



# AMERICAN ACADEMY *of* ACTUARIES

---

## **Practice Note on Anticipated Common Practices Relating to AICPA Statement of Position 03-1: Accounting and Reporting by Insurance Enterprises for Certain Nontraditional Long-Duration Contracts and for Separate Accounts**

**April 2005**

The American Academy of Actuaries (Academy) is the public policy organization for actuaries practicing in all specialties within the United States. A major purpose of the Academy is to act as the public information organization for the profession. The Academy is non-partisan and assists the public policy process through the presentation of clear and objective actuarial analysis. The Academy regularly prepares testimony for Congress, provides information to federal elected officials, comments on draft federal regulations, and works closely with state officials on issues related to insurance. The Academy also develops and upholds actuarial standards of conduct, qualification and practice and the Code of Professional Conduct for all actuaries practicing in the United States.

This practice note has not been promulgated by the Actuarial Standards Board nor by any other authoritative body of the American Academy of Actuaries. The information in this practice note is not binding on any actuary and is not a definitive statement as to what constitutes generally accepted practice in this area.

The Academy welcomes your comments and suggestions for additional questions to be addressed by this practice note. Please address all communications to Amanda Yanek, Life Policy Analyst at ([yanek@actuary.org](mailto:yanek@actuary.org)).

The members of the work group that are responsible for this practice note are as follows:

Errol Cramer, FSA, MAAA  
William Hines, FSA, MAAA  
Ken LaSorella, FSA, MAAA  
Patricia Matson, FSA, MAAA  
John Morris, FSA, MAAA

Kevin Palmer, FSA, MAAA  
David Rockwell, FSA, MAAA  
Carol Salomone, FSA, MAAA  
Roger Smith, FSA, MAAA  
Michelle Smith, FSA, MAAA

## Introduction

This is an update to the original practice note dated March 2004. The original practice note was prepared by a work group organized by the Life Financial Reporting Committee of the American Academy of Actuaries. The work group was charged with developing a description of some of the anticipated common practices that might be considered by actuaries in the United States with implementation of Statement of Position (SOP) 03-1, effective generally starting 2004. The practice note has been updated by the Life Financial Reporting Committee for subsequent accounting guidance that has been released and for additional issues that have arisen from company experience with implementation of the SOP. Events occurring subsequent to the date of publication of this Practice Note may make the practices described herein irrelevant or inappropriate.

The practices presented here represent views of actuaries in industry, consulting and public accounting firms involved in implementation of the SOP. The purpose of the practice note is to assist actuaries with application of the SOP. It should be recognized that the information contained in the practice note provides guidance, but is not a definitive statement as to what constitutes generally accepted practice in this area. Actuaries should consider the facts and circumstances specific to their situation, including the views of their independent auditors, when practicing in this area.

This practice note has been divided into six sections:

- Section A: General GAAP requirements for life and annuity contracts
- Section B: GAAP reserves for minimum death benefit and other insurance guarantees
- Section C: GAAP reserves for minimum annuitization guarantees
- Section D: GAAP reserves and assets for sales inducements
- Section E: Reinsurance and hedging
- Section F: Transitional rules for implementation of Statement of Position 03-1

## **Section A: General GAAP Requirements for Life and Annuity Contracts**

### **Q1. What accounting guidance is discussed in this Practice Note, and how does that guidance relate to existing GAAP requirements?**

A1. The accounting guidance discussed in this note is that contained in AICPA Statement of Position (SOP) 03-1 (July, 2003), FASB Staff Position (FSP) No. FAS 97-1 (June, 2004) and AICPA Technical Practice Aids (TPA) 6300.05 – 6300.10 (September, 2004).

The SOP provides guidance related to valuation, accounting and reporting for nontraditional products. This includes, for example, guidance as to how liabilities are to be measured for variable annuity death benefit guarantees, two-tier annuities and guaranteed annuitization benefits and guidance as to how to account for bonus interest and other sales inducements. The FSP and TPA augment the SOP by addressing specific issues that surfaced as companies adopt the guidance in the SOP.

SAS 69 gives the hierarchy of various financial pronouncements. In that hierarchy, an SOP is considered category (b), ranking below category (a) guidance like FAS 60 and FAS 97. The TPA are considered category (d) and, while not addressed specifically by SAS 69, some believe it is appropriate to categorize the FSP as category (c) GAAP.

### **Q2. What role do actuaries play in interpreting the provisions of the SOP?**

A2. Actuaries are qualified to provide guidance in interpreting the SOP. However, the final interpretation will result from the accounting profession's rule setting process.

### **Q3. What are the key items of interest to actuaries covered by SOP 03-1?**

A3. Following are the items that are usually of interest to actuaries covered by the SOP:

1. Paragraph 11 of the SOP sets out four conditions for recording a separate account arrangement at fair value, including the requirement that all investment performance, net of contract fees, be passed through to the contract holder. If the four conditions are not all met, the separate account assets and liabilities are accounted for as general account assets and liabilities.
2. Under FAS97, the base benefit liability is the contract holder account balance. There are situations where a contract has multiple account balances defined; the SOP clarifies that the account balance to be reported as a liability in the company's financial statements is that which is essentially available in cash. For example, paragraph D5 of the SOP requires that the lower cash value tier versus the annuitization tier apply for a two-tier product. The SOP, in paragraphs 20 through 23, further clarifies that the base liability is the account balance prior to any surrender charges or market value adjustments. Finally, it requires that accrued but not yet credited benefits be included in the liability.

3. Guidance is given in determining the significance of mortality and morbidity risk to be used in the classification of a contract as an investment contract or a universal life-type contract as defined in FAS 97. The determination is made at contract inception (exceptions apply at initial implementation of the SOP and for the reinsuring company upon initial reinsurance of inforce contracts). The general criteria are based on the present value of benefits in excess of the account value as compared to the present value of amounts assessed against the contract. Contracts where the amount of insurance varies significantly in response to the capital markets are presumed, unless rebutted, to have significant insurance risk. There is a rebuttable presumption that a contract has significant mortality risk where the additional insurance benefit would vary significantly in response to capital markets volatility.
4. Liabilities in addition to the account balance might be required for certain insurance benefit features for universal life-type contracts as defined in FAS 97. Specific examples given are minimum guaranteed death benefits (MGDB) on variable products and no-lapse guarantees on universal life-type contracts. A methodology is prescribed for calculating these liabilities.
5. Liabilities in addition to the account balance might be required for annuitization options typically offered under life insurance and deferred annuity contracts. Specific examples given are guaranteed minimum income benefits (GMIB) on variable products and the higher account balance available upon annuitization for two-tier annuities. A methodology is prescribed for calculating these liabilities.
6. Sales inducements are defined. The SOP requires a liability to be accrued over the period in which the contract remains in force for the contract holder to qualify for the inducement or at the crediting date, if earlier. Examples given are a bonus at issue (an additional liability is not necessary if the bonus is actually credited to the account balance), a persistency bonus, and an enhanced crediting rate (“bonus interest”) over an initial contract period. Additionally, certain sales inducements qualify for deferral as an asset in the same way as, but separate from, deferred acquisition costs (DAC). Deferred sales inducement costs are to be amortized over estimated gross profits (EGPs) over the life of the contract. Sales inducements that were not capitalized previously are not capitalized at transition.

#### **Q4. What other items are covered by SOP 03-1?**

**A4.** Following are some additional items covered by the SOP:

1. GAAP separate account treatment applies only to contract holder funds of variable products that meet four specific criteria (accounts are legally recognized, the assets are legally insulated from general account liabilities, contract holder directs investment strategy and all investment performance, net of contract fees and assessments, must go to the contract holder). An insurer might have an ownership interest in the separate account (“seed money”); the insurer may record its ownership as a mutual fund-type investment provided it has less than 20% of the total separate

account, otherwise it must apply a look-through to the underlying assets (i.e., use general account treatment). Rules are defined for recording gains/losses on transfers of assets between the general account and separate account. Finally, certain variable-like accounts where the insurer owns the assets (total return contracts) are required by the SOP to record liabilities at fair value whether or not the assets are at fair value.

2. A variety of disclosures are now required with the financials covering separate accounts, insurance guarantees, annuitization guarantees, and sales inducements. Required disclosures include methodology descriptions and net amount at risk (NAR) exposures.

#### **Q5. Are benefits valued under FAS 133 within the scope of the SOP?**

**A5.** Benefits valued under FAS 133 appear to be outside the scope of the SOP. Paragraph 7 of the SOP states, "*Embedded derivatives contained in nontraditional contracts should be accounted for in accordance with FASB Statement No. 133, Accounting for Derivative Instruments and Hedging Activities, and its related guidance.*" The SOP clarifies in several places, for example, paragraphs 21 and 31, that it does not apply to contract features falling under FAS 133.

However, contracts containing embedded derivatives might have other benefit features that are outside the scope of FAS 133 and it appears these features would then fall under the SOP. Also, FAS 133 allowed companies a choice to exempt contracts that were in force prior to its adoption, and it would appear these grandfathered contracts then fall under the SOP.

#### **Q6. What topics from the SOP are further addressed by the FSP or the TPA?**

**A6.** The FSP addresses the issue of whether the SOP changes the prior FAS97 requirements for establishment of an unearned revenue liability (URL). With adoption of the SOP, some believed that it was no longer appropriate to establish certain URLs, e.g. for UL cost of insurance charges that are disproportionate to the death benefit provided. The FSP states in paragraph 8 "*This requirement of SOP 03-1 does not amend Statement 97 and does not limit the requirement of Statement 97 to recognize a liability for unearned revenue only to those situations where profits are expected to be followed by losses.*"

The TPA address six topics specific to the SOP:

*6300.05. Definition of an Insurance Benefit Feature*

*6300.06 Definition of an Assessment*

*6300.07 Level of Aggregation of Additional Liabilities Determined under SOP 03-1*

*6300.08 Losses Followed by Losses*

*6300.09 Reinsurance*

*6300.10 Accounting for Contracts that Provide Annuity Benefits*

Questions 6300.05 - .09 give guidance on the application of paragraph 26 of the SOP and question 6300.10 gives guidance on the application of paragraphs 31-35 of the SOP.

## **Section B: GAAP Liabilities for Contracts with Death or Other Insurance Benefit Features**

### **Q7. What are the circumstances under which the SOP might require liabilities in addition to account balances for insurance benefits?**

**A7.** Additional liabilities for insurance benefits might be required by the SOP when all of the following apply:

1. A contract contains a mortality or morbidity contingent benefit feature providing for payment of an amount in excess of the account balance;
2. The contract is classified as a FAS 97 universal life-type contract with fees and benefits that are not fixed and guaranteed; and
3. It is expected that periodic charges assessed for insurance benefits will result in profits in early years and losses in subsequent years (i.e., there is an element of front-ending of charges relative to benefits incurred).

The SOP requires a determination to be made as to whether the insurance risk in a contract meets the test of being significant. If not, the SOP requires the contract to be classified as an investment contract with no additional liabilities held for the insurance benefits (insurance benefits, if any, thereby deemed by the SOP to be non-significant). This determination is usually made at inception of the contract and would not usually be subsequently reconsidered (exceptions apply at initial implementation of the SOP, and for the reinsuring company upon initial reinsurance of inforce contracts).

