

A PUBLIC POLICY PAPER

Premium Deficiency Reserves Discussion Paper

March 2007

Premium Deficiency Reserves Work Group of the
Health Practice Financial Reporting Committee



AMERICAN ACADEMY *of* ACTUARIES



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Premium Deficiency Reserves Work Group of the Health Practice Financial Reporting Committee

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Table of Contents

I. Introduction.....3

II. General PDR Background.....4

 A. Purpose of PDRs.....4

 B. General Principles Underlying the Calculation of PDRs.....6

 C. Authoritative Guidance.....9

III. Financial Reporting Impacts.....11

IV. Specific Issues Regarding Assumptions and Calculations.....17

 A. Interaction With Other Reserves.....17

 B. Business To Be Included.....17

 C. Contract Grouping.....18

 D. Projection Period.....24

 E. Premium Rate Changes.....25

 F. Claims Projections.....26

 G. Expenses.....26

 H. Interest Rate.....29

 I. Taxes.....30

 J. Reinsurance.....30

 K. Conservatism.....30

V. Other Considerations.....31

VI. Appendix I: Definitions.....32

VII. Appendix II: Selected PDR Authoritative Guidance.....34

 A. ASB Authoritative Guidance.....34

 B. GAAP Authoritative Guidance.....35

 C. Statutory Authoritative Guidance.....38

VIII. Appendix III: Examples.....43

 A. Business To Be Included.....43

 B. Contract Grouping.....44

 C. Projection Period.....49

Section I - Introduction

This discussion paper on health premium deficiency reserves (PDRs) has been developed to provide some insight into (i) the testing for the need for PDRs, (ii) the manner in which a PDR, if needed, might be determined and (iii) some details around the financial reporting of PDRs. Though this paper provides some examples of potential issues to be considered when determining the need for a PDR, it is not intended to be comprehensive. We expect that the manner in which the examples are addressed will enhance the understanding of the actuary in the basis and background of these reserves.

The paper is intended to assist actuaries in this work, building upon the various authoritative guidance materials in existence, as developed by regulatory and other governing bodies. The generation or interpretation of such guidance is beyond the scope of this paper and our intent is solely to discuss methodology that we have experienced and provide some thoughts about it. It may also be useful to regulators as they review the manner in which an actuary has addressed the three areas indicated above.

We believe it important to note that this paper represents a description of practices the work group believes to be commonly employed by U.S. health actuaries working in insurance companies but is in no way intended to be a codification of generally accepted actuarial practice. Actuaries are not in any way bound to comply with the practices described herein or to conform their work to these practices. We make no representation of completeness; other approaches may also be in common use. Events occurring subsequent to the date of publication may make the practices described herein irrelevant or inappropriate. The Actuarial Standards Board has not promulgated the material within this paper, nor is it binding on any actuary.

Caveats:

- Much of the previously existing guidance relating to PDRs has been developed by non-actuaries and does not address all of the actuary's questions. This paper provides examples that are meant to assist the actuary in dealing with issues that result from the gaps in the non-actuarial guidance.
- Some of the guidance was developed with no expectation that liabilities for future policy benefits or contract reserves would be a part of the financial reporting for the products involved. The interaction between the PDR, the contract reserve and any additional actuarial reserve is further discussed in Section IV.A.
- The PDR is an actuarial reserve and is to be contained in any actuarial opinion of the reserves of a health entity. Thus, both actuarial standards and accounting standards may have to be consulted. These standards are discussed in section II.C.
- Minor wording differences in actuarial guidance may not be intentional. The actuary will need to be aware of the acceptability of interpretations by those with review authority over his or her work.

Some of the terminology used in this discussion paper may be unfamiliar to the reader, or may be used here with a meaning different from what the reader might expect. Accordingly, a short glossary is provided in Appendix I.

Section II – General PDR Background

A. Purpose of PDRs.

PDRs, when needed, are one category of a health insurance organization's liabilities. In the United States, PDRs are required for both general-purpose accounting (GAAP) and regulatory accounting (Stat). The difference in the purpose of Stat versus GAAP results in potential differences in the purpose(s) of the PDR. For Stat accounting, the focus is on the solvency of the legal entity. In general, the basis for reporting assets and liabilities under statutory accounting is more conservative than GAAP and is more rigidly defined in the manner and detail of the display of results. For GAAP accounting, the focus is more on the reporting of income properly allocated to the reporting period, assuming that the organization is capable of continuing in business. The definitions and detail level of reporting are not pre-defined but relate to the materiality of results for components of the organization. In this section, we will first consider PDRs from a statutory financial reporting viewpoint and then from the point of view of GAAP accounting.

Statutory Financial Reporting.

The Preamble of the NAIC Accounting Practices and Procedures (AP&P) Manual discusses "Objectives of Statutory Financial Reporting" in paragraphs 27 and 28. Paragraph 27 states, in part:

"The primary responsibility of each state insurance department is to regulate insurance companies in accordance with state laws with an emphasis on solvency for the protection of policyholders. ... The cornerstone of solvency measurement is financial reporting. Therefore, the regulator's ability to effectively determine relative financial condition using financial statements is of paramount importance to the protection of policyholders."

We understand from the AP&P that a PDR supports this objective to aid in the measurement of a reporting entity's financial condition in that:

- The PDR is a tool for solvency regulation, helping to ensure that a reporting entity's contractual obligations will be adequately funded.
- The PDR accomplishes that purpose by establishing a reserve that reduces the reporting entity's statutory capital and surplus, by an amount equal to the excess of future contracted benefits and associated expenses over future revenues and current contract reserves.
- The PDR helps identify situations where the reduction in statutory surplus could result in potential impairment with regard to the reporting entity's ability to meet its obligations.

GAAP Financial Reporting.

GAAP has a somewhat different focus than statutory reporting. While, strictly speaking, the term "premium deficiency reserve" is not defined, Statement of Financial Accounting Standards No.

60 (FAS60), *Accounting and Reporting by Insurance Enterprises*, discusses in some detail the premium deficiency event and its associated accounting treatment for GAAP, separating its discussion between short-duration contracts and long-duration contracts. GAAP is concerned primarily with a reporting entity's value to its current and potential owners, and with providing financial information about the entity's ongoing operations to such owners and other interested parties. Accordingly, the GAAP presentation of a reporting entity's balance sheet is generally intended to reflect the economic value of the entity's financial resources and obligations, rather than focus on the entity's potential difficulties in meeting its obligations. Furthermore, GAAP places much more importance on a reporting entity's income statement, from a going-concern perspective, because a great deal of the entity's value — to its owners, its customers, and its potential business partners — is derived from its ability to engage in profitable operations in the future.

In this context, the purpose of determining a PDR is to ascertain whether the reporting entity has assumed an unfunded financial obligation, and to represent the effect of such an obligation on the entity's financial condition. The distinction between that purpose and the statutory-perspective purpose cited previously may be neither apparent nor sharp. The two perspectives do, however, lead to different PDR requirements:

- GAAP reporting, much more than statutory financial reporting, is concerned with the expected results of future operations. As such, the impact of recognizing losses on only a portion of the entity's business, and shifting the effects of such losses from future reporting periods to the present, may be less misleading than if the focus is predominantly on whether the entity is already at risk of near-term insolvency. If the current recognition of such potential losses is viewed as eliminating "noise" from projections of future earnings, then the concerns related to current recognition may be offset by the improved perspective on the overall picture, including future earnings. Although recognizing the PDR in the current period reduces current profitability, it results in improved representation of future earnings.
- From a balance sheet perspective, a PDR for a subset of the business may not be as significant as in the statutory context. For example, there is no GAAP equivalent of risk-based capital (RBC) that may be affected by establishing a PDR. The recognition of future contingent losses in the current GAAP balance sheet, however, could have a negative impact on debt covenants or other contractual commitments the reporting entity has entered into, and fail to meet shareholder expectations related to current period earnings levels or earnings growth.

In summary, the GAAP purpose for PDRs is the recognition and appropriate disclosure of a contingent obligation that may affect an interested person's judgment of the financial value and ongoing financial vitality of a business enterprise. Note, however, that the informational value of a PDR may be different, and more limited, in an insurance context than the information provided by a "loss contract reserve" in the context of a manufacturing or non-financial services enterprise. The reasons for this are noted below, in Section II.B.

B. General Principles Underlying the Calculation of PDRs.

The foregoing discussion of purposes (Section II.A.), suggests some general principles that should apply to the determination of PDRs. Before the details of the PDR calculation can be understood, it is important to recognize the business context in which the PDRs are being determined.

In a non-insurance setting, a company that manufactures products or provides services often has a high degree of control over, or knowledge about, the company's costs of the product or service being sold. For example, the costs of raw materials or of intermediate products may be reasonably determined because the materials were previously stockpiled, because the company has locked in prices through contracts with its suppliers, or because the company is able to hedge against price changes. The costs of labor may be reasonably determined based on actual labor contracts or simply because of the company's own discretion in establishing compensation levels.

The non-insurance company may sell its products or services so that the full amount of goods and services is provided at the time of the transaction; the company's own costs are essentially known (or at least knowable) at the time of sale. Alternatively, the company may contract to provide its goods and services during some future period. In that event, there is usually some fairly definite limitation on what the company will provide (e.g., number of units of a manufactured product, or a fixed period of providing services).

To the extent that the company has concerns about its own costs of producing the goods or providing the services, or about the volume of goods or services that may need to be provided in the future, there may be additional measures the company can take to protect its profitability. Sometimes contracts are written on a "cost-plus" basis, whereby the company charges its customer based on actual costs as they ultimately become known, plus a pre-determined profit element. In other cases, prices or fees may be subject to change with little or no notice, with the customer having the option of exiting the contract if a more advantageous arrangement can be found.

In the non-insurance context just described, it is a reasonable expectation that most contracts between a company and its customers will be priced to produce a profit (or at worst, to break even), and that the expectations about profitability will be realized with relatively little error. If the company consciously prices a particular contract at a loss, or if later information creates the expectation of a loss, that can be viewed as an unusual situation that should be disclosed to those with a legitimate interest in the financial condition of the company. Without such disclosure, it would be substantially more difficult to extrapolate the company's future financial performance from its historical results.

The situation is very different for most insurers (or insurance-type companies). Insurers are risk-bearing entities; they take on financial responsibility for very uncertain situations, and attempt to mitigate the resulting risk by various techniques. Risk-mitigation may simply involve entering

into a large number of substantially similar contracts, or it may depend on a diversity of contract types among which there is only a low correlation of financial performance.

Unlike the non-insurance company, then, the insurer typically has very little certainty about the ultimate cost of providing its services to any specific customer. There are some types of insurance (e.g., medical insurance issued to small-employer groups) that are almost sure to experience large losses, but those losses are expected to be offset by profits on other contracts. Some blocks of contracts will often experience a temporary period of unprofitability, which may be ended by appropriate price adjustments or simply by the end of a random period of adverse experience. Because of the uncertainties involved, the projection of either the initiation or continuation of a period of unprofitability may be a highly speculative undertaking.

In the insurance-company context, then, losses on a particular contract or block of contracts are not necessarily an anomaly that must be highlighted and given close consideration; they are often just an ongoing feature of a risky business, and do not require a significant amount of attention. The key consideration, then, is to distinguish between those situations that do require further scrutiny, and those that can be considered as part of the normal course of business. When situations that require such scrutiny are identified, they should be reflected in the reporting entity's financial statements, just as they would be in a non-insurance situation.

From the standpoint of solvency concerns —from the standpoint of statutory financial reporting — the above considerations lead the work group to form the following three principles.

Principle 1: Situations that result in a PDR being established include the following:

- A block of business will experience losses over the near term, either because of overall premium inadequacy for that block, or because the losses on a particular subset within the block will exceed the profits on the other subsets.
- A block of business will be profitable in the near term, but long-term guarantees will cause it to be unprofitable over the projection period.

Principle 2: The PDR should be determined to minimize “false positives.”

