

# HEALTH PRACTICE COUNCIL PRACTICE NOTE

*August 2006*

## GROUP LONG-TERM DISABILITY INCOME INSURANCE

Prepared by a work group organized by the  
Health Practice Financial Reporting Committee  
of the American Academy of Actuaries



AMERICAN ACADEMY *of* ACTUARIES





---

AMERICAN ACADEMY *of* ACTUARIES

---

**HEALTH PRACTICE NOTE 2006-4**  
**AUGUST 2006**

**GROUP LONG-TERM DISABILITY INCOME INSURANCE**

**INTRODUCTION**

This practice note was prepared by a work group organized by the Health Practice Financial Reporting Committee of the American Academy of Actuaries. The work group was charged with developing and updating a description of some of the current practices used by health actuaries in the United States for determining actuarial reserves and liabilities for Group Long Term Disability Income business. This work group was originally formed in 1993 and issued the first set of Health Practice Notes that year; changes have been made to this set of practice notes to reflect additional information on current practices.

The practice notes represent a description of practices the work group believed to be commonly employed by health actuaries in the United States. The purpose of the practice notes is to assist actuaries who are faced with the requirement of preparing a statutory statement of opinion by providing examples of some of the common approaches to this work. However, we make no representation of completeness; other approaches may also be in common use. It should also be recognized that the information contained in the practice notes provides guidance, but is not a definitive statement of what constitutes generally accepted practice in this area. Moreover, these practice notes are based on the Accounting Practices and Procedures manual adopted by the National Association of Insurance Commissioners (NAIC), which includes model Standard Valuation Law, the model “*Minimum Reserve Standards for Individual and Group Health Insurance Contracts*,” and, by reference, the NAIC Health Reserve Guidance Manual. To the extent that the laws of a particular state differ from the NAIC model, practices described in this practice note may not be appropriate for actuarial practice in that state. Events occurring subsequent to the publication of this Practice Note may render the practices described herein irrelevant or obsolete. This practice note has not been promulgated by the Actuarial Standards Board, nor is it binding on any actuary.

---

The American Academy of Actuaries is a national organization formed in 1965 to bring together, in a single entity, actuaries of all specializations within the United States. A major purpose of the Academy is to act as a public information organization for the profession. Academy committees, task forces and work groups regularly prepare testimony and provide information to Congress and senior federal policy-makers, comment on proposed federal and state regulations, and work closely with the National Association of Insurance Commissioners and state officials on issues related to insurance, pensions and other forms of risk financing. The Academy establishes qualification standards for the actuarial profession in the United States and supports two independent boards. The Actuarial Standards Board promulgates standards of practice for the profession, and the Actuarial Board for Counseling and Discipline helps to ensure high standards of professional conduct are met. The Academy also supports the Joint Committee for the Code of Professional Conduct, which develops standards of conduct for the U.S. actuarial profession.

Members of the current work group are Jinn-Feng Lin, chairperson, Barry T. Allen, Arthur L. Baldwin III, Jerome Lynch, Foon Lew, Scott Haglund, Ray Siwek, Jack Sulger, and Tim Gustafson.

Comments on the appropriateness of the practice notes, desirability of annual updates, substantive disagreements, etc., are welcome. Comments should be sent to the Academy's state health policy analyst, Geralyn Trujillo, at the directory address.

## **Q. What does this practice note address?**

A. This practice note addresses questions and issues regarding the actuary's responsibilities for compliance with the model Standard Valuation Law (SVL), the NAIC model *Actuarial Opinion and Memorandum Regulation* (hereafter the *Model Regulation*), Statement of Statutory Accounting Principles, Health Reserves Guidance Manual, and the Actuarial Standards Board's actuarial standards of practice (ASOPs) related specifically to determining adequate reserve levels for group long-term disability (GLTD) insurance coverage.

While many valuation issues are common to life and health insurance in general, the degree of emphasis varies by type of business, and each product type presents its own unique problems, responses, methods, and bases for setting assumptions. This is one of several health insurance product practice notes that have been compiled to provide guidance to actuaries.

The actuary may also refer to Health Practice Note, *General Considerations*, to review valuation issues that are common to many health insurance product lines that may not be addressed in this note. The actuary may also choose to visit the American Academy of Actuaries website health tab to see information on all the health practice notes and the ASOPs.

