

## Actuarial Guideline XLIV

### GROUP TERM LIFE WAIVER OF PREMIUM DISABLED LIFE RESERVES

DRAFT ONLY - VERSION ASSUMES GRANDFATHERING OF 2005 TABLES AND ASSOCIATED USE OF COMPANY EXPERIENCE PROVISIONS (SEE SECTION V). ALSO HAS RECOGNITION OF NEW TABLES AND NEW USE OF COMPANY EXPERIENCE PROVISIONS, EFFECTIVE WITH JANUARY 1, 2023 DISABILITIES (SEE SECTION VI). SECTION VI, USE OF COMPANY EXPERIENCE PROVISIONS ASSOCIATED WITH THE NEW TABLES, LARGELY MODELS THOSE OF GROUP LONG-TERM DISABILITY (GLTD) ACTUARIAL GUIDELINE XLVII.

#### I. Background

Section 4.G. of the Standard Valuation Law establishes tables approved by the commissioner as the minimum standard for computing reserves for group life insurance and special benefits. The purpose of this Actuarial Guideline (Guideline) is to determine the minimum standard of valuation for group term life waiver of premium disabled life benefits and to recognize the 2023 Group Term Life Waiver (GTLW) Mortality and Recovery Valuation Tables. The Guideline also maintains recognition of the 2005 Group Term Life Waiver Mortality and Recovery Tables for purposes outlined in Section V of the Guideline.

Claims subject to Section V of the Guideline (applicable to individuals who become disabled on or after January 1, 2009 and on or before December 31, 2022) may be valued under Section VI (applicable to individuals who become disabled on or after January 1, 2023) at the election of the insurer provided these claims, for all future valuation dates, are valued under that section or any newer succeeding section at the insurer's election.

Group term life policies do not maintain contract reserves beyond the duration of the policy issued to the group policyholder. However, some policies guarantee an extended death benefit to an individual insured who is disabled according to the terms of the policy. Thus, to the extent such guarantees are made, a disabled life reserve must be maintained for each individual that is so disabled. However, prior to the creation of this guideline, there has been no formal guidance regarding the calculation of these disabled life reserves.

#### II. Scope

This guideline applies to group term life certificates on individuals who become disabled on or after January 1, 2009. Based on the provisions of Section 4.G. of the Standard Valuation Law, companies may apply this to group term life certificates on individuals who became disabled prior to January 1, 2009, provided they obtain permission from the commissioner.

#### III. Definitions

“2005 GTLW Mortality Tables” means the mortality rate tables shown in Attachments A and B.

“2005 GTLW Recovery Tables” means the recovery rate tables shown in Attachments C and D.

“2023 GTLW Mortality Valuation Table” means the mortality rate tables shown in Attachments E and F.

“2023 GTLW Recovery Valuation Table” means the recovery rate tables shown in Attachments G and H.

#### IV. The Group Waiver of Premium Reserve Calculation

- A. The minimum standard of valuation for group term life waiver of premium disabled life benefits shall be the present value of the death benefit payable discounted for interest and recovery.

Since there is not a contract reserve based upon an aggregate table, the discounted value of waived premiums is inadequate to support this liability.

- B. The maximum interest rate to be used in determining the minimum valuation standard for any group term life waiver of premium disabled life benefit incurred on or after the effective date of this guideline shall be the maximum rate permitted by law in the valuation of life insurance of the same guaranteed duration issued on the same date as the claim incurral date of disability. For most groups and companies this rate shall be the rate for life insurance with guaranteed duration greater than 20 years. The guaranteed duration used to determine the life insurance rate of interest is equal to the largest term in years between the point at which any individual in the group may become disabled and the point at which no death benefit is available. Thus, if a person could become disabled at age 20, and remain disabled, and receive a benefit upon death before age 65, the guaranteed duration would be 45 years.
- C. The valuation tables were derived from employer-employee group life experience. Other forms of group term life insurance are also subject to the same requirements if they contain similar extended death benefit provisions.

V. Text - Group Term Life Certificates on Individuals Who Become Disabled on or After January 1, 2009 and on or Before December 31, 2022.

Claims subject to this section of the Guideline may be valued under Section VI (applicable to disabilities incurred January 1, 2023 and later) at the election of the insurer provided these claims, for all future valuation dates, are valued under that section or any newer succeeding section at the insurer's election.

A. Group Waiver of Premium Reserve Calculation

- 1. Except as provided in Section V.B, the 2005 GTLW Mortality and Recovery Tables shall be used for determining the minimum standard of valuation for any group term life waiver of premium disabled life benefit incurred during the effective period of this section of this Guideline. Section V.B offers ways to modify the underlying rates of mortality or recovery if they differ from those associated with the underlying experience in the valuation table.

B. Use of Company Experience

- 1. The Appointed Actuary shall review company experience at least once every five years. The review of company experience can range from a detailed experience study to a high level analysis. The extent of the review must be sufficient to enable the Appointed Actuary to defend any conclusion reached. Company experience shall:
  - i. Be segmented into policies with similar benefits, on individuals of each gender;
  - ii. Be experience-specific to the company;
  - iii. Include all relevant experience in the past three most recent years;
  - iv. Exclude experience that is not in the past six most recent years;
  - v. Otherwise be relevant, in accordance with the professional judgment of the Appointed Actuary; and

- vi. Not be deemed irrelevant by the commissioner.
2. The commissioner may require a company to use its experience based upon the most recent review referenced in Section V.B.1 to establish its specific valuation tables if:
- i. Actual mortality experience is reasonably expected to be greater than 90% of the 2005 GTLW Mortality Tables; or
  - ii. Actual recovery experience is reasonably expected to be less than 125% of the 2005 GTLW Recovery Tables.