### **Q8. What are examples of benefit features that might require additional insurance liabilities?**

**A8.** The SOP specifically mentions the following:

1. Minimum guaranteed death benefits (MGDB) provided under variable annuity contracts (paragraph 3);
2. No-lapse guarantees that keep universal life (UL) and variable universal life (VUL) contracts in force when the account balance is zero and any minimum stipulated premiums are insufficient to cover the cost of insurance plus all other contract charges (paragraph 3);

3. Long-term care or similar insurance benefits provided during the accumulation phase of a deferred annuity (paragraph D21);
4. Earnings protection benefits on deferred annuities that pay a death benefit in excess of account balance to cover taxes on contract earnings (paragraph D22); and
5. MGDB or other insurance benefits provided with mutual fund or other noninsurance contracts (paragraph 30).

The above are examples only; any benefit paid in excess of the account balance and based on mortality or morbidity contingency would generally be considered. In fact, TPA 6300.05 is specific that the base mortality or morbidity benefit feature should be considered. These insurance benefit features would usually be considered both by the insurer providing the benefit directly and by a reinsurer assuming all or a portion of the risk.

**Q9. What would generally be considered in deciding to classify a deferred annuity as an insurance contract versus an investment contract?**

**A9.** Paragraph 24 of the SOP states, *”If the **mortality** and **morbidity** risk associated with insurance benefit features offered in a contract is deemed to be nominal, that is, a risk of insignificant amount or remote probability, the contract should be classified as an investment contract; otherwise, it should be considered an insurance contract.”* So, if a deferred annuity provides for the possibility that death or morbidity benefits will be paid in excess of the account balance, the actuary would usually assess the significance of the insurance risk. (Determination of materiality regarding what is “significant” is outside the scope of this Practice Note. However, paragraph 24 of the SOP does provide some guidance with references to terms such as “nominal” “insignificant” and “remote.”) If it is determined that the amount of benefits expected to be paid for the contract is insignificant or there is only a remote probability that benefits in excess of the account balance will be paid, the contract is classified as an investment contract, otherwise, the contract is classified as an insurance contract.

Paragraph 24 of the SOP provides a rebuttable presumption that insurance risk is significant if insurance benefits *”would vary significantly in response to capital markets volatility.”* Thus, for example, variable annuities with MGDB would usually be classified as universal life-type insurance contracts unless the actuary has a persuasive case to rebut the presumption that the insurance risk is significant.

According to paragraph 25 of the SOP, in determining whether the insurance risk is significant, the actuary generally projects expected insurance benefits and contract revenues under a *“full range of scenarios, that considers the volatility inherent in the assumptions, rather than making a best estimate using one set of assumptions.”* Insurance benefits include amounts paid in excess of the account balance and related claim administration costs. Contract revenues include amounts assessed against the contract holder, including investment margins, surrender charges and policy fees. The

present value of expected benefits is compared to the present value of expected assessments (revenues) across the range of scenarios tested.

For example, if benefits in excess of account balance are projected in virtually all scenarios but the present value of these benefits is almost always relatively small compared to the present value of assessments, the actuary might conclude the insurance risk is insignificant and classify the contract as an investment contract. On the other hand, if the present value of these benefits is relatively large in even a few scenarios, the actuary might conclude the insurance risk is significant and classify the contract as an insurance contract.

**Q10. If the insurance risk is significant, does the SOP always require that insurance liabilities be held in addition to the account balance?**

**A10.** Paragraph 26 of the SOP states that an additional insurance liability should be established *”if the amounts assessed against the contract holder each period for the insurance benefit feature are assessed in a manner that is expected to result in profits in earlier years and losses in subsequent years from the insurance benefit function.”* Some actuaries interpret this to mean additional insurance liabilities would usually be considered only if insurance charges are expected to be more than insurance benefits in early years and less than insurance benefits in later years. This is termed the *”profits followed by losses”* test.

The FSP and TPA 6300.06 and 6300.08 provide additional guidance on how to apply paragraph 26 of the SOP. Several specific situations are discussed in the remainder of this section.

**Q11. Does the actuary usually consider a range of scenarios to determine whether to expect profits followed by losses from the insurance benefit feature?**

**A11.** As discussed in Q10 above, paragraph 26 of the SOP requires an assessment as to whether profits followed by losses is expected. Paragraph 26 goes on to say, *“expected experience should be based on a range of scenarios rather than a single set of best estimate assumptions.”* As discussed in Q9 above, a full range of scenarios is also usually considered in determining whether the insurance risk is significant.

In this light, some actuaries believe it is likewise appropriate to consider a range of scenarios to determine whether to expect profits followed by losses from the insurance benefit feature. Other actuaries, however, may believe it is appropriate in some or all situations to look at a single deterministic scenario based on the best estimate assumptions used in DAC amortization.

**Q12. Does the SOP require the test for “profits followed by losses” and the liability calculation to be performed for each benefit feature on a standalone basis, or may one aggregate at the entire contract level or some other level?**

**A12.** Paragraph 26 of the SOP states “*the insurance benefit feature*” is to be tested for profits followed by losses from “*the insurance benefit function.*” TPA 6300.05, *Definition of an Insurance Benefit Feature*, states “*The test should be applied separately to the base mortality and morbidity feature and, in addition, separately to each other individual mortality or morbidity feature.*” TPA 6300.05 also provides guidance on what constitutes a mortality or morbidity feature separate from the base feature.

Neither the SOP nor the TPA specifically addresses whether the liability calculation must be performed for each insurance benefit function. Some actuaries therefore believe insurance benefit features may be combined for purposes of calculating the additional liability. Others believe that since the test for profits followed by losses is performed for each insurance benefit function, it is preferable for the liability to be calculated for each insurance benefit function.

**Q13. My company issues a UL contract with reverse select and ultimate COI charges. Although the margin of COI charges over expected death benefits decreases over time, it is always positive. We currently defer a portion of COI charges as unearned revenue under the unearned revenue liability (URL) requirements of FAS 97. Does the SOP require us to do anything different?**

**A13.** In addressing this issue, the actuary may wish to consider sections of the FSP discussed below.

As the SOP limits establishment of an additional insurance liability to only those situations of profits followed by losses, a question had arisen as to whether the same requirement applied regarding establishment of a URL under FAS97, i.e., no URL unless profits were followed by losses. The FSP poses the question in paragraph 6 by stating, “*Some have read paragraph 26 as limiting the situations in which recognizing unearned revenue is appropriate – that is, only in the situation in which profits are followed by future losses would the recognition of unearned revenue be appropriate.*” The FSP addresses this question in paragraph 8 by stating “*SOP 03-1 does not amend Statement 97 and does not limit the requirement of Statement 97 to recognize a liability for unearned revenue only to those situations where profits are expected to be followed by losses.*”

However, the company may wish to consider whether it is appropriate to hold a URL in view of guidance from the FSP which states in paragraph 11 “*It is improper to record a liability for unearned revenue if the purpose is an attempt to inappropriately level the contract’s gross profit over the life of the contract or the accrual would serve to produce a level gross profit from the mortality benefit over the life of the contract.*” Therefore, one might conclude that it would be preferable the company to continue its practice of holding a URL for reverse select and ultimate COIs (regardless of whether or not profits are followed by expected losses), provided the company has determined that a portion of the upfront COIs are designed to provide for later death coverage and deferral does not serve merely to levelize the COI profit margin.

**Q14. My company issues a UL contract with level COIs. COIs are less than expected death benefit expenses at the later durations. Under the unearned revenue liability (URL) requirements of FAS 97, we currently defer a portion of early year COI charges. Does the SOP require us to do anything different for inforce or new contracts?**

**A14.** This differs from the situation in Q13 as the expectation is that the insurance benefit feature will produce profits followed by losses. In addressing this situation, actuaries may wish to consider the sections of the FSP discussed below.

Some actuaries point to paragraph 12 of the FSP which states, *“Paragraph 26 of SOP 03-1 specifies how to determine the amount of the accrual for the insurance benefit feature when profits are expected to be followed by losses.”* They interpret this to mean that for benefit features where profits followed by losses are expected, the requirement is for an additional insurance liability (per paragraph 26 of the SOP), in lieu of the URL.

Other actuaries believe the requirement of paragraph 26 of the SOP is in addition to, rather than in place of, the URL. They believe the SOP can not change the URL requirement of FAS 97, for example, as stated in paragraph 8 of the FSP *“This requirement of SOP 03-1 does not amend and does not limit the requirement of Statement 97 to recognize a liability for unearned revenue only to those situations where profits are expected to be followed by losses.”* They further note that it is possible to have both a URL and an additional insurance liability, as stated in paragraph 14 of the FSP, *“If a reporting enterprise has accrued unearned revenue liabilities in accordance with paragraphs 17(b) and 20 of Statement 97, those amounts should be considered in determining the necessary insurance benefit liability under paragraph 26 of SOP 03-1. Accordingly, for purposes of paragraph 26, an increase during a period in an unearned revenue liability is excluded from the amounts assessed against the contractholder’s account balance for that period and a decrease in an unearned revenue liability during a period is included with the assessments for that period.”*

In situations where the company does hold a URL, paragraph 14 of the FSP states that the URL *“should be considered in determining the necessary insurance benefit liability. . .”* Many actuaries interpret this to mean that it is still necessary to perform the profits followed by losses test and, if needed, determine an additional insurance liability per the SOP. Additionally, some actuaries believe both the test and calculation of additional reserves are done based on assessments net of changes in URL. A question may arise as to which components of the change in URL should be included in the profits followed by losses test (i.e., the entire amount versus just the amount associated with the insurance benefit feature). This issue is discussed in Q18.

**Q15. Certain of our UL riders have level rider premiums, and we have been holding FAS 60 reserves for these riders. Does this change under the SOP?**

**A15.** Some actuaries believe it is still appropriate to hold FAS 60 reserves for fixed premium riders. Those holding that view may look to TPA 6300.05, *Definition of an Insurance Benefit Feature*, which states, “*Other insurance benefit features that provide for fixed and guaranteed benefits and premiums, and offered as a rider or an addition to a universal life contract, in practice typically would have been and should continue to be, separately accounted for under FASB Statement No. 60, Accounting and Reporting by Insurance Enterprises.*”

Similar considerations may apply to riders that allow for non-guaranteed level premiums and for which FAS 60 reserves are held.

**Q16. I have a UL contract with a no-lapse guarantee feature. How does the SOP apply to this feature?**

**A16.** For a no-lapse guarantee UL, the contract is guaranteed to stay in force provided minimum premiums are paid (minimum premiums either as stipulated in the contract, or implicit as required to maintain a positive balance for a secondary “shadow” account). So, the contract stays in force even where the account balance goes to zero and the minimum premiums are insufficient to cover the COIs plus all other contract charges such as expense loads and policy fees.

In determining how the SOP applies to these contracts, actuaries may wish to consider TPA 6300.05, *Definition of an Insurance Benefit Feature*, which states “*Other individual mortality or morbidity features that would need to be tested separately are those features that create incremental mortality or morbidity risk to the base contract, (for example, no lapse guarantees or long term care riders in a universal life insurance contract) and TPA 6300.06, Definition of an assessment*, which states “*There is a presumption that the minimum guaranteed death benefit of a variable annuity and the no-lapse guarantee mortality feature of a universal life or a variable universal life contract will result in profits in earlier years and losses in subsequent years. This pattern of profits followed by losses results from the design and capital markets risks of these benefit features.*” Some actuaries may conclude that it is appropriate to consider the no-lapse guarantee as a standalone benefit feature, and presume both that the insurance risk is significant and that profits will be followed by expected losses. Other actuaries may test for significance and/or for profits followed by losses to see if either presumption should be rebutted.

In doing the standalone test, as well as in calculating liabilities when applicable, the actuary would need to determine what constitutes the “benefit.” The alternatives might include the following:

1. Some might consider the benefit to be a waiver of the amount of scheduled charges in excess of minimum premiums once the account balance has gone to zero. Some might believe it is usually appropriate to limit this benefit to the amount of scheduled COIs, as waiver of a portion of the expense loads might be considered a non-insurance benefit.