## **Q. For purposes of this practice note, what is group long-term disability insurance?**

A. *Group long-term disability insurance* (GLTD insurance) is income replacement insurance included under Accident and Health Group for statutory statement purposes, and covers the risk that a person insured under the applicable group contract will be unable to work as a result of disability.

This practice note has been written to cover most of the typical GLTD valuation issues. It does not, however, address all product questions, especially those relating to the less common provisions found in some GLTD contracts. For purposes of this practice note, GLTD is considered to include contracts that replace income for a period of at least two years.

## **Q. For purposes of this practice note, what are reserves and liabilities?**

A. Traditional meanings of the terms are intended, particularly those reserves, liabilities, and related actuarial items for which the valuation actuary must provide a statutory statement of opinion regarding their adequacy. Only statutory reserves are addressed in this practice note. Capital and surplus, and the assets backing them, are *not* addressed.

Liabilities addressed in this practice note include the following:

- disabled life reserves (DLR)
- liabilities for claims incurred but not yet reported (IBNR)
- active life reserves (ALR)

Company practice may vary, with DLR established when the claim is reported or when it is approved. The actuary makes sure that valuation practice conforms to the company's claims approval process. Also, as addressed below, the actuary addresses reserving for future claim expenses. Practice varies as to whether to establish a separate reserve liability or to make provision for this liability in other claim reserves.

This practice note supplements Health Practice Note, *General Considerations*, in addressing deficiency reserves

and issues related to the determination of when they are appropriate and what reserve amount are to be held.

**Q. What are “Section 7” and “Section 8” opinions, and what special considerations are addressed regarding them?**

A. Refer to Health Practice Note, *General Considerations*, regarding *Section 7* opinions. They have been or are being phased out as the new NAIC model valuation law is being adopted by states as part of the NAIC requirements for uniform codification of actuarial opinions. Most life and health companies (blue blank) are now subject to having their valuation actuaries issue what was known as a *Section 8* opinion, which requires statements regarding the adequacy of reserves and actuarial liabilities in light of the adequacy of the assets supporting them.

It should be noted that an opinion based on asset adequacy is currently required only for life and health insurance companies reporting on the statutory life and accident and health reporting blank (the blue blank). Health plans and health insurance companies reporting on the statutory health business reporting blank (the orange blank) are not required to perform asset adequacy analyses, but a statement regarding adequacy of the reserves and actuarial liabilities is required.

**Q. What is a gross premium valuation?**

A. Gross premium valuation (GPV) is the calculation of the present value of future liability cash flows on a block of business, including gross premiums, benefit payments, and expenses.

**Q. What is cash flow testing?**

A. See Health Practice Note *General Considerations*.

ASOP No. 22, *Statutory Statements of Opinion Based on Asset Adequacy Analysis by Appointed Actuaries for Life or Health Insurance Companies*, defines cash flow testing (CFT) as the “process of projecting and comparing, as of a given date called the valuation date, the timing and amount of asset and obligation cash flows after the valuation date.”

The actuary generally will want to be able to opine that the assets held are, in aggregate, adequate to meet the long-term obligations required of GLTD contracts, under reasonably anticipated scenarios for economic trends, interest rates, rates of claim incidence and termination, and anticipated levels of benefit payment in light of contractual specifications regarding cost-of-living adjustments (COLA) and Social Security and other offsets. This may be done with or without CFT.

The actuary may use asset adequacy analysis to test statutory reserves actually held for margins, or use the analysis to calculate directly the reserves to be held.

# *Fundamentals of Reserving for Disability Insurance*

## **Q. Which laws and regulations apply?**

A. The Standard Valuation Law (SVL), as most recently amended (1990), and including the *Model Regulation*, defines standards for statutory minimum reserves. However, the latest revision to the *Model Regulation* has not been uniformly adopted by all states, and a number of states have not yet adopted any version of the *Model Regulation*. This raises the question of which laws and regulations a company should follow. The NAIC has published the Health Reserves Guidance Manual, which provides reserve category information and definitions.