That is, no PDR should be required unless there is a meaningful potential for loss.

Principle 3: The PDR also should be determined to minimize “false negatives.”

That is, a PDR should be required whenever there is an expectation for loss.

By describing these statements as principles, we mean that they are fundamental considerations that we keep in mind when judging the appropriateness of particular methods and assumptions. In light of that, we will next make some observations regarding the motivation for, and implications of, each of these principles.

With regard to the first principle above, we note two aspects in particular.

- First, the principle is stated in terms of “a block of business,” without specifying whether such a “block” is the reporting entity’s accident and health business in the aggregate, a very narrowly defined grouping of contracts, or something intermediate. The implications of various degrees of grouping — the “granularity” of the analysis — are addressed in Section IV.C. However, it should be kept in mind that insolvency is a condition of the reporting entity as a whole; a subordinate grouping cannot itself be insolvent, though it may lead to insolvency if other subordinate groupings are not sufficiently profitable. (Exceptions to that statement may be statutory, regulatory, or contractual provisions that segregate the profits of a block of business — e.g., a particular block of participating contracts. In that instance, a subordinate grouping could be “insolvent” itself, regardless of the status of the reporting entity.)
- Second, the principle refers to the projection period for the business. The period over which meaningful financial projections can be made for a block of business will vary widely, based on such factors as the guarantees made in the contracts and the number of contracts that constitute the block. Thus, PDR considerations may be very different for long-term versus short-term contracts. (See the discussions in Sections IV.C. and IV.D.)

With regard to the second principle, we observe the following.

- Even highly profitable reporting entities may occasionally — perhaps even frequently — have blocks of business that are temporarily unprofitable. If a PDR standard requires such entities to establish reserves, it will effectively increase the entities’ capital requirements, even though they are at negligible risk of having their capital reduced by entity-wide losses. Such entities may have their attention diverted from larger financial issues to PDRs for small blocks of business, as they work with regulators to determine the appropriate approach to correcting the loss.
- At the same time, entities that are at or near break-even, and could be pushed into a loss situation by even mildly adverse changes in experience, may not have to set up PDRs at all. Even entities currently in an overall loss situation may not need as many or as large PDRs as some highly profitable entities. Any “false positives” will divert regulatory attention from the at-risk entities to the financially strong entities. This could actually damage solvency regulation, rather than promote it.

With regard to the third principle, we note the following implications.

- The valuation may need to be performed not only over the full, projected lifetime of a block, but also over shorter intervals, to ensure that a temporary impairment of net worth in the intermediate term is not overlooked.
- This principle also has special implications if management is seriously considering actions (e.g., withdrawal from a product line or geographic area; ceding of profitable business; recapture of unprofitable business) that would increase costs or otherwise reduce profits. Careful consideration should be given to whether such actions are likely enough that they should be reflected in PDR calculations. It may be appropriate to

recognize a deficiency as soon as the actions become probable. The appropriate degree of conservatism in establishing PDR assumptions is one aspect of the guidance cited in Section IV.K.

There is some degree of conflict between the second and third principles; approaches that attempt to eliminate false positives are likely to significantly increase the number of false negatives, and vice versa. It is a matter of judgment how to balance those two concerns. To some extent, that judgment will be exercised by regulators in establishing requirements and guidelines for the determination of PDRs, but there will remain some need for judgment by the actuary who actually calculates the PDR. Also, it is difficult to determine how to select assumptions that will achieve a given degree of balance between the principles. These practical difficulties are dealt with in detail in Section IV.

Note that in some instances, the necessity for a PDR will be superseded by the previous establishment of policy reserves, and perhaps the strengthening of such reserves when reserve inadequacy was indicated by a gross premium valuation (GPV). In determining whether, and in what amount, a PDR is needed, the annual release of a policy reserve according to the applicable valuation standard should be viewed as a source of revenue. Accordingly, the principles stated above would not require a PDR in situations where existing policy reserves, combined with future premiums, are expected to adequately fund the future benefits and expenses. There is not necessarily a strong conceptual distinction between PDRs and policy reserves that are based on a GPV. Nonetheless, regulatory standards maintain that distinction (though not always clearly), and may impose very different requirements on the two categories of reserves.

The principles that should underlie the determination of a GAAP PDR differ in their application. For example, a “false positive” would be judged not from the standpoint of effects on future solvency, but rather from the standpoint of whether reporting a deficiency would give a misleading picture of how the reporting entity’s future financial results might be expected to differ from historical results. Similarly, a “false negative” would occur if the failure to establish a PDR would prevent a user of the financial statements from recognizing a material decrease in the reporting entity’s financial strength; in this case, the false negative could be important even if it had no implications for the reporting entity’s near-term solvency, but merely failed to suggest weaker operating results in the future.

Also, at least some of the GAAP discussion of “deficiency” recognition relates to what, in the statutory context, would be thought of more as a GPV test of policy or contract reserves. Here again, there is little distinction between where “policy reserves” leave off and “deficiency reserves” begin. Inadequacy of existing contract reserves may have a very different implication for GAAP financial analyses than would inadequacy of premium rates currently being charged, given the GAAP focus on ongoing operations, including potential new business sales.

C. Authoritative Guidance

Authoritative guidance is provided by: the Actuarial Standards Board (ASB); the Financial Accounting Standards Board (FASB); the National Association of Insurance Commissioners

(NAIC); and the American Institute of Certified Public Accountants (AICPA). Detailed excerpts from this guidance can be found in Appendix II.

The Actuarial Standards of Practice (ASOPs) are developed by the Actuarial Standards Board. It is the actuary's professional responsibility to be familiar with, and follow the prescriptions of, the ASOPs. The primary ASB guidance for PDRs can be found in ASOP No. 42, which provides guidance on when to establish a PDR and general considerations when estimating a PDR. Of course, other standards of practice, such as documentation standards, also apply.

GAAP guidelines include FAS 60, which provides guidance on when a PDR should be recognized for short- and long-duration insurance contracts. It also provides guidance on how PDRs should be accounted for in GAAP statements. The AICPA's Audit and Accounting Guides, as described in Appendix II, provide similar guidance for life and insurance entities as well as health care organizations.

NAIC guidance can be found in a number of documents including:

- NAIC Health Insurance Reserves Model Regulation,
- SSAP No. 54, and
- Health Reserves Guidance Manual (HRGM)

These documents describe when to establish a PDR, appropriate assumptions when estimating a PDR, and proper statutory accounting for a PDR.

The authoritative guidance for PDRs does not always agree and is often interpreted differently by actuaries and accountants, depending on their individual perspectives and experiences with the principles involved. In this discussion paper, we attempt to provide some insight into the differences in guidance and alternative interpretations.

Section III. Financial Reporting Impacts

The purpose of the PDR is to serve as a tool for solvency regulation, helping to ensure that guarantees made by a reporting entity will be adequately funded. The PDR accomplishes that by withholding from the entity's net worth an amount to fund the entity's future benefits and expenses. Since a PDR helps identify situations in which the entity's future statutory net worth could become impaired, the recognition of the potential impairment will be transferred from the future to the present, via the establishment of the PDR. Thus the PDR affects not only the balance sheet, but also the income statement.

The establishment of a PDR will affect reported net income by effectively moving losses from one reporting period to an earlier period. In the year the PDR is established, the income (underwriting gain) is reduced by the amount of the PDR. In the years after the establishment of the PDR, it will be reduced and this reduction will offset the loss it was established to cover. If the estimated loss does not match the actual loss, an additional loss or a gain will result. The income-statement effect may have significance in terms of dividend restrictions, identification of financial trends, financial ratio analysis, etc.

To best understand the balance sheet and income impact of the PDR, it is useful to look at some simple examples. The following examples show what happens as you move forward from year to year in determining the need for a PDR and how the changes may affect the financial statements. This example starts with showing only one line of business. The line of business titled Group LTD assumes projected losses of \$15,000 and \$6,000 for 2006 and 2007, respectively. Future years after 2007 assume projected gains. For simplicity, all results assume no discounting for interest.

EXAMPLE 1

Line of Business	Income Statement Original Actual Results as of 12/31/2005 (thousands)					
	Earned Premium	Incurred Claims	Exps/Comms	U/W G/L	Chg in PDR	Gain/Loss
Group LTD	650	585	78	-13	0	-13
Total A&H Business	650	585	78	-13	0	-13

The 2005 income statement, if a PDR is established in 2005, would include the present value of both the 2006 and 2007 loss, equal to \$21,000.

Line of Business	Income Statement w/ PDR Actual Results as of 12/31/2005 (thousands)					
	Earned Premium	Incurred Claims	Exps/Comms	U/W G/L	Chg in PDR	Gain/Loss
Group LTD	650	585	78	-13	21	-34
Total A&H Business	650	585	78	-13	21	-34

If the PDR established in 2005 for the projected 2006 and 2007 loss equals actual experience, the following shows the impact on the 2006 and 2007 income statement.

Line of Business	Income Statement w/ PDR Actual = Projected Results as of 12/31/2006 (thousands)					
	Earned Premium	Incurred Claims	Exps/Comms	U/W G/L	Chg in PDR	Gain/Loss
Group LTD	585	527	73	-15	-15	0
Total A&H Business	585	527	73	-15	-15	0

Line of Business	Income Statement w/ PDR Actual = Projected Results as of 12/31/2007 (thousands)					
	Earned Premium	Incurred Claims	Exps/Comms	U/W G/L	Chg in PDR	Gain/Loss
Group LTD	579	516	69	-6	-6	0
Total A&H Business	579	516	69	-6	-6	0

Establishing the PDR in 2005 moves the loss recognition from 2006 and 2007 to 2005. The surplus on the balance sheet is therefore reduced by the increased liability in 2005. The 2006 balance sheet reflects the change in PDR of \$15,000 resulting from the reduction in the PDR after the 2006 loss is realized. The 2007 balance sheet is the same with and without the 2005 PDR, as long as the estimated loss and the actual loss are the same. Also, note that the surplus for the balance sheet with PDR remains level at \$403 throughout this three-year period, as shown in the following table.

	Balance Sheet						
	12/31/2004	12/31/2005		12/31/2006		12/31/2007	
		No PDR	PDR	No PDR	PDR	No PDR	PDR
Assets	2,183	2,206	2,206	2,014	2,014	1,975	1,975
Liabilities w/o PDR	1,746	1,782	1,782	1,605	1,605	1,572	1,572
PDR	0		21		6		0
Total Liabilities	1,746	1,782	1,803	1,605	1,611	1,572	1,572
Surplus	437	424	403	409	403	403	403
12/31/2006 and 12/31/2007 Assumes projected equals actual							

EXAMPLE 2

Example 2 starts with the example 1 above but assumes projected results are not equal to actual over the next two years. The same projected losses of \$15,000 in 2006 and \$6,000 in 2007 are assumed. The actual results are a \$10,000 loss in 2006 and \$4,000 loss in 2007. The 2005 income statement will still show a \$21,000 PDR.

Line of Business	Income Statement w/ PDR Actual Results as of 12/31/2005 (thousands)					
	Earned Premium	Incurred Claims	Exps/ Comms	U/W G/L	Chg in PDR	Gain/ Loss
Group LTD	650	585	78	-13	21	-34
Total A&H Business	650	585	78	-13	21	-34

The income statement in 2006 will reflect the actual underwriting gain/(loss) with the change in PDR still \$15,000, assuming that the projections for 2007 have not changed. The net gain/(loss) will then reflect the difference between the actual and expected results.

Line of Business	Income Statement w/ PDR Actual = Projected Results as of 12/31/2006 (thousands)					
	Earned Premium	Incurred Claims	Exps/Comms	U/W G/L	Chg in PDR	Gain/Loss
Group LTD	585	522	73	-10	-19	9
Total A&H Business	585	522	73	-10	-19	9

Assume that on Dec. 31, 2006, projections are revised based on the actual 2006 results and the new projected 2007 results are a \$2,000 loss instead of a \$6,000 loss and future profits after 2007. The above change in PDR reflects the adjustment in the PDR from the original amount of \$6,000 for 2007 down to \$2,000 for 2007. Below is the revised income statement as of Dec. 31, 2007 if actual results equal the new revised projected results.

