
- Premium increases arising from new benefits that are added to existing contracts.

3.7.3 A new contract or one off premium increase should be included as new business if it has a date of entry during the reporting period and at least one premium, which was not subsequently refunded, has been recognised in the financial statements. In circumstances where it is the company's business practice to recognise the contractual obligation before the first premium is paid or recognised in the financial statements during a particular reporting period, it is acceptable to include the policy as new business for that period.

3.7.4 The projected cash flows used to calculate *PVIF* should anticipate the *renewal* of in-force business, including any <u>reasonably predictable</u> variations in the level of *renewal* premiums but excluding any value relating to <u>future</u> new business.

3.7.5 Variations in future premiums relating to in-force business are <u>reasonably predictable</u> 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.

3.7.6 Typical examples of *renewals* (and <u>reasonably predictable</u> variations in *renewal* premiums) are:

- The continuation of contracts beyond the minimum term of an open ended contract, i.e. those contracts with no specific end date;
- Renewable recurring premiums under Group Assurance contracts like PHI and Group Life Assurance;
- Automatic regular increases (whether the level is specified or not, and whether they are contractual or take place unless the contract owner specifically cancels them) in recurring premiums even though they may not be included in the calculation of the liabilities; and
- Increases in premium due to new members or salary increases under Group contracts.

3.7.7 Any variation in premium on *renewal* of in-force business from that anticipated, including deviations in contractual increases 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. Recurrent single premiums and changes to existing contracts, which are not treated as *renewals*, should be included in new business.

3.7.8 The basic principle that should be applied at all times is that the cash flows associated with each premium, and any variation against previous assumptions of these premiums, should be counted <u>once and only once</u>. Premium increases that have already been allowed for in the value of in-force business may not be counted again as new business when they actually occur (i.e. when premiums deviate from what was previously assumed).

3.7.9 Other methods of distinguishing between new and in-force business are allowable, but should be clearly defined in the disclosure, provided this complies with paragraph 3.7.8.

3.8 VALUE OF NEW BUSINESS ("VNB")

3.8.1 *VNB* should be calculated as the present value at point of sale, of after tax shareholder cash flows arising from *new business* (under section 3.7), less the corresponding *cost of required capital*. The allowance for tax on *VNB* should be consistent with that of in-force business, as described in section 3.3 above.

3.8.2 The calculation of *VNB* should allow for actual acquisition costs incurred and cash flow strains under the chosen liability valuation basis.

3.8.3 Appropriate allowance should be made in the *VNB* for the expected cost of embedded investment guarantees.

3.9 REINSURANCE AND DEBT

3.9.1 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 be deducted from the EV at fair value, which is a value consistent with that which markets would place on debt with similar characteristics (i.e. mark-to-market).

3.9.2 Where the level of shareholder capital required to support the *required capital* is reduced via the use of financial engineering (for example subordinated debt), then credit for this reduction can be taken into account (credit would normally be taken through the reduction of the *cost of required capital*).

3.9.3 For all other reinsurance arrangements relating to *covered business*, projected liabilities and cash flows should be net of outwards reinsurance.

3.10 OUTSOURCED SERVICES

In certain circumstances the group holding company or associated service businesses may provide services to the *covered business* on commercial terms e.g. investment management, administration or distribution. In such circumstances it may be assumed within the *EV* that the expenses are equal to the charges by the holding company/service business, provided that it can be demonstrated that this approach does not disguise losses by the holding company/service business and that the approach is adequately disclosed. As such, the treatment of fees paid by the insurer in the EV calculation should be determined by the actual contract fees. The guiding principle to be applied is that there should be consistency between how profits are reported on the chosen liability basis and the profits that are valued for EV purposes, so as to ensure that there is no double counting or omission of shareholder cash flows. Thus only profits/losses that are categorised as accruing in respect of *covered business* should be valued when determining the *PVIF*.

3.11 SENSITIVITY ANALYSIS

3.11.1 Sensitivity of the results to changes in key assumptions should be prepared to provide users of the information with a better understanding of the value placed on the *covered business*. Sensitivities should be provided for the *PVIF and cost of required capital* as well as the *VNB*, except where a particular sensitivity is not meaningful to the assessment of either of these values.

3.11.2 Accounting standards require the disclosure of the sensitivity of profit or loss and equity to changes in key assumptions. Although not required, the use of consistent changes in key assumptions and disclosures for accounting and EV purposes is encouraged. The actuary is also encouraged to consider the need for notes accompanying the EV sensitivities, to explain the similarities or differences of sensitivity parameters disclosed as part of the published accounts and those included in the EV.

3.11.3 In general all other assumptions should remain unchanged except where they are directly affected by the revised economic conditions. For example, future bonus rates are automatically adjusted to reflect sensitivity changes to future investment returns.