In general, the company either follows the version of the laws and regulations adopted by the state of company domicile, or the most recent *Model Regulation* if no version has been adopted by that state. However, the actuary filing an opinion as appointed actuary is also expected to take into appropriate account the applicable laws and regulations of each state in which his or her opinion is filed, and to satisfy the requirements of those laws and regulations. Many variations exist state by state and the requirement of meeting all the different standards may be burdensome.

With the introduction of codification in 2000 and effective for 2001, other sources are available to provide guidance such as the NAIC Statements of Statutory Accounting Principles (SSAPs), particularly SSAP No. 54 and SSAP No. 55, along with its Appendix A-010 Minimum Reserve Standards for Individual and Group Health Insurance Contracts.

## **Q. Which ASOP applies to reserves for disability insurance?**

A. ASOP No. 5, *Incurring Health and Disability Claims*, describes the analysis actuaries normally use in valuing reserves for disability insurance. This ASOP outlines major considerations for all health insurance, including GLTD, even though it does not address many issues specific to this business.

Other actuarial standards that might also apply include ASOP No. 7, *Analysis of Life, Health, or Property/Casualty Insurance Cash Flows*; ASOP No. 11, *Financial Statement Treatment of Reinsurance Transactions Involving Life or Health Insurance*; ASOP No. 22, *Statements of Opinion based on Asset Adequacy Analysis by Actuaries for Life or Health Insurers*; ASOP No. 23, *Data Quality*; ASOP No. 41, *Actuarial Communications*; and ASOP No. 42, *Determining Health and Disability Liabilities Other than Liabilities for Incurred Claims*.

## **Q. Is cash flow testing necessary for GLTD?**

A. ASOP No. 7 (Analysis of Life, Health, or Property/Casualty Insurance Cash Flows) outlines factors that should be considered when cash flow testing is performed. GLTD business usually accumulates substantial reserves. Assets underlying these reserves typically need to be invested to generate suitable returns to support assumptions used in valuation. Default assumptions for the C-1 risk will depend on the riskiness of assets underlying reserves. Since those who are on claim have no call on the assets underlying the reserves for their benefits, there is generally no significant exposure to the interest rate or C-3 risk.

The most significant risk for GLTD usually is the C-2 insurance risk arising from deviations in claim termination experience from that which was assumed in valuation and pricing. The actuary also usually considers the reinvestment risk associated with assets backing the long-term portion of DLR liabilities. If actuaries use cash flow testing to opine on the adequacy of assets, it is usually prudent to perform the analysis under a variety of plausible

scenarios for deteriorating claims termination experience. These scenarios may be developed deterministically or stochastically and typically take into account the credibility of the data underlying assumptions and the other factors that may influence possible outcomes. Secular trends in claims termination experience may also be analyzed by statistical techniques applied to historical data.

**Q. What does the actuary usually do if cash flow testing is not done for GLTD business but is performed for other blocks of business? What typically is done regarding the adequacy of assets allocated to GLTD?**

A. The actuary typically documents the reasons for not performing cash flow testing or uses other techniques to determine asset adequacy. Assets backing GLTD reserves generally are reviewed for duration, quality, and yield. GLTD business relies on investment income, at least for a portion of its profits. It is usually important that the assets allocated to GLTD be appropriate in duration and of reliable quality. The actuary can provide guidance to the Investment Department as to the appropriate duration and yields needed to support the claim reserves. Using liability projections, the actuary normally can provide cash flow needs as well as duration measures. The analysis usually includes a discussion of sources or methods to use in making such a review of assets.

**Q. What methods can be used to demonstrate adequacy for GLTD?**

A. Refer to ASOP No. 5 (*Incurred Health and Disability Claims*). Other methods may address assets, as well as insurance obligation and other risks, in particular the risk that changes in the economic environment and litigation trends may affect the pattern of claim termination rates.

**Q. How can an actuary “demonstrate that a block of business is relatively insensitive to influences such as changes in economic conditions?”**

A. Attempts to relate morbidity trends to economic indicators can be difficult at best. Recognizing that there may be some correlation between economic strength and disability termination rates, the actuary generally is prudent/will want to be well versed in the design of the products offered and the markets in which they are sold.