Line of Business	Income Statement w/ PDR Actual = Projected Results as of 12/31/2007 (thousands)					
	Earned Premium	Incurred Claims	Exps/Comms	U/W G/L	Chg in PDR	Gain/Loss
Group LTD	579	512	69	-2	-2	0
Total A&H Business	579	512	69	-2	-2	0

Establishing the full PDR in 2005 moves the loss recognition from 2006 and 2007 to 2005. The surplus on the balance sheet is therefore reduced by the increased liability in 2005. The 2006 balance sheet reflects the change in PDR of \$15,000 resulting from the reduction in the original PDR and the change in the new projected PDR of \$4,000 (\$6,000- \$2,000) for 2007. The 2007 balance sheet then shows the remaining \$2,000 of PDR released assuming the future projections beyond 2007 are still appropriate.

	Balance Sheet						
	12/31/2004	12/31/2005		12/31/2006		12/31/2007	
		No PDR	PDR	No PDR	PDR	No PDR	PDR
Assets	2,183	2,206	2,206	2,019	2,019	1,980	1,980
Liabilities w/o PDR	1,746	1,782	1,782	1,605	1,605	1,572	1,572
PDR	0		21		2		0
Total Liabilities	1,746	1,782	1,803	1,605	1,607	1,572	1,572
Surplus	437	424	403	414	412	408	408
12/31/2007 Assumes projected equals actual							

EXAMPLE 3

The purpose of the following example is to illustrate how different levels of aggregation might affect the reporting of PDRs, and to note some implications of the differences in reporting.

Consider three companies — labeled A, B, and C — with the following characteristics.

- Each company writes two kinds of business, small-group (SG) and large-group (LG). All three companies write approximately the same amount of SG; all three also write approximately the same amount of LG.
- The balance sheets of all three companies are similar. In particular, all three have \$5 million of net worth before consideration of PDRs.
- All three have a risk-based capital company action level of \$4 million (thus, a regulatory action level of \$3 million and an authorized control level of \$2 million).
- To comply with PDR requirements, each company has projected the loss that each block of business will produce between the current financial statement date and the next time rates can be changed enough to restore profitability. If one block is producing a gain, the company has projected the gain over the same period reflected in the loss calculation for the other block; i.e., near-term losses are not being offset with longer-term gains. These projections have been made using reasonable assumptions.

The following table shows results, in millions of dollars, for the three companies. “Projected actual net worth” is net worth at the end of the PDR determination period, ignoring gains on new business and renewals not included in the PDR projections.

	A	B	C
Projected gain:			
• SG	-1	3	-3
• LG	-1	-2	4
• Total	-2	1	1
PDR required:			
• Block-by-block basis	-2	-2	-3
• Aggregate basis	-2	0	0
Net worth:			
• Before PDRs	5	5	5
• After block-by-block PDRs	3	3	2
• After aggregate-basis PDR	3	5	5
• Projected actual	3	6	6

Note:

- Using the block-by-block basis for PDRs, Company C appears to be in the most hazardous financial condition: it is exactly at its RBC authorized control level. Companies A and B appear to be in hazardous financial condition also, but only at the regulatory action level. Insurance regulators would make Company C their top priority, and then give equal attention to Companies A and B.
- Using the aggregate basis for PDRs, Company A is still in hazardous condition at the regulatory action level. However, Companies B and C have not fallen below any of the RBC event levels. Company A would come under regulatory scrutiny; Companies B and C would require no regulatory intervention.
- Based on the reasonable earnings projections that underlie the PDR calculations, Company A actually will fall to the regulatory action level. Companies B and C will actually see their respective net-worth increase.

Just as in the case of the balance-sheet effect, the income-statement effect will be affected by a block-by-block approach: Two entities that would have the same period-by-period income before PDR recognition, and would still have the same income stream as each other if PDRs were determined on an aggregate basis, could have very different reported income streams reflecting block-by-block PDRs because of the incidence of profits and losses among blocks of business. While reserve adequacy is important for both GAAP and statutory reporting, the earnings impact (and resulting influences on earnings per share and shareholder expectations) has particular importance for GAAP reporting.

Section IV - Specific Issues Regarding Assumptions and Calculations

In practice, PDR calculations are based on unstandardized methods and assumptions that can directly affect the results. Such issues as what business to include, how to group the business, and how long the projection period should be, have a significant impact on the results.

A. Interaction with Other Reserves

There is an interaction among PDRs, contract reserves, and any additional actuarial reserves. Potential future losses that need to be recognized in current liabilities might be recorded in any of these. The concept of PDRs was extended to health products without addressing the interactions. The use of one rather than another of these options will affect current and future earnings patterns and how the reported loss is interpreted:

1. For a group health contract with no contract reserves, the actuary would probably use a PDR to reflect the expectation that the premiums for the next contract year will not cover the benefits and expenses anticipated. This approach recognizes the entire loss in the current year.
2. When a company decides to stop writing a line of business and run off its remaining claims, the actuary should consider whether cash flow requirements would involve selling allocated assets. If the market value of these assets is less than the book value, the actuary may set up an additional actuarial reserve to reflect this difference. This approach recognizes the impact in the current year, but it does not suggest that the product is unprofitable.
3. When developing experience of long-term contracts is adverse (e.g., actual lapse rates of LTC contracts are less than expected), the actuary may revise the assumptions used in contract reserves. Additional portions of all future premiums are used to fund to the higher reserve standard, assuming there are margins in the anticipated gross premiums.

There is no single preferred approach, although accounting guidance may prohibit the use of a particular approach in certain cases. Consistency in financial reporting will likely influence the actuary in the use of one or more of these options. The development of the principles-based approach to reserves for GAAP (and possibly for Stat as well) could merge these as the principles-based approach uses a discounting of future cash flows with no lock-in of prior assumptions.

B. Business to be included

In determining which lines of business or contracts to include in the PDR calculations, a review of the relevant authoritative guidance may be helpful. For GAAP, FAS 60 applies to all insurance enterprises. For U.S. Statutory reporting, SSAP 54's scope is for all individual and group accident and health contracts, as further defined in SSAP 50. From the perspective of

premium deficiency reserves for health insurance, it can be concluded that all health insurance should be reviewed.

Administrative-services-only contracts are excluded, because these are not considered insurance products. For this type of business, however, when the administrative fees are not sufficient to cover expenses for the remainder of the contract period, a liability should be established under SSAP No. 5. The liability would be calculated using the same procedures as outlined for premium deficiency reserves.

Historically a gross premium valuation does not consider new business. When estimating a PDR, it is appropriate to include new business in the projection if the new business is guaranteed-issue and will be written at a loss. For any contracts that have been entered into, it is appropriate to use them in the projections whether they are profitable or unprofitable. However, it is not appropriate to use profitable business that is not under contract to offset unprofitable business. Please refer to the HRGM for further discussion.

Consideration should be given to premium-deficient contracts with effective dates after the valuation date, but with rates known as of the valuation date. The exact details of the situation will need to be carefully reviewed before reaching a decision for inclusion or exclusion from the PDR calculations. Factors that may enter into this review include the likely volume of business to be exposed to an inadequate rate situation, the ability to revise the rates and the timing of those revisions, expected policyholder reaction to a rate revision, etc. The “Business to be Included” example in Appendix III, Section A discusses these same considerations in the context of renewals and presents some possible conclusions.

C. Contract grouping

The issue of contract grouping as related to determining the need for a PDR has generated much debate within the insurance industry. Regulators, auditors, and companies have struggled with what was intended by the original guidance language regarding PDRs. Section 18 of SSAP No. 54 states:

“For purposes of determining if a premium deficiency exists, contracts shall be grouped in a manner **consistent** with how policies are **marketed, serviced and measured**. A liability shall be recognized for **each grouping** where a premium deficiency is indicated. Deficiencies shall **not be offset** by anticipated profits in other policy groupings.”

Paragraph 32 of FAS 60 states:

“Insurance contracts shall 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.”

While the SSAP’s and FAS’s are intended to provide guidance and should thus help with understanding how to apply the accounting practice, these guidelines have created more confusion in some situations. The questions have focused on how granular the analysis for

“policy groupings” should be for calculating the PDR. The extremes in aggregation have gone from one aggregate group for the whole health line of business requiring only one projection to individual policy groupings based on each policy form, thus requiring many projections. These two extremes help point out the challenges faced when determining the need for a PDR. Other areas that have generated debate include whether group and individual lines of business should be separated from each other, whether noncancelable business should be shown separately from guaranteed renewable business, and whether groupings should be based on how the health business is managed for rate action.

Arguments have been made for various approaches to grouping for premium deficiency reserve calculations. It is recognized that one reporting entity may have a valid approach for offsetting one group’s losses with another group’s profits that is different from another reporting entity. The main objective in all these situations should be the appropriate recognition of a premium deficiency reserve when an identified group, however defined, experiences a premium deficiency.

In order to help understand the dynamics involved in the issues with grouping, some discussion of the process is necessary. The whole process may be thought of as consisting of two levels:

- (1) Testing – the minimum level at which financial projections are performed; and
- (2) Reporting – management’s combination of the testing level results for reporting in the various external statements.

At each level, different issues will affect how a reporting entity decides to group its business.

TESTING LEVEL

The initial level is the “testing” level. At this level the focus is how to group contracts so that projections will provide meaningful results based on reasonable and credible assumptions. The actuary should review each grouping, and testing should be performed to determine the need for a PDR. Specific factors that may affect how grouping is accomplished at this level include:

- (1) Materiality of a group relative to size of the whole reporting entity
- (2) Similarity of product types
- (3) Differences in marketing methods (e.g., direct marketing vs. agent/broker)
- (4) Potential rate restrictions
- (5) Geographical rating areas
- (6) Length of rate guarantee periods
- (7) Regulatory requirements
- (8) Line of business (individual vs. group)
- (9) Case size within group business
- (10) Expected future growth or decline of a possible grouping

This is by no means a complete list of all the factors to consider, but it does provide a basis from which to establish groupings. These criteria may vary in importance based on how material each criterion is to premium rates and whether a grouping is large enough to be material relative to the whole reporting entity.

For example, the HRGM suggests possible “testing” groups for medical insurance products as:

1. Comprehensive medical;
2. Medicare supplement (including Medicare Select);
3. Medicare risk;
4. Medicaid (and similar state-sponsored medical assistance programs);
5. Dental; and
6. High-deductible medical reinsurance premiums, including aggregate coverages.

The HRGM also suggests the following possible group size categories that may be used for reviewing testing groups:

1. Small-group;
2. Large-group;
3. Mega-group; and
4. Any large group comprising 10 percent or more of the carrier’s total enrollment.

State regulations governing group insurance rating may result in the group size categories varying from company to company. Other criteria for determining grouping based on group size can be the level at which a company considers a group fully credible for rating purposes, based on actual group experience. For mega groups, where each group may be issued individually tailored product benefits, it generally is acceptable to combine all the mega-group experience together for determining the need for a PDR.

Another issue to consider at this level is whether a single policy that has both life and health benefits can offset a deficiency in the health portion with any surplus from the life portion. The standard grouping language from SSAP No. 54 suggests that grouping is permissible if the life and health portion were marketed, serviced, and measured together.

How to establish groupings for testing purposes will vary from company to company. The criteria noted above allow considerable flexibility and judgment in selecting how policies should be combined for testing purposes. Regardless of the approach, valuation actuaries must be able to justify their selection of groupings and provide sound reasons for inconsistency from valuation to valuation.

REPORTING LEVEL

The next level is the external reporting level. How are the testing groups arranged into an aggregate grouping for reporting purposes? An important consideration for grouping at this level is that all health business be included in some category or group. When summed across all the aggregated groups at this level, the sum should contain all the health business. The SSAP No. 54, Section 18 and FAS 60, Paragraph 32 language regarding grouping should be reviewed.