2. Others might consider the benefit to be death benefits paid on contracts maintained in force solely by the no-lapse guarantee. Those that take this view may wish to consider adjusting the death benefit, for example, by reducing by minimum premiums paid or by proportioning down by the ratio of minimum premium to COI for each period.

Since charges for no-lapse guarantees are often implicit only, the actuary might also determine what to use for insurance charges in testing for profits followed by losses. This is discussed further in questions 18 through 20.

**Q17. For a variable annuity with a GMDB, would I usually perform the test for profits followed by losses?**

**A17.** In determining how the SOP applies to these contracts, actuaries may wish to consider TPA 6300.06, *Definition of an Assessment*, which states “*There is a presumption that the minimum guaranteed death benefit of a variable annuity and the no-lapse guarantee mortality feature of a universal life or a variable universal life contract will result in profits in earlier years and losses in subsequent years. This pattern of profits followed by losses results from the design and capital markets risks of these benefit features.*” Some actuaries may conclude that it is unnecessary to actually test for profits followed by losses, since there is a presumption that it falls under the profits followed by expected losses category.

**Q18. In testing for profits followed by losses from an insurance benefit feature, should one use the explicit insurance benefit feature charge as the “amounts assessed” against contract holders?**

**A18.** In determining how the SOP applies to these contracts, actuaries may wish to consider TPA 6300.06, *Definition of an Assessment*, which states, “... *there is a rebuttable presumption that the explicit fee should be used for the paragraph 26 test in SOP 03-1. However, paragraph 54 of FASB Statement No. 97 goes on to state that there may be circumstances where the presumption may be overcome if evidence indicates that the substance of the agreement is not captured in the explicit terms of the contract. It is unlikely the presumption can be rebutted in the situation in which the assessment is explicitly incremental upon election of a separate insurance benefit feature and for which the policyholder has the choice to not pay if the election is not made.*” Some actuaries may conclude that the SOP requires the explicit charge to be used as the assessment for an optional insurance benefit feature, unless the charge does not capture the substance of the agreement. Some actuaries may interpret this to also conclude that the SOP requires any explicit charge to be used in testing the base benefit feature, again unless that charge does not capture the substance of the agreement.

Some actuaries believe that the guidance outlined in TPA 6300.06 would also apply to the extent the change in an unearned revenue liability is included in contract assessments (as described in Q14). Actuaries with this view normally would only include the portion of the change in URL explicitly associated with the insurance benefit feature as a

component of assessments, unless that approach is inconsistent with the substance of the agreement.

**Q19. What is an example of an explicit charge for an insurance benefit feature that does not capture the substance of the agreement?**

**A19.** TPA 6300.06, *Definition of an Assessment*, states, “For example, in some universal life policies, the product's base mortality function may have been designed and priced on an integrated basis with the other functions, such as administration and asset management. In such products, while the explicit cost of insurance charge is not expected to be sufficient to cover the death benefit risk in all periods, the product may be designed such that other assessments, including administrative fees, asset management fees, and investment margins, are expected to result in profits in subsequent years sufficient to offset the losses from the explicit cost of insurance charges designed shortfalls.”

**Q20. Where the explicit charge for an insurance benefit feature does not capture the substance of the agreement, or there is no explicit charge, what is used as “amounts assessed” against contract holders?**

**A20.** An implicit charge is determined based on an allocation of other charges in the contract, per the guidance provided by TPA 6300.06, *Definition of an Assessment*. The TPA points out the following considerations in determining that the allocation of charges is appropriate:

- *“Allocation is not inconsistent with documentation, if any, of pricing at contract inception,*
- *Assessments are allocated considering the recovery of all costs of each product component,*
- *Allocation does not contradict external information on the market value of an individual product component on a stand-alone basis, and*
- *Allocation method is applied consistently.”*

There are various ways this guidance might be applied. Some actuaries, for example, might apply this guidance by separating the benefits provided in a contract and allocating all charges across those benefits, including the portions of those charges intended to recover acquisition costs and provide for profit. Other actuaries might allocate profit loads across contract benefits, but not expense loads.

**Q21. Might I consider an additional insurance liability if I expect smaller losses followed by larger losses?**

**A21.** In determining how the SOP applies to these contracts, actuaries may wish to consider TPA 6300.08, *Losses Followed by Losses*, which states, “...the concept underlying paragraph 26 of SOP 03-1 is that the insurance entity may be required to establish a liability if it provides an insurance benefit in future periods for which it charges amounts in such periods that are less than the expected value of the insurance benefits to be provided. Consequently, the insurance enterprise should recognize a liability. This concept is applicable in situations in which charges attributable to an insurance benefit feature are less than the expected cost of the insurance benefit in all periods.”

In this situation, the actuary may choose to review the allocation of contract charges to the insurance benefit in the context of any available pricing documentation.

**Q22. In testing for expected profits followed by subsequent losses, how far in the future is “subsequent?” I have a UL with a 5-year no-lapse guarantee. Does the SOP apply?**

**A22.** The SOP does not specify the duration over which to consider “subsequent” losses. As discussed in Q16 above, those who decide to treat the no-lapse guarantee as a standalone benefit feature may also believe it is usually appropriate to test for profits followed by losses and to establish any additional liabilities over the 5-year horizon.

**Q23. Is testing for profits followed by losses done at issue only, or is this testing updated as actual experience emerges?**

**A23.** Paragraph A28 of the SOP says, “Similarly, the comparison of the timing of expected assessments and related benefits for determining whether the amounts assessed against the contract holder each period for the insurance benefit feature are assessed in a manner that is expected to result in profits in earlier years and losses in subsequent years from the insurance benefit function would occur at inception only, as well.” Some actuaries believe this means that this test would usually be performed at issue only, with exceptions applicable to inforce business at initial implementation of the SOP, and for the reinsuring company upon assuming reinsurance on inforce contracts.

**Q24. How are the additional liabilities for insurance benefits generally determined?**

**A24.** The methodology is prescribed in paragraphs 26 through 28 of the SOP. The first step is to calculate the benefit ratio (BR) by the following formula:

$$BR = \frac{\textit{Present value of cumulative actual plus future expected excess benefits}}{\textit{Present value of cumulative actual plus future expected total assessments}}$$

This ratio is similar to the ratio used in significance of risk testing. Similar to significance of risk testing, the benefit ratio is based on future expected experience over a full range of scenarios, rather than on a single set of best estimate assumptions. Other than the need to consider a range of scenarios, paragraph 26 of the SOP states, “In calculating the additional liability for the insurance benefit feature, assumptions used, such as the interest rate, discount rate, lapse rate, and mortality, should be consistent with assumptions used in estimating gross profits for purposes of amortizing capitalized acquisition costs.”

The next step is to calculate the liability as defined in the SOP on a retrospective basis by the following formula:

$$\textit{Additional Insurance Liability} = \textit{BR* cumulative actual assessments minus cumulative actual excess payments, all accumulated with interest}$$

To ensure mathematical consistency of the formula, the interest rate accreted to the liability would normally be the same as the discount rate used in determining present values. Some actuaries thus believe the interest rate applied to the liability would be the same as the discount rate. Given the language quoted above from paragraph 26, some further believe this would be the same rate as used to discount and accrete interest in the calculation of DAC. (See Q25 for a further discussion of this interest rate.)

Conceptually, the BR represents the “net premium” funding of expected benefit costs where the net premium is expressed as a constant percentage of the assessment base. The liability accounts for the difference in past payments to date from their levelized expected

costs. Paragraph 27 of the SOP requires periodic review and unlocking as for DAC, and states, *“The insurance enterprise should regularly evaluate estimates used and adjust the additional liability balance, with a related charge or credit to benefit expense, if actual experience or other evidence suggests that earlier assumptions should be revised.”*

Paragraph 26 of the SOP states that the BR may exceed 100%. The actuary would usually be prudent to evaluate whether a premium deficiency reserve is needed in this situation, considering factors such as the level at which the company tests for premium deficiencies and the materiality of this insurance benefit feature.

Finally, paragraph 28 of the SOP states that the additional insurance liability may not be less than zero.

**Q25. What discount rate would be used for calculating present values in determining the benefit ratio?**

**A25.** As discussed in Q24, some actuaries believe paragraph 26 of the SOP requires use of the same discount rate as for DAC. Under paragraph 22 of FAS 97, this is the credited rate and not an assumed asset earnings rate. Paragraph 25 of FAS 97 allows for two options for determining the DAC discount rate, (a) a single rate from inception or (b) a rate updated to reflect experience. Although paragraph 26 of the SOP requires that benefits and assessments be projected over a range of scenarios to determine the benefit ratio, some actuaries might believe it would not be appropriate to use a path-dependent interest rate for calculating present values in determining the benefit ratio.

**Q26. How many scenarios are generally used to meet the requirements of the SOP?**

**A26.** Some actuaries believe that where insurance benefits do not vary significantly with capital markets volatility, one or several deterministic scenarios may be sufficient. Where insurance benefits do vary significantly with capital markets, paragraphs 25 and 26 of the SOP require consideration of a range of scenarios. The general approaches the actuary might consider include the following:

1. One approach might be to project a stochastic set of scenarios. The actuary would consider evaluating whether there are a sufficient number of scenarios such that the results would not change materially as additional stochastic scenarios were added. A technique some actuaries might employ would be to test on a sample of the business how results converge as the number of stochastic scenarios is successively increased.
2. Another approach might be to identify a set of representative scenarios, or even a single representative scenario. The scenarios could be deterministic or could be periodically generated afresh based on current market conditions. Either way, the actuary would usually be prudent to be able to support the conclusion that the representative scenario(s) provide results consistent with consideration over a range of equity market movements. One technique might be to generate a set of stochastic scenarios and then identify a subset that produce results representative of the bigger stochastic set. Another technique might be to apply analytical consideration of likely

equity market movements together with analysis of the path dependency of the benefit features in deriving appropriate representative scenarios.

The impact of a range of scenarios on both the benefits and the assessments normally would also be considered.

**Q27. Does the SOP require consideration of a range of mortality and/or policyholder behavior scenarios?**

**A27.** In some cases, testing a range of mortality or policyholder behavior assumptions may be appropriate. For example, a no-lapse UL guarantee would usually depend in large part on future interest rate levels, but could depend as well on how richly policyholders fund their contracts. The actuary might choose to consider evaluating whether a variation in the funding level is significant to the benefit and whether a range of funding levels should be considered.

Some actuaries believe, however, that the intent of the SOP is to require testing of a range of results for only the key drivers of any additional insurance reserves, but not necessarily to have to test a range for each and every possible variable outcome. Typically this means considering a range of economic scenarios, i.e., interest rate levels and equity market changes. To the extent practical and applicable, some actuaries also believe one would usually base assumptions made about policyholder behavior on formulas that appropriately reflect the expected relationship to capital market conditions, for example, excess lapses based on the projected differential between credited rates and market rates.

Some actuaries might believe it would usually be appropriate to have more refined models by considering stochastic mortality scenarios.

**Q28. How does the actuary usually determine the BR from a range of scenarios tested?**

**A28.** Paragraph 26 of the SOP defines the BR as the ratio of “*expected*” values. Some actuaries believe it would usually be appropriate to determine the expected value as the mean result when considering a range of values. One approach is to calculate the mean BR as the mean of the present value of benefits across all scenarios divided by the mean of the present value of assessments across all scenarios. This approach appears consistent with the language of the SOP, which states that, “*The amount of the additional liability should be determined based on the ratio (benefit ratio) of (a) the present value of total **expected** excess payments over the life of the contract, divided by (b) the present value of total **expected** assessments over the life of the contract.*” and “**Expected** experience should be based on a range of scenarios rather than a single set of best estimate assumptions.” In addition, this approach provides for internal consistency in some methods of calculating the additional insurance liabilities and DAC (see Q32 below).

