

A PUBLIC POLICY PRACTICE NOTE

# Statutory Reserving for Group Long-Term Disability Income Insurance

March 2018

Developed by the Group Long-Term Disability Practice Note Work Group of the American Academy of Actuaries



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AMERICAN ACADEMY *of* ACTUARIES

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

We welcome comments and questions. Please send comments to [health@actuary.org](mailto:health@actuary.org).

## **Group Long-Term Disability Practice Note Work Group**

Douglas Vrooman, MAAA, FSA, Chairperson

Nicole McManus, MAAA, FSA, EA  
Jinn-Feng Lin, MAAA, FSA, FCA  
Julian Levin, MAAA, ASA  
Allen Livingood, MAAA, FSA

Franklin Reynolds, MAAA, FSA, FCIA  
Bill Obert, MAAA, FSA  
Bram Spector, MAAA, FSA



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1850 M Street NW, Suite 300  
Washington, DC 20036-5805

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## Introduction

This practice note was prepared by a work group organized by the Financial Reporting and Solvency 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. The original practice note was issued in 1993 and was updated in 2006. This version includes updates to the 2006 practice note to reflect additional information on current practices.

The practice note represents a description of practices the work group believes to be commonly employed by health actuaries in the United States. The purpose of the practice note 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 ideas included in the practice note provide information, but are 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 the 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.

## Section 1—Scope and Context

### *Q1. What does this practice note address?*

This practice note addresses issues involving group long-term disability (Group LTD or GLTD) statutory reserving to assist the practicing actuary comply with relevant laws, regulations, standards, and applicable guidance. The primary purpose is to supplement existing information on industry practices (in cases where such information is explicitly found) and, in some cases, provide information where it is not currently available.

Existing sources of information and guidance include the following literature:

- Standard Valuation Law
- Statement of Statutory Accounting Principles
- Valuation Manual (Section 25)
- Health Reserves Guidance Manual
- 2012 GLTD Table

- Actuarial Guideline 47
- Actuarial standards of practice (ASOPs)

Several of these documents address valuation issues across life and health insurance in general, as opposed to GLTD specifically. However, each product type presents its own unique issues, responses, methods, and bases for setting assumptions. This is one of several health insurance product practice notes that have been compiled to provide information to actuaries.

This note uses a question-and-answer format to identify and address different issues and concepts related to GLTD reserving.

*Q2. For purposes of this practice note, how is Group LTD insurance defined?*

GLTD insurance is income replacement insurance categorized as an Accident and Health (A&H) contract for statutory statement purposes. It covers the financial risk that a person insured under the applicable group contract will be unable to work as a result of disability by replacing a portion of the insured's income during an extended period of a disability illness or accident. GLTD is generally distinguished from group short-term disability insurance based on two plan design components: the waiting period (or elimination period) before benefits become payable, and the benefit period over which benefits are paid while the insured remains disabled. For purposes of this practice note, GLTD is considered to include contracts that replace income for a period of at least two years (after the waiting period).

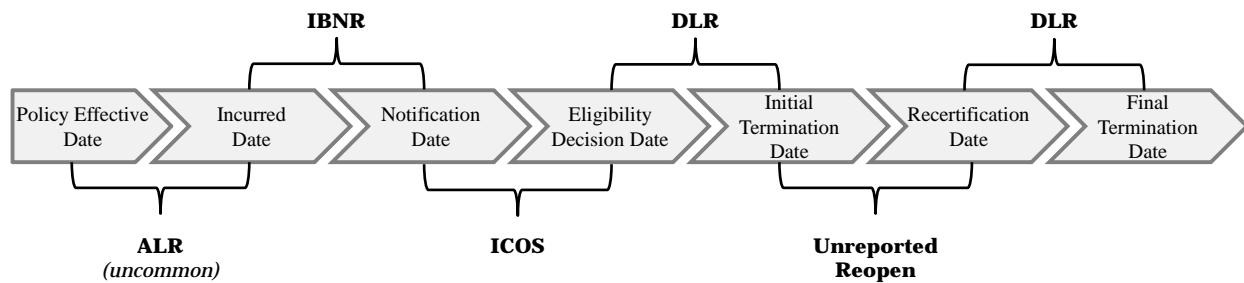
This practice note has been written to cover most typical GLTD valuation issues. It is not intended to comprehensively address all product questions, in particular those relating to the less common provisions found in some GLTD contracts.

This note specifically addresses statutory reserving for GLTD. While the concepts discussed may be useful when setting GLTD reserves for other purposes, we have made no attempt to specify where that may or may not be the case.

Except where explicitly mentioned, the regulatory basis for our comments is the current version (as of Jan. 1, 2017) of the NAIC Model Regulation and its supporting documents.

*Q3. For purposes of this practice note, what are reserves and liabilities?*

Traditional meanings of the terms are intended, particularly those reserves, liabilities, and related actuarial items for which the valuation actuary provides a statutory statement of opinion regarding 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), which represent the present value of all future expected payments for known and open claims that were incurred prior to the financial statement date (i.e., present value of amounts not yet due). The calculation of the DLR can also include:
  - Offsets for Social Security or other sources of income
  - Receivables for overpayment recoveries
  - Reserve for claims that are in litigation status
  - Reserves for claims pending a decision
- Incurred But Not Reported (IBNR) liabilities, which represent the present value of all future expected payments for unknown open claims that were incurred prior to the financial statement date, but not yet reported as of that date. IBNR is typically an aggregate reserve calculation.
- Active Life Reserves (ALR). These are also referred to as Additional Contract Reserves, Benefit Reserves, and Policyholder Liabilities. ALR is not a common reserve for GLTD as most GLTD contracts are short-duration contracts with the ability to change premium rates from year to year.
- In Course of Settlement (ICOS) liabilities, which represent the liability for due and unpaid claims. The ICOS can be included in the DLR or IBNR dependent on the method (seriatim or aggregate) used in the calculation. The ICOS is typically much smaller than the portion of the DLR and IBNR representing the present value of amounts not yet due (PVANYD) and it is reported separately from the PVANYD in the annual statement. The ICOS would typically be reported in Exhibit 8, whereas the PVANYD would typically be reported in Exhibit 6.
- Reserve for potential reopened claims. This can be included as a DLR or IBNR.
- Terminated but not reported reserve offset (TBNR), which represents the lag of reporting a termination and still holding a DLR for a claimant during the reporting lag.

It is common practice for the actuary to make sure that valuation practice in calculating reserves conforms to the company's claims management and approval process and procedures. Also, as addressed below, the actuary commonly 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.

*Q4. What are some other considerations that are relevant to the LTD valuation actuary, but out of scope for purposes of this practice note?*

The purpose of the practice note is to assist actuaries who prepare statutory statements of opinion by providing examples of some of the common approaches to this work. However, the LTD valuation actuary also might wish to consider how the data, assumptions, cash flows, and methods used in the statutory valuation relate to other accounting bases and valuation practices, including valuation of liabilities for the purposes of:

- Generally Accepted Accounting Principles (GAAP) financial statements
- International Financial Reporting Standards (IFRS) financial statements
- Tax financial statements
- Policyholder financial statements
- Manual rating or experience analysis-based pricing
- Capital- or surplus-related analysis
- Economic capital or enterprise risk management (ERM)-related analysis
- Own Risk and Solvency Assessment (ORSA)

Valuations for each of the distinct categories listed above have respective accounting guidance, frameworks, or prescribed standards, which the valuation actuary would need to carefully consider. While these topics are not in the scope of this practice note, it is nonetheless important that the valuation actuary consider the differences between assumptions, cash flows, and methods across the various categories of valuations, if differences are appropriate, and ensure the relationship of the assumptions and methods is appropriate. Lastly, the valuation actuary might wish to consider the ultimate relationship between the resultant valuation output, to ensure the relationships are reasonable, appropriate, and intended.