3.11.4 In theory some of the sensitivity scenarios may have consequential effects on valuation bases, for example the basis for certain blocks of business that are actively updated to reflect current economic circumstances. Consequential valuation impacts on the sensitivities should preferably be allowed for where an active valuation basis is used although it may not always be possible because of dynamic modelling.

3.11.5 Where companies decide to dynamically vary the reserving basis it would be acceptable to include the day-one impact of any reserving basis change as part of the PVIF sensitivity. Care should be taken to correctly allow for the impact of the reserving basis changes on the allowance for taxation.

3.11.6 The impact of changes in investment market parameters on the cost of embedded investment derivatives should be allowed for in the PVIF as this will directly impact future shareholder cash flows. It would be acceptable to apply approximate methods to derive the sensitivity results of this liability to changes in the input parameters. The actuary should be satisfied that these approximations are sufficiently accurate.

3.11.7 For new business, the sensitivities should reflect the impact of a change immediately after inception of the policy.

3.11.8 Sensitivities should be disclosed at least annually. It is only necessary to calculate sensitivities in a single direction unless a movement in the opposite direction gives a significantly different change in value (i.e. asymmetrical movement) in which case both directions should be shown.

3.11.9 Sensitivity testing is particularly recommended where deviations from expected values may be significant, or where an assumption is considered to be particularly critical. The actuary should use his or her judgement to decide whether any further sensitivities (other than prescribed in section 5.8) should be shown for factors to which the business may be particularly sensitive, for example where business written is sensitive to the tax position of the company.

3.11.10 Where applicable, the actuary may take into account the likely management actions that would be performed in the event of the sensitivity occurring in practice. For example if mortality rates were 10% higher than assumed, it is reasonable that, provided contracts and competitive pressures allowed it, charges in respect of mortality would be amended, albeit after some delay. All management actions assumed should be adequately disclosed.

3.11.11 For participating business where it is company practice to vary bonuses based on the investment return, the bonus rates should be adjusted accordingly when varying the rates of investment return or allowing for movements in asset values.

3.12 CHECKS

3.12.1 The reasonableness of the models and the inputs used should be checked. Sufficient checks should be performed to ensure that assumptions have been derived and input correctly and that the system is projecting profits correctly in accordance with the assumptions.

3.12.2 The minimum checks to be performed should include:

- The comparison of items such as opening reserves, premiums and claims in the first year of the profit projection with the numbers in the financial statements.
- The reconciliation of expenses assumed for *EV* purposes to actual expenses incurred.
- The level of profit projected to be earned in the first year of the projection period, compared with actual profit earned in the previous year.

3.12.3 External disclosure of the above checks is not required.

3.13 APPROXIMATIONS AND MATERIALITY

3.13.1 This APN does not preclude the use of approximate methods. The basic principle that should be applied at all times is that the actuary is satisfied that the method and calculation is sufficiently accurate to satisfy materiality concerns.

3.13.2 Materiality limits should be determined with reference to the impact on the *PVIF, VNB* and *EV earnings*. Where appropriate, materiality limits should be agreed with external actuarial consultants and/or auditors performing the review. It is recommended that materiality limits should be consistent with that adopted for the primary financial statements.

4. ASSUMPTIONS

4.1 GENERAL

4.1.1 **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 expected future experience should be allowed for when sufficient evidence exists and the changes are reasonably certain. The assumptions should be actively reviewed.**

4.1.2 The EV is sensitive to the assumptions used. The effect of over-optimistic assumptions will emerge in future years as negative operating experience and/or investment variances. Similarly, if over-cautious, the effect will emerge in future years as positive operating experience and/or investment variances. The objective is to find an appropriate balance, and to avoid over-optimistic or over-cautious assumptions.

4.1.3 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. Thus, assumptions should represent best estimates of future experience.

4.1.4 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 IFRS bases. Best estimate assumptions should be based on the covered business being part of a going concern.

4.1.5 Treatment of changes in future experience will be a matter of judgment. Favourable 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. The most important *EV* assumptions and information to be included in disclosures should be discussed with and approved by the company's Board or an appropriate committee thereof before being published.

4.1.6 The *VNB* should be calculated using either point of sale demographic and economic assumptions or the revised demographic assumptions as at the current reporting date and either opening or closing economic assumptions. However, for certain types of contract where premium rates have been set according to investment yields at the point of sale, for example on annuity contracts, the *VNB* may be based on investment yields at point of sale. Note that using point of sale assumptions does not affect the closing *EV*; it is merely a reallocation between items in the analysis of change in *EV*.