The actual grouping language for statutory and GAAP is shown below again.

Statutory (SSAP 54, Section 18)

“For purposes of determining if a premium deficiency exists, contracts shall be grouped in a manner consistent with how policies are marketed, serviced and measured. A liability shall be recognized for each grouping where a premium deficiency is indicated. Deficiencies shall not be offset by anticipated profits in other policy groupings.”

GAAP (FAS 60, Paragraph 32)

“Insurance contracts shall 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.”

How these characteristics are defined can and will vary from company to company.

GAAP reports are generally at a corporate consolidated level while statutory reports are at a legal entity level. The remaining discussion of the reporting level grouping will focus on statutory reporting. GAAP issues relating to reporting results for premium deficiency reserves should be discussed with the company’s auditors.

Marketing

The marketing aspect can be looked at in several ways. For example, should it be interpreted in terms of marketing technique (e.g., direct mail), which has little obvious bearing on premium adequacy? (To the extent it does, it is reflected in expense assumptions, regardless of ultimate grouping.) Or should it be interpreted from a competitive standpoint: What “markets” are you in? One approach could be the following:

- One group of products (comprehensive medical, dental, etc.) is marketed to customers as a means to provide for services and products that treat — on a preventive, curative, or ameliorative basis — adverse health-related conditions.
- Other products (disability income) are marketed as a means to replace income lost when, because of physical or mental disability, an individual loses some or all of his/her capacity to engage in remunerative employment.
- Other products (long-term care) are marketed as a means of providing for essentially custodial services that are necessitated by some medical (physical or mental) condition.
- Finally, there are some miscellaneous products marketed to address narrowly defined health-related needs. Of these products, typically none (or at most one) will be material in relation to a carrier’s overall book of business.

Servicing

The servicing of those categories of business defined in the marketing section above differs significantly from category to category. Items that should be identified include: how proof of loss is submitted; how eligibility for benefits is determined and confirmed; and to whom payment is made. Such differences are clearly more meaningful than, say, whether a claim form is mailed to the carrier's own employees or to a TPA employed by the carrier for a particular small block of business.

Measurement

“Measured” is in some ways both the easiest to deal with and the most difficult, simply because it has the least clear meaning. Within a carrier, by various people for various purposes, contracts may be measured at any level from contract-by-contract (e.g., for renewal pricing) to all A&H in the aggregate (e.g., by top corporate management of a multi-line company). Many different levels of grouping might be justified in keeping with how business is measured.

In light of recent discussions on the above matters, a subgroup of the NAIC Life and Health Actuarial Task Force agreed to a change in the HRGM. This would give additional guidance on how to aggregate testing groups into a predefined set of applicable lines of business for determining the need for PDR. Before this change, the HRGM addressed aggregate groups as “any line of health business including medical, long-term care, and disability insurance.” A revision to the HRGM tries to address some of the regulatory concerns regarding the balance between how companies are testing for PDR versus how the results should be reported on a statutory basis. It recognizes that companies may vary how they group their business for testing purposes, and thus how they offset sufficiencies against deficiencies. It also lays a framework of how companies should ultimately report the need for a PDR and at what level sufficiencies couldn't be used to offset deficiencies. This is outlined in the HRGM under Section VI, *Premium Deficiency Reserves, Section B. Applicable Lines of Business*. These revised guidelines are outlined below.

The guidelines specify four lines of business that must include all health coverage. All of a company's health business must fit into one or another of these four lines of business, which are:

1. Comprehensive major medical (to include other medical-type coverage and Medicare supplement as well as any coverage where the benefits are substantially subject to inflationary cost trend — e.g., dental and vision);
2. Long-term care insurance;
3. Income protection (disability income) insurance; and
4. Limited benefit plans (e.g., hospital indemnity, critical illness, and other coverage where the benefits are not significantly subject to inflationary cost trends).

If any of the four specific lines above is not material by itself, then it should be combined with the most similar other line for reporting purposes. Otherwise, deficiencies in one of the aggregate groups must not be offset with sufficiencies from another aggregate group.

Another issue at this level is how the aggregated results from the testing level will be illustrated in the appropriate statutory financial format. (Typically, this is either the life & health “blue blank,” or the health “orange blank.”) For example, a company may have two separate testing groups, for Medicare supplement and dental, and decide to aggregate these testing groups into one reporting group called Medical. The Medicare supplement group generates a projected \$100 loss and the dental group generates a projected \$70 gain. The company thus calculates a \$30 premium deficiency reserve at the reporting level. Whether in the blue blank or orange blank, some level of partition across columns will then need to be addressed when filling in the statement. In this example, if the company is filing an orange blank, the actual columns for the Part 2D exhibit may show a \$30 PDR for the Medicare supplement column and a \$0 PDR for the dental column versus the calculated testing results of \$100 and (\$70), respectively.

Clearly, the issue of grouping can be a challenge to the valuation actuary. Discussions with the company’s external auditors, domiciled state regulators, and internal management during the process can prove very valuable. In deciding what groupings to use in determining the need for a PDR, the valuation actuary will need to address various questions, such as:

- At what level should groupings be tested in order to recognize on a reasonable and credible basis those blocks of business that need a PDR?
- What groups with a sufficiency should be allowed to offset other groups with a deficiency?
- How should a reporting entity report the results in order to meet the purpose of the PDR outlined in Section I of this paper?

The focus for the actuary should always be to identify, analyze, and reconcile any groups of business that may impair the entity’s ability to meet its future financial obligations. It is also important to refer to the authoritative guidance references noted in this paper regarding disclosure and documentation of the issues related to grouping contracts.

To better understand the issues surrounding contract grouping and the impact it has on determining the need for a PDR, examples are provided in Appendix III, Section B.

FAQs

1. If a company writes a very large group and in order to sell to the group the company sets premiums so that there will be a loss on the group for the first year, should the company establish a PDR?

A company can set up a PDR on a large contract if it believes it is consistent with corporate philosophy. The reason for doing so, and estimation of the loss, should be well documented. There is no guidance that would prohibit a PDR, but on the other hand there is no requirement that a PDR be established in this situation.

2. How are medical conversions considered when determining whether a PDR is required for a company?

Medical conversions have always raised difficult valuation concerns, as the conversions are individual policies (or individual-type coverage issued through a group trust) normally issued as a result of writing group business. Given the nature of these types of policies, it is highly likely that a gross premium valuation will produce a negative present value. However, the results would vary by state, depending on the policy provisions and any regulations on rate increases.

Therefore, in calculating the PDR on medical conversions, it is necessary to consider the policies in each state separately. Assumptions about lapse rates, trends, rate increases, etc., will vary considerably by state. It is possible that changes in state regulations could dramatically change the amount of the PDR from one year to the next.

For grouping purposes in determining the need for a PDR, conversions can be grouped with similar business. However, it is not clear which other business is most similar. One choice would be the group business since the policies are usually issued as the result of being in this market. Since the conversion policies are often individual policies, it could be argued that conversions are similar to other individual policies with no or limited underwriting at issue. The determination would depend on the circumstances for each company.

If the policies are anticipated to show ongoing losses, the present value of those may be offset against the gain on other policies in the same grouping. In calculating this present value, only current in-force policies need be considered.

D. Projection period

Regarding the time period in which to perform PDR projections, Section 18 of SSAP 54 states that deficiency reserves should be based on “the remainder of a contract period.” This assumes that premiums will be adjusted accordingly when a new contract period starts, thus eliminating the need for a PDR beyond the start of that new period.

In contrast, a gross premium valuation performed to test the adequacy of a company’s total health business may assume a projection period that is much longer. This is typically either over the lifetime of the contracts or until the volume of in-force business is insignificant.

For these reasons, it may be difficult to determine an appropriate projection period to use in calculating a PDR, and some level of actuarial judgment will be involved. The following factors should be considered in determining the appropriate time period for PDR projections:

- Terminations
- Rate increases (restrictions/limitations)
- Claims trend
- Regulatory restrictions
- Renewability provisions
- Prior company practices regarding cancellations and exiting lines of business

The updated HRGM defines a deficiency period as the period for any block where the internal calculations result in a positive result from the reserve value for testing premium deficiency. The reserve value for testing premium deficiency is the sum of:

- The present value of future paid claims through the end of the deficiency period
- The present value of future expenses
- The present value of claim and contract reserves at the end of the deficiency period

Less:

- Current claim reserves (including special large-claims reserves)
- Current contract reserves
- Present value of future earned premiums
- Any current balance sheet accrual for future expenses

If the values fluctuate over different projected periods, the appropriate projection period is the one that generates the greatest reserve value from the above calculation. The HRGM also notes that if no grouping within a specified line of business generates a positive result in the above calculation for a one or three year testing period, no further testing needs to be done for that grouping.

Given the myriad of scenarios that can arise in determining the projection period, a few examples are provided in Appendix III, Section C.

FAQ

- 1) What should be done if a company has a guaranteed-renewable block of business that will be in a deficient financial position forever?

The company should project the deficiency as a perpetuity, and discount it at an appropriate rate of interest.

E. Premium rate changes

For many accident and health coverages, premium rate changes are standard practice. For re-ratable contracts, an assumption for future premium rate changes should be incorporated into the PDR calculations. The assumption should be reasonable relative to the assumed claim trend levels, with consideration also given to market competition, regulatory rate authority, company rating philosophies, and contractual limitations. Appropriate age-related rate changes for individual attained-age rated contracts should also be included.

Retrospective premium changes should also be included, if applicable. Both experience-rating refunds and retrospectively determined premium changes for group accident and health contracts affect the profitability of these contracts. The availability and amount of premium stabilization reserves related to these contracts should also be incorporated into the analysis.

Anti-selective lapses may result from rate increases. Consideration should be given to the impact on both the volume of business and the future claims levels.

F. Claims Projections

The actuary could consider any factor that will have an impact on projected claims levels. All assumptions affecting claims projections should be reasonable when considering the company's current business plan, and the health insurance market. The actuary should consider:

1. Current trends in medical cost and utilization;
2. Provider risk-sharing;
3. Changes in provider contracts;
4. Environmental and demographic impacts on morbidity;
5. Potential improvements in technology resulting in new services being offered and covered;
6. Positive morbidity impact of growth in underwritten coverage;
7. Durational wear-off;
8. The impact of benefit changes;
9. The leveraging impact of static co-pays and deductibles; and
10. The anti-selective impact of premium rate increases, which may cause healthier individuals to drop coverage or change products.

G. Expenses

The HRGM's guidance regarding (non-claim) expenses is clear: all of the reporting entity's expenses must be addressed in some fashion. Specifically, the HRGM says the following.

“Generally, the expenses considered for a particular grouping should represent a reasonable allocation of all the reporting entity's expenses ... The allocation may reflect that some expenses, such as the cost of installation of new business, may not be applicable to a particular grouping. If other lines of business can cover overhead, the test for a deficiency and the calculation of the deficiency reserve can be performed using only direct costs.”

In an appendix, the HRGM quotes the corresponding GAAP guidance from the *AICPA Audit and Accounting Guide: Health Care Organizations* (May 1, 1999 edition):

“The estimated future health care costs and maintenance costs to be considered in determining whether a loss has been incurred should include fixed and variable, direct and allocable indirect costs.”

It seems, then, that essentially the same considerations apply for both statutory and GAAP reporting; these considerations can be outlined as follows.

- The expenses that are directly attributable to the business being modeled must be reflected in the PDR calculation for that business.

- Some expenses may not be relevant at all to the business being modeled. For example, in a projection involving no new business, costs associated with the installation of new business need not be included in any fashion.
- All other expenses must be supported by some business. The expenses in the PDR projections, for example, cannot be limited to incremental expenses, but must include even fixed and indirect expenses. However, there is considerable flexibility about how such expenses may be allocated among the various groupings. Also, it is acceptable to allocate some of these expenses to lines of business (e.g., life and annuity products) that fall entirely outside the health PDR calculations, as long as it can be demonstrated that those other lines can support those expenses.

