

A PUBLIC POLICY PRACTICE NOTE

# Practices for Preparing Health Contract Reserves

*September 2010*

American Academy of Actuaries  
Health Practice Financial Reporting Committee



---

AMERICAN ACADEMY *of* ACTUARIES

---

A PUBLIC POLICY PRACTICE NOTE

# Practices for Preparing Health Contract Reserves

*September 2010*

Developed by the Health Practice Financial Reporting Committee  
of the American Academy of Actuaries



---

AMERICAN ACADEMY *of* ACTUARIES

---

**The American Academy of Actuaries is a 17,000-member professional association whose mission is to serve the public on behalf of the U.S. actuarial profession. The Academy assists public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.**

## **Health Practice Financial Reporting Committee Practice Note**

This practice note is not a promulgation of the Actuarial Standards Board, is not an actuarial standard of practice, is not binding upon any actuary and is not a definitive statement as to what constitutes generally accepted practice in the area under discussion. Events occurring subsequent to this publication of the practice note may make the practices described in this practice note irrelevant or obsolete.

The members of the subgroup responsible for this practice note are Darrell Knapp, MAAA, FSA, HPFRC Chairperson; Laurel Kastrup, MAAA, FSA, Subgroup Chairperson; Rowen Bell, MAAA, FSA; Thomas Cija, MAAA, FSA; Earl Hoffman, MAA, FSA; Brian Kiel, MAAA, FSA; Matthew Klaus, MAAA, FSA; Donna Novak, MAA, FCA; James O'Connor, FSA, MAAA; D. Joeff Williams, MAAA, FSA; and Russell Willard, MAAA, FSA. Comments are welcome as to the appropriateness of the practice notes, desirability of annual updates, substantive disagreements, etc. Comments should be sent to the Academy's State Health Policy Analyst at [StateHealthAnalyst@actuary.org](mailto:StateHealthAnalyst@actuary.org).

## TABLE OF CONTENTS

Introduction.....	1
1. What is the purpose of contract reserves?.....	2
2. What is the main GAAP and SAP guidance on contract reserves, and how does that guidance differ between the two bases of accounting?.....	2
3. What types of health insurance products typically require contract reserves? .....	4
4. How do you determine appropriate SAP or GAAP contract reserve assumptions? .....	5
5. What methods are used for contract reserves for SAP versus GAAP?.....	6
6. What is the tax deductibility of health contract reserves? .....	7
7. When can you unlock GAAP assumptions? .....	7
8. How do you unlock GAAP assumptions when you have a premium deficiency? .....	7
9. How do you establish contract reserves when there is a changing benefit and/or premium pattern? .....	8
10. How do gross premium valuations and contract reserves interact? .....	9
11. How is GAAP loss recognition testing different from GAAP DAC recoverability testing?.....	9
12. How are GAAP recoverability testing and loss recognition testing performed?.....	10
13. How does the SAP gross premium valuation test compare to GAAP loss recognition testing?.....	11
14. On a GAAP basis, how do you determine if you have profits followed by losses? .....	12
15. If you have profits followed by losses on a GAAP basis, how do you establish a “loss reserve”?.....	12
16. How are future premium rate increases for level premium issue age products accounted for in loss recognition testing and asset adequacy testing? .....	13
17. How do unamortized deferred acquisition costs (DAC) relate to contract reserves?.....	13
18. Are contract reserves held for policies in open claim status?.....	14
19. How are waiver-of-premium provisions accounted for in contract reserves? .....	14



## Practices for Preparing Health Contract Reserves

### Introduction

This practice note represents a description of practices the American Academy of Actuaries' Health Practice Financial Reporting Committee (HPFRC) considers to be commonly employed by U.S. health actuaries. The purpose of the practice note is to assist actuaries who are required to prepare financial statements by providing examples of some of the common approaches to this work. HPFRC makes no representation of completeness; other approaches also may be in common use. It also should be recognized that the information contained in this practice note provides information, but is not a definitive statement of what constitutes generally accepted practice in this area. This practice note has not been promulgated by the Actuarial Standards Board, nor is it binding on any actuary.

Statutory Accounting Principles (SAP) guidance discussed in this practice note is based on the March 2009 Accounting Practices and Procedures Manual (APPM) adopted by the National Association of Insurance Commissioners (NAIC). The sections of the NAIC APPM that apply to policy reserves for health insurance products include Statement of Statutory Accounting Principles No. 54 (SSAP 54), *Individual and Group Accident and Health Contracts*, and Appendix A-010, *Minimum Reserve Standards for Individual and Group Health Insurance Contracts*. Note that the information provided in this practice note will not be appropriate in all situations, as there may be differences between state law and the NAIC APPM for a given state, and state law preempts the NAIC APPM. The Health Reserves Guidance Manual (HRGM) also is referenced in this practice note. The HRGM provides guidance regarding the calculation and documentation of health reserves for statutory financial statements. Currently, the HRGM is not considered authoritative guidance for the NAIC APPM.