For example, a company that offers generous benefits in cyclical industries typically would expect to experience wider swings in experience than a company offering more modest schedules in stable, established industries. Established disability insurers can also attempt to consider their own trend in termination rates during prior economic cycles. Incidence rates may be more likely to vary with economic conditions than termination rates. The actuary also generally takes into account the influence that changes in economic conditions may have on assets backing reserves and on the rate of discount used in calculating reserves.

Other factors the actuary generally considers include the business climate of the jurisdiction, and any experience the company or other disability insurers may have had with past claims litigation.

**Q. How can an actuary demonstrate reserve adequacy when claims handling practices are changed?**

A. Relating reserve adequacy when claim handling practices are in a state of flux can be a major issue. Claims handling issues may involve opening claims more quickly or maintaining a claim longer to avoid closing and re-opening it. Frequently then, tabular and IBNR trends become difficult to compare and measure. Trends in IBNR and other development measures become out-dated quickly when the claims area decides to apply new rules to adjudicating claims. Communication with the claims department is normally important in these situations. Understanding the nature of the changes and relating them to possibly new IBNR methods or factors is usually done



quickly. Monitoring other claim items such as claims received, claims waiting approval, claims denied can assist the actuary in determining the true nature of the changes.

It is also usually prudent for the actuary to check on the claim handling practices related to how and when claims are closed. There can be situations in which claims that are effectively closed are not yet removed from the open claim status records due to administrative lags.

**Q. What minimum claim reserve contingency margin may be considered adequate to provide for adverse deviations?**

A. Reserves generally may be considered adequate if they are sufficient, in aggregate, to cover reasonable contingencies and expenses. Both disabled life claims and unreported claims are subject to random fluctuations, and to cyclical trends typically driven by economic conditions. Reserve margins usually may be considered adequate in the IBNR if they cover reasonably anticipated changes in reported claims, and in case reserves for decreases in claim termination rates among open claims. Contingency margins will normally represent a smaller percentage of underlying reserves as the number of claims increases.

ASOP No. 5, section 5.1, states that varying degrees of conservatism or margin are appropriate, depending on the purpose of the estimate. The degree of conservatism depends on the assumptions. For example, the actuary typically will not adopt the 1987 GLTD table without validating, at least in the aggregate, the reasonableness of its assumptions about claims termination in the claims block being valued.

Adequacy testing, such as that performed through GPV, may be used in determining whether such margins are called for. Retrospective tests such as Schedule O may also provide guidance regarding appropriate levels of margin.

**Q. When might a GPV be performed to demonstrate reserve adequacy?**

A. GLTD business is usually written on a 1-year term basis with minimal rate guarantees. Typically, no opinion of the adequacy of the IBNR reserve is made without addressing the question of rate adequacy. This may require a gross premium valuation. Also, pricing may involve an assessment of claim incidence and termination rate adequacy.

**Q. May a claim reserve estimate be considered adequate if it does not include a provision for loss adjustment expenses (LAE)?**

A. No. LAE is required in both the *Model Regulation* as well as in Statement of Statutory Accounting Principles No. 54 - Individual and Group Accident and Health Contracts and discussed in SSAP No. 55. LAE is also mentioned in the Health Reserves Guidance Manual. The actuary may also choose to review ASOP No. 42, *Determining Health and Disability Liabilities Other than Liabilities for Incurred Claims*.

One method is to develop a claims expense factor as a percentage of paid claims or claim reserves, and to adjust benefit reserves accordingly. In evaluating the appropriate adjustment for expenses, the actuary usually decides whether an inflation assumption is appropriate. In general, the expense adjustment factor for open approved claims reflects the cost of ongoing maintenance, but not the initial claims investigation expense. For incurred but not reported claims, the expense adjustment typically will also include the cost of initial investigation. For example, the actuary may choose to develop separate factors for expenses attributable to benefit payments during any period in which benefits are paid while the insured is disabled under an “own occupation” provision.

**Q. What does the valuation actuary consider regarding business not yet issued as of the valuation date?**

A. Generally, the actuary considers the valuation of business already in force, and considers rate adequacy only from the standpoint of its impact on IBNR. However, as a matter of practice, the actuary generally verifies that methods and assumptions for reserves on in-force business are appropriate in light of any changes anticipated in product design, underwriting, claim adjudication practices, or target markets that may affect claim patterns. This includes rate adequacy and other considerations.