This treatment of expenses seems reasonable, and should not present severe problems with respect to mature, ongoing operations. There are circumstances, however, in which the application of this treatment creates problems, and it is not clear whether the most straightforward application is the best one.

Consider, for example, a start-up situation, where the reporting entity has just begun to write business. From the moment the first contract is written, a PDR calculation becomes necessary, and the full expenses of the entity must be incorporated into the calculation. This may result in a very large expense burden being supported by a very small number of contracts — perhaps even a single contract.

There are several ways to approach this situation, but may not follow the authoritative guidance.

1. The expenses used in the calculation could reflect the expense level that is expected to apply when the business is mature; the full variable expenses would be included, but the per-unit share of fixed and indirect expenses would be based on a mature volume of business. This approach has some intuitive appeal. However, it seems clearly at odds with the authoritative guidance, which requires that the total current expenses of the reporting entity be addressed.
2. The expenses in the PDR calculation could be based not on a fully mature volume of business, but on a more near-term projected volume, e.g., the volume expected to be achieved within the next year or two. However, this seems no more supportable than approach No. 1; it still permits some current expenses to be ignored.
3. The expenses in the PDR calculation could be graded down during the projection period, based on the volume expected to be added during that period. However, this requires, in effect, that the projection assume some profitable new business will be written to cover some portion of the expenses. It is far from clear that such an assumption is permitted (particularly since the *Audit Guide* guidance for GAAP is provided in the context of “existing contracts”). In a way, this approach may be the worst of both worlds. It requires a possibly impermissible assumption regarding future profitable business; at the same time, it may still leave a huge expense burden for the small block of existing contracts.

Also, it raises the question of whether those future contracts would themselves require PDRs until the volume of in-force business becomes sufficiently large; if so, the ameliorative effect on the required PDR may be much less substantial than one would hope for.

4. The most straightforward approach would be to simply incorporate the full expense level in the projections for the existing contracts. However, this would very possibly create a perpetuity of losses leading to a very large PDR. One could argue that this is exactly what is called for by the authoritative guidance. However, much of the resulting PDR will prove to be unneeded as the company's business grows in line with management's expectations. This seems to present the sort of "false positive" that was discussed in Section II.C above. It also seems at odds with the explicit GAAP prohibition of PDRs that will create net profits for a business as they are released in the future. (If the latter guidance is given precedence over the language regarding expenses, then the GAAP PDR will be lower than a "full expense" PDR would be, regardless of the conclusion reached for Stat purposes. This is an example of why a GAAP PDR might be significantly lower than the corresponding Stat PDR.)

None of the approaches, then, seems wholly satisfactory. The selection of an approach may require especially careful consideration of the assumptions being made, as well as, the results of discussions with the relevant authorities. For example, it may be appropriate to project a reasonable volume of future business consistent with the business plan presented to authorities during the licensing process.

The start-up situation also presents another issue, in the extreme case where the reporting entity has not yet actually written any business. Does the potentially very large PDR pop up suddenly when the first contract is put on the books? Or is there a requirement that a PDR be set up immediately upon the inception of operation, on the grounds that it is reasonable to assume some new business will be written and that the initial volume of business will not be able to support the full expenses of the reporting entity? Again, this may require discussions with relevant authorities.

A similar, although perhaps less troubling, situation is presented in the case of a reporting entity that is exiting a particular line of business, or perhaps going out of business entirely (e.g., one entity in a holding company group being closed down as its business is transferred to an affiliated entity). In this "wind-down" situation, the shrinking book of business may not be able to support a full expense load. This problem may occur even in the case where only one of several lines of business is being wound down. For example, there may be a system dedicated to that line of business, generating a fixed-expense burden that cannot be eliminated until the business has run off the books entirely. Consider the following implications of the wind-down situation.

- One could argue that, in the case of the complete wind-down, the regulators should be concerned about whether the entity has enough capital to absorb the losses likely to occur during the wind-down, in order to ensure that the reporting entity's customers will receive all of their promised benefits. Even in this situation, however, there may be some

inappropriate results. Suppose the calculated PDR leaves a positive statutory surplus that is, nonetheless, below the entity's mandatory control level for RBC purposes. This situation might, by law, *require* the insurance regulators to take control of the reporting entity, even though its affairs are being wound up in an orderly fashion that amply protects the policyholders' interests. That is obviously an undesirable and unreasonable result.

- The results may be unreasonable also when a single line of business is being exited. Again, think of the situation where a dedicated system must be kept in place until the exit is completed and all the reporting entity's obligations with respect to that line have been met. The fixed expenses associated with keeping that system in operation might result in a significant PDR. Nonetheless, the entity might easily be able to offset those expenses with some portion of the profits from continuing lines of business. However, the authoritative guidance seems to indicate that direct fixed expenses cannot be allocated to other lines of business. Because they are directly attributable to one line of business, they must be reflected in the PDR calculation for that line only. Again, this straightforward approach could create an undesirable false positive for insurance regulators, and an impermissible creation of future profits under GAAP.
- Finally, consider again the extreme wind-down situation in which there are no contracts in force, but expenses continue to be incurred since claims are still being paid from prior periods. Under some interpretations of the existing guidance, the reporting entity might be required to set up a PDR (for any expenses beyond the claims and claim administration expenses) even where there is no premium, no in-force contracts, and no prospect of any in-force contracts in the future. This, again, could occur with respect to a complete wind-down or an exit from a single line of business; it is simply the last stage of the situations described in the two immediately preceding bullets.

As was the case for the start-up situation, it is hard to craft an approach that seems to produce an intuitively reasonable result while conforming to the relative authoritative guidance. Under these circumstances, it may be necessary to seek regulatory relief from a strict application of the requirements.

H. Interest rate

In the testing and measurement for a PDR, an appropriate interest or discount rate(s) assumption is needed. The chosen assumption will be influenced by the time period of the projected deficiency. For short time horizons, the discount rate may even be zero, due to lack of material impact on the results.

Based on the time horizon, the actuary will need to consider such issues as the extent to which the existing investment portfolio will turn over during the period of deficiency, and how market interest rates are likely to change during that period. Other considerations will include anticipated reinvestment rates during the deficiency period and their impact on projected portfolio yields, and whether investment expenses will be recognized explicitly or implicitly.

Actuaries have historically considered four interest rates, based upon the situation:

1. The average earnings rate on the applicable investment portfolio;
2. Current new-money rates;
3. The interest rate assumed in product pricing;
4. The interest rate prescribed by the standard valuation law (SVL).

I. Taxes

The deficiency reserve should be calculated without recognizing any impact of income taxes. Any income tax impact related to the establishment of deficiency reserves, or their future incorporation into earnings, are usually addressed in the calculation of deferred tax assets/liabilities (e.g., under SSAP No. 10).

J. Reinsurance

The determination of the PDR is usually net of reinsurance with authorized reinsurers. Not only is the amount of reinsurance premiums and reinsurance recoveries usually considered in the PDR estimate, but also the timing of the reinsurance cash flows (premiums and recoveries) are usually determined if the PDR is calculated using a discount rate. Actuaries usually calculate a PDR both gross and net of reinsurance with authorized reinsurers. Both numbers are usually provided for accounting purposes.

K. Conservatism

For GAAP accounting, FAS 60 states, “*No loss shall be reported currently if it results in creating future income.*” This implies that the assumptions used in calculating a PDR should not be conservative for GAAP purposes, since if the actual loss is less than the PDR, the result will be a future recognition of income.

Statutory guidance is not explicit concerning the use of conservatism in establishing a PDR. Most of the guidance on conservatism is stated in general and may or may not be intended to specifically apply to PDRs. For statutory accounting purposes, the actuary will have to consider the materiality of the use of conservative assumptions and the impact on current and future financial results.

Section V. Other Considerations

Documentation

The work group believes that actuarial standards and the HRGM require the actuary to document the findings of any premium deficiency reserve testing. The HRGM indicates that even if a premium deficiency reserve is not required, the testing and results that determined it was not necessary should be documented. The workgroup agreed that the information that should be included in the documentation regardless of the need for a premium deficiency reserve includes:

1. Description of the groupings, along with
 - a) The rationale for the groupings (such as “marketed,” “serviced,” and “measured” issues);
 - b) An indication of which lines of business were combined due to immateriality; and
 - c) The basis for changes from prior years;
2. All assumptions used in the projections; and
3. Discussion of the time periods chosen for the projections.

The actuary should review ASOP No. 41, *Actuarial Communications*, when preparing the appropriate documentation.

APPENDIX I DEFINITIONS

American Institute of Certified Public Accountants (AICPA)

A body of accountants who are responsible for providing auditing guidance and standards to the accounting profession.

NAIC AP&P Manual (Accounting Practices and Procedures Manual)

Intended to establish a comprehensive basis of accounting if not in conflict with state statutes and/or regulations (Preamble, Paragraph 4).

FASB/FAS (Financial Accounting Standards Board/Financial Accounting Standards)

The Financial Accounting Standards Board (FASB) is the designated organization in the private sector for establishing standards of financial accounting and reporting, which govern the preparation of financial reports. FASB's primary purpose is to develop generally accepted accounting principles in the United States (US GAAP).

FAS are standards written and promulgated by FASB, in accordance with US GAAP.

GAAP (Generally Accepted Accounting Principles)

The standard framework of guidelines for financial accounting; includes the standards, conventions, and rules accountants follow in recording and summarizing transactions, and in the preparation of financial statements.

GPV (Gross Premium Valuation)

This is a method for placing a value on a life insurance company's liabilities that explicitly values the future premiums payable. In addition, it usually values explicitly future discretionary benefits and future expenses. If it makes explicit allowance for future bonuses it may be referred to as a bonus reserve valuation. The valuation may be carried out using formula or cash flow techniques.

HRGM (Health Reserves Guidance Manual)

The Health Reserves Guidance Manual provides guidance regarding the calculation and documentation of health reserves for statutory financial statements as described in the NAIC's Health Insurance Reserves Model Regulation. This manual is designed to encompass all health coverages, including medical, dental, disability and long-term care.

NAIC (National Association of Insurance Commissioners)

The mission of the NAIC is to assist state insurance regulators, individually and collectively, in serving the public interest and achieving the following fundamental insurance regulatory goals in a responsive, efficient and cost effective manner, consistent with the wishes of its members: protect the public interest; promote competitive markets; facilitate the fair and equitable treatment of insurance consumers; promote the reliability, solvency and financial solidity of insurance institutions; and support and improve state regulation of insurance.¹

¹ Taken from the NAIC's website, http://www.naic.org/index_about.htm

PDR (Premium Deficiency Reserves)

Premium deficiency reserves are liabilities set up to account for the present value of future projected underwriting losses. Premium deficiency reserves are typically established for financial reporting purposes and are one category of a health insurance organization's liabilities. They may also be established for other purposes such as management reporting.

Reporting Entity

For GAAP, it is typically the holding company but could be a specific regulated entity. For Stat, it is the insurance company that is filing annual requirements.

RBC (Risk-Based Capital)

The assessment of the capital requirement for a general insurer by considering the risk profile of the business written, i.e., the capital required is a function of actual business written.

SSAP (Statement of Statutory Accounting Principles)

The NAIC AP&P Manual presents a comprehensive basis of accounting that should be followed, if not in conflict with state statutes and/or regulations. Specific standards that apply to PDRs include:

SSAP 10: Income Taxes

SSAP 50: Classification and Definitions of Insurance or Managed Care Contracts in Force

SSAP 54: Individual and Group Accident and Health Contracts

SVL (Standard Valuation Law)

Law that stipulates the minimum reserve a life insurance company must maintain for its life insurance policies and annuity contracts. This law was first developed by the NAIC as a method of calculation for reserves that would incorporate the first-year expenses incurred by the insurance company.