*Q5. How should policies sold and filed in foreign jurisdictions be handled?*

When the policies to be valued are in a jurisdiction outside the United States, the actuary can refer to the Code of Professional Conduct. The Code reads, “In addition to the Code, an Actuary is subject to applicable rules of professional conduct or ethical standards that have been promulgated by a Recognized Actuarial Organization [i.e., a full member association of the International Actuarial Association] for the jurisdictions in which the Actuary renders Actuarial Services.” Annotation 3-1 of the Code states: “It is the professional obligation of an Actuary to observe applicable standards of practice that have been promulgated by a Recognized Actuarial Organization for the jurisdiction in which the Actuary renders services, and to keep current regarding changes in these standards.” For more information on international practice, see the Academy’s professionalism discussion paper, *Considerations of Professional Standards in International Practice*.

(<http://www.actuary.org/files/publications/InternationalPractice.pdf>)

## Section 2—Definitions

*Q6. What definitions are used in this practice note?*

### **Reserves and Liabilities**

The terms “*reserves*” and “*liabilities*” are generally used as defined in the NAIC Life and Health Annual Statement.

- Reserves represent the present value of benefits and expenses after the valuation date, less any premiums. A&H reserves are recorded in the NAIC Life & Health Annual Statement Exhibit 6.
- Liabilities are amounts that accrued on or before the valuation date. A&H liabilities are recorded in the NAIC Life & Health Annual Statement Exhibit 8.

### **Active Life Reserves**

*Active Life Reserves* include the following components:

- *Contract reserves*, sometimes referred to as policy reserves, are reserves established on all inforce policies so that a portion of the premium collected in years before the valuation date is meant to help pay for higher claim costs in later years.
- *Unearned premium reserves*, sometimes referred to as premium reserves, are reserves established based on that portion of the net or gross premiums due before the valuation date that applies to a time after the current valuation date.

### **Claim Reserves**

*Claim reserves*, sometimes referred to as *disabled life reserves*, are reserves established based on the present value of future benefit payments accruing after the valuation date on claims incurred before the valuation date. Claim reserves are determined for the following categories of claims:

- *Reported claims*—claims for which the company has received notice as of the valuation date. These include:
  - *Approved claims*—claims for which the company has accepted liability.
  - *Pending claims*—claims for which the company has not yet determined whether it is liable.
  - *Resisted claims*—claims for which the company believes it does not have liability, but the claimant disagrees. Resisted claims include claims in litigation.
- *IBNR*—claims that are incurred on or before the valuation date but have not been reported by the insured to the company. Depending on company practice, this can also include claims that have been reported, but do not carry a Disabled Life Reserve due to insufficient information or having not yet satisfied the elimination period.
- *Future reopen claims*—previously reported claims that have terminated before the valuation date, but may reopen subsequent to the valuation date.

### ***Claim Liabilities***

*Claim liabilities* represent an estimate of claims that have been incurred and accrued before the valuation date, but not yet paid. As stated above for claim reserves, they also are determined from:

- Reported claims
  - Approved claims
  - Claims in course of settlement
  - Resisted claims
- IBNR claims

In practice, the development of the claim reserves and claim liabilities may be calculated simultaneously without distinguishing between the accrued and unaccrued components. The components may be allocated between Exhibits 6 and 8 based on historical development factors or some other allocation method. Factors will usually vary between that used for IBNR and those used for known claims. This allocation may impact certain financial results such as federal income tax and required risk-based capital.

### ***Claim Expense Reserves***

*Claim expense reserves* are reserves established based on the present values of future claim adjudication and administration expenses.

### ***Other Reserves That May Be Needed***

- *Premium deficiency reserves* are reserves established as a result of reserve adequacy analysis when, for a period of time, the present value of future premiums, current reserves, and unpaid claims liability is less than the present value of future claim payments and expenses, plus the anticipated reserves at the end of the period.
- *Additional actuarial reserves as the result of asset/liability analysis* are additional reserves that may be established as a result of the actuary's asset adequacy analysis.

### ***Reserve Adequacy Testing***

*Gross Premium Valuations* calculate reserves as the present value of future liability cash flows and ending reserves on a block of business. The valuation actuary typically develops assumptions for the gross premium valuation based on realistic expectations, which may or may not include margins for adverse deviation. Cash flows include benefit payments and expenses.

*Reserve Adequacy Analysis* compares the reserve based on a gross premium valuation and expected future liability cash flows, with the calculated active life and claim reserves. Reserve adequacy analysis typically uses best-estimate assumptions (i.e., without margins for adverse deviation).

*Asset Adequacy Analysis* tests the adequacy of reserves-related actuarial items in light of the assets supporting them. The most common method for performing asset adequacy analysis is cash flow testing. However, ASOP No. 22, Section 3.3.2, states that other methods may be available to the actuary to analyze asset adequacy analysis besides cash flow testing.

*Claim Reserve Runoff Analysis* tests the adequacy of claim reserves over time by comparing the actual benefit payments and ending reserves with beginning reserves. This may be performed taking into account interest on the reserves, and may be analyzed for the most recent year or multiple sets of recent years. Examples of this type of test (without interest) appear in NAIC Life & Health Annual Statement Schedules H and O.

## **Section 3—Fundamentals of Reserving**

### **3a. General**

*Q7. Which laws and regulations apply? What actuarial guidelines apply?*

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 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 requirements of meeting all the different standards may be burdensome.

With the introduction of codification in 2000 (effective for 2001), other sources are available to provide guidance such as the NAIC Statements of Statutory Accounting Principles (SSAPs), particularly SSAP Nos. 54 and 55, along with its Appendix A-010 Minimum Reserve Standards for Individual and Group Health Insurance Contracts. The SSAPs, along with applicable appendices and actuarial guidelines have been organized into an Accounting Practices and Procedures Manual (APPm) promulgated by the NAIC. At this writing, the APPm has been adopted by 20+ states. Adoption is tracked by the American Council of Life Insurers (ACLI). The APPm has promoted uniformity in valuation practices, and allows new valuation requirements to be immediately adopted by those states once they have been approved by the NAIC and incorporated into the APPm. There are still a handful of states that adopt new valuation regulations one by one. Some adopt the model regulation word for word, and a handful of states modify the model regulations in part before adopting.

In 2014, the NAIC approved the 2012 GLTD Valuation Table, modifications to Appendix A-010, and a new Actuarial Guideline (AG 47) for “The Application of Company Experience in the Calculation of Claim Reserves under the 2012 GLTD Valuation Table,” all of which was incorporated into the APPm. The modifications to A-010 require companies to adopt the 2012 GLTD Valuation Table as adjusted for company experience using AG 47 by Jan. 1, 2017, for new claim incurrals for purposes of

determining minimum reserves for GLTD. Optionally, companies could have adopted the requirements as early as Oct. 1, 2014. Furthermore, companies may adopt the new requirements for all (prior) claim incurrals years at a later date. The only consideration for retrospective adoption is that once a company elects to adopt retrospectively for all claim incurrals, it cannot go back at a later date and use the earlier requirements based on the 1987 Commissioner's Group Disability Table.

New York has similarly adopted the 2012 GLTD Valuation Table for minimum reserves for GLTD claims (AG 47) with the same dates for election and optionality for retrospective adoption. These requirements were published Feb. 24, 2016, as amendments to NY Regulation 56 (11 NYCRR 94).

The valuation actuary is advised to be familiar with the model regulation and actuarial guideline found in the APPM and any additional or different requirements that may have been adopted by the state of domicile of the company, and other states where his/her opinion will be filed.

A new Valuation Manual including a section devoted to health reserves (VM-25) was adopted in conjunction with Principles-Based Reserves (PBR) effective Jan. 1, 2017. Currently, VM-25 refers to the APPM and its Appendix A, which includes appendix A-010, and Appendix C, which includes AG 47. Therefore, the requirements found in the VM-25 are the same as found in the APPM. PBR is not in effect for all of the United States as of April 2017.

The sections of the APPM that pertain to LTD reserving are SSAP Nos. 54 and 55. The areas covered are briefly summarized below. It is common practice for the valuation actuary to be familiar with these statements of statutory accounting principles.

SSAP No. 54, *Individual and Group Accident and Health Contracts*, discusses the following items:

- Reserve requirements—policy and claim reserves. Policy reserves include unearned premium reserves, premium deficiency reserves, and if applicable, contract reserves where there are level premiums under certain guaranteed renewable contracts. Claim reserves consist of a reserve for present value of amounts not yet due. Reserving methodologies and assumptions shall meet provisions of appendices A-010, 641, 820 and 822 as applicable, and actuarial guidelines found in Appendix C as applicable.
- Change in valuation basis—defined as a change in interest rate, morbidity, mortality assumptions, or reserving method affecting reserves on inforce policies that meets the definition of change in accounting practice contained in SSAP No. 3. Impact to surplus is based on reserves as of beginning of year. Impact is not graded in unless specifically allowed for.