Another approach would be to calculate the BR for each scenario and simply take the mean of these ratios. Some actuaries believe this is appropriate because the numerator

(benefits) and denominator (assessments) of the benefit ratio are negatively correlated, i.e., scenarios producing relatively high excess payments also produce relatively low assessments. This negative correlation is better captured by using the mean of the benefit ratios. A potentially relevant consideration when applying this method is that the BR could be very high for the adverse scenarios when both benefits are large and assessments are small, e.g., in projecting results for a variable annuity MGDB. Some actuaries believe this could skew results in some situations and create an unduly conservative value for the mean BR and reserve. In addition, this approach can create consistency issues when calculating the associated insurance liability and DAC impact, since there is usually no single stream of future assessments to which the benefit ratio can be applied that will result in the liability declining to zero at the end of the projection period.

Some actuaries might choose alternate measures for the BR, for example, for practicality reasons or because it is felt the scenarios are not all equally likely. Some examples might be: the use of a percentile ranking; choosing a representative scenario(s) among the projected set; or calculating the expected value by assigning weights to the scenarios tested.

**Q29. I determine my benefit liability using a stochastic set of scenarios. If I am using a mean reversion approach for DAC amortization, how would I make my benefit liability return assumptions (which are stochastically generated) consistent with my DAC return assumptions during the mean reversion period?**

**A29.** The actuary might consider various approaches, including the following three:

1. Some actuaries might use the mean reversion rate as the mean return in a stochastic generator during the mean reversion period and use the long-term rate as the mean return for subsequent periods.
2. Some actuaries might use the base return assumption (prior to mean reversion) as the mean for purposes of generating stochastic returns, and either: (a) disregard mean reversion for purposes of the additional insurance reserve under the SOP; or (b) adjust all scenarios by x basis points in the mean reversion period, where x is the difference between the long-term rate and the mean reversion rate.
3. Some actuaries might use a mean return assumption in all periods at some level between the mean reversion rate and the long-term rate.

**Q30. At what level of aggregation is it usually appropriate to calculate the BR and resultant additional insurance benefit liabilities for a set of contracts?**

**A30.** TPA 6300.07, *Level of Aggregation of Additional Liabilities Determined under SOP 03-1*, states, “It is presumed that the level of aggregation generally should be consistent with the level at which the entity’s DAC amortization ratios and associated DAC balances are calculated.” It states further, “It is not appropriate to combine DAC-level groups for aggregation purposes in paragraph 26 of SOP 03-1. Aggregation at a

*more detailed level than the level at which the entity's DAC amortization ratios and associated DAC balances are calculated may be warranted based on an individual entity's facts and circumstances."*

Therefore, the TPA specifies that the BR should be calculated at the same, or more detailed level, than what the company uses for purposes of its DAC amortization ratio (commonly referred to as the DAC k-factor).

Individual entities differ as to the level of aggregation used for their DAC k-factors and, likewise, would have different approaches as to the level of aggregation for their BRs. Some entities might simply determine BR at the same level as used for DAC, whereas others might choose to determine BR at more detailed levels, for example, separately for each benefit rider or feature within a group of policies combined for DAC purposes.

Lastly, it is possible for a company to have blocks of business that have no DAC but do require additional insurance liabilities. The level at which BR would be calculated would follow the same considerations of facts and circumstances as discussed above.

**Q31. At what level of aggregation is it generally appropriate to floor any additional insurance benefit liabilities at zero?**

**A31.** Paragraph 8 of the SOP states the additional insurance liability balance cannot be less than zero in any event. As set out in Q30 above, TPA 6300.07 presumes that the level of aggregation for calculation of the additional insurance liability is the same level as for DAC k-factors, or a more detailed level where warranted. Some actuaries may believe, then, that the test for a zero floor for the liabilities applies at the same level at which the liability is calculated, i.e., the same or more detailed level than for DAC k-factors.

**Q32. The SOP requires that estimated gross profits (EGPs) used for amortization of DAC be adjusted to reflect the recognition of any additional insurance liabilities, and that assumptions for EGPs and these liabilities be consistent. How would the actuary typically reconcile EGPs and liabilities when EGPs are based on a single set of best estimate assumptions and liabilities are based on a range of values?**

**A32.** The actuary might consider various approaches, including the following two:

1. Determine projected EGPs by simply using the mean results over the range of scenarios, i.e., the mean value for assessments, the mean value for contract expenses and the mean value for paid benefits. This would typically be done for each projection period separately. This ensures internal consistency, specifically, the additional insurance liabilities would be projected to amortize down to zero within the projection period. (This holds true provided the BR is determined as the present value of benefits summed over all scenarios divided by the present value of assessments over all scenarios, and where present value is done at the same discount rate as used for additional insurance liabilities and DAC.)

2. Determine the BR using a range of scenarios as above, project future assessments and expenses deterministically on the basis of a single set of best estimate assumptions, and calculate EGPs as the best estimate assessments less the best estimate contract expenses and less incurred claims determined as BR times the best estimate assessments. Note there usually would be no need for an explicit projection of paid benefits or changes in the additional insurance liabilities under this method. This approach, however, might not automatically reflect any impact on incurred benefits of flooring the liability at zero, and might not be appropriate if the company chooses not to include interest on liabilities in the adjustment made to EGPs (see Q33).

Some actuaries might use variations on these general methods. For example, under the second method above, some actuaries might choose to use existing projections of future paid benefits such as might be available from the company’s recent plan or risk management forecasts (provided done using assumptions appropriate for GAAP). Incurred benefits would then be determined as paid plus change in liability; the actuary would then project out a path for the current additional insurance liability to be eventually amortized to zero (the liability could potentially increase before decreasing, and could potentially be subject to a zero floor at times).

**Q33. When reflecting the change in additional insurance liabilities in EGPs, would the actuary also increase EGPs by investment income from assets supporting these liabilities?**

**A33.** The SOP is not specific on this point and states merely in paragraph 29 that, “*The estimated gross profits used for the amortization of deferred acquisition costs should be adjusted to reflect recognition of the liability in accordance with paragraph 28 of this SOP.*”

Conceptually, some actuaries might believe it would be appropriate to adjust EGPs for interest on the additional insurance liabilities. This issue can be laid out by considering the following equations:

$$(1) \text{ EGP}_t = \text{Assessments}_t - \text{Contract Expenses}_t - \text{Paid Benefits}_t - \text{“Adjustment”}_t$$

$$(2) (\text{Liability}_t - \text{Liability}_{t-1}) = \text{BR} * \text{Assessments}_t - \text{Paid Benefits}_t + \text{Liability Interest}_t$$

The SOP does not stipulate how to apply the “*Adjustment*,” but one interpretation is simply to apply the change in the additional insurance liability. Substituting  $(\text{Liability}_t - \text{Liability}_{t-1})$  for “*Adjustment*” in equation (1) gives:

$$\text{EGP}_t = \text{Assessments}_t - \text{Contract Expenses}_t - \text{Paid Benefits}_t - (\text{Liability}_t - \text{Liability}_{t-1}), \text{ or}$$

$$(3) \text{ EGP}_t = \text{Assessments}_t - \text{Contract Expenses}_t - \text{BR} * \text{Assessments}_t - \text{Liability Interest}_t$$

As can be seen in equation (3), reflecting the additional benefit liabilities in EGPs not only replaces paid benefits with a levelized funding cost equal to “ $\text{BR} * \text{Assessments}$ ” but

also reduces EGPs by interest accreted to the additional liability balance. Some actuaries might believe it is usually appropriate to add this interest cost back in to EGPs so the periodic benefit cost reflected in EGPs is a constant percentage of assessments. In effect, the “*Adjustment*” would be determined as change in liability plus interest on the liability, rather than change in liability alone. In this case, the additional interest adjustment would usually be determined at the same rate at which interest accretes to the liability.

In addition, as described in Q34 below, in order to use a “shortcut” approach to address the issue regarding interdependence of the SOP reserve and amortization of an unearned revenue liability, interest on the reserve would normally be included in EGPs. Some actuaries may include interest on the liability in order to apply the shortcut formula.

Alternatively, the actuary might think of interest on assets supporting the liability as a component of investment margin since the GAAP liability under the SOP is comprised of account balance plus additional insurance liabilities. In this case, interest would typically be determined at the portfolio earned rate. However, paragraph 23 of FAS 97 states that EGPs should include “*amounts expected to be earned from the investment of policyholder balances.*” Some actuaries might read this restrictively to mean EGPs should not be adjusted to include investment income on assets supporting additional insurance liabilities. On a technical point, then, interest on the additional liability might be better characterized under GAAP as a component of the adjustment to EGPs for the additional insurance liabilities (i.e., use of the liability rather than portfolio rate).

Other actuaries note that the illustration provided in Appendix E of the SOP does not adjust EGPs to include investment income on assets supporting additional insurance liabilities. So, while conceptually appropriate, some actuaries might believe it is not required to adjust EGPs for interest on liabilities, while other actuaries might believe it is not even appropriate to do so.

**Q34. My product has non-level revenue items requiring an unearned revenue liability (URL) and also has insurance benefit features requiring additional liabilities. How would I do the calculations, as there appears to be an interdependence of these items?**

**A34.** Paragraph 26 of the SOP notes that certain front-end fees are deferred and amortized as a URL under FAS 97. In such case, paragraph 26 states, “*The amounts recognized in income should be considered assessments for purposes of this paragraph.*” Interdependence arises, as the URL is dependent on EGPs that are dependent on additional insurance liabilities, and the additional insurance liabilities are dependent on assessments that are dependent on the URL. Mathematically, an iterative approach is used by some actuaries to solve for a circular relationship; an iterative approach might then be considered when a product has non-level revenue deferred as a URL and also has features requiring additional insurance liabilities. An example might be a UL with policy fees charged for the first ten contract years only, and with a no-lapse guarantee.

An iterative approach could be applied as follows:

1. Calculate the interim EGP stream by ignoring the additional insurance liabilities, and use these to determine the interim stream of URL balances. Note that the final EGP stream is unknown until the BR and additional insurance liabilities have been determined.
2. Determine the interim incurred assessments by adjusting collected assessments by the changes in interim URL. Use this stream for determining the interim BR and interim stream of additional insurance liabilities.
3. Use the interim stream of additional insurance liabilities to determine the adjusted EGP stream.
4. Use the adjusted EGP stream to determine the adjusted stream of URL. If not close to the interim URL, iterate back through steps 2 through 4 above. (For practicality reasons, it might often be sufficient to stop at step 4.)

Another approach would be to first calculate the BR using all assessments excluding the change in URL. Then calculate EGPs, including the estimated benefits and liabilities associated with the insurance benefit feature. Then the URL amortization could be recalculated and the change in URL included in assessments. If the assessments including the change URL do not differ significantly from those without change in URL, no additional analysis generally would be required. If they do differ, the iterative process could be repeated until the difference became insignificant.

Finally, a “shortcut” approach might be used to determine the results of the iterative approach. This approach is described in the August 2004 Financial Reported article entitled “Resolution of Circularity Issues in SOP 03-1” by Mike Lesar. The approach relies on two key assumptions: (1) that interest on reserves is included in EGPs (offsetting the interest component of the reserve increase); and (2) that interest on the URL is included in EGPs (offsetting the interest component of the URL increase).