Generally Accepted Accounting Principles guidance relevant to health insurance liabilities historically resided within Statement of Financial Accounting Standards No. 60 (FAS 60), *Accounting and Reporting by Insurance Enterprises*. But after the codification of GAAP that took effect in July 2009, the guidance formerly in FAS 60 is now found within Topic 944, *Financial Services—Insurance*. Although the format of the GAAP accounting guidance has changed as a result of the 2009 Accounting Standards Codification (ASC), there was no intent for the migration of content to the ASC format to alter the content of that guidance. Therefore, we will refer throughout this practice note to FAS 60 as being the source of relevant GAAP guidance, even though technically FAS 60 has been superseded by ASC Topic 944.

ASC 944-10-15 specifies the scope of ASC 944 to be limited to a number of organizations, including life and health insurance entities and property and liability insurance entities. Health maintenance organizations (HMOs) and hospital medical service organizations (traditional not-for-profit health organizations, including many Blue Cross and Blue Shield plans and Delta Dental plans) are not specifically included in the scope and some of these organizations do not believe FAS 60/ASC 944 is applicable to them. They instead believe their guidance comes from ASC 954 (*Health Care Entities*). The guidance in Topic 954 is derived from the American Institute of Certified Public Accountants (AICPA) Audit and Accounting Guide, Health Care

Organizations. Topic 954 includes very limited guidance on contract reserves but specifically mentions that deferral of acquisition costs is not allowed (ASC 954-720-25). Some of these organizations still will establish contract reserves and may or may not use the GAAP lock-in principle discussed later in the paper.

Primary differences between statutory and GAAP reserving are addressed in Question 2, except for Deferred Policy Acquisition Costs (DPAC or DAC). DAC represents the unamortized balance of deferrable acquisition expenses and is addressed further in Question 17.

For the purpose of this practice note, a contract reserve for a policy is defined as the excess of the present value of future policy claims over the present value of future net premiums. Contract reserves also may be referred to in actuarial literature as policy reserves or additional reserves. The term active life reserve also is used sometimes, but for this practice note that term will be used to refer to the combination of the contract reserve and the unearned premium reserve for a policy.

### **1. What is the purpose of contract reserves?**

The basic accounting concept of matching future revenue with future expected costs applies when determining the need for contract reserves. Contract reserves arise when the future pattern of expected claim payments (benefits) does not match the future pattern of benefit net premiums. This mismatch occurs when the present value of future net premiums is less than the present value of future claims. The net premium is based on that amount required to cover the cost of claims only. Contract reserves represent the portion of current and past premiums that are needed to pre-fund the future increases in claims. Without contract reserves, an insurer would report excessive profits in the early years of a long-term insurance policy, followed by excessive losses in later years. From a solvency perspective, without contract reserves, an insurer's net worth would be overstated.

### **2. What is the main GAAP and SAP guidance on contract reserves, and how does that guidance differ between the two bases of accounting?**

FAS 60 divides insurance contracts into two main categories: short-duration contracts and long-duration contracts. Short-duration contracts are defined as those in which the insurer can, at the end of a fixed period of short duration, cancel the contract or adjust the premiums and/or level of coverage provided. Long-duration contracts are defined as those that require performance by the insurer over a longer period and the insurer cannot make unilateral changes in contract provisions. FAS 60 acknowledges that accident health (A&H) insurance contracts may be either short-duration or long-duration, and indicates that individual or group A&H contracts that are noncancelable, guaranteed renewable, or collectively renewable ordinarily would be considered to be long-duration contracts.

FAS 60 states that, for long-duration contracts, the insurer shall establish a liability for future policy benefits, which conceptually represents the difference between the present value of future benefits and expenses and the present value of future net premiums. As a result, GAAP contract reserves often are referred to as benefit reserves. FAS 60 does not explicitly address the liability

for future policy benefits in the context of short-duration contracts. Generally, accountants have interpreted FAS 60 as prohibiting insurers from establishing a liability for future policy benefits for short-duration contracts.<sup>1</sup>

FAS 60 does not prescribe methodologies or assumptions to be used for GAAP benefit reserves, but it does provide two essential pieces of guidance.

First, FAS 60 states that the various assumptions used by the insurer in calculating the benefit reserves should include a provision for adverse deviation (PAD or PfAD). The application of a PAD for any specific assumption always is done in a manner that increases the policy reserve.

Second, FAS 60 states that, for any particular contract, the assumptions used to calculate the benefit reserves when that contract was first recognized on the insurer's financial statement should continue to be used in all subsequent reporting periods, except in situations in which testing indicates that a premium deficiency exists—in which case the original assumptions are unlocked and replaced with current assumptions. This concept is referred to as the lock-in principle.

SAP guidance (in Statement of Statutory Accounting Principles No. 50, *Classifications and Definitions of Insurance or Managed Care Contracts in Force*) rejects the GAAP notion of classifying insurance contracts by short-duration versus long-duration in favor of separating insurance contracts into four classes: life, accident and health, property and casualty, and deposit-type. SSAP 54 provides guidance on policy reserves for A&H contracts, which are defined to include both unearned premium reserves and contract reserves.