APPENDIX II

Selected Premium Deficiency Reserve Authoritative Guidance

ASB Authoritative Guidance

ASOP No. 42 (excerpt)

Premium Deficiency Reserve—A liability established when, for a period of time, the value of future premiums, current reserves, and unpaid claims liability are less than the value of future claim payments and expenses plus the anticipated liabilities at the end of the period. (Paragraph 2.9)

Considerations for Determining Premium Deficiency Reserves—The actuary should establish a premium deficiency reserve when such a reserve is required. Premium deficiency reserves are typically established for financial reporting purposes. They may also be established for other purposes such as management reporting. The actuary commonly performs a gross premium valuation in order to determine whether or not a deficiency exists.

General Considerations—When determining deficiency reserves, the actuary should take into account the following:

- a. Assumptions in the Aggregate—The actuary should use assumptions that are reasonable in the aggregate*
- b. Exposure—The actuary should consider reasonable increases and decreases in exposure units over the time period of the calculation in the premium deficiency reserve calculation. This parameter should reflect changes due to such factors as mortality, lapses, and the impact of expected premium rate changes.*
- c. Premium Rate Changes—The actuary should use a premium rate change assumption that is reasonable in relation to the projected claims costs and the risk-assuming entity's expectations. This assumption should take into account factors such as market conditions, regulatory restrictions, and rate guarantees.*
- d. Claim Trend—The actuary should take into account the wearing away of durational effects such as risk selection and pre-existing condition limitations, changes in provider agreements, adverse selection due to premium rate increases and plan design, and other factors that affect future claim payments.*
- e. Risk-Sharing Arrangements—The actuary should take into account risk-sharing arrangements. If the actuary anticipates there will be a payout for risk-sharing arrangements associated with a block of business that is being tested for premium deficiency, the actuary should treat the amount of the payout as an expense. Some of these arrangements require providers to share in losses as well as gains. If such an agreement is in effect and the actuary anticipates there will be losses associated with the block of business being tested, the actuary should include the amount due from the providers to offset the losses only to the extent that the actuary reasonably expects the amount due to be collectible.*
- f. Interest Rates—The actuary should use interest rates in the present value calculation that are reasonable and consistent with the purpose for which the reserve is being calculated.*

- g. *Reinsurance*—The actuary should consider the expected effects of reinsurance and changes in reinsurance premiums in determining the premium deficiency reserve.
- h. *Taxes*—The actuary should consider the effect of losses assumed in the calculation of the premium deficiency reserve on the risk-assuming entity's taxes and may include a tax credit in the calculations where appropriate.
- i. *Expenses*—The actuary should consider total expenses of the risk-assuming entity in establishing a premium deficiency reserve and should consider whether the expenses allocated to the block of business are reasonable for the purpose of determining premium deficiency reserves.

Additional Considerations for Financial Reporting—When determining premium deficiency reserves for financial reporting, the actuary should consider the following:

- a. *Blocks of Business*—In order to determine whether or not a premium deficiency exists, the actuary should consider blocks of business in a manner consistent with applicable financial reporting requirements. The characteristics of a block of business may include, but are not limited to, benefit type (for example, major medical, preferred provider organization, or capitated managed care), contract type (for example, group or individual policies), demographic grouping (for example, group size or geographical area), and length of rate guarantee period. Whatever criteria are used, a block of business should be large enough so that its financial results are material relative to the risk-assuming entity as a whole. The actuary may need to establish a premium deficiency reserve for a block of business where a premium deficiency exists even if the contract period has not started.
- b. *Time Period*—The actuary should take into account any applicable law, regulation, or other binding authority in establishing the time period of the calculation. The valuation date is the beginning of the time period used to project losses from a block of business. The end of the time period is generally the earlier of the end of the contract period or the point at which the block no longer requires a premium deficiency reserve. (Section 3.4)

GAAP Authoritative Guidance

FAS 60 (excerpt):

A probable loss on insurance contracts exists if there is a premium deficiency relating to short-duration or long-duration contracts. Insurance contracts shall 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. (Paragraph 32)

Short-Duration Contracts

A premium deficiency shall be recognized if the sum of the expected claim costs and claim adjustment expenses, expected dividends to policyholders, unamortized acquisition costs, and maintenance costs exceed related unearned premiums. (Paragraph 33)

A premium deficiency shall first be recognized by charging any unamortized acquisition costs to expense to the extent required to eliminate the deficiency. If the premium deficiency is greater

than unamortized acquisition costs, a liability shall be accrued for the excess deficiency. (Paragraph 34)

Long-Duration Contracts

Original policy benefit assumptions for long-duration contracts ordinarily continue to be used during the periods in which the liability for future policy benefits is accrued. However, actual experience with respect to investment yields, mortality, morbidity, terminations, or expenses may indicate that existing contract liabilities, together with the present value of future gross premiums, will not be sufficient (a) to cover the present value of future benefits to be paid to or on behalf of policyholders and settlement and maintenance costs relating to a block of long-duration contracts and (b) to recover unamortized acquisitions costs. In those circumstances, a premium deficiency shall be determined as follows:

<i>Present value of future payments for benefits and related settlement and maintenance, determined using revised assumptions based on actual and anticipated experience</i>	<i>\$XX</i>
<i>Less the present value of future gross premiums, determined using revised assumptions based on actual and anticipated experience</i>	
	<i><u>-XX</u></i>
<i>Liability for future policy benefits using revised assumptions</i>	<i>XX</i>
<i>Less the liability for future policy benefits at the valuation date, reduced by unamortized acquisition costs</i>	
	<i><u>XX</u></i>
<i>Premium deficiency</i>	<i>\$XX</i>

(Paragraph 35)

A premium deficiency shall be recognized by a charge to income and (a) a reduction of unamortized acquisition costs or (b) an increase in the liability for future policy benefits. If a premium deficiency does occur, future changes in the liability shall be based on the revised assumptions. No loss shall be reported currently if it results in creating future income. The liability for future policy benefits using revised assumptions based on actual and anticipated experience shall be estimated periodically for comparison with the liability for future policy benefits (reduced by unamortized acquisition costs) at the valuation date. (Paragraph 36)

A premium deficiency, at a minimum, shall be recognized if the aggregate liability on an entire line of business is deficient. 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. (Paragraph 37)

Audit and Accounting Guide: Life and Health Insurance Entities (excerpt)

Recoverability Testing (Year of Issue)

Recoverability is usually demonstrated by determining that the present value of the contract-related future cash flows, less the current benefit reserve, reduced by the current unamortized DAC balance, is a positive amount. If this amount is negative, a premium deficiency may exist. If the recoverability tests indicate a deficiency in the ability to pay all future benefit costs and expenses including the DAC, the loss is recognized and charged to expense as an adjustment to

the current year's DAC balance, or if the loss is greater than the DAC balance, by an increase in the benefit reserve. (Paragraph 10.43)

Loss Recognition Tests (Issues of All Years). Recoverability testing or profitability test of insurance contract groups in years subsequent to issue should be performed periodically as deemed necessary. Overall consideration should be given to circumstances indicating that actual experience for a block of business, regardless of the issue year, is significantly different from the originally expected experience for each primary assumption. In circumstances in which actual experience is significantly worse than the originally assumed experience, loss recognition testing is required using revised assumptions that reflect actual experience and revised estimates of future experience, where appropriate. Significant assumptions generally include mortality, morbidity, persistency, expense levels, and interest rates. Insurance contracts should be grouped to be consistent with the entity's manner of acquiring, servicing, and measuring the profitability of the insurance contracts to determine whether a premium deficiency exists. (Paragraph 10.45)

Annual tests of premium deficiencies are generally appropriate for short-duration contracts. (Paragraph 10.46)

It is possible that actual experience with respect to expenses, interest, mortality, morbidity, and withdrawals may indicate that accumulated liabilities, together with the present value of future gross premiums, will not be sufficient (a) to cover the present value of future benefits and settlement and maintenance expenses related to the block of business and (b) to recover the unamortized portion of deferred acquisitions expenses. The computation of such a deficiency would take the form illustrated in the following table:

Calculation of Premium Deficiency

<i>Present value of future payments for benefits and related settlement and maintenance expenses, determined using revised assumptions based on actual and anticipated experience</i>	<i>\$XXX</i>
<i>Less the present value of future gross premiums, determined using revised assumptions based on actual and anticipated experience</i>	<i>-XXX</i>
	<u><i>-XXX</i></u>
<i>Liability for future policy benefits using revised assumptions</i>	<i>XXX</i>
<i>Less the liability for future policy benefits at the valuation date, reduced by unamortized acquisition costs</i>	<i>-XXX</i>
	<u><i>-XXX</i></u>
<i>Premium deficiency</i>	<i>\$(XX)</i>

(Paragraph 10.48)

The deficiency represents a loss that, in conformity with GAAP, should be recognized immediately by a charge to earnings and either a reduction of unamortized acquisition costs or an increase in the liability for future policy benefits. Future annual reserve additions should be based on the revised assumptions. No charge should be made to record currently an indicated loss that will result in the creation of an apparent profit in the future. The liability for future policy benefits using revised assumptions based on actual and anticipated experience shall be

estimated periodically for comparison with the liability for future policy benefits (reduced by unamortized acquisition costs) at the valuation date, particularly if the entity has experienced or anticipates adverse deviations from original assumptions that could materially affect the liabilities. (Paragraph 10.49)

Although the computation can be made only by individual blocks of business, a provision for premium deficiency at a minimum should be recognized if the aggregate liability on an entire line of business is deficient. In a number of instances, the liabilities on a particular line of business may not be deficient in the aggregate, but circumstances may be such that profits will be recognized in early years, and losses in later years. In such situations, appropriate adjustments should be made to liabilities to eliminate the recognition of losses in later years. Adjustments should always be made when losses first become apparent. (Paragraph 10.50)

Audit & Accounting Guide: Health Care Organizations (excerpt)

This chapter provides guidance on applying GAAP to providers of prepaid health care services for the accounting and reporting of health care costs, contract losses (premium deficiencies), stop-loss insurance (reinsurance), and contract acquisitions costs. (Paragraph 13.01)

FASB Statement No. 5, Accounting for Contingencies, states that a loss should be accrued in financial statements when it is probable that a loss has been incurred and the amount of the loss can be reasonably estimated. Accordingly, losses should be recognized when it is probable that expected future health care costs and maintenance costs under a group of existing contracts will exceed anticipated future premiums and stop-loss insurance recoveries on those contracts. The estimated future health care costs and maintenance costs to be considered in determining whether a loss has been incurred should include fixed and variable, direct and allocable indirect costs. Contracts should be grouped in a manner consistent with the provider's method of establishing premium rates, for example, by community rating practices, geographical area, or statutory requirements, to determine whether a loss has been incurred. (Paragraph 13.06)

Statutory Authoritative Guidance

NAIC Health Insurance Reserves Model Regulation (excerpt)

This regulation does not specifically address PDRs; however, the following general reserving guidance is given:

When an insurer determines that adequacy of its health insurance reserves requires reserves in excess of the minimum standards specified herein, such increased reserves shall be held and shall be considered the minimum reserves for that insurer.

With respect to any block or contract, or with respect to an insurer's health business as a whole, a prospective gross premium valuation is the ultimate test of reserve adequacy as of a given valuation date. Such a gross premium valuation will take into account, for contracts in force, in a claims status, or in a continuation of benefits status on the valuation date, the present value as of the valuation date of: all expected benefits unpaid, all expected expenses unpaid, and all unearned or expected premiums, adjusted for future premium increases reasonably expected to be put into effect.

Such a gross premium valuation is to be performed whenever a significant doubt exists as to reserve adequacy with respect to any major block of contracts, or with respect to the insurer's health business as a whole. In the event inadequacy is found to exist, immediate loss recognition shall be made and the reserves restored to adequacy. Adequate reserves (inclusive of claim, premium and contract reserve, if any) shall be held with respect to all contracts, regardless of whether contract reserve are required for such contracts under these standards.

Whenever minimum reserves, as defined in these standards, exceed reserve requirements as determined by a prospective gross premium valuation, such minimum reserves remain the minimum requirements under these standards.