4.2 OPERATING ASSUMPTIONS

4.2.1 Premium increases should be modelled under *EVM*. The allowance for future premium increases should be based on the best estimate take up rate expected.

4.2.2 For classes of business where reserves are set retrospectively, future assumptions should be based on management's view of best estimate future experience. In particular for group business, assumptions will be required in respect of the future growth of the business (e.g. rate of increase/decrease in membership of schemes, scheme termination, benefit increases due to salary inflation, etc.) and benefit payments. These assumptions should be based on recent experience where available, and in the case of benefit increases related to salary inflation, should be consistent with the other economic assumptions.

4.2.3 Due to the open-ended nature of some group business, assumptions based on recent experience may give rise to a projection where the book of business continues to grow at an unrealistic level for a prolonged period. This should be avoided, and assumptions (such as discontinuance rates and scheme terminations) may need to be adjusted in the later years of the projection.

4.3 EXPENSES

4.3.1 Future expenses such as renewal and claim expenses should reflect the expected on-going expense levels required to manage the in-force covered business, including investment in systems required to support that business and allowing for future inflation.

4.3.2 Future expense assumptions should be based on actual expenses incurred and the split between acquisition, maintenance and extraordinary non-recurring / development expenses should be consistent with the chosen liability valuation basis where relevant.

4.3.3 For group business, where expense assumptions are usually not required for purposes of the valuation, projected expenses should be based on recent expense experience. The projection of these expenses should allow for both expense inflation and expected growth / decline in the business.

4.3.4 The nature and impact on shareholder value of any exceptional development and one-off costs excluded from the unit cost base should be separately disclosed.

4.3.5 Where a holding company incurs expenses that relate to covered business these should be included in the expense assumptions in an appropriate way.

4.3.6 Overhead expenses (and, where applicable, holding company expenses) should be allocated between new business, existing business and development projects in an appropriate way consistent with past allocation, current business plans and future expectations.

4.3.7 Company pension scheme deficits should be allocated to the covered business expense assumptions in an appropriate way.

4.3.8 Favourable changes in unit costs such as productivity gains should not normally be included beyond what has been achieved by the end of the reporting period. Where insurers make assumptions about expected cost reductions in their cash-flow projections, such assumptions must be supported by realistic and objective analysis, and based on verifiable data and information.

4.3.9 All expected expense overruns affecting covered business, including holding company operating expenses, overhead costs and development costs should be appropriately allowed for. In particular:

- 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. For clarity, the additional expenses before the long term level should be included in the PVIF. The extent to which such changes in unit costs have been anticipated should be separately disclosed.
- Actual acquisition expense overruns relating to the new business written in the reporting period should be allowed for in the *VNB.*
- Maintenance expense overruns should be reflected in the *PVIF* and *VNB.*

4.3.10 The expense assumptions should include an allowance for the cost of share based payments results from future incentive share allocations expected. It is recommended that the expense assumptions should be adjusted as follows (for both cash-settled and equity-settled schemes):

a) Remove the *IFRS2: Share-based Payment* expense from the total expenses;

b) Add the fair value (allowing for expected take-up) of new options issued during the period under review to the total expenses;

c) Follow existing methodology to annualise expenses that incur at a frequency other than annual if this is appropriate to the revised expense relating to share based payments – i.e. b) above; and

d) Follow existing methodology for separation of expenses into shareholder expenses, once off and policyholder related (e.g. renewal and acquisition) expenses.

4.3.11 Where an external service company, or an associated service business that is not included under *EVM*, is used in the management of *covered business* (for example investment management services), the actual and future expected fees or charges payable to the service company should be allowed for in calculating the *PVIF, cost of required capital* and *VNB* of *covered business*.

4.3.12 Where services are provided to *covered business* by an internal group company, the company's value included within the *ANW* should be impaired for the value of any future losses relating to the management of *covered business,* unless this has already been allowed for in the *PVIF*.

4.3.13 The actuary should be aware that preferential service agreements or outsourcing arrangements might be altered or terminated, or may have tax implications under anti-transfer pricing provisions in the Income Tax Act, 1962, and where appropriate the expense assumptions should be adjusted accordingly.

4.4 ECONOMIC ASSUMPTIONS

4.4.1 **Economic assumptions must be internally consistent and should be consistent with observable, reliable market data. No smoothing of market or account balance values, unrealised gains or investment return is permitted.**

4.4.2 Economic assumptions should be regularly reviewed, i.e. updated for each reported calculation of EV.

INVESTMENT RETURNS

4.4.3 Assumed investment returns should reflect the expected future returns on the assets held and allocated to the covered business at the valuation date. The assumed returns should allow for any expected defaults on investments. A regular review of both the risk-free rate as well as the risk premiums for different asset classes is encouraged.