SSAP 54 states that SAP contract reserves must meet the requirements of Appendix A-010, *Minimum Reserve Standards for Individual and Group Health Insurance Contracts*. Appendix A-010 represents the incorporation into SAP of the requirements found in the NAIC's Model Regulation No. 10, *Health Insurance Reserves Model Regulation* (HIRMR). As a general rule, when changes are made to HIRMR, corresponding changes are made to Appendix A-010.<sup>2</sup>

Appendix A-010 states that contract reserves are required, with two main exceptions we discuss below, for A&H contracts with level premiums and for A&H contracts for which it is expected that there will be a time at which the present value of future benefits exceeds the present value of future valuation net premiums. One exception is that contract reserves are not required for "contracts which cannot be continued after one year from issue." The other exception is that contract reserves are not required if rates for a particular block of contracts are determined in such a manner that each year's premium is intended to cover that year's cost, with no prefunding of future years' costs from the current year's premium. Further clarity on the scope of this requirement is provided within SSAP 54, which states that the fact that the insurer may have the

---

<sup>1</sup> Such a liability, if established, would start and end at zero over a typical 12-month contract period, but could be non-zero at interim points to the extent that there is a material difference between the expected pattern of premiums and the expected pattern of incurred claims throughout the 12-month period.

<sup>2</sup> Note that changes to HIRMR have to be adopted by the NAIC and included in the APPM before they are effective. The APPM is automatically adopted by reference in most states.



right to increase premiums or to decline renewal of the contract under certain conditions has no bearing on whether or not a contract reserve is required.<sup>3</sup>

Appendix A-010 also prescribes methodologies and assumptions that must be used in computing the minimum allowable contract reserves for A&H contracts. The insurer is allowed to use alternative methodologies and assumptions in computing the contract reserves it records on its SAP statement, as long as the insurer can demonstrate that in aggregate the recorded contract reserves exceed the reserves calculated according to the minimum standards. Where prescribed, the SAP assumptions for mortality, morbidity, termination rates, and/or interest rates typically have been set in accordance with the SAP concept of conservatism. Where assumptions are not prescribed, SAP anticipates the use of assumptions that are consistent with the SAP concept of conservatism. As a result, contract reserves calculated using the SAP methodologies and assumptions frequently will differ from contract reserves calculated under GAAP, in which the insurer has greater freedom to select methodologies and assumptions (as long as the assumptions include provisions for adverse deviation).

SAP guidance explicitly does not address the lock-in principle found in GAAP. The guidance in Appendix A-010 regarding minimum reserve assumptions and methodologies, however, generally remains unchanged for a particular policy after issuance. That is, as changes are made to the HIRMR, those changes typically only affect the minimum reserve requirements for new contracts, with existing contracts remaining subject to the minimum reserve requirements applicable at issue. This practice resembles the lock-in principle in some ways. In addition, regulatory approval typically is sought in situations in which an insurer wishes to make any changes to its contract reserve assumptions and methodologies for inforce business, even in situations in which both the current and proposed new reserves exceed the minimum requirements of Appendix A-010.

### **3. What types of health insurance products typically require contract reserves?**

Typical products that require contract reserves are those that have an issue age premium structure (future premiums are level based on the insured age at issue of policy) with increasing future expected claims. This would include such products as individual disability income, long-term care, Medicare supplement, and specified disease (e.g., cancer) products. There also may be the need for contract reserves in case in which the underwriting selection curve creates a mismatch in the future claims and premiums. This could include such products as individual major medical. Contract reserves may be necessary on products that have an attained age structure if the future scheduled premium increases based on advancing age do not match sufficiently with future expected age-related increases in claims.

As noted above, GAAP typically is interpreted as implying that the insurer only may hold contract reserves for long-duration products. For many types of accident and health insurance policies for which the insurer's rating structure does not contemplate any pre-funding of claims across years, whether the policies are classified as long-duration versus short-duration may be a distinction without a difference insofar as contract reserves are concerned. While FAS 60

---

<sup>3</sup> The intent of this provision is to recognize rating requirements that are expected to have sub-portions subsidize other sub-portions (e.g., community rating) so a "contract reserve" is not established for those sub-portions being subsidized.

contains some examples relevant to A&H insurance regarding the boundary between short-duration and long-duration contracts, in practice there appears to be some variety among insurers in how A&H policies are classified. Some insurers, for example, have classified group long-term disability policies as being long-duration in nature, which enables deferred acquisition costs to be amortized over periods of time longer than one year. In a similar vein, one could argue in this post-HIPAA (Health Insurance Portability and Accountability Act) environment that small group medical policies are a long-duration contract, since the insurer cannot unilaterally decide not to renew a particular group. But few insurers appear to have explicitly adopted such a GAAP accounting policy.