**Q35. The SOP requires regular evaluation of the additional insurance liability and restatement as necessary. Is this linked to periodic review and unlocking of DAC?**

**A35.** Some actuaries believe these two items are closely linked, as the BR and additional insurance liability get restated as needed in a manner analogous to how the k-factor and DAC get unlocked. In particular, past actual assessments and paid benefits are generally used, and expected future assessments and paid benefits typically get reprojected based on the current inforce and current set of assumptions (future projections are done under a range of scenarios under paragraph 26 of the SOP).

Some actuaries believe it would be logical to first review the BR and additional insurance liabilities before a DAC review. To the extent the BR and insurance benefit liabilities are changed, this would usually impact the EGP stream for DAC.

Some actuaries observe there is a subtlety in the review requirements, as follows: the BR and additional insurance liabilities are subject to review when evidence suggests assumptions need to be changed (paragraph 27 of the SOP), whereas DAC is subject to unlocking when evidence suggests EGPs need to be changed (paragraph 25 of FAS 97). It may be possible that situations will arise where the company determines that only the additional insurance liabilities or only the DAC would be unlocked. For example, changes in contract expenses typically would impact DAC but not the insurance liability.

**Q36. For variable products, would one usually include or exclude investment advisory and other investment fund based fees from the calculation of assessments?**

**A36.** Paragraph 26 of the SOP states, “*Total expected assessments are the aggregate of all charges, including those for administration, mortality, expenses, and surrender, regardless of how characterized.*” Some actuaries note the words “*all charges ... regardless of how characterized,*” and read this to include investment advisory and other fund-based fees. Some actuaries also note that the same fees could be characterized as either account balance or fund-based. For example, it is possible to design a variable product with zero fees charged the policyholder and margins taken by the company out of the investment funds. Some actuaries may believe, then, that charges that are revenue to the company would appropriately be included, whether account balance based or fund-based, and whether collected by the company or by an external fund manager (to the extent they are shared with the insurance company).

Other actuaries note that the examples of assessments given in paragraph 26 of the SOP are those applicable to account balances, and interpret this to mean assessments would appropriately include only those items charged directly to the policyholder.

While there could be a difference in the result of the significance test based on what is included in the assessment base, the two approaches would likely result in similar additional insurance liability levels, since it is the pattern rather than the level of assessments that typically determines the liabilities held.

**Q37. What relationships do the additional GAAP MGDB and GMIB liability levels have with corresponding statutory reserves (i.e., in explaining results to management and external analysts)?**

**A37.** The calculations are fundamentally different and the amounts will likely not have a stable relationship. The additional GAAP liabilities for insurance benefits are usually based on the amounts assessed for the benefits over the policy lifetime and a benefit stream that is determined using a range of scenarios. Statutory reserves are usually based on the net amount at risk (NAR) exposure as of reporting date and deterministic assumptions. In the case of GMIB and other guaranteed living benefits, there is normally a floor of past accumulated rider fees. However, the statutory reserve is additionally subject to standalone cash flow adequacy testing based on the NAR as of the reporting date. Further, there is a revised valuation law in development under which , if it is

adopted, statutory reserves for all VA guarantees would be based on cash flow type testing and thus reflect current market exposure.

For example, consider a newly issued block where a change in the capital markets creates a large NAR. Statutory reserves would reflect the current NAR exposure. Under GAAP, the BR would increase and the rate of future funding of the liability would go up. However, the current liability balance typically would go up by only the change in BR applied to past assessments (liability increase would likely be minimal for newer issued blocks).

As another example, assume a favorable market change in the capital markets that makes the chance of future payout small. Statutory reserves could be zero if the market improvement were sufficiently favorable. Under GAAP, the BR would be reduced but liabilities might still be positive.

### **Section C: GAAP Liabilities for Minimum Annuitization Guarantees**

**Q38. What are the usual considerations in determining whether an annuitization option might require a liability to be held in addition to the base reserve of the account balance?**

**A38.** The actuary would usually take into account the following considerations:

1. Paragraph 31 of the SOP states, “*an additional liability for the contract feature should be established if the present value of expected annuitization payments at the expected annuitization date exceeds the expected account balance at the expected annuitization date.*” So, the first step would usually be to assess whether there is potential at some or all future annuitization dates for expected excess payments, i.e., present value of annuitization benefits in excess of the account balance (see Q43 for discussion on present valuing). If so, typically one would then consider the expected rates of future annuitization.
2. Unlike for insurance benefits, the SOP does not prescribe a significance test or a test at inception for profits followed by losses. Also, the SOP does not stipulate that the deferred contract be insurance or investment only, and does not stipulate that the expected annuitization payments be life contingent or certain. Some actuaries believe that it normally would, therefore, be appropriate to hold an additional liability for annuitization options whether the contract is insurance or investment, and whether or not life contingent annuitizations are offered. Also, some actuaries believe this applies equally to traditional and nontraditional products.
3. The SOP is applicable only when the annuitization option does not fall under FAS 133 (paragraph 31 of the SOP).

In brief, the SOP might require an additional liability if the present value of future annuitization payments is expected to exceed the account balance available at annuitization.

**Q39. What are examples of annuitization options that have potential for benefit payments in excess of that provided by the account balance, and specifically what account balance typically would be used?**

**A39.** Paragraph 31 of the SOP provides as examples annuity purchase guarantees, guaranteed minimum income benefits (GMIB) and two-tier annuities. Additionally, some actuaries believe it would usually be appropriate to evaluate any annuitization option provided by a fixed or variable deferred annuity contract or as a settlement option on a life contract to determine whether there is a potential for excess annuitization payments.

Paragraph 31 of the SOP refers to the “*accrued account balance*,” in testing for excess annuitization benefits. The SOP states in the Summary section, “*the accrued account balance should be based on the highest contractually determinable balance that will be available in cash or its equivalent at contractual maturity or reset date, without reduction for future fees and charges.*” Some actuaries believe that, when testing for excess annuitization benefits, the appropriate account balance typically would be the highest balance available in cash before surrender charge or market value adjustment. For example, the lower account balance tier usually would apply in the case of a two-tier annuity.

**Q40. Is the requirement for additional liability for annuitization options applicable only to products within the scope of FAS 97?**

**A40.** No. TSA 6300.10, *Accounting for Contracts that Provide Annuity Benefits*, states, “*SOP 03-1 applies to all entities to which FASB Statement No. 60, Accounting and Reporting by Insurance Enterprises, as amended, applies. Therefore any product that includes an annuitization benefit should be evaluated. This includes, but is not limited to, products where the base contracts are accounted for under FASB Statement Nos. 60, 97, or 120.*”

**Q41. My company has some life insurance contracts that include favorable settlement options. Would I normally set up an additional liability under the SOP?**

**A41.** The SOP states in paragraph 31 that a reserve should be held “*if the present value of expected annuitization payments at the expected annuitization date exceeds the expected account balance at the expected annuitization date.*” In addition, Section 6300.10 of the TPA states, “*SOP 03-1 applies to all entities to which FASB Statement No. 60, Accounting and Reporting by Insurance Enterprises, as amended, applies. Therefore any product that includes an annuitization benefit should be evaluated. This includes, but is not limited to, products where the base contracts are accounted for under FASB*

*Statement Nos. 60, 97, or 120, Accounting and Reporting by Mutual Life Insurance Enterprises and by Insurance Enterprises for Certain Long-Duration Participating Contracts, and where the annuitization benefit has not already been included in establishing the liability. To the extent annuitization benefits features have not already been included in benefit or premium deficiency liabilities, the provisions of SOP 03-1 paragraphs 31-35 should be applied.”*

Some actuaries believe that, since a settlement option may involve a series of payments comparable to an annuity, it would normally be appropriate to hold a liability for annuitization if the present value of expected annuitization payments at the expected date of death exceeds the expected death benefit, as that could be considered the account balance as of the date of death.

Other actuaries believe that, since a settlement option applies to death benefits, it is not an annuitization option or that, since paragraph 31 of the SOP references an expected account balance which would not exist upon death, the SOP did not intend for the annuitization benefit liability requirements to apply to annuitization options provided upon death.

**Q42. How are the additional liabilities for annuitization options usually determined?**

**A42.** Paragraphs 31 through 33 of the SOP prescribe a methodology analogous to that prescribed for the calculation of additional insurance liabilities. An additional liability for annuitization options typically would be based on a BR, would be subject to a zero floor, would usually be subject to periodic assessment and restatement, and would be subject to the same reinsurance assumed considerations. Further, EGPs used for amortization of DAC would reflect the change in this liability (paragraph 34 of the SOP).

Many of the issues that apply to additional insurance liabilities may also apply to the additional liability for annuitization options, and the comments in section B might be applicable. The assumptions used in calculating the BR would typically reflect expected experience based on a range of scenarios that consider the inherent volatility in the assumptions; the expected annuitization election rate is one of the assumptions that would be estimated (per paragraph 31 of the SOP). Some actuaries believe that for annuitization options on variable annuities, it is normally appropriate to use a dynamic annuitization election rate, since the rate at which policyholder elect annuitization may be correlated to equity market performance.

**Q43. What interest rate and other assumptions would be used in determining present values when determining the additional liability for annuitization options?**

**A43.** There are two periods of discounting to consider, namely the annuity payment phase, and the accumulation phase until annuitization, as follows:

1. Paragraph 31 of the SOP sets the interest rate to be used for present valuing benefits and related claim expenses during the annuity payment period as the “*estimated investment yields expected to be earned during the **annuitization** phase of the contract.*” Some actuaries believe this would normally imply use of a rate consistent with that expected to be earned by the company at that time from new premium. Some actuaries believe it would usually be appropriate to use an earned rate net of allowance for asset defaults and net of allowance for investment expenses and for all other non-claim related expenses. Also, they might believe the earned rate would be gross of allowance for any profit margin. Use of this earned rate would typically result in an excess benefit (excess of present value of annuity payments and related claim expenses over the account balance), in the event annuitization would result in an expected loss to the company.

Where annuity payments include life contingencies, some actuaries might believe an appropriate mortality assumption would usually anticipate ongoing future improvements in mortality. Some actuaries might interpret the SOP to allow for provisions for adverse deviation when determining the present value of life contingent annuity payments, i.e., by reductions in the assumed earned rate and mortality rates. Other actuaries might believe the SOP does not require use of margins, or might even prohibit the use of margins.

2. The actuary would usually determine the present value of the excess benefits during the accumulation period to determine the additional liability. Paragraph 31 of the SOP requires use of assumptions consistent with those used in estimating EGPs for DAC, including consistency with the interest rate. Some actuaries believe it is therefore appropriate to use a rate consistent with that used for DAC and additional insurance liabilities.

Also, present valuing during the accumulation period typically involves assumptions as to expected rates of future annuitizations, and some actuaries interpret the SOP to require consideration of a range of scenarios where volatility is inherent. Some actuaries believe the other assumptions used for the accumulation period such as mortality and persistency appropriately would be based on best estimates without margins for adverse deviation (to be consistent with estimating EGPs for DAC).

**Q44. How would the SOP apply to a variable immediate annuity with a guaranteed payout floor that is accounted for under FAS 133?**

**A44.** Once the contract is bifurcated during the payout phase according to revised Derivatives Implementation Group Issue B25 (DIG B25), the benefits valued under FAS 133 would be outside the scope of the SOP. Some actuaries believe those benefits not valued under FAS 133 would fall within the scope of the SOP (see Q5).