4.4.4 Current gross redemption yields (for example as observed from the gilt yield curve, the swap curve or the zero coupon yield curve) and the current investment portfolio should be considered when selecting fixed interest assumptions.

4.4.5 Assumptions for the reinvestment of future positive cash flows should be based on the expected future investment strategy and should be consistent with other projection assumptions.

4.4.6 Assumptions may allow for future switching between investment classes where this is expected to occur, in line with investment strategy. Any such switching assumption should be reflected in other projections such as capital requirements.

4.4.7 In jurisdictions where longer-term fixed interest markets are underdeveloped, investment return assumptions should be based, where appropriate, on an assessment of longer-term economic conditions, or other equivalent markets.

INFLATION

4.4.8 Inflation assumptions should be consistent with observed inflation and investment markets, for example observed yields on index-linked securities.

4.4.9 The <u>expense</u> inflation assumption should be consistent with the types of expenditure (such as office space, different types of staff, IT systems) expected to be made, recognising that this could be different from general price inflation.

TAX

4.4.10 When projecting future investment returns on assets backing covered business, appropriate allowance should be made for all relevant taxes.

4.4.11 The effective Capital Gains Tax (CGT) rate is influenced by the assumed realisation period over which any unrealised gains are converted to realised gains. When determining the realisation period, regard should be had to the actual practice of the company with respect to the sale of assets (and thus the realisation of the CGT liability). The assumed realisation period for the assets backing the shareholders *required capital* should be considered separately from assets backing policyholder liabilities.

4.4.12 Disclosure may be necessary to explain the 'best estimate' interpretation where uncertainties exist over future tax regulations, for example when changes have been announced but not yet officially implemented.

RISK DISCOUNT RATES

4.4.13 Risk discount rates should be reviewed for each reporting date.

4.4.14 The discount rate(s) used to discount the expected shareholder cash flows should be set equal to a risk-free rate plus a risk margin (real-world approach). However, the APN does not preclude the use of a market consistent approach.

4.4.15 Typically, the risk discount rate(s) could be set using one, or a combination, of the following approaches:

- A "top-down" approach, where a single risk discount rate is used across all products, based on the risk profile of the individual company (for example based on the company's Weighted Average Cost of Capital (, typically calculated using tools such as the Capital Asset Pricing Model); or

- A "bottom-up" approach, where the risks are considered on a more granular level and hence risk discount rates may vary by product, geographical region, and also between existing and new business, and so on.

4.4.16 The risk discount rate could be term dependent set using a reference curve or refer to a specific term, for example, to reflect the yield curve, where different risk-free rates are used depending on the timing of cash flows.

4.4.17 The risk margin(s) should reflect any risks associated with the emergence of future shareholder cash flows that are not allowed for elsewhere in the valuation.

4.4.18 The risk discount rate does not allow for the particular tax position of a potential investor, since not all investors are taxed on the same basis.

PARTICIPATING BUSINESS

4.4.19 For participating business the method should 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 policy conditions.

MANAGEMENT ACTIONS

4.4.20 Attention is particularly drawn to relevant guidance regarding assumed future management actions in SAP 104 and other guidance notes. Assumptions regarding future increases in expense recovery charges or risk charge rates and resulting action regarding premium increases or reductions in sums assured will generally be based on less objective supporting evidence than assumptions regarding experience. The assumptions should therefore be substantiated as rigorously as possible, and should be approved by the Board or an appropriate committee of the Board.

5. DISCLOSURE

5.1 GENERAL

5.1.1 Sections 5.2 to 5.11 below provide guidance regarding minimum disclosure requirements. Appendix A provides a suggested format for presentation of the opening and closing *EV of covered business* and EV earnings. Additional disclosures to enable understanding of the reasons for movement in EV, and future sustainability of return on EV, are encouraged, such as segmental information.

5.2 METHODOLOGY AND DEFINITIONS

5.2.1 A clear description of the covered business should be provided as well as any changes made to the types of business included in covered business since the previous valuation.

5.2.2 If business other than long-term insurance business (as defined by the regulator) is included in the *covered business*, if material this should be shown separately, both in respect of the *value of new business* and the value of in-force *covered business*.

5.2.3 Companies should disclose 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.

5.2.4 A clear description of the chosen liability basis should be included where this is not already covered in the primary financial statement disclosures (for example where an IFRS liability measure has been used).

5.2.5 Where any adjustments are made to contract boundaries on the chosen liability basis this must be clearly disclosed by the insurer.