#### **4. How do you determine appropriate SAP or GAAP contract reserve assumptions?**

For SAP purposes, Appendix A-010 states that the insurer should be determining a sound value of its liabilities in calculating its contract reserves. Many actuaries believe that this implies that the reserves should be appropriate under moderately adverse conditions, but should not be excessive. This objective typically is accomplished by including provisions for adverse deviation in the reserve assumptions. Professional judgment must be used and the actuary should consider the covariance effects of the various assumptions.

Many actuaries believe that the SAP contract reserve should be greater than the reserve level that would be established using assumptions that represent the best estimate of anticipated future experience. Many actuaries will rely on their own company's experience (if credible) or industry tables when determining the best estimate of anticipated future experience and will include a margin for conservatism. HIRMR states in Section 4.A.5 (Appendix A-010 Section 34.e), "The total contract reserve established shall incorporate provisions for moderately adverse deviations." At a minimum, the SAP contract reserve must be at least as great as the amount determined using the prescribed methodology and prescribed assumptions required by state regulation.

FAS 60 provides the following guidance on assumption-setting for GAAP contract reserves:

"The liability, which represents the present value of future benefits to be paid to or on behalf of policyholders and related expenses less the present value of future net premiums (portion of gross premium required to provide for all benefits and expenses), shall be estimated using methods that include assumptions, such as estimates of expected investment yields, mortality, morbidity, terminations, and expenses, applicable at the time the insurance contracts are made. The liability also shall consider other assumptions relating to guaranteed contract benefits, such as coupons, annual endowments, and conversion privileges. The assumptions shall include provision for the risk of adverse deviation."

Unlike SAP, there are no prescribed assumptions for GAAP reserves. Many actuaries believe that the GAAP assumptions should be less conservative than SAP assumptions—but stronger than a best estimate basis. Many actuaries will review the assumptions used in pricing and determine if a provision for risk of adverse deviation was established. If this requirement has been met, the assumption basis consistent with that used in the development of gross premiums may be appropriate for use. The actuary needs to be cognizant of the possibility, however, that,

due to changes in the environment subsequent to when the pricing was originally developed, the pricing assumptions no longer represent appropriate current estimates for use with newly-issued contracts. This possibility is particularly likely in situations in which a particular policy form has been in use for several years; it may be appropriate for the actuary to establish different policy eras under the same policy form, with different assumptions reflecting then-current conditions at the time of issue. In practice, it may be more common for interest rate or persistency assumptions to be updated from pricing than for mortality or morbidity assumptions to be updated from pricing, as it may be easier to demonstrate a material variance from the original assumption with respect to interest rate or persistency than with respect to mortality or morbidity.

The subject of selecting assumptions for contract reserves is also addressed in Section 3.3.1 of Actuarial Standard of Practice No. 42, *Determining Health and Disability Liabilities Other Than Liabilities for Incurred Claims*.

## **5. What methods are used for contract reserves for SAP versus GAAP?**

For SAP, Appendix A-010 currently defines the minimum reserve standard to be the two-year full preliminary term method for all benefits, except long-term care and certain return of premium or other cash deferred benefits. In addition, the requirements for credit health coverage reserves are defined in a separate SSAP and are not discussed further in this practice note. For long-term care insurance, the minimum standard is the one-year full preliminary term method. For return of premium or other deferred cash benefits, the minimum standard is one-year full preliminary term if benefits are to be provided at any time before the 20th anniversary and two-year full preliminary term otherwise. All of these methods allow for reduced reserves in the initial durations of the contract to limit surplus strain from acquisition costs. Please refer to the Reserve Method section under Contract Reserves in Appendix A-010 for specific reserve standards.

Note that the above only defines minimum standards—a carrier may use an alternative method if it produces reserves as least as great as those defined by the minimum standard. Many carriers choose to use a reduced preliminary term method or a net level premium method, when the product has minimal acquisition costs, to match premiums more effectively with expenses.

For GAAP, FAS 60 states the liability should represent the present value of future benefit less the present value of future net premiums, which implies the use of a net level premium method rather than any form of preliminary term method. GAAP, however, also recognizes the potential problems this method creates with respect to matching premiums with expenses when a carrier has non-level expenses, such as acquisition costs. To address this potential problem, FAS 60 also requires the deferral of acquisition costs. (See Question 17 for more information on the establishment of a deferred acquisition cost asset.)

Under either SAP or GAAP, if the contract reserves are deficient, additional reserves may be required, as determined by a gross premium valuation as discussed later in the practice note.