SSAP No. 54 (excerpt)

When the expected claims payments or incurred costs, claim adjustment expenses and administration costs exceed the premiums to be collected for the remainder of a contract period, a premium deficiency reserve shall be recognized by recording an additional liability for the deficiency, with a corresponding charge to operations. For purposes of determining if a premium deficiency exists, contracts shall be grouped in a manner consistent with how policies are marketed, serviced and measured. A liability shall be recognized for each grouping where a premium deficiency is indicated. Deficiencies shall not be offset by anticipated profits in other policy groupings. Such accruals shall be made for any loss contracts, even if the contract period has not yet started. (Paragraph 18)

As discussed in Appendix A-010, a prospective gross premium valuation is the ultimate test of the adequacy of a reporting entity's accident and health reserves as of a given valuation date and shall be determined on the basis of unearned premium reserves, contract or additional reserves, claim reserves (including claim liabilities), and miscellaneous reserves combined; however, each component shall be computed separately. (Paragraph 23)

If a premium deficiency reserve is established in accordance with paragraph 18, disclose the amount of that reserve. If a reporting entity utilizes anticipated investment income as a factor in the premium deficiency calculation, disclosure of such shall be made in the financial statements. (Paragraph 34)

Health Reserves Guidance Manual (excerpt)

The Health Guidance Manual provides guidance on the calculation and documentation of health reserves. As such, it references the documents listed above. This document has been revised in 2006. Per the 2006 version, additional guidance is given as follows:

Both SSAP No.54 and GAAP permit contracts to be grouped for purposes of determining if a PDR is required. Minor wording differences are not intended to signify major differences in groupings. In those instances where a PDR is required for GAAP reporting, or could reasonably be expected to be held for companies that do not report on a GAAP basis, the company should determine if a PDR should also be held for statutory reporting. In addition, the NAIC believes that further guidance is needed, beyond simply adopting whatever groupings are used for GAAP: specifically, there should be defined lines of business for this purpose. To the extent each is

credible, these lines of business are the minimum basis for grouping contracts for determining if a PDR is required for a line of business.

Applicable Lines of Business

The Guidance Manual states the following regarding lines of business:

A deficiency reserve may be needed on any of the following specified lines of business (if material). All health coverage is to be included in one of these specified lines of business by the company.

Comprehensive Major Medical (to include other Medical type coverage and Medicare Supplement as well as any coverage where the benefits are substantially subject to inflationary cost trends—e.g. dental and vision);

Long-Term Care insurance

Income Protection (disability income) insurance, and

Limited Benefit plans (e.g., Hospital Indemnity, Critical Illness and other coverage where the benefits are not significantly subject to inflationary cost trends).

Consistent with the requirements of the HIRMR, any of these specified lines which is not material by itself should be combined for testing with the most similar other line.

Calculation

In describing the calculation of the PDR, the Guidance Manual notes the following:

Concurrent values of all blocks within a specified line are to be combined for purposes of financial reporting. In order to make more meaningful projections of experience, it may be appropriate to separate a defined line of business into smaller blocks....

...If values vary for different periods, the deficiency period is the period with the greatest value. Other blocks within the same specified line of business would be tested for the defined period as well. If no block within a specified line has a positive result for one or three year testing periods, in general no further testing of this type needs to be done for that line of business. It may be necessary to test longer periods using a gross premium valuation to determine the adequacy of contract reserves...

...The question has been raised whether it is appropriate to include investment income in the analysis, given that the future income streams are also being discounted to the valuation date. It is appropriate, because the future profit or loss is partly dependent on the amount of future investment income, and the present value of that profit or loss must include a discount for the time value of money...

...Premium deficiencies that are likely to occur only for a few months or only for part of a rating period usually need not be recognized, because premiums are anticipated to be sufficient over the entire year or rating period...

...The reserve should be reviewed at least annually and adjusted as necessary...a calculation based on underlying data should be performed at least annually.

Contract Grouping

The Guidance Manual states the following:

...Generally, the groupings should reflect how premium rates are developed and applied. This usually will result in groupings by product type and case size. Other criteria that may be considered include (but are not limited to) marketing methods (e.g., direct marketing vs. agent/broker sales), geographical rating areas, and length of rate guarantee periods, to the extent that such criteria materially affect premium rates. Whatever criteria are used, each grouping should be large enough to be material relative to the size of the reporting entity as a whole. In some cases, considerations of similarity and materiality may result in the entire health business being treated as a single grouping.

If there is more than one grouping within a specified line of business for a reporting entity, the actuary should review each contract grouping and perform a gross premium valuation on all groupings where the premium and reserves may not be sufficient to cover claims and expense in the near future. The actuary should perform gross premium valuations on other groupings sufficient to demonstrate that in total for each specified line of business the cumulative premiums and current reserves are sufficient to cover the cumulative claims and expense through the end of the last period of deficiency on any grouping.

In the event that the total of the results for a specified line of business will not cover all the deficiencies of internally tested groupings within that line, the company shall hold the net amount as a premium deficiency reserve.

For medical insurance products, if the block is large enough, internal product groupings could be defined as:

Comprehensive Medical

Medicare Supplement (including Medicare Select)

Medicare Risk (Medicare+Choice)

Medicaid (and similar state-sponsored medical assistance programs)

Dental

High-deductible medical reinsurance premiums, including aggregate coverages

Group sizes may include, but are not limited to:

Individual

Small Group

Large Group

Mega Group

Any large group comprising 10% or more of the carrier's total enrollment

A surplus originating from the life portion of a single contract could be used to offset deficiencies resulting for the health portion of the same contract, subject to restrictions identified in SSAP No. 54. Those restrictions include that the life and health were marketed, serviced and measured together.

The exact dividing point for contract groupings will vary from company to company but should be internally consistent from valuation to valuation as much as possible taking into account the growth or decline in size of each coverage grouping.

Time Period of Calculation

The Guidance Manual states:

The valuation date is the beginning of the time period over which to project financial losses from a block of insurance policies for determining a premium deficiency reserve. The ending of the

time period is more difficult to determine, and requires a substantial amount of judgment in many cases...

...For example, in the case where a block of business has a premium deficiency, but it is expected to be restored to profitability at the next renewal date, it is not reasonable to anticipate future profits on this block as an offset to concurrent deficiencies on other blocks.

Assumptions

The Guidance Manual provides guidance concerning the actuarial assumptions regarding enrollment, premium rate increases, claim trends, risk-sharing arrangements, expenses, interest rates, and taxes.

Disclosure and Documentation

The Guidance Manual states:

The company should disclose, in documentation that can be made readily available to regulators upon their request (such as the actuarial memorandum supporting the actuarial opinion), the contract groupings it has used for purposes of determining reserve values for testing premium deficiency for each specified line of business. The company should include in the disclosure, whether or not it combined lines of business due to lack of materiality of one of the specified lines of business. The basis for any change to the groupings should be disclosed as well. To the extent possible, any change in contract groupings should be identified well in advance of its use. If a deficiency reserve is not required for any grouping, the disclosure should note this and the actuarial tests that established that none was necessary should be documented as below.

The company should disclose, in that same documentation available to regulators, each contract grouping that had a positive premium deficiency reserve value. All other contract groupings' reserve value for testing premium deficiency should be documented. The documentation described below should be completed for each such contract grouping.

As back-up to the disclosures, the company should document the following information:

- 1. The distinguishing characteristics of each contract grouping;*
- 2. The assumptions used in the calculation of reserve values for testing premium deficiency (including margin for conservatism in any grouping without a positive deficiency value). The assumptions should include:*
 - a. Enrollment changes,*
 - b. Premium rate increases,*
 - c. Claim trends (including morbidity changes as well as inflation and utilization trends),*
 - d. Expense trends,*
 - e. Interest rates, and*
 - f. Special adjustments made for anti-selection, durational wear-off, provider insolvency etc.*
- 3. The time period over which revenues and costs were projected*

APPENDIX III EXAMPLES

A. Business to Be Included Example

A company is developing liabilities for the Dec. 31, 2005 financial statements. As part of the analysis, the company uncovered pricing errors in its experience rating formulas for renewals beginning Feb. 1, 2006, which will result in approximately 8 percent losses for all experience-rated business renewing in February or March. Experience-rated business renewing in all other 2006 months is expected to be at break-even (an assumption to simplify this example). The errors were discovered in mid-December and the company decided to honor the mispriced renewals. As of Dec. 31, 2005, the company has received positive commitments from 75 percent of the February renewals and 50 percent of the March renewals. The anticipated renewal rate, based on a historical analysis, is 90 percent. There are no multi-year rate guarantees. The treatment of expenses is not an issue.

The premiums and profits on the contracts are as follows:
(Policy year experience for each renewal month)

Cases renewing in	Annual Premiums (100% renewal)	Annual Profits (100% renewal)	Annual Profits (90% renewal)	Annual Profits (75% February, 50% March)
February	2,000	-160	-144	-120
March	4,000	-320	-288	-160
Total PDR		-480	-432	-280

Issue

What should be the approach to developing a PDR for mispriced business, with an unknown renewal distribution outcome, that will renew *after* the valuation date, Dec. 31, 2005?

Alternative Actuarial Approaches at Dec. 31, 2005

1. As the company has decided to honor the mispriced renewals, establish a PDR at Dec. 31, 2005.
 - Three potential scenarios:
 - \$480 (assuming 100 percent renewal)
 - \$432 (assuming the historical renewal level of 90 percent)
 - \$280 (assuming the known renewal commitments, with the possibility of increasing the PDR at some future date as more information is known)
2. Establish no PDR at Dec. 31, 2005. Then establish a PDR as of Feb. 1, 2006, based on an updated renewal distribution pattern, with an expectation to increase this PDR in March, again based on new, updated information.

B. Contract Grouping Examples

To better understand the issues surrounding contract grouping and the impact it has on determining the need for a PDR, the following examples have been included. These are based on the generic example included in Section III and use the two-level process outlined in Section IV, Part C.

EXAMPLE 1

Example 1 assumes the company is writing two lines of business — group long-term disability and group long-term care. The company has decided to test each block separately. The Group LTD still shows a projected loss for 2006 of \$15,000 with future years profitable. The Group LTC shows a projected gain for 2006 of \$17,000 and the remaining three years after 2006 also show projected gains. Below is the income statement as of Dec. 31, 2005 with any PDR adjustments.

Testing Group	Income Statement Original Actual Results as of Dec. 31, 2005 (thousands)					
	Earned Premium	Incurred Claims	Exps/Comms	U/W G/L	PDR Levels	
					Testing	Reporting
Group LTD	650	585	78	-13	15	15
Group LTC	725	615	90	20	-17	0
Totals	1,375	1,200	168	7	-2	15

At the reporting level, the most recent guidance in the HRGM requires keeping these groupings separate. The projected gains in the Group LTC cannot be used as a credit against the projected losses in the Group LTD line.

EXAMPLE 2

Example 2 assumes the company is now writing three lines of business — group long-term disability, group long-term care and individual major medical. The company has decided to test each block separately. The group LTD still shows a projected loss for 2006 of \$15,000 with future years profitable. The group LTC shows a projected gain for 2006 of \$17,000 and the remaining three years after 2006 also show projected gains. The individual major medical projections show a loss of \$19,000 in 2006 and future years break even or are profitable thereafter. Below is the income statement as of Dec. 31, 2005 with any PDR adjustments.

Testing Group	Income Statement Original Actual Results as of Dec. 31, 2005 (thousands)					
	Earned Premium	Incurred Claims	Exps/Comms	U/W G/L	PDR Levels Testing	Reporting
Group LTD	650	585	78	-13	15	15
Group LTC	725	615	90	20	-17	0
Ind Maj Med	385	358	50	-23	19	19
Totals	1,760	1,558	218	-16	17	34

At the reporting level, the most recent guidance in the HRGM requires keeping these groupings separate. The projected gains in the group LTC cannot be used as a credit against the projected losses in either the group LTD line or the individual major medical line.