5.2.6 Disclosure of the method used to determine the *value of new business* including:

- Definitions of new business;
- Any material changes in the definition of new business since the previous valuation and the impact of such changes on the *VNB*;
- Whether the definition of new business used in the calculation of the *VNB* is the same as that reported in the primary financial statements. To the extent that these two definitions differ, a reconciliation of the volume of new business should be provided;
- Whether investment yields at point of sale or year-end were used to determine *VNB*;
- Whether demographic assumptions at point of sale or year-end were used to determine VNB; and
- To what extent allowance for diversification has been assumed for purposes of determining the cost of required capital for VNB purposes.

5.2.7 For consistency and from analysts' perspective, VNB should ideally be disclosed on a consistent basis between two reporting periods. VNB may be calculated at opening, point of sale or closing demographic assumptions and economic assumptions, with appropriate disclosures. The VNB using the non-economic assumptions as at the end of the period should be disclosed.

5.2.8 The treatment of consolidation adjustments, including inter-company arrangements such as reinsurance or loans associated with *covered business* and the allocation of holding company expenses to *covered business* should be disclosed.

5.2.9 The methods used to calculate the shareholder cash flows underlying the *EV* should be disclosed. It should be made clear that the cash flows are based on the release of margins under the chosen liability basis, which could differ from the published accounting basis.

5.2.10 Specific focus should be given to areas of material change in the methodology applied from previous valuations.

5.2.11 Return on Embedded Value ("RoEV") is the EV earnings over the period expressed as a percentage of EV at the beginning of the period. Where RoEV is disclosed for periods other than one year, the ratio of EV earnings over EV at the beginning of the period should be annualised.

5.2.12 Disclosure of any EV information on a "per share" basis should allow for dilution by adjusting the number of ordinary shares in issue in an appropriate way. For example, the number of issued shares may have to be adjusted for convertible shares issued, Black Economic Empowerment transactions and treasury shares. Alternative "per share" calculations (e.g. undiluted values) may be disclosed as further information.

5.2.13 The reasons for any changes in the risk margin(s) in the risk discount rate(s) from the previous valuation should be disclosed.

5.2.14 For companies writing participating business, the approach used to determine future bonuses and the treatment of bonus smoothing reserves should be disclosed.

5.2.15 The extent to which any extraordinary non-recurring expenses or development costs have been excluded from the expense assumptions should be disclosed.

5.2.16 The extent to which future productivity gains (if any) are anticipated should be quantified and disclosed.

5.2.17 The approach used to allow for company tax in the projection calculations should be disclosed, including disclosure of:

- The approach used to allow for taxes in the *PVIF* and *VNB; and*
- Any adjustments made for discounting of tax provisions.

5.2.18 The basis of exchange used for any foreign currencies should be disclosed.

5.2.19 The basis on which, reason for and extent to which any of prior period comparatives have been restated should be disclosed. The *VNB*, EV earnings and closing *EV* should all be restated.

5.3 ASSUMPTIONS

5.3.1 The principal economic assumptions, the before tax investment return assumptions on all major asset classes including any assumption of future change in the mix of assets backing *required capital*, inflation rates and the risk discount rate(s) used at the start and end of the reporting period should be disclosed.

5.3.2 The process used to derive the economic assumptions (for example, the risk discount rate(s); assumption regarding the asset mix covering the *required capital*) and other business assumptions (e.g. mortality, persistency, expenses and future asset allocation) that have a material impact on the disclosed values should be disclosed - for example, the process used to derive the risk margin(s).

5.4 EMBEDDED VALUES

A table showing the *embedded value* at the current reporting date and at the previous reporting date split between *free surplus, required capital*, *PVIF* and *cost of required capital* should be disclosed. Appendix A provides a suggested table format for presentation of the opening and closing *EV of covered business*.

5.5 RECONCILIATION OF OPENING AND CLOSING *EV*

5.5.1 The opening and closing EVs, together with a breakdown of the change in EV over the period should be disclosed. Presentation of the breakdown is at the discretion of the company, subject to 5.5.2. A suggested format for the presentation of analysis of EV earnings is given in Annexure A.

5.5.2 The breakdown of the change in EV over the period should be split between those items that relate to the *ANW*, *the PVIF* and the *cost of required capital*, to better explain the movement in capital flows.

5.5.3 EV earnings are defined as the change in EV (after minority interests) for the period, after adjustment for any capital movements such as dividends paid, capital injections and cost of treasury shares acquired or disposed of for the period. EV earnings would typically include value added by new business, expected return on existing business, operating experience variances, changes in assumptions and changes in minority shareholders interest in PVIF minus cost of required capital and investment variances.

5.5.4 Explanations of any material variances between the actual experience and that anticipated in the previous projection assumptions (variance analysis) should be provided. The effect of any change to the method or approach for expected future shareholder cash flows should also be quantified and disclosed (model changes). Similarly, any impact resulting from material changes in experience assumptions or risk margins should be disclosed and explained (assumption changes).