SSAP No. 55, *Unpaid Claims, Losses, and Loss Adjustment Expenses*, discusses the following items:

- Claims not yet due for continuing loss (e.g., LTD monthly payments) follow SSAP No. 54 requirements for present value of amounts not yet due.
- Claim liabilities for A&H contracts include:
  - Due and unpaid claims
  - Resisted claims in course of settlement
  - Other claims in course of settlement
  - IBNR
- Claim adjustment expenses for A&H contracts expected to be incurred in connection with the adjustment and recording of A&H claims.

*Q8. Which ASOP applies to reserves for disability insurance?*

ASOP No. 5, *Incurred Health and Disability Claims*, provides guidance to actuaries 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 to reserves for disability insurance include

- ASOP No. 7, *Analysis of Life, Health, or Property/Casualty Insurer Cash Flows*
- ASOP No. 8, *Regulatory Filings for Health Benefits, Accident and Health Insurance, and Entities Providing Health Benefits*
- ASOP No. 10, *Methods and Assumptions for Use in Life Insurance Company Financial Statements Prepared in Accordance with U.S. GAAP*
- ASOP No. 11, *Financial Statement Treatment of Reinsurance Transactions Involving Life or Health Insurance*
- ASOP No. 21, *Responding to or Assisting Auditors or Examiners in Connection with Financial Audits, Financial Reviews, and Financial Examinations*
- 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. 25, *Credibility Procedures*
- ASOP No. 41, *Actuarial Communications*
- ASOP No. 42, *Determining Health and Disability Liabilities Other than Liabilities for Incurred Claims*

### **3b. Disabled Life Reserves (DLR)**

*Q9. What reserve basis is appropriate for LTD?*

Regulations define the basis for the minimum prescribed level of DLR that are held for LTD. Companies may use other bases for the statutory reserves, as long as they produce reserves that in aggregate meet or exceed the minimum. In practice, it is common for companies to calculate reserves using the minimum standard prescribed basis. Unless specifically mentioned otherwise, the practices described in this note should be assumed to apply equally to statutory minimums and a company's actual reserve calculation (if different). When a company does decide to report statutory reserves above that of the required minimum, it is usually in response to analysis of company experience and reserve adequacy that indicates additional reserves may be needed.

#### **Methods**

*Q10. Which reserve methods are appropriate for calculating Disabled Life Reserves (DLR) on known, open claims?*

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). This would usually entail calculating the present value of future benefits using the appropriate valuation table (e.g., the 2012 GLTD Valuation Table when appropriate).

*Q11. What continuance tables are appropriate for reserving open claims?*

The standard prior to the 2014 adoption by the NAIC of the 2012 GLTD Valuation Table, was the 1987 Commissioner's Group Disability Table (CGDT). The 2012 GLTD Valuation Table is required to replace the 1987 CGDT for new incurrals as of Jan. 1, 2017, as the minimum statutory reserve basis for the claim termination assumptions for group LTD claim reserves.

The 2012 GLTD Valuation Table was published by the Academy in October 2013. Modification of the 2012 GLTD Valuation Table using company experience is required, and the methodology and formulas are documented using a credibility approach described in an actuarial guideline (AG 47). The 1987 CGDT was published by the Society of Actuaries (SOA) in *Transactions*, vol. XXXIX, pp. 393-458, and minimum statutory reserve requirements allowed for a modification of this table based on individual company experience.

The transition options are to use the new table for new incurrals, as of Jan. 1, 2017, or at the option of the company apply the new table to new incurrals as of Oct. 1, 2014. Retrospective adoption of the 2012 GLTD Valuation Table as the minimum basis is allowed, at the option of the company for all incurral periods at the time of initial adoption of the table or at a later date. Once a company elects to adopt the 2012 GLTD Valuation Table for all incurral periods as the minimum basis, it cannot go back to using the prior table as the minimum basis.

The 2012 GLTD Valuation Table was based on the 2008 experience table. A 15 percent margin was reflected in the claim termination rates by multiplying the 2008 table termination rates by 0.85. Additionally, the 2012 GLTD Valuation Table incorporates mortality improvement of approximately 15 years of 1 percent improvement per year to move the table from the midpoint of the data reflected in the 2008 experience table to the year in which the new table was expected to be adopted. The mortality improvement was determined by multiplying the death rates by 0.85. The 2012 GLTD Valuation Table breaks claim terminations down between recoveries or deaths. Claim termination due to maximum benefit period reached, other limitation reached such as mental and nervous limitation, or settlements are excluded as terminations from the table.

Additional information about the 2012 GLTD Valuation Table can be found in Appendix B.

The valuation actuary can refer to the report developed by the Academy committee that recommended the 2012 GLTD Valuation Table as the valuation standard for GLTD. Additional details on the underlying experience can be found in the report by the SOA committee for the 2008 experience table. A link to this report can be found in Appendix A.

The SOA made a subsequent data call in 2015 and has recently posted the experience covering claim terminations through 2012 on its website.

*Q12. When does the 2012 GLTD Valuation Table need to be implemented?*

On April 1, 2014, the NAIC approved a new group long-term disability valuation table, updates to the Health Insurance Reserves Model Regulation, and an associated Actuarial Guideline 47 (AG 47). According to the Health Insurance Reserves Model Regulation, Section 2.B(1)(b)(iii), the minimum standard for claim reserves states:

*For group long-term disability income claims incurred on or after October 1, 2014, and before the date specified in Paragraph (2), the minimum standards with respect to morbidity may be based on the 2012 GLTD termination table, or subsequent table...*

which allows for adoption for claims incurred on or after Oct. 1, 2014. It goes on to require adoption:

*Subject to the conditions in this section, the 2012 GLTD or subsequent table with considerations outlined in Paragraph (1) shall be used in determining minimum standards with respect to morbidity for group long term disability claims incurred on or after January 1, 2017.*

There is additional and separate language in the Model Regulation that describes the implementation considerations for claims incurred both pre- and post-2005. The intent of

the language is to allow consistency with the prior regulation. The key considerations of what is outlined in the minimum standards can be summarized as follows:

- There is no requirement that the standard be changed for older claims valued on a prior minimum standard basis;
- The new standard may be applied to older claims on an optional basis; and
- There is no explicit timing restriction for when such a change can be implemented.

However, the Model Regulation explicitly states that:

*Once an insurer elects to calculate reserves for all open claims on a more recent standard, then all future valuations must be on that basis.*

Thus, when the 2012 GLTD table is implemented for claims prior to the required date, it becomes the minimum standard for all subsequent valuations for that set of claims, and reverting to a prior standard is not permitted.

### **Assumptions**

*Q13. What are the major variables to consider in setting termination rates?*

Termination rates used in valuation historically varied by a claimant's age at disability, sex, duration, and elimination period. The 2012 GLTD Valuation Table included additional factors: diagnosis, gross monthly benefit, and definition of the disability. Additional parameters such as occupation, industry, Social Security status, and various plan design features may also be considered. (Some of these are included in the most recent SOA LTD experience study.)

Company experience should be considered where experience is credible. The use of company experience is required when using the 2012 GLTD Valuation Table and the credibility approach is defined in AG 47. Appropriate margins should be considered in setting termination assumptions.

Use of some of these variables would be considered commonplace practice and used in most LTD reserve calculations (e.g., those included in the 2012 Model Regulation). Others might be considered advanced practice, or used for fine-tuning adjustments, to increase reserve accuracy at the individual claim level, which is commonly an objective for additional uses beyond valuation, such as manual rating or experience rating applications. For statutory reserving, where the goal is generally aggregate reserve adequacy, use of the finer levels of detail may not add value.

This note identifies a broad (but not exhaustive) range of potential parameters that could be reflected in reserving assumptions. It is common practice for the reserving actuary to be aware of these and consider their potential materiality to his/her block of business.

However, the reserving actuary has considerable leeway as to how his/her reserving makes provision for any exposures those create.