**Q45. For a two-tier product, would the additional liability be calculated as the present value of the difference between the expected upper tier and the lower tier account values at annuitization?**

**A45.** Paragraph 31 of the SOP states that the additional liability is the difference between the present value at the assumed earned rate of expected annuity payments and related expenses and the accrued account balance at the actual annuitization date. In certain situations, it might occur that the upper tier equates to the present value of expected annuity payments and the lower tier equates to the accrued account balance.

**Q46. My annuitization options are generally conservative and unlikely to provide excess benefits except in the most remote of circumstances. Would I disregard this remote contingency on the grounds of being immaterial?**

**A46.** If the additional liability for annuitization options would be immaterial, the actuary might decide not to hold it. The actuary might find it prudent, however, to demonstrate immateriality based on analysis over a range of scenarios. Some actuaries might believe this analysis is beneficial only at inception. Other actuaries, however, might note that, unlike for additional insurance liabilities as discussed in paragraph A28 of the SOP, there is no at-inception-only test for excess annuitization benefits and, thus, one might decide to later establish an additional liability for annuitization options if events turn out unfavorable.

**Q47. Does existence of an annuitization option typically extend the expected lifetime of the contract?**

**A47.** Paragraph A39 of the SOP and paragraph 7 of FAS 97 state in regard to annuitization options, *“If purchased, the annuity is a new contract to be evaluated on its own terms.”* Some actuaries therefore believe that the annuitization phase typically would be considered apart from the accumulation phase, and therefore the additional liability for the annuitization option, as well as any additional insurance liabilities, DAC and deferred sales inducements, would be determined over the contract’s accumulation period only.

The additional liability represents a pre-funding of a potential future benefit during the accumulation stage; upon annuitization, the account balance plus any additional liability represent the “premium” for the new annuitized contract (per two-tier example in paragraph D5 of the SOP). The annuitized contract usually would be evaluated at that time for characterization as an insurance or investment only contract.

**Q48. How would the actuary reserve for a contract that annuitizes “in-the-money”? How would profits then typically emerge at point of annuitization and thereafter?**

**A48.** As noted in Q47 above, a “premium” is released from the terminating contract (accumulation phase) and a liability is established for the new contract (annuitization phase). Profit or loss upon annuitization typically would then result from any difference in “premium” over the initial liability established at point of annuitization. The “premium” is comprised of the account balance plus any amounts such as for additional insurance liabilities, additional liability for annuitization options and accrual for sales

inducements, less any DAC and other assets held on that contract. The liability at annuitization would normally be determined as follows:

1. If benefits are certain only, the payout annuity would generally be an investment only contract and initial liability would be set equal to “premium,” less any deferrable acquisition costs incurred at annuitization.
2. If benefits include life contingencies, the payout annuity would generally be a limited-payment contract under FAS 97. The initial liability generally ends up exactly equal to “premium” less deferrable acquisition costs for reasons discussed here. The initial liability would usually be the present value of benefits and expenses and could include provisions for adverse deviations. However, if the annuitization option liability were calculated without provision for adverse deviations (see Q43 above), ordinarily the initial liability likewise would not contain such provisions (FAS 60 requires provisions be removed to the extent needed to avoid a premium deficiency). Finally, there typically would be no profit recorded at annuitization because a deferred profit liability would then otherwise be held under FAS 97.

Based on the considerations above, generally no profit or loss would be recorded at annuitization. Further, the annuitization option liability would typically be calculated based on “paid” benefits equal to any excess of liability at annuitization over the account balance available in cash. Given the many and uncertain assumptions going into the additional annuitization liability calculation, there would likely be periodic unlocking with resultant gains or losses recorded during the accumulation phase.

During the annuitization phase, profits or losses typically would be expected to emerge to the extent actual experience emerged different than expected and as provisions for adverse deviation, if held, were released.

## **Section D: Sales Inducements**

### **Q49. What are sales inducements?**

**A49.** These are defined in the glossary of the SOP as follows: “*Sales inducements are product features that enhance the investment yield to the contract holder on the contract. The three main types of sales inducements are: (1) day-one bonus, which increases the account value at inception, also called immediate bonus; (2) persistency bonus, which increases the account value at the end of a specified period; and (3) enhanced yield, which credits interest for a specified period in excess of rates currently being offered for other similar contracts.*”

Per the SOP then, sales inducements provide an enhanced investment yield. Some actuaries interpret these as purely interest or yield related benefits, whereas, other

actuaries believe items credited the account balance that are in substance, if not in name, equivalent to an interest credit would be appropriately considered as well. For example, they might consider premium credits provided at contract issue under certain variable annuity contracts to be day-one sales inducement bonuses.

**Q50. Are all persistency bonuses sales inducements? In particular, what about persistency bonuses of refund of COIs for a UL?**

**A50.** Paragraph 61 of FAS 97 states, “*The Board also concluded that amounts assessed against policyholder balances that are refundable and amounts that are assessed for initiation of a universal life-type contract are unearned revenues.*” Some actuaries therefore believe that refund of COIs for a UL, together with similar benefits of full or partial refund of other contract expense charges or loads, would appropriately be treated as unearned revenue under FAS 97 and not as sales inducements under the SOP. Other actuaries believe that, since a refund of COIs or similar benefits meet the criteria outlined for sales inducements in the SOP, they would appropriately be treated as such.

**Q51. If a company credits a higher interest amount starting in a specific year and continuing for the remaining life of the contract, (e.g., crediting rates are increased by 15 basis points over the company’s usual crediting rates starting with the 11th contract year, or M&E charges for a variable contract reduce for policy years 16 and later), would this be treated as a sales inducement under the SOP?**

**A51.** The answer would depend on the facts and circumstances. In the case of increasing interest credits, some actuaries might regard this as a sales inducement as additional interest is being credited upon contract persistency. If the actuary determines this is a sales inducement (essentially a series of persistency bonuses), the actuary usually would follow the SOP guidance for establishing a sales inducement liability and possibly a companion asset (see Q52).

Other actuaries, however, might regard this as a regular part of contract benefits rather than as an enhancement. If the actuary determines this is not a sales inducement, the actuary would then determine how to account for this benefit feature. One approach is to not accrue an additional liability (i.e., hold the account balance) and simply reflect the increased interest credits in EGPs. Another potential approach, in the case of an investment contract, is to apply the FAS 91 interest method of recognition for non-level interest (note that this would essentially smooth out the credited rate and might produce the same result as treating the benefit as a sales inducement).

In the case of decreasing M&E charges, some actuaries might believe the benefit is not a sales inducement as there is no enhanced crediting of interest or yield. Other actuaries, however, might believe the reduction in M&E is equivalent to the crediting of additional amounts to the contract, and would usually follow the considerations discussed above for the example of increasing interest rates.

**Q52. How would sales inducement liabilities be computed?**

**A52.** Paragraph 36 of the SOP states, “*Sales inducements provided to the contract holder, whether for investment or universal life-type contracts, should be recognized as part of the liability for policy benefits over the period in which the contract must remain*

*in force for the contract holder to qualify for the inducement or at the crediting date, if earlier, in accordance with paragraph 20 of this SOP.”*

Based on the above, day-one sales inducements typically would be added to the account balance at the inception of the contract or immediately thereafter. If a day-one bonus stipulates that the contract must persist for several years before it becomes available, the total bonus would still be added to the account balance immediately despite the fact that the bonus would not yet be converted to cash (per paragraph 20 of the SOP the liability would be accrued over “*the crediting date, if earlier*”). By design then, day-one sales inducements costs are recognized upfront in the account balance and no additional liability is needed.

Enhanced yields are typically credited to the account balances daily, monthly or annually. As above, if an enhanced yield bonus stipulates that the policy must persist for several years before it becomes available in cash, the credits would still be added to the account balance as fall due despite the fact that the bonus would not yet be converted to cash. The SOP requires amounts accrued but not yet credited to be included in the account balance. No additional liability is then needed.

Persistency bonuses are normally credited at a future date and are not added to the account balance until that date. An additional liability therefore would be computed. The language in the SOP does not mention a specific methodology, but usually does provide guidance that it be treated as an interest rate adjustment in the case of FAS 91 investment contracts (SOP paragraph A51), or that it be done ratably (SOP appendix D). There are several different methods that can be described as ratably, for example, accruing ratably as a level percent of account balance which is equivalent to determining a level yield enhancement. Other methods that are more tailored to specific product designs can also be described as ratably, for example, a level percent of death benefits, assessments, or EGPs, or even a fixed amount per contract.

A consideration is how to maintain the liability on track to accrue up to the persistency bonus, for example, the bonus amount might depend on the account balance at the time the bonus is credited. Some actuaries might feel it is appropriate to adjust the rate of accrual prospectively, whereas other actuaries might feel it is appropriate to adjust the liability retroactively as for DAC unlocking. Either way, it would usually be prudent to periodically review the accrual of liability and adjust for actual experience.

**Q53. Do all sales inducement liabilities produce an associated sales inducement asset?**

**A53.** This does not appear to be the case. Paragraph 37 of the SOP defines specific conditions for when a sales inducement liability leads to establishment of a companion sales inducement asset.

First, the SOP requires that the sales inducement be “*explicitly identified in the contract at inception.*” So, benefits provided after the contract has been in force might require

accrual of a liability but would not necessarily permit an asset, for example, management adding a persistency bonus to preserve an inforce block of business.

Second, the SOP requires evidence that the benefits provided are enhancements to the normal crediting of benefits. Specifically, the SOP states, “*The insurance enterprise should demonstrate that such amounts are (a) incremental to amounts the enterprise credits on similar contracts without sales inducements and (b) higher than the contract’s expected ongoing crediting rates for periods after the inducement, as applicable; that is, the crediting rate excluding the inducement should be consistent with assumptions used in estimated gross profits, contract illustrations, and interest-crediting strategies.*” In some cases the demonstration might be self-evident, for example, universal life where the sales illustration shows a first year credited rate clearly in excess of a level renewal year rate. Other cases, however, might involve comparison with a similar product without the sales inducement and/or internal company documentation on product management.

**Q54. In considering the criteria for deferral of a sales inducement, what would a company do if it did not offer a similar contract without a sales inducement?**

**A54.** Some actuaries believe comparison with a similar product offered by the company but without the sales inducement is a sufficient but not a necessary condition. They might note paragraph A54 of the SOP, which states “*In cases where a similar product is not actively marketed and sold without the enhanced crediting rate, AcSEC believes the enterprise should demonstrate that the enhanced crediting rate is incremental to the effective crediting rate.*” Paragraph A54 then discusses and provides an example of an alternate demonstration the company could use. Specifically, where there is no similar product without a sales inducement, the SOP calls for the enterprise to demonstrate that the enhanced credited rate is incremental to the effective crediting rates on the enterprise’s other products that have common characteristics.

**Q55. How does the calculation of the sales inducement liability typically affect the sales inducement asset?**

**A55.** As discussed in Q53 and Q54, certain sales inducement costs are eligible for deferral and amortization as a deferred sales inducement asset (DSI). Some actuaries believe the appropriate amounts to defer are those on an incurred basis, i.e., amounts credited or accrued under paragraph 20 of the SOP plus changes in any corresponding sales inducement liability.

There are a variety of ways in which this can be applied. In considering the different approaches, it is helpful to develop the liability for the sales inducement by components:

$$liability_t = (liability_{t-1} + interest\ on\ liability_t - release\ upon\ policyholder\ lapsation_t + incremental\ accrual\ amount_t) - amounts\ credited_t$$

where  $interest\ on\ liability_t$  is the interest accrual implied within the liability, calculated as the credited interest rate times  $liability_{t-1}$  and  $incremental\ accrual\ amount_t$  can be thought of as the balancing item in the equation.