## ***Disabled Life Reserves on Open Claims, Reported and Approved (Case Reserves)***

**Q. Which reserve methods are appropriate for calculating Disabled Life Reserves (DLR) on known, open claims?**

A. ASOP No. 5 discusses methods for estimating incurred claims. The tabular method is generally used for known, long-term claims (over two years in duration). A development method is normally appropriate for unreported claims.

**Q. What continuance tables are appropriate for reserving open claims?**

A. The most commonly used table is the 1987 Commissioner's Group Disability Table (CGDT) as published by the Society of Actuaries in Transactions, vol. XXXIX, pp. 393-458, or a modification of this table based on individual company experience. The Standard Valuation Law and the Health Reserve Model Regulation adopted by many states specifies the use of the 1987 CGDT for Statutory reserving.

**Q. When is it appropriate to use a company's own experience?**

A. For statutory reserving, the actuary may choose to modify the termination for the first two years of each claim's duration based on the company's own reasonably credible experience. Termination rates may be modified for even longer periods if allowed by a particular state's regulation and with the approval of the insurance commissioner.

**Q. What are the major factors to consider in setting termination rates?**

A. Termination rates used in valuation generally vary by a claimant's age at disability, sex, duration, and elimination period. The actuary may also choose to develop and use termination rates that recognize other parameters, such as diagnosis or cause of disability, occupation, industry, Social Security status, the definition of disability, and various plan design features

**Q. When calculating termination rates, what special claim situations are usually considered?**

A. If a claim is settled with a lump-sum payment, it is generally preferable to use an implied termination date in lieu of the actual settlement date. Claims obtained via reserve buyouts and claims from administrative-services-only (ASO) business may exhibit different termination patterns than the rest of the block of claims. Plans that allow transfer of claim responsibilities from one administrator to another would normally be considered. The actuary typically takes into account the materiality of these situations and decide whether to exclude these claims from the study.

**Q. What margins are appropriate for adverse deviation of termination rates?**

A. Valuation termination rates include an appropriate margin for adverse deviation. The 1987 Commissioner's Group Disability valuation table was created by reducing the basic experience table termination rates by 10 percent. In determining the appropriate margins to include in termination rates, the actuary generally takes into account any margins included in other components of the reserve calculation methodology.

**Q. What specific factors are considered in monitoring the appropriateness of termination rates?**

A. Termination rates are usually monitored periodically for appropriateness through a number of methods. Some of the common approaches include actual-to-expected termination studies, Schedule H tests, Schedule O tests, and incurred claim development over successive valuation dates. The actuary generally pays close attention to mix-of-business changes and the impact on reserve adequacy. For example, a shift from primarily 2-year, own-occupation business to a block of claims that is evenly distributed between 2-year, own-occupation and own-occupation to 65 may cause a decline in termination rates

**Q. What offsets other than Social Security might be taken into account?**

A. The actuary may choose to adjust prospective benefit payment amounts to account for offsets other than Social Security (SS). These offsets may include disability benefits payable under Workers' Compensation, Short-Term Disability plans, salary continuance plans, state mandated disability plans, pension plans, periodic disability payments under life insurance, public employee retirement systems, state teacher retirement systems pension offsets, and individual disability contracts. The actuary usually recognizes that some of these benefits may be temporary.

**Q. What other adjustments does the actuary take into account in setting morbidity assumptions?**

A. The following are typical adjustments/that are frequently considered, although they by no means constitute an exhaustive list:

- Reserves for claims in course of settlement or claims not yet approved may be calculated as the probability of approval multiplied by the reserve that would be held for the same claim if it had been approved. The probability of approval typically recognizes the claimant's probability of reaching the end of the elimination period.
- Reserves for claims in course of settlement that have completed the elimination period (EP), which also includes the retrospective liability for amounts past due that would be paid if the claim is approved, typically are considered.
- The DLR appropriately accounts for the claim's benefit end date, such as age 65, age 70, normal retirement age or an age implied by a reduced benefit duration table.
- The actuary may also choose to account explicitly for the end dates of benefit offsets.
- Social Security (SS) family benefits last only as long as there are eligible dependents. If dependent information is available, this may be explicitly accounted for in the reserve calculation. If not, then an aggregate probability of family SS ending in a given year may be applied to all claims.
- The probability of receipt of SS may be modelled by applying block approval rates to all claims without SS, or by applying a different set of approval rates to only those claims that have been neither denied for SS at all levels of appeal nor deemed to be ineligible.
- The actuary may want to consider amounts of claim overpayments that will be recovered from claimants who eventually receive SS.
- The actuary generally takes into account reduced benefits for claim payments made under a partial disability situation.
- The reserve calculation may account for "inside limits" of the plan. These can occur due to a "mental & nervous claim," self-reported symptoms, or maternity.
- Activity-of-daily-living (ADL) defined disabilities may be reserved according to the contract specifications.
- Benefits paid under riders for specific conditions or circumstances may be considered for inclusion in the prospective benefit payment stream when calculating reserves. These riders may include additional benefits to cover dependent education, spouse disability and other additions to a standard disability benefit.

**Q. What interest rates are used to discount reserves?**

A. Reserve interest rates are commonly based on new-money interest rates and vary by a claimant's date of disability. The new-money rate may reflect the actual new-money rate or a new money rate less an adjustment for profit or contingencies. Another common approach is to use a single-portfolio rate of interest. The NAIC Health Insurance Reserve Model Regulation adopted by many states requires claims to be valued at a reserve interest rate no higher than the rate appropriate for single-premium immediate annuities issued in the same year as the date of disability reduced by 100 basis points.

The actuary usually confirms that the assumption for investment income earned on the current market-value of assets is consistent with the reserve interest rate assumption.

## ***Disabled Life Reserves for Claims Incurred But Not Yet Reported***

Any methodology for establishing a liability for incurred but not yet reported (IBNR) claims essentially consists of finding an appropriate proxy to predict the claims that are expected to develop from a given block of GLTD premium. Typically, this is the premium itself, although the use of other bases, such as covered payroll, may also be appropriate.

### **Q. How do companies develop factors for IBNR reserves?**

A. Development methods may examine claim reporting patterns from the date disabled. This normally leads to a series of factors applied to monthly premiums or another exposure basis and represents the proportion of claims covered by those premiums that may still be unreported. The sum of the results is usually multiplied by an appropriate target loss ratio (TLR) to arrive at expected net claims. With late reporting, the applied series is often shorter. The actuary may shorten the series by increasing the final factor for the results of the tail by truncating the series at a sufficiently distant point or by some other method. Whichever method is used, the actuary usually recognizes the impact of the method with regard to matching reported claims and liabilities, and takes steps to prevent the application of the chosen method from resulting in a material mismatch.

The actuary may also consider establishing a reserve for claims that have closed but that may reopen. Part of this liability may be covered by keeping some disabled life reserves open for a period after the claim is terminated. Another acceptable approach is to increase the IBNR to cover this liability. Setting up reserves as a percentage of claims closed in the previous year may also be appropriate.

The actuary may choose to segment the block of GLTD business when using development methods that examine claim reporting patterns from date of disability.

### **Q. What variables typically affect the rate at which claims become known?**

A. The following variables may impact the rate at which claims become known, and therefore may be considered when developing IBNR factors:

- Elimination Period (EP) — Claims with EPs of three or fewer months may exhibit a different reporting lag than claims with an EP of six months.
- Claim Procedures — Claims that are paid through a paperless phone-in claim system may exhibit a shorter reporting lag than claims paid from a standard claim submission form. Claims paid subject to employer authorization may experience a longer reporting lag.
- STD Coverage — The reporting lag will most likely be shorter on cases where the company is also paying STD claims.
- Third Party Administration (TPA) Relationship — The presence of a TPA, which either pays claims or assists in claim submissions, may affect the reporting lag.

### **Q. What kind of segmentation of business might be used in the development of IBNR factors?**

A. One of the IBNR methods that might be viewed is a target loss ratio (TLR) times premium earned in the EP, plus the time of the average claim lag. However any method that does not separately break down the business into separate groups by each element that significantly affects the rate at which claims become known, is aggregating over those elements. For any significant aggregation that may be present, the actuary may want to consider the following:

The average lag factor may vary for new cases versus ongoing cases versus cancelled cases. The average lag factor is used to account for claims that were incurred in past months but are not completely developed. New cases and cancelled cases have fewer past undeveloped months; it may therefore be appropriate to use smaller average lag factors for these cases.