5.5.5 A reconciliation of *ANW* to consolidated value of shareholders' funds in the primary financial statements should be provided.

5.6 VALUE OF NEW BUSINESS

5.6.1 The *VNB* at the point of sale should be shown both gross and net of *cost of required capital*.

5.6.2 The net *VNB* should be shown both gross and net of any minority shareholders' interest.

5.6.3 The *present value of new business premiums* ("*PVNBP*") should be calculated:

- By projecting the premiums expected in each future year, using assumptions and projection periods that are consistent with those used to calculate the VNB. The PVNBP may be calculated on a deterministic basis;
- Using premiums gross of reinsurance, unless there are specific situations where this approach would be misleading; and
- Using the same definition of new business as is used in the calculation of VNB and, where appropriate, other sales figures reported externally.

5.6.4 Where PVNBP values are disclosed, a description of how the underlying assumptions have been set should also be provided including the approach to allowing for reinsurance.

5.6.5 The new business margins should be disclosed and be calculated as the ratio of the *VNB* to the *PVNBP*. New business margins should be shown both before and after allowing for minority shareholders' interest, unless the impact is not material. Alternative calculations of new business margins may be disclosed as further information.

5.7 SENSITIVITIES

5.7.1 For companies that publish EV 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.

5.7.2 Sensitivities should be provided for the *PVIF* and *cost of required capital* as well as the *VNB*, except where a particular sensitivity is not meaningful to the assessment of either of these values.

5.8 MINIMUM SENSITIVITIES TO BE DISCLOSED

Interest rate and assets

- 100 basis point *increase* in the risk discount rate(s);
- 100 basis point p.a. *reduction* in the interest rate environment, which should allow for all consequent movements in the future expected returns, bonus rates, inflation rates and risk discount rates;
- 10% *decrease* in equity/property capital values at the valuation date, without a corresponding fall/rise in dividend/rental yield; and
- 100 basis point p.a. *increase* in the expected return on equity/property assets (as a change in the equity or property risk premium with no consequential changes to discount rates). This sensitivity is not required where a bottom-up market consistent approach has been adopted for calibrating discount rates, as in such an approach it is artificial to change future yield assumptions without adjusting discount rates.

Expense and persistency

- 10% *decrease* in maintenance expenses (i.e. the on-going cost of administering contracts);
- <u>For *value of new business* only</u>, a decrease of 10% in acquisition expenses other than commission and commission related expenses; and
- 10% proportionate decrease in lapse, paid-up and surrender rates (multiplicative, i.e. a base lapse rate of 5% pa becomes 0.9 x 5% = 4.5% p.a.). This sensitivity should reflect a single, sustained downwards movement in persistency rates. Separate analysis of contracts that are either positively or adversely affected by reduced lapse rates is not required.

Insurance risk

- 5% proportionate decrease in base mortality and morbidity rates (disclosed separately for life assurance and annuity business).

5.9 Segmentation

5.9.1 Although not required, disclosure of segmental information of covered business is encouraged for companies with more than one business or geographical area of operation. It is suggested that the segmental information should be consistent with that used in the primary financial statements.

5.10 Statement from the Directors

5.10.1 The supplementary information should, if possible, include a statement from the directors that the EVM accounts have been prepared in accordance with APN107.

5.10.2 Where reference is made to APN107 in financial statements, but the guidance has not been complied with in its entirety, the areas of non-compliance and reasons for non-compliance should be disclosed.

5.11 Statements by an Actuary

5.11.1 An actuary may not certify compliance with APN 107, unless the disclosed EV information complies in all material respects with the APN, or where alternative approaches are allowed in this APN, this fact has been adequately disclosed.

6. EV REPORTING FOR INSURANCE GROUPS ("*GROUP EV*") AND OTHER NET WORTH ADJUSTMENTS

6.1 GROUP EV AND OTHER NET WORTH ADJUSTMENTS

6.1.1 Holding companies may want to disclose EV results on a *Group EV* basis, as defined in section 2.10, including both *covered business* and non-covered business. The APN does not prescribe the bases on which non-covered business should be valued. Some guidelines related to certain key issues are provided below.

6.1.2 Assets shown at fair value in the financial statements would normally be included in the *Group ANW* at the same value.

6.1.3 For *Group EV* results, where a listed subsidiary (other than a long-term insurance subsidiary) is consolidated in the holding company's accounts, the *Group ANW* should include the holding in the listed subsidiary at fair value.