*Q14. When calculating own experience termination rates, what special claim situations are usually considered?*

The 2012 GLTD Valuation Table excluded lump sum claim settlements as terminations, as well as benefit period expiries and closures due to other contractual limitations such as a mental and nervous benefit period. Common practice is to exclude these types of terminations when calculating own experience termination rates.

Claims obtained via reserve buyouts and claims from jumbo groups, groups with unique plan designs, or administrative-services only (ASO) business may exhibit different termination patterns than the rest of the block of claims and are often segmented in experience studies where possible. Plans that allow transfer of claim responsibilities from one administrator to another, or significant changes in the claim department, would normally be considered. The actuary might wish to take into account the materiality of these situations and decide whether to exclude these claims from the study.

*Q15. What margins are appropriate for adverse deviation of termination rates?*

Valuation termination rates include an appropriate margin for adverse deviation. The 1987 Commissioner's Group Disability Table was created by reducing the basic experience table termination rates by 10 percent. The 2012 Group Long Term Disability Valuation Table was created by applying a 15 percent margin to the base table. In determining the appropriate margins to include in termination rates, the actuary might wish to take into account any margins included in other components of the reserve calculation methodology and determines an appropriate margin given the relative size and variability of the block. A company experience margin is also required and defined in AG 47 when using the 2012 GLTD Valuation Table.

*Q16. What specific factors are considered in monitoring the appropriateness of termination rates?*

Termination rates are usually monitored periodically for appropriateness through a number of methods. Some of the common approaches include actual-to-expected termination studies, claim runoff adequacy, and incurred claim development over successive valuation dates. The actuary generally pays close attention to mix-of-business changes, claim processing changes, general economic environment, and clinical improvements to understand 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.

*Q17. What offsets to benefit amounts and other adjustments in the DLR calculation does the actuary take into account?*

The following are typical situations or adjustments that are frequently considered, although it is not intended to constitute an exhaustive list:

- 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 and no additional adjustments are needed.
- Adjustment to benefit amounts may be made to reflect actual offsets that have been awarded or expected offsets that the claimant is eligible for, such as Social Security and other offsets discussed in a subsequent section.
- Social Security 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 Social Security ending in a given year may be applied to all claims.
- The probability of receipt of Social Security may be modeled by applying block approval rates to all claims without Social Security, or by applying a different set of approval rates to only those claims that have been neither denied for Social Security at all levels of appeal nor deemed to be ineligible.
  - The amount of a potential Social Security award may also be modeled by developing an assumed award amount to all claims without Social Security, since the full payment history used to develop the actual award amount may not be available.
- The actuary may want to consider amounts of claim overpayments that will be recovered from claimants who eventually receive Social Security.
- The actuary generally takes into account reduced benefits for claim payments made under a partial disability situation, using the actual income offset or the average over prior months.
- 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 are commonly considered; they are considered for inclusion in the prospective benefit payment stream when calculating reserves based on potential materiality. These riders may include additional benefits to cover survivor income, dependent education, spouse disability and other additions to a standard disability benefit.

*Q18. What benefit offsets other than Social Security might be taken into account?*

Common practice is to include those offsets that are materially impactful to the valuation of the business. Common offsets often seen in the industry include workers' compensation, partial earnings, salary continuance, state-mandated disability plans, pension plans, public employee retirement system, state employee retirement system, and payments resulting from other disability policies.

*Q19. What are considerations for the setting of offset assumptions?*

Generally, the remaining duration of a claimant's current offsets is not known. There may be exceptions—some offsets may have a specific future end date coded. For offsets with future end dates coded, it is common practice for the actuary to use them if reliable. For offsets where the remaining duration is not known, it is common practice to study the behavior of the offset and set the reserve assumptions accordingly. For offsets known to be of short duration, such as Short-Term Disability plans and salary continuance plans, it is a common practice to assume a zero probability of keeping the offset for future disability durations beyond an appropriately chosen point. Partial or rehab earnings may warrant special attention for a number of reasons. First is that the earnings themselves may be variable as the claimants' ability to work varies and so the actuary may want to choose an offset that matches the average over several months. Secondly, most contracts have a work incentive benefit that reduces the offset for a specified period in time, which means that the future offset may differ from the current offset, even if the earnings remain the same. Finally, the presence of partial earnings will likely impact the potential for a future Social Security award.

*Q20. What interest rates are used to discount reserves?*

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 approach is to use a single-portfolio rate of interest. The NAIC Health Insurance Reserve Model Regulation (Exhibit 1, Paragraph 5 of Appendix A-010) adopted by many states requires claims (where the policy does not have contract reserves) to be valued at a reserve interest rate no higher than the rate appropriate for single-premium immediate annuities (SPIA) issued in the same year as the date of disability reduced by 100 basis points. Changes to the SPIA valuation interest rate are being made in 2017 for implementation effective Jan. 1, 2018, and those changes are not expected to apply to GLTD reserves. The language that has been proposed will make it clear that the GLTD valuation interest rate is what one would have calculated as the old SPIA rate formula less 100 basis points, but is derived without referring to the SPIA rate that is undergoing changes. The new description is provided below.

The following requirement in Exhibit 1, Paragraph 5 of Appendix A-010 with respect to claims incurred on or after Jan. 1, 2018:

For claim reserves on policies not requiring contract reserves, the maximum interest rate is the maximum rate allowed by Appendix A-820 in the valuation of single premium immediate annuities issued on the same date as the claim incurrable date, reduced by 100 basis points.

is replaced with:

For claim reserves on policies not requiring contract reserves, the maximum interest rate ( $I$ ) shall be the calendar year statutory valuation interest rates as defined by

$$I = .02 + .8 X (R - .03)$$

Where  $R$  is the average, over a period of twelve (12) months, ending on June 30 of the calendar year of the claim incurrall date, of the monthly average of the composite yield on seasoned corporate bonds, as published by Moody's Investors Service, Inc. and the results rounded to the nearer one-quarter of one percent (1/4 of 1 percent).

*Q21. What are considerations in adjusting reserves for overpayments?*

The actuary may want to consider amounts of claim overpayments that will be recovered from claimants who eventually receive Social Security and recovery of past overpayments. For overpayments expected to be generated by Social Security offsets to be awarded in the future, the amount of the overpayment can be based on the assumed size of the Social Security offset and the amount of elapsed time between disability and award. Then likelihood of collection of this amount together with the likelihood of getting a Social Security offset can be considered. For past overpayments, if the amount of the outstanding balance is known, the actuary may wish to consider the likelihood of collection of the known amount. A further refinement might be to combine the expected (or actual) overpaid amount and the likelihood of collection with an assumed pattern in which the future collections are expected to be recovered and then apply interest discounting to the timing and amount of the collections.

*Q22. What are considerations for mortality improvement?*

The initial release of the 2008 Long Term Disability Experience Study Report by the Society of Actuaries mentions observed mortality improvement in the study. The study did not normalize for potential changes in exposure mix by variables such as diagnosis category, age and gender. The report also mentions that the U.S. Centers for Disease Control and Prevention has reported general population rates of mortality improvement. When the revised Society of Actuaries report was released, the experience committee did not address the issue. However, when the 2012 GLTD Valuation Table was created (with the 2008 SOA GLTD Table as its underlying experience), a 15 percent reduction in the mortality rates was incorporated to recognize mortality improvement between the table's experience period and its implementation date. However, the table made no provision for post-implementation future mortality improvement. It is common practice for the actuary, under any minimum valuation standard, to consider what may be appropriate if and when projecting future mortality improvement. Common considerations includes company trends in actual-to-expected death rates, public information about population mortality improvement, disabled life mortality trends vs. population mortality trends, etc. It may also be important to consider parameters that may affect mortality improvement such as age, gender, and diagnosis category.

*Q23. What are considerations for late reporting of claim terminations and for a terminated but not reported (TBNR) adjustment?*

There are situations when the exact timing of a death or a recovery is not known when it actually occurs. Reporting delays could result in deaths and return-to-work being reported in the claim system a few days or even months after the actual event that would give rise to a claim termination. There are various approaches to reflecting late reporting claim terminations:

- Adjust the termination rate assumptions used in calculating the claim reserve for open claims to account for late reporting terminations.
- Calculate a TBNR offset to the claim reserve for open claims to account for a portion of the open claims that are expected to have actually terminated as of the valuation date but the information is not in the claim system and valuation data as of the valuation date.
- Make no adjustment at all. Some carriers think of this as including an implicit margin on the claim reserves.