## **6. What is the tax deductibility of health contract reserves?**

Tax deductibility will depend upon a number of things, including whether or not the organization is taxed as an insurance company. As such, you should always consult your tax advisor regarding any conclusions regarding tax practices. Subject to such consultations, in general, contract reserves are tax deductible for insurance companies if the underlying contract is either noncancelable or guaranteed renewable, as defined in Treasury Regulation 1.801-3(c) and 1.801-3(d). Mortality and morbidity assumptions are specified in Treasury Regulation § 1.807-1 and generally follow statutory guidelines, while the interest rate assumption to be used is the greater of the prevailing state assumed interest rate (PSAR) from statutory guidance or the applicable federal interest rate (AFR) promulgated by the Internal Revenue Service. Lapse assumptions are those used to compute statutory reserves.<sup>4</sup> The tax reserve method is defined as the two-year preliminary term method except for long-term-care contracts for which the one-year preliminary term method is required based on the issue year. The tax reserve method is applicable whether or not the statutory reserve is based on a similar method; for example, if a company chose to use net level premium for statutory reserves, it still would need to use a two-year preliminary term for tax reserves. Premium deficiency reserves are not tax deductible. The tax reserve never can be greater than the statutory reserve actually held.

## **7. When can you unlock GAAP assumptions?**

In general, original assumptions are required to be used in subsequent accounting periods to determine changes in the GAAP liability for future policy benefits. As noted above, this often is referred to as the lock-in principle. Assumptions are changed only if one of three situations arises. The first situation, described in paragraph 35 of FAS 60 (now ASC 944-60-25-7), occurs when a gross premium valuation reveals a premium deficiency. The second situation, described in paragraph 37 of FAS 60 (now ASC 944-60-25-9), occurs when a future projection by calendar year reveals a pattern of profits followed by losses. This situation can arise, for example, with a long-term care block for which experience is deteriorating. The third situation, described by the AICPA in its Statement of Position 05-1 (SOP 05-1), *Accounting by Insurance Enterprises for Deferred Acquisition Costs in Connection with Modifications or Exchanges of Insurance Contract*, occurs when an internal replacement occurs. (See also the discussion of AICPA Technical Practice Aid 6300.36 in Question 14 below.)

## **8. How do you unlock GAAP assumptions when you have a premium deficiency?**

If a GAAP premium deficiency exists, which allows GAAP assumption unlocking, it is recognized by a charge to earnings and by writing off the DAC or by increasing the reserves using current best estimate assumptions. Future changes in reserves will be determined using the modified assumptions, which are now locked in unless a future deficiency develops. No loss shall be reported currently if it results in creating future income. Note that the GAAP guidance

---

<sup>4</sup> SAP allows the use of non-zero lapse assumptions only based on certain pricing practices and places further limitations on the selection of non-zero lapse assumptions.

(now found in ASC 944-60-25-8) states that you can write off the DAC or increase reserves, and it does not specify the order in which these must happen. Actual practice varies and depends on the specifics of the situation. This guidance for long-duration contracts is different from the guidance for short-duration contracts. For short-duration contracts, the GAAP guidance specifies the order as follows: “[A] premium deficiency shall first be recognized by charging any unamortized acquisition costs to expense to the extent necessary to eliminate the deficiency. If the premium deficiency is greater than unamortized acquisition costs, a liability shall be accrued for the excess deficiency.”

As discussed further in Question 12 below, best estimate assumptions are used in the gross premium valuation (GPV) that determines whether a premium deficiency exists. The new reserve is generally the existing reserve plus the additional reserve indicated by the GPV, using the best estimate assumptions.

**9. How do you establish contract reserves when there is a changing benefit and/or premium pattern?**

Contract reserves are calculated at issue based on an expected pattern of future benefits and premiums that are known at issue. These projections typically assume the renewal net premiums are level and the future benefits increase only for aging and medical trend, if any. To the extent a product may have future rate increases or changes in benefit levels due to inflation or other factors, the initial level of reserves will not reflect that impact.

The NAIC Health Reserves Guidance Manual does provide some SAP guidance on the issue of recognizing inflationary cost increases in the development and updating of contract reserve factors, as follows:

“There are a number of approaches to recognizing inflation of future benefit costs. Reserve factors should always be developed recognizing any anticipated increase in benefit costs that results from the aging of the insured individuals. Additional cost increases that are projected to arise from inflation, general changes in utilization, etc., may also be incorporated in the initial development of reserve factors. If that is not done, or if the actual cost increases diverge significantly from the projected levels, it will be necessary to modify the reserve factors.”

Various methods for modifying reserve factors are described below, with selected comments on their appropriateness for either SAP or GAAP reporting:

*Do nothing approach:* Reserves are based on initial level of benefits with no adjustments are made for future actual increases in benefits after issue. Future increases in benefits are funded by the potential for future increases in premiums. This method should be used only when consistent with the policy rating structure and the company has shown a pattern of increasing rates when future benefits increase.

*Proportional approach:* Each year, multiply the contract reserve by a factor that reflects the cumulative inflationary cost increases since contract reserve factors were developed.

Note that this method requires consistent historical and expected future increases in the net premiums and incurred claims for the coverage.

*Benefit rider approach:* Each year, calculate a new set of contract reserve factors that reflect the inflationary cost increase and add this to the prior contract reserve factors.