When adjusting expected loss ratios for actual experience, the actuary want to use different actual-to-expected factors by year of issue or for the current year's sales versus ongoing cases.

In order to appropriately respond to changes in the mix of business by elimination period, whether or not STD coverage is present, third-party administration, size of case, etc., periodic studies are often made to make sure all significant assumptions are appropriate for the current situation.

Approximate methods may be appropriate if it can be demonstrated that over time they closely reproduce results comparable to those generated by more detailed methods. For example, it might be determined that multiplying premiums received for the elimination period plus two months by the TLR would produce the same aggregate results achieved from more detailed methods.

**Q. What are some of the considerations for selecting a TLR assumption for IBNR calculations?**

A. The TLR is often related to (a) pricing assumptions applied to the current block of business and (b) the results of current analysis of actual-to-expected experience. The actuary may also deem it appropriate to increase the TLR:

- During times of poorer than expected experience, such as during a recession or in a declining interest rate environment.
- When needed, premium rate increases are delayed for various reasons, such as the existence of rate guarantees, for which there are insufficient reserves elsewhere.
- When dealing with known catastrophic situations, if not handled elsewhere.

**Q. What are some other considerations for IBNR calculations?**

A. As alluded to elsewhere in this note, the actuary considers all known, significant liabilities and often has a choice as to how or where they are to be handled. For instance, reserves for potentially reopened claims can be in DLR or IBNR. Some other adjustments that might be in IBNR include:

- If (a) a portfolio-interest assumption is used in DLR calculations and the latest assumption was not calculated by including a value for current IBNR in the mix and (b) if the IBNR TLR was adjusted only to fit the new average DLR interest rate then it would usually be appropriate to adjust the IBNR to where it would have been if it had affected the average DLR rate calculation. (This would not be an issue if the DLR interest rate were tied to investment year and current IBNR TLRs were adjusted to fit the current investment rates.)
- Claims “on hand,” “in the course of settlement,” “not yet approved,” etc., are among the terms used to describe those claims that have been received but not yet fully approved for payment. As mentioned elsewhere in these notes, some companies might consider them in DLR calculations, perhaps dependent on whether they are within the EP. At any valuation date there may be a significant variation in the level of those not yet approved claims that are not directly considered in the DLR calculation. If so, the actuary would usually expect to be made aware of this and would normally consider any adjustments that might be appropriate for IBNR.

- It is usual to consider the confidence level of all assumptions used in IBNR calculations and to add a suitable provision for adverse deviation (PAD) at appropriate points in the calculation. It is not uncommon for one or more of the adjustments mentioned above to be simply handled by an adjustment to the PAD factor(s) used.

**Q. What provisions are usually made for claims that have been reported, but that have not completed the elimination period?**

A. The IBNR reserve may be designed to cover only unreported claims, or may also be designed to account for liabilities on claims that have been reported but have not completed the elimination period. In the former case, the DLR accounts for all reported claims, even those that have not completed the EP. In the latter, the DLR accounts only for claims that are known and have completed the EP.

While both methodologies are in common use, it is usually desirable to take reasonable steps to ensure consistency between the IBNR and the DLR, so that all foreseeable liabilities are appropriately accounted for.

**Q. How do changes in claims administration affect the calculation of IBNR factors?**

A. Any significant changes to claim processing procedures or DLR calculations usually warrant new studies. For example, if the company's previous practice was to add claims to the DLR within a few days of notification of pending claim, but now the company adds the claims only after the claims are approved for payment, the factors for IBNR would change. When using development methods, the actuary may also find it appropriate to make sure that the factors are developed from periods covered by the same claim practices. For example, a significant change in practice 15 months ago might suggest that the study cover claims reported in the past 15 months instead of the past 36 months.

**Q. How does a company check the validity of its IBNR factors?**

A. Follow-up studies are usually done to test the validity of prior IBNR calculations and adjust current ones. Subsequent claim payments and current reserves for claims unreported at the time of the prior IBNR calculation are discounted back to the date of the IBNR calculation to measure its accuracy. The more conservative IBNR calculations usually will be those that were found to be adequate for each calculation in a series of yearly calculations.