Some companies may not have sufficient data to know the true date of death or date of return to work and need to rely on a closure code that indicates a claim was closed due to death or recovery. In some cases, a company may have better information on the actual date of death and may utilize the Social Security Death Register as a check to find out about deaths not reflected in their claims system. The date of return to work for capturing information on late reported recoveries may not be as readily available, which makes studying late reported recoveries challenging. It is common practice for the valuation actuary to be discussing with the claims management, the available data and the claims process for recognizing late reported deaths and recoveries and make their best judgement on how or if to reflect late reported terminations. Retrospective adequacy tests could help identify whether adjustment could be made for this or other potential issues (if material).

### **Experience Studies**

*Q24. When is it appropriate to use a company's own experience?*

The valuation standard requires insurers to fully or partially incorporate their claim termination experience into the valuations to the extent it is credible. If, at the time of valuation, a company has fewer than 50 open claims disabled within two years of the effective date of the valuation, and fewer than 200 open claims disabled more than two years prior to the effective date of the valuation, the carrier is exempt from the requirement.

Full credibility in the 2012 GLTD standard (i.e., the requirement to use 100 percent of company-specific experience in the valuation of LTD claims) is determined from the

number of expected terminations that yields an 85 percent probability that observed terminations are within 5 percent of expected terminations, taking differences in volatility by duration into account. The appropriate formulas can be found in AG 47.

According to the 2012 GLTD valuation standard, insurers whose experience is not considered fully credible are required to calculate a partial credibility factor for blending company-specific experience with the terminations from the 2012 GLTD Valuation Table.

While the above information is based on the model language of Actuarial Guideline 47 in regards to the 2012 GLTD Valuation Table, it is important that the actuary become familiar with the regulation of the domicile state and any differences from model regulations. To see what is included in the model regulation, please find the reference in Appendix A for Model Regulation 10. Additionally, if a company has not adopted the 2012 GLTD Valuation Table for past incurrals, it is important that the actuary understand the requirements under the 1987 Commissioner's Group Disability Table

*Q25. Is using own experience optional or mandatory?*

The use of insurer's own experience, to the extent credible, is mandatory in states that have adopted the 2012 GLTD Valuation Table and related standard.

*Q26. How frequently should experience studies be performed?*

For large insurers, experience studies are performed annually or whenever there is good reason to believe experience has changed. Experience studies should be performed not less than every five years (this is maximum according to AG 47). In deciding whether there is good reason to believe experience has changed, changes in policy forms, underwriting procedures, legal requirements, economic conditions, and claims volume are commonly considered, as well as the appropriateness of termination rates.

*Q27. If valuation termination rates are updated due to experience changes, is that a 5A Basis change?*

Typically, when an insurer first adopts a new valuation table impacting past incurrals (for instance, moving from the 1987 Commissioner's Group Disability Table to the 2012 GLTD Valuation Table), it qualifies as a 5A basis change. Furthermore, updates due to experience changes would typically fall under Change in Estimates (therefore not a 5A Basis change). While the above guidance is very general, in any of these cases it is important to have discussions with a company's accounting team (and potentially regulators) to ensure reserve changes are being booked in the correct place for a given issue and all steps are complied with to satisfy statutory law and regulation.

*Q28. What methods can I use to study termination experience to be consistent with the development of the 2012 GLTD Valuation Table?*

To properly define what has been terminated, it is common practice to first consider what the exposure measure definition should be. Often for valuation tables, exposure begins on the earliest month-end where the following conditions are met:

- The claim is open (close date is after the valuation date); and
- The first payment has already occurred (the first payment is before the valuation date).

Once an appropriate measure of exposure is defined and implemented, the actuary can then compare the terminations to the overall exposures (at the granularity determined appropriate) to determine the termination rates.

AG 47 also provides information as to the appropriate segmentation to use to group experience, as well as on what basis the study is done (i.e., Lives Basis, Gross Benefit Basis, Net Benefit, Other Basis). Before the 2012 GLTD Valuation Table, termination studies were solely performed on a lives basis. However, with the 2012 GLTD Valuation Table, a company may use a non-lives weighted basis if certain conditions are met (e.g., if a lives weighted basis is leading to a reserve adequacy issue).

*Q29. Where can information and guidance be found about experience adjustment factors and credibility requirements?*

The Society of Actuaries publication *Issues in Applying Credibility to Group Long-Term Disability Insurance* provides such information. ASOP 25, *Credibility Procedures*, provide guidance to the actuary. The actuary may also find the following sources to be useful: The actuarial guidelines pertaining to the 2012 GLTD and 2005 GTLW valuation standards, and the state of Florida's Rule 690-149 for applying credibility.

*Q30. When does a change to the company experience factor need to be implemented?*

For claims to which Actuarial Guideline 47 is being applied, Section III(C)(vi) requires an update to the valuation basis in accordance with Section III(B) at least once every five years. Required annual experience monitoring, discussed in a subsequent question below, may result in an interim change. In general, for companies not exempted, Section III(B) describes the process of modifying the Valuation Table in light of a measurement of company experience. Section III(B) yields experience adjustment factors (T) for each duration group defined there. A company then applies these factors to the Valuation Table to get its claim termination valuation assumptions. Section III(C) describes requirements to be followed in making that measurement and Subsection (vi) describes the valuation basis update process. For other claims being valued under older minimum standards, where company experience in the first 24 (or up to 60) months of disability may be used, there is no specific guidance about method and frequency of experience measurement. However, when a company requests regulatory approval under the older standard to use experience beyond two years but less than five years of disability, it will

include in that request a description of how it will use the experience in setting reserves. It is common for this description to be reviewed when considering changing experience and its implications for valuation purposes.

*Q31. How much does the experience have to change before it warrants updating?*

Actuarial Guideline 47 Section III(C)(vi) requires ongoing experience monitoring through annual experience studies that produce the experience adjustment factors T that give a company its valuation basis. The valuation basis must be updated when the annual Section III(B) experience study yields a value of T that changes by more than 10 percent from the one used in the current valuation basis for any of the five duration groups. The 10 percent threshold is measured by taking the ratio of the T factor for a duration group prior to the experience update versus after the update and determining if the ratio exceeds 110 percent or is less than 90 percent. Under older valuation minimum standards, there is no specific guidance.

*Q32. Are updates to the company experience factor made for new incurrals or for the entire block of inforce claims?*

Updates to the valuation basis under Actuarial Guideline 47 apply to all claims to which the Actuarial Guideline is being applied. The NAIC Health Insurance Reserves Model Regulation allows a company at its election to value claims that are currently on an older minimum valuation standard on a newer standard. Therefore, a company's historical choices in this regard will define the scope of the update under the Actuarial Guideline, which eventually will include prior incurrals. It may also include prior incurrals initially if the election to apply this standard to prior incurrals is made at the time of the standard's implementation. Similarly for other claims being valued under older minimum standards where company experience in the first 24 (or up to 60) months of disability may be used, updates are applicable to all claims to which the standard is being applied. There is no specific guidance about method and frequency of experience measurement under the older standard. However, when a company requests regulatory approval under the older standard to use experience beyond two years but less than five years of disability, it will include in that request an analysis of credibility of the experience and a description of how it will use the experience in setting reserves. That description is usually reviewed and considered for this purpose.

*Q33. When should (or shouldn't) a carrier group experience together for the purposes of determining own-experience factors?*

Actuarial Guideline 47 Sections III(C)(i) and III(C)(ii) describe situations in which experience can be combined or in which it should be kept separate. For example, within a statutory entity claim termination experience may need to be placed into major subgroups where experience may be significantly different. Alternatively, there may be multiple statutory entities that by virtue of affiliation or reinsurance arrangement may be under a common claim management structure. In this case, the evaluation of their experience on a combined basis may be appropriate. For claims valued under older standards, the NAIC

Health Insurance Reserves Model Regulation discusses use of insurer's experience for consideration in setting claim termination assumptions in the first two years of disability. For experience more than two years and less than five years after disability (if used), it discusses use of insurer's experience for which it maintains underwriting and claim administration control.