6.1.4 All long-term insurance subsidiaries, both listed and unlisted, should be included in the *Group EV* results either at EV, or alternatively at either IFRS net asset value or IFRS fair value, net of an appropriate allowance for minority shareholder's interests. Where IFRS fair value is used the value should be split between net asset value and a fair value adjustment. Where a subsidiary is included at *EV,* the *ANW* should form part of the *Group ANW* and the *PVIF* and *cost of required capital* should be included in the *Group PVIF* and *Group cost of required capital* respectively.

6.1.5 Allowance should be made for the fair value liability at the valuation date relating to <u>outstanding</u> share based payment options (accounted for under *IFRS2: Share-based Payment*) as follows:

- For <u>cash settled</u> schemes the IFRS Share-based Payment liability should be removed, and replaced by the full mark-to-market value (allowing for expected take-up) as a financial liability in the *ANW*. No adjustment is required to the number of shares in issue for purposes of 'per share' calculations.
- For <u>equity settled</u> schemes the full mark-to-market value (allowing for expected take-up) should be included as a financial liability in the *ANW*. To avoid double-counting the fully diluted number of shares, for purposes of 'per share' calculations, should not be increased for shares under option in terms of equity settled schemes.

<u>For EV results relating only to *covered business*</u> (as opposed to an insurance group), where applicable, the manner in which outstanding options under share based payment schemes is allocated between *covered* and non-covered business should be disclosed quantitatively.

6.1.6 The *Group ANW* should be adjusted for the value of future holding company net operating profits/losses, which have not been allowed for elsewhere in the *Group EV* calculations.

6.1.7 Internal group agreements such as financial reinsurance or loan arrangements are commonly used 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*.

6.1.8 For EV results relating only to *covered business*, the manner in which debt is allocated between *covered* and non-covered business should be disclosed quantitatively.

6.1.9 For insurance groups using internal capital models to set *required capital*, this may be considered for the *covered business* of the group as a whole (for example allowing for the impact of diversification).

6.1.10 Appropriate disclosure of the valuation methodology for non-covered business is recommended (unless this is disclosed in the primary financial statements).

7. EXTERNAL REVIEW/AUDIT

7.1 Where an external review has been performed on the EV calculations, it is desirable to disclose that such review has been performed and to disclose which of the following formed part of the external review:

- The methodology underlying the calculations;
- The assumptions underlying the calculations;
- Whether any model changes over the period were reviewed;
- Whether any new products or major amendments to existing models were reviewed;
- The analysis of the change in EV over the period; and
- The analysis of the actual versus expected earnings over the period.

Where an explicit review has been performed of any internally developed capital models used to determine the *required capital* for published EV calculations, the nature of this review should be disclosed.

7.2 Where the EV was subject to an external audit in accordance with the International Standards on Auditing rather than an external review, the EV statements should refer to the audit report rather than presenting the disclosure requirements as per paragraph 7.1 above.

7.3 Where no external review or audit of the EV has been performed this should be disclosed.

APPENDIX A - SUGGESTED FORMAT FOR PRESENTATION OF EV AND EV EARNINGS

EMBEDDED VALUE OF COVERED BUSINESS	**DD/MM/X1**	**DD/MM/X0**
Free surplus	Xxx	Xxx
Required capital	Xxx	Xxx
Covered business ANW	**Xxx**	**Xxx**
Present value of in-force business	Xxx	Xxx
Cost of required capital	Xxx	Xxx
Embedded value of *covered business*	**Xxx**	**Xxx**
Return on embedded value	**Xx%**	**Xx%**

EMBEDDED VALUE EARNINGS FOR THE REPORTING PERIOD	**ANW**	**Cost of required capital**	**PVIF**	**EV**
Embedded value earnings for the period:				
Embedded value at end of financial period	Xxx	Xxx	Xxx	**Xxx**
Less Capital raised / transfers to *covered business*	Xxx	0	0	**Xxx**
Plus Capital distributed / transfers from *covered business*	Xxx	0	0	**Xxx**
Plus Dividends accrued or paid	Xxx	0	0	**Xxx**
Plus Cost of treasury shares acquired / (disposed)	Xxx	0	0	**Xxx**
Plus Value of acquired / (divested) business & other exceptional items	Xxx	Xxx	Xxx	**Xxx**
Less Embedded value at start of financial period	Xxx	Xxx	Xxx	**Xxx**
Embedded value earnings	**Xxx**	**Xxx**	**Xxx**	**Xxx**
Components of Embedded value earnings:				
Value of new business at point of sale	Xxx	Xxx	Xxx	**Xxx**
Adjustment of Value of new business to end of period non-economic assumptions[1]				
Expected return on *covered business*	0	Xxx	Xxx	**Xxx**
Expected profit transfer	Xxx	0	Xxx	**0**
Operating experience variances (relative to opening assumptions)	Xxx	Xxx	Xxx	**Xxx**
Operating assumption and model changes	Xxx	Xxx	Xxx	**Xxx**
Extraordinary non-recurring expenses/ Development costs	Xxx	0	Xxx	**Xxx**
Expected return on *ANW*	Xxx	0	0	**Xxx**
Change in minority interest	0	Xxx	Xxx	**Xxx**
Embedded value operating return	**Xxx**	**Xxx**	**Xxx**	**Xxx**
Investment return variances on in-force *covered business*	0	Xxx	Xxx	**Xxx**
Investment return variances on *ANW*	Xxx	0	0	**Xxx**
Effect of foreign currency movements	Xxx	Xxx	Xxx	**Xxx**
Effect of economic assumption changes	Xxx	Xxx	Xxx	**Xxx**
Effect of tax changes	Xxx	Xxx	Xxx	**Xxx**
Exceptional items	Xxx	Xxx	Xxx	**Xxx**
Embedded value earnings	**Xxx**	**Xxx**	**Xxx**	**Xxx**