EXAMPLE 3

Example 3 assumes the company is writing four lines of business — group long-term disability (LTD), group long-term care (LTC), individual major medical, and group dental. The company has decided to test each block separately. The group LTD still shows a projected loss for 2006 of \$15,000 with future years profitable. The group LTC shows a projected gain for 2006 of \$17,000 and the remaining three years after 2006 also show projected gains. The individual major medical projections show a loss of \$19,000 in 2006 and future years break even or are profitable thereafter. The group dental shows a projected gain for 2006 of \$15,000 and future years continue to be profitable. Below is the income statement as of Dec. 31, 2005 with any PDR adjustments.

Testing Group	Income Statement Original Actual Results as of Dec. 31, 2005 (thousands)					
	Earned Premium	Incurred Claims	Exps/Comms	U/W G/L	PDR Levels Testing Reporting	
Group LTD	650	585	78	-13	15	15
Group LTC	725	615	90	20	-17	0
Ind Maj Med	385	358	50	-23	19	4
Group Dental	240	192	30	18	-15	0
Totals	2,000	1,750	248	2	2	19

At the reporting level, the individual major medical could be included with the group dental. This results in reducing the projected PDR from 19 to 4 due to the ability to take a credit for the projected profits in the group dental line of business in 2006.

EXAMPLE 4

Example 4 assumes the company has five lines of business — group long-term disability, group long-term care, individual major medical, group dental and a state-mandated guaranteed issue major medical block that is required if the carrier is going to write individual major medical. The rates on this block are limited by regulations. The company has initially decided to test each block separately. The group LTD still shows a projected loss for 2006 of \$15,000 with future years profitable. The group LTC shows a projected gain for 2006 of \$17,000 and the remaining three years after 2006 also show projected gains. The individual major medical projections show a loss of \$19,000 in 2006 and future years break even or are profitable thereafter. The group dental shows a projected gain for 2006 of \$15,000 and future years continue to be profitable. The state-mandated guaranteed issue major medical projections show a loss of \$7,000 in 2006, \$5,000 in 2007, and \$3,000 in 2008 and \$2,000 in 2009. Future years after 2009 break even or are profitable. Below is the income statement as of Dec. 31, 2005 with any PDR adjustments.

Testing Group	Income Statement Original Actual Results as of Dec. 31, 2005 (thousands)					
	Earned Premium	Incurred Claims	Exps/Comms	U/W G/L	PDR Levels Testing	PDR Levels Reporting
Group LTD	650	585	78	-13	15	15
Group LTC	725	615	90	20	-17	0
Ind Maj Med	385	358	50	-23	19	6
Group Dental	240	192	30	18	-15	0
State Mand Pool	55	60	3	-8	17	5
Totals	2,055	1,810	251	-6	19	26

Testing Group	Projected Underwriting Cash Flows by Year (thousands)				
	2006	2007	2008	2009	2010
Ind Maj Med	-19	0	1	2	3
Group Dental	15	13	11	9	7
State Mand Pool	-7	-5	-3	-2	0
Totals	-11	8	9	9	10

At the reporting level, the individual major medical, group dental and state-mandated medical pool could be grouped together. The resulting projected underwriting cash flows combined for all three lines of business by year would be a projected loss of \$11,000 in 2006, projected gain of

\$8,000 in 2007 and projected gains thereafter. Thus the combined projections would require an \$11,000 PDR at Dec. 31, 2005.

The question now is how do you allocate the resulting PDR across the three different groups for reporting purposes? The group dental line will show a zero PDR since it generated projected gains over the projection period. How is the combined PDR of 11 split between the individual major medical and state-mandated medical pool? One approach may be based on the resulting PDR generated at the testing level. This is the approach shown in the reporting column in the above example. Another approach may be based on premium. Regardless of the approach, consistency from year to year should be maintained.

The above examples are for illustrative purposes only. It is recognized that in different situations the valuation actuary may need to analyze the groups in a different manner based on the specific circumstances for a particular company. To reiterate the main objective mentioned previously, actuaries should use their best judgment to appropriately recognize a premium deficiency reserve when an identified line of business, however defined or grouped, needs a premium deficiency reserve.

C. Projection Period Examples

Given the myriad of scenarios that can arise in determining the projection period, a few examples have been shown below to clarify the issues an actuary should consider in setting this assumption. These are based on the generic example included in Section III.

Example 1

Example 1 takes the base case and looks at the future projected periods to determine the appropriate PDR. The original base case assumed the following projected results:

Projected Year-end	Annual Projected Results – Group LTD (thousands)			
	Earned Premium	Incurred Claims	Exps/ Comms	U/W G/L
12/31/2006	585	527	73	-15
12/31/2007	579	507	69	3
12/31/2008	573	499	66	8
12/31/2009	567	490	65	12

Based on these projections, since the line of business is assumed to turn positive after 2006 and continue positive with increasing gains, it is reasonable to assume the only PDR needed would be the \$15,000 at Dec. 31, 2005. Assuming actual results equal projected, the PDR would go to zero at Dec. 31, 2006.

Example 2

Example 2 shows a loss in both 2006 and 2007 and future gains thereafter. Again, since the block is assumed to turn positive after 2007 and continue positive thereafter, the PDR would be the present value of the losses in 2006 and 2007. For this example, the present values assume no interest. For this example, the PDR at Dec. 31, 2005 would be \$18,000 (the present value of the losses in 2006 and 2007). The PDR at Dec. 31, 2006 would be \$3,000 and \$0 at Dec. 31, 2007.

Projected Year-end	Annual Projected Results – Group LTD (thousands)			
	Earned Premium	Incurred Claims	Exps/ Comms	U/W G/L
12/31/2006	585	527	73	-15
12/31/2007	579	513	69	-3
12/31/2008	573	503	66	4
12/31/2009	567	493	65	9

Example 2 above illustrates the scenario when a line of business that renews each year and for whatever reasons (rate restrictions, regulatory guidelines) shows projected losses, the actuary should continue the projections until the line of business is restored to profitability or lapses completely. This could be for several years with reasonable termination assumptions and in fact may result in indefinite losses. This would generate a PDR for every future valuation period.

Example 3

Example 3 below shows how the previous scenario could generate a stream of PDRs if future projections showed losses every year. This example assumes the line of business lapses completely after 2014. The far right-hand column shows the projected PDR at each prior year-end assuming actual results equal projected.

Projected Year-end	Annual Projected Results – Group LTD (thousands)				
	Earned Premium	Incurred Claims	Exps/Comms	U/W G/L	PDR at Prior YE
12/31/2006	585	527	73	-15	-108
12/31/2007	468	422	61	-15	-93
12/31/2008	370	329	55	-14	-78
12/31/2009	278	243	48	-13	-64
12/31/2010	208	180	40	-12	-51
12/31/2011	136	114	33	-11	-39
12/31/2012	91	74	27	-10	-28
12/31/2013	60	48	21	-9	-18
12/31/2014	25	19	15	-9	-9

Example 4

Example 4 may be unrealistic but is intended to show the need to perform projections for several years in order to determine the continued profitability of a line of business. This example shows a gain in 2006 but a loss in 2007 and then future gains thereafter. For this example, the PDR at Dec. 31, 2005 would be \$2,000 (the present value of the gain in 2006 and the loss in 2007). The PDR at Dec. 31, 2006 would also be \$3,000. After 2007, no future PDRs would be required assuming actual results equal projected.

Projected Year-end	Annual Projected Results – Group LTD			
	Earned Premium	Incurred Claims	Exps/Comms	U/W G/L
12/31/2006	585	511	73	1
12/31/2007	569	503	69	-3
12/31/2008	566	498	66	2
12/31/2009	562	493	65	4

Assuming future blocks will be cancelled either explicitly or by assuming large rate increases is an option for limiting future loss periods, but may not be realistic. This assumption must be justifiable based on the company's current rate management practices and consistent with prior strategic decisions. The ability to show changes in future profitability assuming cancellation or large rate increases is also heavily influenced by marketing constraints and regulatory restrictions. These issues must also be considered when performing future projections of unprofitable business.

It is not necessary to hold a PDR for losses over a few months or only a part of a rating period if it is anticipated that the premiums will be sufficient over the entire year or rating period.

Example 5

A company has a group medical contract that is in the second year of a 5-year rate guarantee with designated rate increases. At issue, the designated increases were expected to be sufficient to maintain profitability; but based on current experience, the company believes that the designated rate increases will be below medical trends, causing losses in the fourth and fifth year of the contract.

The premiums and profits on the specified contract are as follows:

	Premiums	Original Claims	Revised Claims	Profits
Year 1 (actual)	360	300	300	15
Year 2 (expected)	369	309	315	9
Year 3 (expected)	378	318	330	3
Year 4 (expected)	387	327	345	-3
Year 5 (expected)	396	336	360	-9

The premiums, profits, and surplus for all of the company's group medical contracts combined are as follows:

	Premiums	Profits	Surplus
Year 1 (actual)	800	40	100
Year 2 (expected)	1,000	40	140
Year 3 (expected)	1,200	45	185
Year 4 (expected)	1,500	75	260
Year 5 (expected)	1,800	90	350

Issue

What should be the approach to developing a PDR when you have profits followed by losses over the life of a contract? In this example, no additional reserve was established originally because the valuation net premiums were believed to equal the expected claims at every year at issue.

Alternative Actuarial Approaches at End of Year 2

1. PDR of \$9 based on anticipated losses over life of contract.
2. PDR of \$0 based on current profitability and an expectation of profitability in upcoming year, whereas losses beyond one year are too uncertain to project confidently.

Additional Discussion Items

Would the answer change if:

1. The revised profit stream had been the expected profit stream at initial rating?
2. The rating restriction is not contractual, but based on regulatory approval expectations?
3. The rating restriction is voluntary, based on current perception of market competitiveness?

Example 6:

A company has a single large Medicaid risk contract renewable on July 1. The contract has a level premium throughout the policy year but high underlying trends and seasonal patterns of incurral result in gains in July through December and losses in January through June.

Premiums and Profits:

<u>Calendar Year</u>	<u>Contract Year</u>	<u>Premiums</u>	<u>Profits</u>
July – December Year 1 (actual)	1	200	30
January – June Year 2 (expected)	1	200	(10)
July – December Year 2 (expected)	2	250	40
January – June Year 3 (expected)	2	250	(15)

Overall premiums, profits, and surplus are as follows without a PDR.

<u>Calendar Year</u>	<u>Medical Premiums</u>	<u>Medical Profits</u>	<u>Surplus</u>
July – December Year 1 (actual)	800	40	250
January – June Year 2 (expected)	850	5	255
July – December Year 2 (expected)	900	65	320
January – June Year 3 (expected)	1,050	15	335

Issue:

According to the *Health Reserves Guidance Manual*, a PDR should not be necessary as "Premium deficiencies that are likely to occur ...only for part of a rating period usually need not be recognized, because premiums are anticipated to be sufficient over the entire... rating period." However, if only *future* premiums can be considered when determining whether a PDR is necessary, can only the current contract period be considered? Or if renewal is reasonably anticipated, can subsequent contract periods be considered?

Alternative actuarial approaches at the end of calendar year 1:

1. PDR of \$10 based on anticipated losses through the end of the contract year 1 renewal period. Alternatively, rather than a PDR, a contract reserve could be established to recognize that some of the premium collected in the first six months of the contract are intended to pay for claims in the second six months. The practical effect on the financial statements would be the same.
2. PDR of \$0 based upon the anticipated gain on the policy in calendar year 2 and/or the *Health Reserves Guidance Manual*.

With the PDR, the results would be the following:

<u>Calendar Year</u>	<u>Medical Premiums</u>	<u>Medical Profits</u>	<u>Surplus</u>
July – December Year 1 (actual)	800	30	240
January – June Year 2 (expected)	850	15	255
July – December Year 2 (expected)	900	50	305
January – June Year 3 (expected)	1,050	30	335