*Q34. Where do I find information on diagnosis mappings?*

Diagnosis mappings can be found on the Society of Actuaries website, at the link provided in Appendix A. The spreadsheet containing the 2008 SOA GLTD Experience Table has mappings under the ICD-9 system of diagnosis coding. A separate spreadsheet shows mappings for diagnosis codes under the ICD-10 system.

### **3c. Incurred But Not Reported (IBNR) Reserves**

*Q35. How do companies develop factors for IBNR reserves?*

Companies often use a completion factor method to "complete" the ultimate incurred claims. This can be done using paid claim and DLR claim triangles to estimate the ultimate IBNR level. The actuary commonly uses actuarial judgement as to the appropriate length of this method to ensure adequate IBNR reserves and to account for any late reporting of DLR cases.

Less common approaches include calculating completion factors based on the cumulative percentage of DLR cases set up since the date of their incurrance (this is the claim reporting pattern). These factors can be applied to cumulative incurred claims to estimate the ultimate incurred claims.

It is also common practice for actuaries to establish an additional IBNR reserve for claims that have closed but that may reopen (companies usually hold either an extra DLR or IBNR reserve for this situation).

*Q36. What kind of segmentation of business is used in the development of IBNR factors?*

Common industry practice includes separating groups by each element that significantly affects the rate at which claims become known. Typical segments include:

**New/Ongoing Cases:** 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 canceled cases have fewer past undeveloped months; therefore, it may be appropriate to use smaller average lag factors for these cases.

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

**Other:** In order to appropriately respond to changes in the mix of business by elimination period, whether or not short-term disability 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.

Aggregate or approximate methods may be appropriate if it can be demonstrated that 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.

*Q37. How does a company check the validity of its IBNR factors?*

Follow-up studies are usually performed 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. To the extent that the follow-up studies of prior reporting periods show prior calculated IBNRs to be sufficient within a reasonable range, they could be used as an indicator to validate current IBNR factors.

*Q38. What variables typically affect the rate at which claims become known?*

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 reported through a paperless phone-in claim system or electronic online system may exhibit a shorter reporting lag than claims reported from a standard claim submission form. Claims reported subject to employer authorization may experience a longer reporting lag.
- Short-Term Disability Coverage—The reporting lag will most likely be shorter on cases where the company is also paying short-term disability claims.
- Life Waiver Coverage—The reporting lag will most likely be shorter on cases where the employer groups also carry group life coverage with the premium waiver option with the insurance company.
- Third-Party Administration (TPA) Relationship—The presence of a TPA, which either pays claims or assists in claim submissions, may affect the reporting lag.

*Q39. How do changes in claims administration affect the calculation of IBNR factors?*

Any significant changes to claim processing procedures or DLR calculations usually warrant new studies. For example, if a company's previous practice was to add claims to the DLR within a few days of notification of a 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, it is common practice to use as much experience as one has from the claim period where the administration aligns with the period you are reserving on. 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.

*Q40. What provisions are usually made for claims that have been reported, but that have not completed the elimination period?*

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 with no duplication nor gaps.

*Q41. What are some of the considerations for selecting a Target Loss Ratio (TLR) assumption for IBNR calculations?*

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 worse-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.
- A significant change in the DLR reserves that would impact the level of IBNR that needs to be held.

*Q42. What are some other considerations for IBNR calculations?*

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 or as a separate reserve item. Examples of 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. Note: 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.

- Pending claims are those that have been received but not yet fully approved for payment. As mentioned elsewhere in this note, some companies might consider them in the DLR calculations, subject to a factor that represents the probability of the claim being ultimately approved, perhaps dependent on whether the claim is within or has satisfied the elimination period. 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.

Other approaches to setting the IBNR might include:

- The use of billed lives, incidence, and severity metrics rather than premium and loss ratio. This allows for the use of risk metrics not influenced by premium rate changes on the block and breaks the loss ratio into its key drivers that can be studied and updated as experience changes.

### **3d. Other Considerations**

*Q43. Is an active life reserve (ALR) held for cases with a rate guarantee that extends beyond the valuation date?*

If a load is charged for rate guarantees, then under current practices, the actuary normally assumes that at least a portion of the load is needed to cover an increase in expected claims in the years beyond the current policy year. In that case, a liability exists.

If a load is not being charged, common practice includes that the actuary still determine if a liability exists for the rate guarantee.

*Q44. What other conditions might indicate a need for an ALR?*

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, administrative practice, or implied at the point of sale), it is common to determine if it is appropriate to hold an ALR.

A situation in which (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.

Note: Some companies’ portability options may fall under this category.

*Q45. What checking of the data should the actuary conduct?*

See ASOP No. 23, *Data Quality*, which provides guidance to actuaries when selecting data, performing a review of data, using data, or relying on data supplied by others, in performing actuarial services (ASOP No. 23, Section 1.2). Under ASOP No. 23, 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.

While it is not necessary to audit the data, it is common practice for data to be checked for reasonableness, completeness, and consistency.

It is common to document steps taken to confirm data quality.

*Q46. How would reinsurance contracts be reflected in reserve calculations?*

Gross and ceded liabilities must be calculated separately, and 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 should be calculated directly, based on the application of the reinsurance provisions to open claims.

*Q47. Are statutory reserves appropriate for GAAP, tax, retrospective experience rating, or other purposes?*

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 sources and have different primary considerations.

If there is a material difference between the reserve basis used for retrospective premium rating and the reserve basis used for statutory reporting, an actuary may wish to consider the potential difference in the estimate of retrospective payments accrued or payable with those in the statutory financial statements. For instance, if claim reserves calculated for experience refund accrual determinations are higher than statutory, the difference should not be allowed to flow through as profit. Approximate methods may be appropriate.

*Q48. What are some best practices related to monitoring claims operations to understand when claims handling practices may be changing?*

It is common practice for the actuary to be familiar with the claim operations practices. A sample of recent claims is usually reviewed along with claims that have passed between the own occupation and any occupation periods, rejected and contested claims, and long-duration claims to see that the claim processing is consistent with that assumed in the claim reserving. As a best practice, the actuary might wish to hold regular meetings with the operations (claims department) to better understand any changes in processes, procedures, personnel, and technology that may impact claims handling practices, timing of claim decisions and payments, and potentially resulting reserves.

*Q49. Does an update to the DLR basis also affect the IBNR and other types of reserves?*

The IBNR reserve is an estimate of the DLR that would have been set up if all incurred claims had been reported as of the valuation date. Hence, it is appropriate to consider updating the IBNR and other reserves when the DLR basis is updated.

*Q50. What are considerations for the DLR on claims in pending status?*

LTD carriers may hold claim-specific reserves for claims that are pending approval (i.e., a seriatim calculation). Alternatively, some companies may not wish to hold a claim-specific reserve for pending claims and instead cover this liability through an aggregate reserve. Both approaches are common in practice, but each requires consideration toward ensuring the liability for pending claims is not accounted for in both the DLR and IBNR.

The seriatim pending reserve is typically calculated in the same manner as the approved claim DLR, except it is reduced to reflect the probability of the claim ultimately becoming an approved claim. Companies use a range of practices for this (e.g., they could begin holding the claim-specific pending reserve at different points in time), including:

- When the claim is first reported;
- When the reported pending claim satisfies the elimination period;
- When sufficient information is first available to calculate a seriatim reserve; or
- A prescribed period if integrated with short-term disability (i.e., a number of weeks or months prior to or after the completion of the maximum short-term disability benefit period, and thus the beginning of the LTD benefit period).

The company claims practices and the changes in practices may influence the choice of when to hold a claim-specific pending DLR. The IBNR accounts for any liability up to the time the pending DLR is established.

The pending claim reserve factor that represents the probability of a pending claim becoming approved can be determined by a study of the resolution of a company's

pending claims. In current practice, this factor is reviewed periodically and refreshed as needed or when claims process changes.