*New factor approach:* Each year, develop a completely new set of reserve factors based on new projections of future benefit costs. This approach would not be appropriate for GAAP reporting in light of the lock-in principle.

*Assume benefits increase initially approach:* Develop reserves at issue assuming a certain expected pattern of future benefit increases. Accurate assumptions regarding future benefit patterns may be difficult to predict.

*Loss ratio approach:* Project a target loss ratio based on pricing assumptions for a block of business. This target loss ratio will be used to develop an expected incurred claims amount. The reserve is then the retrospective difference between the expected incurred claims and the actual incurred claims to-date. This approach is not used as often for SAP reporting.

#### **10. How do gross premium valuations (GPV) and contract reserves interact?**

A GPV compares the present value of future claims, expenses, and ending reserves (unearned premium, claim, and contract) with the present value of future gross premiums and current reserves (unearned premium, premium deficiency, claim, and contract). Both the current contract reserves and the projected future contract reserves at the end of the projection period would be necessary inputs to the GPV.

For SAP, both SSAP 54 and Appendix A-010 state that a prospective GPV is the ultimate test of reserve adequacy—and that extra reserves need to be recorded if the gross premium valuation determines any reserve inadequacy. If needed, this extra reserve usually is shown on line 3 (Additional actuarial reserves—Asset/Liability analysis) of Exhibit 6 of the Life/A&H Annual Statement or on line 5 (Aggregate write-ins for other policy reserves) of the Underwriting and Investment Exhibit Part 2D of the Health Annual Statement.

Any premium deficiency reserve that the insurer holds would be considered a part of the reserves included in the SAP gross premium valuation. Some companies may perform the GPV prior to performing premium deficiency testing due to the potential tax deductibility of the GPV-related extra reserve versus the non-deductibility of premium deficiency reserves. What the prevailing practice is on this is not clear.

#### **11. How is GAAP loss recognition testing different from GAAP DAC recoverability testing?**

GAAP guidance (currently found in ASC 944-60-25) requires that the block of business be tested periodically for GAAP profitability. Test results directly may affect the current DAC balance and

future amortization. Recoverability testing occurs in the first contract year, while loss recognition testing can occur at any time. In addition, the test applies to all business in force.

Recoverability testing ascertains whether all new business (i.e., current-year issues) will be profitable from a GAAP perspective. If not profitable, the company has a premium deficiency. The company determines whether the present value of gross premiums equals or exceeds the sum of the present values of expected benefits, deferred acquisition costs, and maintenance costs. Note that this test excludes consideration of any non-deferrable costs and overhead costs. The test, at least initially, will include all of the original GAAP assumptions, including full provisions for adverse deviation. If the test fails using the GAAP assumptions with PAD, the test will be performed again with no PAD. If the test fails without PAD, adjustments must be made as described in Question 8.

Loss recognition tests will be performed on the business in aggregate, first-year and renewal. The inclusion of any first-year business obviously would occur after any first year recoverability testing adjustments. GAAP guidance does not specify the timing of loss recognition testing. The test should be performed, however, whenever actual experience materially deviates unfavorably from expected experience. This test is done using assumptions without PADs. In addition, note that once a loss recognition test has resulted in corrective action, the test must be repeated at future valuation dates—at least until such time that further tests show sufficient margins to preclude the need for future testing.

## **12. How are GAAP recoverability testing and loss recognition testing performed?**

As stated in Question 11, GAAP recoverability testing and loss recognition testing are the same basic tests performed on different blocks of business (i.e., new business versus inforce). The purpose of the test is to compare the net liability position (all liabilities less DAC) to the minimum liability derived from a GPV test, on a pre-tax basis.

The GPV equals the present value of all remaining benefits and expenses less the present value of all remaining gross premiums, using current best estimate assumptions without provision for adverse deviation. The expenses included are usually just maintenance expenses, although overhead charges may be included if they are not absorbed by the rest of the business. A probable loss exists if the net liability is less than the GPV. If this test is not met, then the shortfall should be recognized as a loss in the current accounting period via either a reduction to unamortized DAC or an increase in GAAP benefit reserves, as stated in Question 8.

For testing, insurance contracts should be grouped consistent with the enterprise's manner of acquiring, servicing, and measuring the profitability of its insurance contracts to determine if a premium deficiency exists. Like products can be combined for testing (e.g., all major medical or all life products). Companies have great latitude in defining the business cells to be aggregated for testing. For example, the company may choose to test specific blocks of business such as all major medical sold via direct mail or all products sold in 2002 and 2003. Future testing, however, must be consistent with past decisions for existing blocks of business. A good rule to remember is that the higher the level of aggregation, the more opportunity exists to utilize sufficiencies to offset deficiencies.

### 13. How does the SAP gross premium valuation test compare to GAAP loss recognition testing?

The two tests have a number of similarities as well as a few differences.