Method 1: Amounts deferred include the entire amount of any change (positive or negative), in the sales inducement liability (i.e.,  $liability_t - liability_{t-1} + amounts\ credited_t$ ) since this represents the current period incurred cost. The advantage of this method is its simplicity. Under this method, the sum of amounts deferred equals the amounts eventually paid.

Method 2: As in Method 1 above, except amounts deferred are reduced by interest on the liability (i.e.,  $liability_t - liability_{t-1} - interest\ on\ liability_t + amounts\ credited_t$ ). Some actuaries believe this is an appropriate technical refinement as it results in the present value of amounts deferred equal to the present value of amounts eventually paid.

Method 3: As in Method 2 above, except amounts deferred are increased by adding back the portion of the change in the sales inducement liability due to policyholder lapsation (i.e.,  $incremental\ accrual\ amount_t - amounts\ credited_t$ ). The advantage of this approach is that it eliminates the deferral of negative amounts (reductions in the sales inducement liability from policyholder lapsation), in the DSI.

Other approaches might be considered, for example, combining Methods 1 and 3 above.

#### **Q56. How are sales inducement assets and liabilities usually reported?**

**A56.** On the balance sheet, the sales inducement asset is typically reported as an asset separate from DAC, and the sales inducement liability is typically reported as part of contract liabilities. On the income statement, amortization of the sales inducement asset and changes in the sales inducement liability are both usually classified as a component of benefit expense.

#### **Q57. Does the SOP require the actuary to assume that all contracts persist to earn their persistency bonuses when computing the sales inducement liability?**

**A57.** Paragraph 36 of the SOP states, “*No adjustments should be made to reduce the liability related to the sales inducements for anticipated surrender charges, persistency, or early withdrawal contractual features.*” Some actuaries interpret this as requiring the sales inducement liability to be calculated assuming all those currently in force will persist to collect their bonuses. A secondary consideration is treatment of exits due to death or morbidity; some actuaries might consider these different than persistency and allow for assumed decrements.

Other actuaries, however, might interpret the SOP language as effectively two steps as follows: (a) determine an appropriate liability that the actuary expects to eventually pay out; and then (b) accrue to this amount without any adjustment for persistency. They might interpret step (a) as projecting the persistency benefits based on best estimate

assumptions, including appropriate allowance for persistency. If exits are not assumed, the actuary might consider the liability to be over-estimated. Step (b) would then be to accrue up to this amount. In step (b) these actuaries believe it would usually be appropriate to assume 100% persistency. Some actuaries, however, disagree with this interpretation.

To illustrate the two varying interpretations, consider an example where \$1,000 is paid at the end of 10 years and 80% are expected to persist. The first interpretation above is to assume 100% persistency and accrue up to \$1,000 per contract. The alternate interpretation is: (a) to determine an \$800 expected liability per contract (80% chance of payout of \$1,000); and then (b) accrue up to this amount for each contract. (Note that it normally would be inappropriate under step (b) to both adjust for persistency and accrue to only 80% of the \$800 or \$640 per contract.)

**Q58. How would the actuary reflect sales inducements in the EGPs stream for purposes of amortization of DAC and related items?**

**A58.** This is not explicitly covered in the SOP. However, where a companion sales inducement asset is held, some actuaries believe it is usually appropriate to exclude the incurred sales inducement benefits from EGPs. This would be consistent with treatment of other items that are deferred, such as deferrable acquisition costs and unearned revenue, and that are likewise excluded from EGPs. (Note that the incurred sales inducement benefits typically are deferred and amortized within the sales inducement asset).

Where no sales inducement asset is held, some actuaries believe it is appropriate to include sales inducement benefits in the EGPs on an incurred basis, i.e., paid, credited or accrued plus changes in the sales inducement liability. This would be consistent with treatment of benefits for which an additional insurance liability is held. (Note, as per Q33, some actuaries might believe it appropriate to add interest on the sales inducement liability to the EGPs).

## **Section E: Reinsurance and Hedging**

The discussion in Section E covers additional insurance liabilities for contracts covered by reinsurance on additional insurance liabilities. Although not specifically mentioned, the same issues and responses usually apply equally, where relevant, to reinsurance credits for additional liabilities from insurance benefits, annuitization options and from sales inducements, and to contra offsets to DAC and sales inducement assets.

**Q59. How would a ceding entity account for reinsurance treaties that meet the risk transfer criteria of FASB Statement No. 113, *Accounting and Reporting for Reinsurance of Short-Duration and Long-Duration Contracts*, and that reinsure the insurance benefit features accounted for under paragraph 26 of SOP 03-1, *Accounting and Reporting by Insurance Enterprises for Certain Nontraditional Long-Duration Contracts and for Separate Account*?**

**A59.** TPA 6300.09, *Reinsurance*, which appears specifically relevant, states that, “*The accounting for reinsurance should be separate from the accounting for the direct contracts of the ceding entity in accordance with paragraphs 14 through 16 of FASB Statement No. 113. Reinsurance recoverables arising from the reinsurance contract should be reported as assets. As stated in paragraph 20 of FASB Statement No. 113, the recoverable should be calculated using methods and assumptions consistent with those used to establish the direct contract holder’s liability. Therefore, a benefit ratio using the same assumptions and scenarios used to establish the direct contract liability, as required in paragraph 26 of SOP 03-1, should be used to establish a reinsurance recoverable with excess benefit payments ceded under the terms of the reinsurance contract as the numerator and direct assessments as the denominator. As required by paragraph 26 of FASB Statement No. 113, the cost of reinsurance shall be amortized over the remaining life of the underlying reinsured contracts if the reinsurance contract is long-duration, or over the contract period of the reinsurance if the reinsurance contract is short-duration. The cost of reinsurance may be recognized based on total direct assessments or on another reasonable manner such as estimated gross profits.*”

The above TPA can be summarized as follows:

1. Gross liabilities are usually determined independent of any reinsurance.
2. An asset is normally determined for reinsurance credits on a consistent basis with determination of the gross liabilities. Q61 below provides an example of determination of the BR for reinsurance in accordance with the TPA.
3. The cost of reinsurance typically may be amortized in proportion to assessments, or another reasonable method such as EGPs. Though not stated, presumably amortization is applicable where the reinsurance costs are inconsistent with the direct contract’s pattern of assessments or EGPs

**Q60. For the ceding company, are the significance of risk test and profits followed by losses test for reinsured contracts usually done on a direct basis or net of reinsurance in determining whether additional insurance liabilities are held? Likewise, would the additional insurance liabilities be determined on a direct or net basis?**

**A60.** The TPA calls for the accounting for reinsurance to be separate from the accounting for the direct contracts. Some actuaries believe, then, that the significance of risk and profits followed by losses tests, usually would appropriately be done on a direct

basis without consideration of any reinsurance cash flows. Likewise, additional insurance liabilities, if appropriate, usually would be determined on a direct basis.

Under this approach, separate testing of the reinsurance cash flows typically would be done to determine whether the reinsurance contract qualifies for reinsurance accounting and whether a reinsurance credit should be established where additional insurance liabilities are held.

**Q61. Where additional insurance liabilities are being held under the SOP, how would the actuary for the ceding company calculate reinsurance credits?**

*A61. The TPA states that “a benefit ratio using the same assumptions and scenarios used to establish the direct contract liability, as required in paragraph 26 of SOP 03-1, should be used to establish a reinsurance recoverable with excess benefit payments ceded under the terms of the reinsurance contract as the numerator and direct assessments as the denominator.” For example, if 25% of benefits are reinsured, the reinsurance BR would be 25% of the direct BR, and the reserve credit would be 25% of the direct liability.*

**Q62. For a direct written GMIB accounted for under the SOP, would reinsurance ceded that is “net settled” be accounted for under the SOP or FAS 133?**

**A62.** For direct writers of variable annuities, GMIB guarantees are generally scoped out of FAS 133 according to DIG Issue B25, which relies on the conclusions reached in DIG Issue A13. In summary, these DIG issues conclude that such benefits do not meet the “net settlement” requirement for a FAS 133 embedded derivative. SOP 03-1 Paragraphs 31 through 35 provide guidance on how to account for such benefits where FAS 133 is not applicable. However, many reinsurance agreements covering GMIB business do meet the net settlement requirements of FAS 133 and so would normally be accounted for as a derivative(s) under FAS 133, unless there is some other reason why FAS 133 does not apply, such as the insurance exemption provided for in Paragraph 10 c) of FAS 133.

In cases where the FAS 133 insurance exemption applies, FAS 113 accounting would likely be applicable. FAS 113 states that, “*Indemnification of the ceding enterprise against loss or liability relating to insurance risk in reinsurance of long-duration contracts requires the reasonable possibility that the reinsurer may realize significant loss from assuming insurance risk as that concept is contemplated in Statement 60 and FASB Statement No. 97.*” Many actuaries believe that reinsurance ceded on GMIB business would not qualify for the FAS 133 insurance exemption and so would not be accounted for as reinsurance under FAS 113. This is because GMIB reinsurance often does not involve significant insurance (e.g., mortality or morbidity) risk. Even where the direct business may contain significant mortality risk, reinsurance contracts on this business generally do not transfer the underlying mortality risk, either because they fix the mortality assumption at treaty inception or because it is set at annuitization election dates.

Some actuaries might believe that certain reinsurance agreements do meet the criteria of FAS 113 where the reinsurance contract involves some level of mortality risk transfer and that the reinsurance qualifies for a Paragraph 10 c) exemption from FAS 133, even though it may meet the net settlement criteria of FAS 133. Actuaries taking this view would usually calculate a reinsurance recoverable using the same methodology as used for the underlying contracts (i.e., a benefit ratio approach), and as outlined in Q59 through Q61 above.

**Q63. Where reinsurance credits are determined on the direct assessment base, how would a company account for reinsurance premiums?**

**A63.** As discussed in Q59, TPA 6300.09 calls for the reinsurance cost to be amortized over the contract lifetime or contract period, as applicable, and that amortization could be based on total direct assessments or another reasonable manner such as estimated gross profits.

Some actuaries may define “reinsurance cost” as the net of reinsurance premiums, expense allowances, and benefit recoveries, while others might simply use reinsurance premiums and expense allowances. Some actuaries believe it is generally appropriate to amortize reinsurance premiums and expense allowances against direct assessments consistent with the treatment of recoveries, while other actuaries believe it may also be appropriate to amortize reinsurance premiums and expense allowances proportional to EGPs or in some other reasonable manner.

**Q64. If benefits for which additional liabilities are held under the SOP are reinsured, how would reinsurance impact the incidence of EGPs used to amortize DAC?**

**A64.** Some actuaries believe it is normally appropriate to include reinsurance benefits and reinsurance premiums in EGPs. One way to do this would be to include any change in the reinsurance credit along with any change in deferred reinsurance premiums in EGP along with the reinsurance cash flows. Other actuaries believe it is not usually appropriate to consider reinsurance cash flows or other items in calculating EGPs.

**Q65. How does the SOP impact accounting by a reinsurer assuming risk for a benefit feature falling within the scope of the SOP?**

**A65.** Paragraph 30 of the SOP sets out the rules on this. Essentially, this is generally treated under analogous rules but considering the reinsurance from the viewpoint of the reinsurer. Some considerations are as follows:

1. The significance test would generally be based on the reinsurer’s cashflows and categorization could thus differ from that for the direct issued contract. The test is based on inception of reinsurance for that contract rather than its inception date.