## ***Other Considerations in Reserving for GLTD***

### **Q. Are claim cycles and underwriting cycles reflected in the projection assumptions?**

A. As discussed above, claim and underwriting cycles for GLTD are extremely difficult to predict with any degree of precision and, unless the actuary has clear evidence to the contrary, they are not usually considered in the reserve valuation process. Typically, it is more appropriate for cyclical fluctuations to be considered as part of capital adequacy analysis, or in conjunction with cash flow testing.

### **Q. Is an active lives reserve (ALR) held for cases with rate guarantees that extend two or more years beyond the expiration of the current policy year?**

A. If a load is being charged for rate guarantees, then the actuary normally assumes that at least part of that load is to cover an increase in expected claims in the years beyond the current policy year and to compensate for giving up the right to re-rate every year, and that a liability exists.

Depending on the nature and extent of such guarantees, the actuary may determine that the liability is immaterial, or may account for it by including a specific factor in the IBNR reserve and possibly, also, the DLR. One approach is to adjust the actual-to-expected factor in calculating the IBNR reserve. A second approach is to establish a separate ALR.

### **Q. What other conditions might indicate a need for an ALR?**

A. Some group disability policies are issued with age banded rates, particularly in “voluntary” or “employee-pay” situations. If the age band used for an employee never changes as the employee ages, either by guarantee or simply as an administrative convenience, it may be classified as “issue age banded” instead of “attained age banded”. If “issue age banded” rates are not subject to change (either by guarantee or administrative practice) the situation should be examined to see if it is appropriate to hold an ALR.

A situation where (a) guarantees are present, (b) covered employees are expected to remain with the employer and covered for a long period of time even if experience deteriorates and (c) no other future sources of funds are available to fund increased claims as the population ages, implies that an ALR is appropriate. However that may be less true as each of (a) through (c) is not true. The situation that may need most investigation is “administrative practice” versus guarantees. Here the actuary may want to examine company history, attitude and capabilities in the same or related situations.

### **Q. What checking of data would the actuary conduct?**

A. See ASOP 23 (*Data Quality*) for guiding principles. The actuary identifies the data that has a material impact on the reserves (such as the age of the disabled individual) and conducts such checking as the actuary deems necessary to generate appropriate results.

### **Q. Under what circumstances would the actuary consider establishing premium deficiency reserves?**

A. See SSAP No. 54, *Individual and Group Accident and Health Contracts*. When expected obligations (claims plus administrative costs) exceed premiums for the remainder of a contract period, SSAP NO. 54 indicates, “a premium deficiency reserve shall be recognized by recording an additional liability for the deficiency.” Such a

reserve may be handled as a separate calculation or by another method, such as adjusting the reserve for IBNR liabilities to reflect a higher TLR.

**Q. How would reinsurance contracts be reflected in reserve calculations?**

A. The actuary generally will calculate the impact of reinsurance on each liability component separately. The calculation may be an estimate, if appropriate, or may be a direct calculation. For example, the IBNR for reinsurance ceded may be estimated as a pro-rata share of the total IBNR, based on the proportion of reinsurance premium paid relative to total premium. The DLR reserve for reinsurance may be calculated directly, based on the application of the reinsurance provisions to open claims.

**Q. Are statutory reserves appropriate for GAAP, tax, retrospective experience rating, or other purposes?**

A. Statutory reserves may not be appropriate for other uses. Reserves for statutory reporting are governed by state law, whereas reserves for GAAP reporting or tax calculations are subject to requirements from other regulatory agencies.

If there is a material difference between the reserve basis used for retrospective premium rating and the reserve basis used for statutory reporting, the actuary should usually consider the difference in the estimate of retrospective payments accrued or payable in statutory financial statements. Typically, statutory estimates of retrospective payments accrued or payable would be reasonably consistent with the reserves reported to the clients, since those are the reserves that will be used in the actual calculation.





---

AMERICAN ACADEMY *of* ACTUARIES

---

1100 Seventeenth Street NW  
Seventh Floor  
Washington, DC 20036  
Telephone 202 223 8196  
Facsimile 202 872 1948  
[www.actuary.org](http://www.actuary.org)