As discussed above, the SAP gross premium test is outlined in the NAIC Health Insurance Reserves Model Regulation as the ultimate test of reserve adequacy. The analysis must be performed whenever a significant doubt exists as to reserve adequacy with respect to a major block of contracts or with respect to the insurer's health business as a whole. If a deficiency is found through the gross premium analysis, immediate loss recognition must be made and the reserves are to be restored to an adequate level. Gross premium tests generally are performed by aggregating all contracts in a given line of business or for the company as a whole. It should be noted that SAP premium deficiency reserves are calculated using a GPV methodology.

GAAP loss recognition testing is outlined in FAS 60 and is referenced in conjunction with the premium deficiency analysis. If a deficiency is found through the recoverability analysis, the actions required are discussed in Question 8.

Areas of potential distinction between the two tests include:

- *Timing of the tests:* Gross premium valuation is only required to be performed when the company has a concern about reserve adequacy. Due to the complicated relationship with deferred acquisition costs, GAAP loss recognition testing should be performed as a regular course of business. Similarly, a company may have situations in which, due to conservative SAP reserve assumptions, it has no concern about SAP reserve adequacy but finds GAAP reserves to be deficient.
- *Grouping:* SAP gross premium valuation tests often are performed at a relatively aggregated level, which could be as high as the company level. For GAAP, FAS 60 requires the testing to be performed using groupings consistent with how products are acquired, serviced, and measured. The minor wording differences between the SAP and GAAP guidance are not intended to signify a major difference in groupings. But differences in granularity of testing may arise from the fact that SAP reporting is performed at the legal entity level, whereas GAAP reporting is performed at the consolidated enterprise level. There appears to be a wide variety of practice and interpretation in this area.
- *Treatment of expenses:* A SAP gross premium test is to include all expenses, whereas the GAAP gross premium recoverability testing is required to include only settlement and maintenance costs.

*Conservatism:* Many actuaries believe the SAP gross premium test should be based on assumptions that would produce an adequate reserve under moderately adverse development. GAAP gross premium tests generally are believed to be performed based on assumptions that represent the expectation of ultimate outcomes. Assumptions involving future morbidity improvement and future rate increases may be appropriate for GAAP purposes but inappropriate for most SAP purposes.



**14. On a GAAP basis, how do you determine if you have profits followed by losses?**

It may be common for a block of business to show losses followed by profits. This may be due to the additional build-up of GAAP contract reserves in early policy durations based on the underlying assumptions including a provision for adverse deviation. In some cases, however, a loss recognition test might show that profits occur in early periods and losses in later periods.

The need to strengthen reserve in a profits-followed-by-losses situation was referenced in the answer to Question 7 and is described in ASC 944-60-25-9 (formerly FAS 60 paragraph 37) as follows:

“In some instances, the liability on a particular line of business may not be deficient in the aggregate, but circumstances may be such that profits would be recognized in early years and losses in later years. In those situations, the liability shall be increased by an amount necessary to offset losses that would be recognized in later years.”

The profits-followed-by-losses concept is particularly relevant in situations in which gross premium rates are increased for guaranteed renewable products that were originally priced with the expectation that premium rates would remain level over the lifetime of the contracts (e.g., long-term care). Some actuaries believe that the level of aggregation applied for profits followed by losses is the same as for loss recognition testing.

Some companies historically assumed an in-force gross premium rate increase by itself constituted an assumption unlocking event and prospectively unlocked (i.e., “pivoted” and unlocked) contract reserve assumptions when rates were increased. The AICPA in 2008 issued *Technical Practice Aid 6300.36*, which clarified that an in-force gross premium rate increase alone is not grounds for unlocking and it also reiterated that contract reserve assumptions can be unlocked only in the three situations described in the answer to Question 7 above. In the event of an in-force gross premium rate increase for a block of guaranteed renewable business without an adjustment to the future change in contract reserves, the block may be projected to exhibit profits followed by losses, as the additional gross premium collected falls immediately to the bottom line instead of being used to fund the contract reserves.

Period-by-period projections of future income are required to determine if a block of business is exhibiting profits followed by losses. As such, to determine if the profits-followed-by-losses scenario exists, additional balance sheet and income statement items must be produced that are not commonly produced by the typical loss recognition process used to determine if an aggregate deficiency exists (as discussed in Question 12 above). These additional items include year-by-year projections of reserve amounts, unamortized DAC amounts, and investment income.

**15. If you have profits followed by losses on a GAAP basis, how do you establish a “loss reserve”?**

Under ASC 944-60-25-9 (formerly FAS 60 paragraph 37), the liability should be increased by the amount necessary to offset the losses that would be recognized in later years. This marginal liability sometimes is referred to as a loss reserve. It is reasonable to fund the deficiency over the

profit period in proportion to an objective basis, such as premiums or profits. “No loss shall be reported currently if it results in creating future income.”