*Q51. What are methods for calculating a “Reopen” reserve on claims that are currently closed?*

The reopen reserve is typically established on claims that close due to reasons that carry the potential for a claim to resume benefit payment status. For example, a claim that is closed due to insufficient information, or recovery, may ultimately reopen; whereas a claim that has been closed due to benefit expiry, or death, ultimately has no potential for additional benefit liability. In these circumstances, a reopen reserve is held to fund the liability for claims that reopen, where a DLR needs to be established. Companies may hold a reserve on claims that reopen from:

- a status where a previous pending or approved claim DLR was held;
- a pay-and-close status where no reserve was previously held; or,
- initially denied claims where no payments were made and no reserves were previously held.

Company claims practices may influence when the reopen reserve is held. There are various approaches to handling the potential liability for claims that reopen after being closed.

An aggregate reopen liability may be held based on a study of the resolution of recent closures. This is similar to a claim triangle study, but it looks at the claims that were closed by month of closure versus the payments and ending reserve on those claims over time. A claim-specific reserve based on recent closures may be held.

Alternatively, a seriatim calculation could be used. A factor representing the ratio of the present value of the payments made and the ending reserve divided by the claim reserve last held when the claim was closed may be developed from an aggregate study. The factor may vary by month since closed and would be multiplied by the last reserve held for each closed claim. The study may indicate that the reopen factor decreases since month closed and becomes close to zero after a suitable number of months, such as 24 to 48 months.

There are other potential methods as well. The reopen liability could be implicitly captured in the disabled life reserve by releasing only a fraction of the DLR when a claim is closed due to recovery each month for a suitable number of months after closure. Alternatively, the reopen liability could be captured in the aggregate IBNR reserve, by including reopened claims as late reporting claims in the IBNR triangle.

*Q52. What are considerations for calculating DLR and IBNR for claims in litigation status?*

A reserve is typically held for claims in litigation status by studying the ultimate outcomes of such claims. The DLR can be established in a variety of ways. An aggregate study of the resolution of litigation status claims may lead to development of a factor representing the ultimate payments made on such claims. This study can then lead to developing a factor times the regular DLR held for the claim, or a factor times the gross monthly benefit or a factor times some other measure of exposure for each claim in litigation status. An IBNR reserve for unreported litigation may be held as either a part of the regular IBNR reserve or separately by studying the reporting patterns of new litigation cases.

*Q53. What are considerations in calculating the Loss Adjustment Expense (LAE) reserve?*

Claim adjustment expenses for A&H contracts expected to be incurred in connection with the adjustment and recording of A&H claims is discussed in SSAP No. 55. Expenses expected to be incurred in regards to the investigation and the ongoing administration of LTD claims are included. The LAE liability can be established by first conducting a unit cost study of claims management expenses. Then expenses can be expressed as a percentage of the DLR and IBNR. The initial investigation cost may be higher than the ongoing maintenance expense and such differences may be reflected in the factor used for IBNR versus DLR or in varying the factor by claim duration segments.

## **Section 4—Fundamentals of Reserve Adequacy**

### **4a. General**

*Q54. What methods can be used to demonstrate reserve adequacy for GLTD?*

The most common methods to determine reserve adequacy are:

- Asset adequacy testing
- Gross premium valuations
- Multi-year claim runout analysis

These methods are described in detail in sections 4b and 4c.

*Q55. How can an actuary “demonstrate that a block of business is relatively insensitive to influences such as changes in economic conditions”?*

Current practices include:

- Stress tests are performed to increase or decrease claim termination rate assumptions and to determine the sensitivity of the disabled life reserve on open claims.
- Incidence and severity assumptions included in the IBNR are stressed to determine sensitivity. Historical data is then used to determine how much the company experience on claim termination rates on open claims, incidence, and severity on new claims change under different economic conditions to determine the ability of the disabled life reserve on open claims and the IBNR to withstand future economic conditions.

*Q56. What does the valuation actuary consider regarding business not yet issued as of the valuation date?*

Generally, under current practices, the actuary considers the valuation of business already in force, but also considers business that has been contracted regardless of whether that business is effective as of the valuation date from the standpoint of premium deficiency. However, as a matter of current practice, the actuary generally verifies that methods and assumptions for reserves on inforce 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.

It would be unusual for a contract or block of LTD contracts to be written at an expected loss; however, premium deficiency reserves (PDR) do require consideration of rate guarantees. In this case, the actuary considers the renewal rates of the group and their adequacy for the potential development of a PDR.

*Q57. Under what circumstances would the actuary consider establishing premium deficiency reserves?*

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.” It is prudent for GLTD carriers to perform the PDR testing to determine whether a PDR may be required based on business written or committed as of the valuation date.

A premium deficiency reserves discussion paper can be found in the Appendix A references.

#### **4b. Reserve Adequacy**

*Q58. What reserve adequacy demonstrations are required?*

The Health Insurance Reserves Model Regulation states that a prospective gross premium valuation is the ultimate test of reserve adequacy as of a given valuation date. It goes on to say that it “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 addition, the Model Regulation requires claim reserves for prior valuation years “to be tested for adequacy and reasonableness along the lines of claim runoff schedules in accordance with the statutory financial statement including consideration of any residual unpaid liability.”

In the context of reserve adequacy for annual renewable term LTD contracts, a gross premium valuation of LTD would predominately entail a claim runoff test using best-estimate assumptions relative to the reported reserves. Given the nature of the annual renewable term contract, no consideration of premiums is required.

*Q59. Under current practice, how do actuaries make appropriate adjustments when claims handling practices are changed?*

Relating reserve adequacy when claim handling practices are in a state of fluctuation is an issue for the actuary to consider. Changes in claims handling practice may involve opening claims more quickly or maintaining a claim longer to avoid closing and reopening it. Tabular and IBNR trends can become difficult to compare and measure. Trends in IBNR and other development measures can become outdated when the claims area adapts new processes in adjudicating claims. Routine communication with the claims department is normally important in keeping aware of these situations. Understanding the nature of the claim administration changes and reacting with adjustments to IBNR methods or factors, if appropriate, is often done quickly. Monitoring other claim data such as claims received, claims waiting approval, or claims denied can assist the actuary in determining the true nature of the changes. Additional areas to monitor related to claims management practice and administration are return to work processes and Social Security approval processes.

It is also prudent for the actuary to be aware of practices related to how and when claims are closed. There can be situations in which claims that are effectively closed have not been removed from the open claim status records due to administrative lags.

*Q60. What claims practices should be closely monitored in order to consider potential impacts/changes in reserve adequacy?*

Current practice includes the monitoring of staffing levels, claim process and investigation time, computer system changes or downtime, seasonal claim submission

patterns, and governmental influences. In regard to disability claims processes and investigation, the practices noted below are commonly monitored:

- Recording a claim upon receipt, as submitted
- Recording a claim as approved, based on evaluation of the definition of disability
- Evaluating a claim for evidence of recovery, and other ongoing claim management practices
- Evaluating a claim for Social Security offsets, other contractual offsets, and calculation of net benefit liability
- Monitoring claim activity for benefit expiry, voluntary settlement, and other miscellaneous activities

*Q61. May a claim reserve estimate be considered adequate if it does not include a provision for loss adjustment expenses (LAE)?*

No. LAE is required in both the Model Regulation as well as in SSSAP 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. If applicable, the actuary is also required to review and apply the relevant sections of ASOP No. 42, *Determining Health and Disability Actuarial Assets and Liabilities Other than Liabilities for Incurred Claims*.

One current approach to calculate the LAE 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, an 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

*Q62. Under current practices, when do actuaries usually consider differences between a prospective gross premium valuation (GPV) and retrospective runoff studies?*

Use of both techniques can increase confidence in the adequacy of reserves. Retrospective runoff studies are more fact-based than prospective GPV; the only element of judgment is in selection of the assumptions for the ending reserve. The other elements (beginning reserves, payments, interest) reflect past actual outcomes and can be tied to financial statements. A fact-based approach may be preferable or even required for Annual Statement exhibits, state examinations, Internal Revenue Service audits, etc., in demonstrating adequacy of reserves.

When projecting future experience (e.g., cash flow testing), a prospective GPV technique is used. This applies a set of assumptions to generate future liability cash flows (and perhaps future reserve balance). While this set of assumptions can undergo a validation exercise as described next, prospective GPV involves use of judgment as to what future experience will be.