2. The reserving guidance generally applies whether or not there is an account balance (i.e., treated as though FAS 97 universal life-type insurance contract). For example, there typically would not be an account balance if only the insurance benefit feature were reinsured.
3. The liability calculation is normally based on the reinsurance premiums. For example, consider reinsurance of an inforce block with a positive insurance liability. If the reinsurer received essentially level premiums, the insurance liability would usually start at zero at treaty inception. However, if the reinsurer received an upfront payment for the current exposure to future benefits, insurance liabilities would usually be established at treaty inception. Regardless, the liability typically would be based on the reinsurer's actual and projected cashflows, and usually would not follow the direct company's calculations.

To the extent the reinsurer encounters a premium deficiency on a block of business covered under SOP 03-1, a gross premium valuation would be required in accordance with FAS 60, and a liability in excess of the liability calculated under SOP 03-1 would usually be established.

**Q66. For a reinsurer assuming a benefit feature falling under SOP 03-1 that does not have any DAC associated with the reinsured benefits, how would the discount rate and other assumptions for determining liabilities under SOP 03-1 be determined?**

**A66.** As described in Q30, some believe that the same facts and circumstances that would be considered in setting a assumptions for DAC purposes should be reviewed. Possible methods for assessing the appropriate discount rate include:

1. Reviewing the method used to set assumptions for amortizing DAC for other blocks of business and using a comparable approach,
2. Reviewing the method used by the ceding company to determine its assumptions used to amortize DAC on the underlying contracts reinsured, and
3. Considering the facts and circumstances specific to the reinsurer and the business reinsured. For example, in setting the discount rate, considering items such as the earned rate on the reinsurer's asset portfolio less investment expenses and less the spread to the reinsurer e.g. GMDB benefit charges (which could be viewed as a spread to the reinsurer).

As described in Q64, the impact of loss recognition and the need to hold a gross premium reserve would normally considered.

**Q67. We use derivatives to hedge benefit guarantees covered by SOP 03-1. How would gains and losses from these derivatives be treated when calculating the additional insurance liabilities and DAC?**

**A67.** Certain derivatives might qualify for hedge accounting treatment under FAS 133. As a general principle, hedge accounting results in a matching in income of the hedge gains (losses) with the item hedged. However, it should be noted that the circumstances under which hedges against benefit guarantees covered by SOP 03-1 qualify for hedge accounting under FAS 133 are limited and, normally are not commonly applicable to direct writers of these guarantees. Requirements regarding qualification for hedge treatment and the resulting accounting fall outside the scope of this practice note. The remainder of this question covers practices in place for accounting for derivatives (or ineffective portions of derivatives) that do not qualify for usually FAS 133 hedge accounting treatment.

Under FAS 133, such derivatives are usually marked to market through GAAP net income. A variety of practices have evolved for the treatment of the change in the value of these derivatives in both the DAC and Additional Insurance Liability (AIL) calculations.

Possible approaches for the treatment of the change in the value of the derivatives include the following:

1. Calculate AIL with out regard to any derivative gains or losses. For DAC, the change in the value of derivatives may be included in the current period EGP as an element of investment margin to the extent allowed under FAS 97.
2. For AIL, include the change in the value of derivatives with assessments as an element of general account investment margin. As for DAC above, the change in the value of the derivatives would usually be included in EGPs as an element of investment margin to the extent allowed under FAS 97.

For these purposes, the change in the value of derivatives may include both the change in the FAS 133 (mark-to-market) value of the derivatives and the cash payouts under these derivatives over the period. The change in the FAS 133 value may consist of only the change in the intrinsic value of the derivatives (i.e., the change due to market movements), or may also include the change in the time value (similar to an interest component applied to the opening FAS 133 value). Even if the derivatives provide a perfect “economic” hedge against the benefit guarantees, the change in the derivative market values could be significantly different to the change in the value of benefits using the SOP 03-1 assumptions. This is because the characteristics of the scenario set used for the SOP 03-1 calculations are often quite different from those of scenario sets used to derive market-consistent values as required for FAS 133.

In many real life situations, the difference for AIL between the two approaches mentioned above is not material, and the income impact would generally be offset at least partially when considering the net result of changes in AIL and DAC.

One consideration with both of these approaches is the FAS 97 determination of investment margin on a base of assets equal to the policyholder account balances. The derivatives, which could have positive, zero or negative FAS 133 values, would usually be included as part of the asset base. Special care might be helpful in the case of a separate account product where the derivatives had a value in excess of account balances held in the general account (note that separate account balances are matched generally by separate account assets). Some actuaries believe that, ordinarily, only a portion of the derivative up to the amount of general account balances could then be utilized.

## **Section F: Transitional rules for implementation of Statement of Position 03-1**

### **Q68. What is required by the SOP for initial implementation of the accounting change?**

**A68.** Key items for actuaries include: possible restatement of certain base liabilities in terms of which account balances to use; identification of all insurance benefit features; possible reclassification of some contracts as insurance versus investment only; identification of all annuitization options; determination of additional insurance benefit liabilities; determination of annuitization liabilities; possible splitting of the current DAC balance into a sales inducement asset and a remaining DAC balance; and finally, determination of resultant impact on EGPs together with potential restatement of DAC and PVP (present value of future profits from acquisitions).

### **Q69. How are the initial insurance benefit and annuitization liabilities determined?**

**A69.** Paragraph 41 of the SOP states that any adjustment in contract holder liabilities from adopting this SOP should be reported in a manner similar to the cumulative effect of a change in accounting principle in accordance with the provisions of Accounting Principles Board (APB), Opinion No. 20. In layman's terms, this means that a liability would usually be established at the adoption date of the SOP as if the SOP had been in existence since the inception of the contract and any significant change in balance sheet amounts would be reported separately in income as a change in accounting principle.

For the purposes of the initial insurance and annuitization reserves required by the SOP, the actuary would usually determine past assessments and paid benefits from the contract inception dates to date of accounting change. Likely, the historical data would not all be available in most cases and actuaries would therefore make good faith estimates of the required information. The benefit ratio and additional liabilities would usually then be determined by projecting future expected assessments and insurance or annuitization benefits, to add to the historical data.

Some actuaries have posed the possibility of basing the initial calculations only on those contracts in force as of the accounting change date. Specifically, past assessments and benefits would normally be considered only for those contracts currently in force. While there might be instances where this method is appropriate, it is generally felt that this approach would not usually comply with APB 20 requirements.

**Q70. How are sales inducements usually handled for in-force business?**

**A70.** The SOP is silent on transition rules for the accrual of a liability for sales inducements such as persistency bonuses. However, paragraph 36 of the SOP requires the accrual to be “*over the period in which the contract must remain in force for the contract holder to qualify for the inducement or at the crediting date, if, earlier.*” Some actuaries interpret this as requiring a liability at adoption as applicable for the in-force. Accordingly, the actuary would normally determine the accrual for in-force business as per the SOP rules, i.e., going back to contract inception. Note that accrual under the SOP is generally interpreted as not allowing for assumption of persistency (though a liability is usually recorded as surrender charge revenue once a contract surrenders, so, a liability would be established only for those contracts in force as of the transition date).

Paragraph 42 of the SOP sets out explicit transition rules for the sales inducement asset created by the deferral of sales inducements where applicable. The value of the deferred sales inducement asset as of accounting change date is usually the asset, if any, currently held by the company. If past practice was to amortize the sales inducement asset in proportion to EGPs, the asset at adoption of the SOP could change as a result in modified historical and prospective EGPs resulting from implementing other provisions of the SOP. If the deferred sales inducement asset was being amortized on a basis other than EGPs, no adjustment to the asset as of the adoption date is required or allowed by the SOP. In addition, the SOP would prohibit the actuary from retroactively establishing an asset if none currently exists. The starting sales inducement asset would normally be amortized based on EGPs similar to DAC, but on a prospective basis only. Future sales inducements on both in force and new contracts would normally be deferred where applicable.

For companies that had not previously established an asset and a liability for persistency bonuses, the transition rules are inconsistent in that they suggest that only a liability be established at the adoption date of the SOP. For contracts in force at adoption date, it would appear that sales inducements incurred post-adoption usually could be deferred where a sales deferral inducement asset were permitted. Sales inducements incurred are determined as bonuses credited plus accrued plus change in liability (see Q55 above). Some actuaries consequently believe it is appropriate to include the initial change in liability (i.e., establishment of the liability at transition), as an item of deferral in the persistency bonus asset.

Paragraph 42 of the SOP requires the sales inducement asset to be reported apart from DAC on the balance sheet. In the income statement, the change in deferred sales inducement asset would usually be included in policy benefits.

**Q71. How are past acquisitions typically handled?**

**A71.** The SOP is silent on this issue. Some actuaries believe that, for past acquisitions, it is usually appropriate for additional insurance and annuitization benefit liabilities required by the SOP to start at zero as of purchase date, since the purchase GAAP accounting implicitly included provisions for these benefits either in the fair value of the liabilities or the PVP calculation. After the purchase date, a liability normally would then develop from subsequent assessments collected and benefits paid. There would usually be an adjustment to the original amortization pattern for PVP to the extent the EGPs are changed under the SOP.

**Q72. What is the required accounting change date, and what would be reported?**

**A72.** The SOP is effective for financial statement for fiscal years beginning after December 15, 2003 for domestic companies, and one year later for foreign registrants. For companies this means starting with first quarter 2004. For some companies, the SOP represents a material accounting change that would be disclosed in their year-end 2003 financials. The actuary might then be requested by the company to quantify as of year-end 2003 the impact of the SOP estimated for the first quarter 2004 implementation.

Early adoption is permitted, however, if it is as of the start of the reporting year and would thus involve applying the new accounting basis for all reporting quarters of that year. For example, early adoption undertaken in the fourth quarter of 2003 would require the company to restate financials from the first through third quarters of 2003 on the new accounting basis. The actuary might then be requested by the company to quantify the impact of the SOP on past quarters of 2003.

**Q73. For investment contracts that followed the FAS 91 interest method for DAC amortization prior to the adoption of the SOP, the SOP would require these contracts to be reclassified as universal life-type contracts if certain insurance features are determined or deemed to be significant under the provisions in the SOP. At the adoption of the SOP, how would this change typically be handled?**

**A73.** In applying the principles to APB 20, an usual approach to account for this change in product classification would be to go back to the inception of the contract and calculate current GAAP balances as if the contract were classified as a universal life type contract from this issue date. Presumably, DAC would be amortized in proportion to EGPs as required by FAS 97. Any differences in the DAC and benefit liabilities as of the adoption date would be reported as a change in accounting principles.

An argument could be made that, to be consistent with the SOP guidance for sales inducements that were capitalized and amortized on a basis other than EGPs prior to the adoption of the SOP, the DAC balance at the adoption date could be maintained with future DAC amortization only based on EGPs.

## **Transitional Rules for Implementation of FSP No. FAS 97-1 and the TPA.**

### **Q74. How would one account for changes due to adoption of the FSP?**

**A74.** According to the FSP, if application of the FSP results in changes to previously reported information, the cumulative effect of the accounting change would usually be reported as of the beginning of the first period beginning after the FSP is first posted to the AICPA web site. For most companies, this means changes resulting from the adoption of FSP 97-a would usually be reported as a cumulative effect of accounting change in the third quarter of 2004.

### **Q75. How would one account for changes due to adoption of the TPA?**

**A75.** The TPA states that, “*adoption of this guidance that results in changes to previously reported information should be recorded in accordance with APB 20, Accounting Changes.*” For most companies, this means that the cumulative effect of adopting SOP 03-1 would normally be redetermined as of the adoption date (usually January 1, 2004), and results reported for periods since the adoption date restated. There is no cumulative effect of accounting change specifically related to the TPA in the period of adoption.