**16. How are future premium rate increases for level premium issue age products accounted for in loss recognition testing and asset adequacy testing?**

When accounting for future premium increases, the actuary may consider filed rate increases, approved rate increases, implemented rate increases, and anticipated future rate increases that have yet to be filed. Practices vary depending on the health product. For GAAP loss recognition testing, many actuaries set assumptions assuming a realistic scenario. The actuary usually accounts for filed rate increases and approved rate increases. When considering the filed rate increase amount, the actuary should recognize that the full filed amount may not be approved and therefore that a realistic assumption should be determined.

For products with increasing morbidity, such as individual medical and Medicare supplement, it is appropriate to include anticipated rate increases under realistic scenarios since it is likely that they will be approved. For other products, such as long-term care, for which future rate increases are not anticipated in the course of normal business, other items should be considered before using anticipated rate increases. Those items include the company’s history of rate increases, the rate increase amount that is likely to be approved by regulators, and management intent to file for these rate increases.

For asset adequacy analysis, the actuary should set assumptions based on moderately adverse conditions. Normally, the actuary usually may account for filed rate increases and approved rate increases. When considering the filed rate increase amount, the actuary should recognize that the full filed amount may not be approved and that an appropriate assumption should be determined. Some states have implemented some restrictions that mandate that only approved and implemented rate increases can be included.

Under both loss recognition testing and asset adequacy analysis, if the actuary believes that current contract reserves and future premiums do not cover future benefits and expenses, then a loss should be recognized and additional reserves established.

**17. How do unamortized deferred acquisition costs (DAC) relate to contract reserves?**

Unamortized deferred acquisition costs relate only to GAAP reporting. DAC is not classified as a reserve or future policy benefit. The DAC, however, is reported as an asset on the balance sheet for accounting purposes. GAAP recoverability and loss recognition testing includes unamortized DAC. (See Question No. 12.) The appropriate unamortized DAC balance is subject to being expensed by the company if either the GAAP recoverability or loss recognition testing fails.

Practice varies, but, in an ideal situation, DAC should be calculated over the life of the policy using the same assumptions, including a provision for adverse deviation, as to policy termination rates and interest used in the GAAP contract reserve calculations. Practice varies, but, in an ideal situation, a consistent inforce and model should be used to value both the DAC and GAAP contract reserves. In some instances, a more simplistic model may be used to value DAC.

## **18. Are contract reserves held for policies in open claim status?**

Contract reserves typically are held for policies in open claim status. The claim costs underlying the contract reserve calculations typically are developed using all in-force policies as the exposure basis as opposed to only using non-benefit eligible (i.e., active) policies. When claim costs are developed using all in-force policies without regard to claim status, contract reserves must be held for all in-force policies to capture all expected future benefit payments for a block of business. Policies on claim normally continue in force, often due to the waiver-of-premium provision.

Note that the 1964 CDT, 1985 CIDA, and 1985 CIDB disability valuation tables were developed using all in-force policies as the exposure basis.

Theoretically, contract reserves may not need to be held for policies in open claim status if the claim costs underlying the contract reserves were developed using active policies as the exposure basis—instead of all in-force policies. Before releasing contract reserves for policies in open claim status in this scenario, the actuary should consider carefully whether the contract reserves should be maintained to the extent that they are accounting for costs related to future changes in claim status, such as a recovery followed later by another claim incidence.

Note that Appendix A-010 paragraph 34.c states that the contract reserve is in addition to claim reserves and premium reserves. It could be argued that this statement means that each policy that requires a contract reserve must have a contract reserve regardless of benefit eligibility status. Holding contract reserves on all in-force policies, whether theoretically necessary or not, allows the insurer to satisfy this NAIC requirement without ambiguity.

## **19. How are waiver-of-premium provisions accounted for in contract reserves?**

Contract reserves for waiver-of-premium normally are calculated using the same valuation methodology and assumptions as used for the contract reserves for the base benefits. The key difference between the waiver-of-premium contract reserve calculation and the base contract reserve calculation is that the monthly premium is substituted for the base benefit amount. Insurers typically use the gross monthly premium in the waiver-of-premium calculation.

As an alternative, some companies apply overall adjustment factors to the base contract reserve for which the factors are developed by modeling a comparison between the base claim costs and the waiver-of-premium claim costs.

Waiver-of-premium adjustments typically must be accounted for when contract reserves are calculated with underlying claim costs that were developed using all in-force policies as the exposure basis. In this scenario, contract reserves must be held for all in-force policies, which typically mean that net premiums are assumed to be collected for benefit-eligible policies on waiver-of-premium. This overstatement in the net premiums understates the contract reserves. The waiver-of-premium adjustments described above are meant to offset this overstatement in net premiums.

Again from a theoretical viewpoint, if the claim costs underlying the contract reserves were developed based on non-benefit eligible (i.e., active) policies only, then contract reserves only need to be held on active policies. In this scenario, there is not an overstatement in assumed net premiums, and waiver-of-premium adjustments typically are not required.

Exhibit 2 (Reserves for Waiver of Premium (supplementary explanatory material)) of Appendix A-010 discusses waiver-of-premium SAP reserve considerations for individual disability income policies.