These two techniques can be connected as well. For example, an actuary may conclude that the most recent three years of company experience in claim terminations and attainment of Social Security offsets would indicate a reasonable set of assumptions to use in a prospective GPV. A set of prototype reserves at the beginning of the three-year period and remaining reserves at the end of the period can then be set and used in a runoff study. Because experience during the period was used to create the prototype reserve basis, one would expect the runoff be near breakeven. This would provide some validation to the prototype reserve basis to be used in the prospective GPV.

*Q63. What are typical time frames for the length of a runoff study?*

Given the nature of GLTD, it will often take many years for the liabilities to run off. A case reserve runoff study of 2 to 5+ years can still provide valuable insight if runoff results are available by disability claim duration categories. For example, if medium-duration and long-duration case reserves appear to be running off adequately in a three-year runoff study, the actuary in current practice usually has more confidence that reserves are set at an appropriate level.

The runoff of true IBNR reserves will usually be nearly complete after one year; however, the study runout is also heavily dependent on the ending case reserve for the claims reported during the period.

#### **4c. Asset Adequacy**

*Q64. What is cash flow testing?*

See Health Practice Council practice note *General Considerations* or the Asset Adequacy Practice Note. Links to both are provided in Appendix A.

ASOP No. 22, *Statements of Opinion Based on Asset Adequacy Analysis by Actuaries for Life or Health Insurers*, Section 2.8 defines cash flow testing (CFT) as “A form of cash flow analysis involving the projection and comparison of the timing and amount of cash flows resulting from economic and other assumptions.”

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 moderately adverse 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.

*Q65. Is cash flow testing necessary for GLTD?*

ASOP No. 7, *Analysis of Life, Health, or Property/Casualty Insurer 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. Because those who are on claim have no call on the assets underlying the reserves for their benefits, there is generally no significant exposure to policyholder withdrawal disintermediation risk, but there is interest rate or C-3 risk as low interest rates will give rise to reinvestment risk that can be mitigated through reduced reserve discount rates, so that it is important for assets and liabilities to have a reasonable duration match.

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. An 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.

*Q66. What is the role of experience studies when performing a GPV or when projecting obligation cash flows as part of cash flow testing?*

When monitoring company experience with regard to recoveries, deaths, or attainment of Social Security offsets, a company may use an actual-to-expected study or other similar process. It is common practice for the actuary to use this information when setting the assumptions for the projection. For example, if the projection model contains expectations reflecting current reserve assumptions, the assumptions in the model can be modified by applying actual-to-expected ratios to the expectations in the model to construct the assumptions for the projection. In this case, projection assumptions are expressed in terms of current reserve assumptions. Expectations in the model and in the actual-to-expected study may instead be according to an industry table or prescribed valuation table. In this case, projection assumptions are expressed in terms of that table. In any case, consistency between the actual-to-expected process and application of its outcome in a model is vital. ASOP No. 23, *Data Quality*, outlines major considerations in the selection and use of data that may have bearing on how a sound experience study is performed. The actuarial guideline for the 2012 GLTD Valuation Table notes a review should be at least annually on claim termination experience.

*Q67. Are claim cycles and underwriting cycles reflected in the projection assumptions?*

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.

*Q68. What typically is done regarding the adequacy of assets allocated to GLTD if formal cash flow testing is not done?*

Assets backing GLTD reserves are generally 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 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.

The actuary typically documents the reasons for not performing cash flow testing or uses other techniques to determine asset adequacy.

*Q69. What is a gross premium valuation?*

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. GPV can be used as a more simplified form of asset adequacy testing as required by the Actuarial Opinion and Memorandum regulation.

## Appendix A—Resources

- **2008 Group Long Term Disability Experience Table Report**  
Society of Actuaries  
March 2011  
<https://www.soa.org/Research/Experience-Study/Group-Disability/2008-ltd-experience-report.aspx>
- **Group Long Term Disability Valuation Standard Report**  
American Academy of Actuaries' GLTD Work Group  
Presented to the NAIC Health Actuarial Task Force  
October 2013  
[http://www.actuary.org/files/Final\\_GLTDWG\\_Table\\_Report\\_Final\\_Version\\_Oct3\\_0.pdf](http://www.actuary.org/files/Final_GLTDWG_Table_Report_Final_Version_Oct3_0.pdf)
- **Actuarial Guideline 47—The Application of Company Experience in the Calculation of Claim Reserves Under the 2012 GLTD Valuation Table**  
December 4, 2013  
[http://www.actuary.org/files/Final\\_GLTDWG\\_Actuarial\\_Guideline\\_December\\_4\\_0.pdf](http://www.actuary.org/files/Final_GLTDWG_Actuarial_Guideline_December_4_0.pdf)
- **NY Regulation 56 (11 NYCRR 94)**  
[http://www.dfs.ny.gov/insurance/r\\_finala/2016/rf56a2t.pdf](http://www.dfs.ny.gov/insurance/r_finala/2016/rf56a2t.pdf)
- **Valuation Manual Chapter 25**  
[http://www.naic.org/documents/committees\\_a\\_latf\\_related\\_valuation\\_manual\\_noapf\\_160829.pdf](http://www.naic.org/documents/committees_a_latf_related_valuation_manual_noapf_160829.pdf)
- **NAIC Statements of Statutory Accounting Principles**, see SSAP Nos. 54 and 55  
[http://www.naic.org/cipr\\_topics/topic\\_statutory\\_accounting\\_principles.htm](http://www.naic.org/cipr_topics/topic_statutory_accounting_principles.htm)
- **Appendix A-010 Minimum Reserve Standards for Individual and Group Health Insurance Contracts**  
<http://www.naic.org/store/free/MDL-010.pdf>
- **Actuarial Standards of Practice (ASOPs)**  
<http://www.actuarialstandardsboard.org/standards-of-practice>
- **Diagnosis Mappings**  
<https://www.soa.org/resources/experience-studies/2011/2008-ltd-experience-report/>
- **Premium Deficiency Reserves Discussion Paper**  
[https://www.actuary.org/pdf/health/pdr\\_march07.pdf](https://www.actuary.org/pdf/health/pdr_march07.pdf)

- **Health Practice Council practice note *General Considerations***  
[http://www.actuary.org/files/publications/General\\_Considerations\\_Practice\\_Note\\_1995.pdf](http://www.actuary.org/files/publications/General_Considerations_Practice_Note_1995.pdf)
- **Asset Adequacy Practice Note**  
[http://www.actuary.org/files/publications/Asset\\_Adequacy\\_PN\\_092517.pdf](http://www.actuary.org/files/publications/Asset_Adequacy_PN_092517.pdf)

## Appendix B—2008 GLTD Experience Table Information

The SOA published the 2008 GLTD Experience Table Report on July 1, 2011, and final revisions were published on Oct. 10, 2011. The 2008 experience table covered claim termination experience from 1997 through 2006, with a valuation date of Dec. 31, 2007, in order to allow for late reporting terminations and new claims. This is the most comprehensive study of claim termination experience for GLTD. The 2008 study included 1.2 million claims exposed, which was more than 4 times the exposure of the Table 95a, and it included data from 20 companies. The data submitted by the largest companies was dampened so that no company represented more than 12 percent of the total exposure.

Claim terminations for the 2008 experience table are broken down into five categories:

- Recovery
- Death
- Maximum benefit period reached
- Benefit period limit such as mental and nervous (M&N) limit
- Settlement

Claim data variables in the 2008 study included:

- Age at disability
- Attained age
- Gender
- Duration in months since incurral date
- Elimination period (EP) in months
- Duration since end of EP
- Diagnosis in 13 categories (initially based on ICD-9 codes; later, a mapping to ICD-10 codes was provided by the SOA)
- Calendar year of experience
- Indexed gross monthly benefit (GMB)
- Definition of disability
- Own occupation period
- Change in definition of disability transition month
- M&N limit period
- M&N transition month
- Maximum benefit duration

The 2008 report compares the 2008 termination rates to the 1987 Commissioner's Group Disability Table for several disability ages, three-month EP, no diagnosis category, 24-month own occupation period, and \$3,000 GMB. The graphs indicate that the 2008 study termination rates are generally higher than the 1987 Commissioner's Group Disability Table termination rates for all claim durations.