[1]Where Value of new business at point of sale is not calculated on end of period non-economic assumptions.

Comments on the Analysis of change in EV items:

A.1 Expected return on *covered business* (unwinding)

A.1.1 The change over the reporting period in the present value of the shareholders' interest in the expected future cash flows and in the present value of the cost of *required capital*, assuming actual experience followed assumptions.

A.1.2 The preferred option is that this should also include the expected return on the new business from the point of sale to the calculation date. (A minor point here is that the new business contribution will be at the revised risk discount rate as at the calculation date, which is likely to differ from that assumed at the start of the period on which the in-force business calculation is based.) However, for presentational purposes the APN does not preclude grouping the expected return on new business with the published *VNB*.

A.2 Operating experience variances

A.2.1 The current and present value of future profits or losses arising from differences between actual and previously assumed non-economic experience during the period (e.g. expense under- or overruns not anticipated in the prior period's projection process).

A.2.2 As before, the new business should contribute to this line from the date of entry to the calculation date to the extent that the assumptions as at the calculation date differ from the actual experience over the period.

A.2.3 Also includes the profit or loss arising from changes in other factors such as increased charges for the shareholders or changes to surrender bases, which affect future cash flows. The new business is not expected to contribute to this item, as the new business has been calculated assuming the revised assumptions as at the calculation date.

A.3 Operating assumption and model changes

A.3.1 The profit or loss arising from changes in the estimated future experience (excluding those referred to under economic assumption changes below), to the extent that these are reflected in revised experience assumptions and/or risk margins.

A.3.2 Details of the effect on the different elements of the EV of material assumption changes should be separately quantified and disclosed.

A.4 Investment return on *ANW*

A.4.1 The after tax investment return on the *ANW* over the period.

A.4.2 As an alternative this item may be split into an expected return on *ANW* element and an investment variance on *ANW* element.

A.5 Investment return variances on in-force *covered business* and *ANW*

A.5.1 The current and present value of future profit or loss arising from the shareholders' share of all investment returns (net of investment expenses) on assets backing the *covered business* over the period differing from that expected.

A.5.2 Also includes the effect of changes in extraneous economic variables (i.e. interest rates and inflation rates), beyond the control of management to the extent that these are reflected in asset values.

A.5.3 The preferred option is to show investment return variances on in-force *covered business* and *ANW* on separate lines.

A.6 Economic assumption changes

A.6.1 The effect of changes in extraneous economic variables (i.e. interest rates and inflation rates), including associated changes to valuation bases, beyond the control of management to the extent that these are reflected in revised experience assumptions and/or discount rates or bonus rates.

A.6.2 The effect of changes in the risk margin (e.g. risk discount rate gaps) should be separately disclosed.

A.7 Foreign currency movements

A.7.1 Where a company operates in jurisdictions with different currency exchange rates, the effect of exchange rate movements on the value of distributable profits should be analysed separately. This does not apply to international investment portfolios included in South African liabilities, where the effect of exchange rate movements will be reflected as part of the investment variances.

A.7.2 The effect of currency movements should be determined as follows:

- Opening and closing EV "balance sheet" values should be converted at the exchange rates at the respective points in time;
- EV "income statement" values (for example VNB, expected return, experience variances, etc.) should be converted at the average exchange rate for the period;
- The "Effect of Currency movements" in the Components of EV earnings table is the difference to take the opening value plus movements to the closing value in the converted currency; and
- *VNB* and *PVNBP* should also be converted at the average exchange rate for the period. For new business margin calculations, the *VNB* numerator and the *PVNBP* denominator should be converted at the same rate. Therefore, new business profitability margins will be unchanged when converting to a different currency.

A.8 Effect of tax changes

A.8.1 The effect of changes to tax and other legislation in each jurisdiction.