Under these circumstances, the commissioner may require a company to use the process set out in Section V.B.4 and establish for the company a minimum value for Z.

3. A company may use its experience exclusively without reference to the standard tabular mortality expected experience or to the standard tabular recovery expected experience to create its specific valuation tables if:
- i. The Appointed Actuary can demonstrate and certify the following:
    - a) The company-specific valuation tables are based on company experience with allowances for graduation and margins for adverse experience;
    - b) The company-specific mortality valuation tables used for computing minimum reserves for group term life waiver of premium benefits are such that there is at least an 85% statistical confidence that the actual annual aggregate mortality will be less than the mortality in the company-specific-mortality valuation tables; and
    - c) The company-specific recovery valuation tables used for computing minimum reserves for group term life waiver of premium benefits are such that there is at least an 85% statistical confidence that the actual annual aggregate recoveries will be greater than the recoveries in the company-specific recovery valuation tables.
  - ii. The company has written permission from the domiciliary commissioner to use the company-specific valuation tables.
  - iii. Unless otherwise exempted or required, the specific valuation tables shall apply to the computation of minimum reserves for group term life waiver of premium disabled life benefits for claims incurred during or after the calendar year in which the study was performed.
  - iv. The company shall not use mortality and recovery tables with rates that produce reserves less than the reserves produced by using 75% of the 2005 GTLW Mortality Tables and 160% of the 2005 GTLW Recovery Tables for all durations of disability combined.

4. If not invoking Section V.B.3, a company may use a credibility-weighted combination of company mortality experience with the 2005 GTLW Mortality Tables and/or of company recovery experience with the 2005 GTLW Recovery Tables to create its specific valuation tables.
- i. The blended tables for each gender and type of experience (mortality and recovery) shall be computed using the formula  $\text{Blended Table} = T \times S$ , where:
    - a) Z shall be a credibility weighting factor, between 0 and 1, developed by the Appointed Actuary using credibility theory methods not unacceptable to the commissioner;
    - b) F shall be the ratio of the company's actual experience to the expected experience for the 2005 GTLW Mortality and Recovery Tables for each gender and type of experience (mortality and recovery);
    - c) M shall be 1.12 for mortality tables and 0.80 for recovery tables. The values provide a smooth transition between the 2005 tables and company experience when  $Z = 1$ ;
    - d) S shall be the 2005 GTLW Mortality and Recovery Tables; and
    - e) T shall be computed using the following steps:
      - Step 1: Compute the raw value of  $T = [Z \times (F \times M) + (1 - Z)]$ .
      - Step 2: Round T to the nearest 5%.
      - Step 3: If the absolute difference between the T produced in step 2 and the value of T utilized immediately prior to the study is less than 10%, then set T equal to the value of T utilized immediately prior to the study.
      - Step 4: For all durations of disability, combined for each gender, set the value of T to the greater of 75% and the T resulting from step 3 for mortality and set the value of T to the lesser of 160% and the T resulting from step 3 for recovery.
  - ii. The company has written permission from the domiciliary commissioner to use the blended valuation tables.
  - iii. Unless otherwise exempted or required, the specific valuation tables shall apply to the computation of minimum reserves for group term life waiver of premium disabled life benefits for claims incurred during or after the calendar year in which the study was performed.

VI. Text - Group Term Life Certificates on Individuals Who Become Disabled on or After January 1, 2023.

<<< BEGINNING OF GLW-ADAPTED GLTD AG 47 SECTION >>>

- A. When the insurer follows the instructions provided in this guideline, the selected claim mortality rates and recovery rates are deemed to be tables approved by the commissioner as the minimum standard for computing reserves as established by Section 4.G of the Standard Valuation Law.
- B. Valuation Table Modifications for Company Experience

If not invoking the small company exception specified in Section VI.D, a company must use a credibility-weighted combination of its own claim mortality experience and claim recovery experience with the 2023 GTLW Mortality and Recovery Valuation Tables to create its specific valuation table.

- i. For claim durations within the elimination period, mortality rates and recovery rates may be developed as below consistent with other Duration Groups or in any other manner deemed appropriate by the actuary. With respect to credibility, any value between 0 and 1 that the actuary deems appropriate for the block may be used.
- ii. For claim durations beyond the elimination period, the valuation mortality rates and recovery rates shall be computed using the mortality rates from the 2023 GTLW Mortality Valuation Table ( $S_M$ ) and recovery rates from the 2023 GTLW Recovery Valuation Table ( $S_R$ ) multiplied by mortality experience adjustment factors ( $T_M$ ) and recovery experience adjustment factors ( $T_R$ ) that are calculated separately for three different duration groups for mortality and separately for three different duration groups for recovery.

$$\text{Valuation Mortality Rate} = T_M \times S_M$$

$$\text{Valuation Recovery Rate} = T_R \times S_R$$

The duration groups are defined as follows:

Group 1: duration > the satisfaction of the elimination period and duration  $\leq$  24 months

Group 2: duration > 24 months and duration  $\leq$  60 months

Group 3: duration > 60 months

- a)  $S_M$  and  $S_R$  shall be the mortality rates and recovery rates respectively from the 2023 GTLW Mortality and Recovery Valuation Tables.
- b)  $T_M$  shall be computed as  $T_M = [Z_M \times F_M + (1 - Z_M)] \times (1 + M_M)$  and  $T_R$  shall be computed as  $T_R = [Z_R \times F_R + (1 - Z_R)] \times (1 - M_R)$

where

- 1)  $Z_M$  shall be a mortality credibility weighting factor, between 0 and 1, developed for each duration group according to the following specifications:

Group 1-3:  $Z_M = \text{Min} \left( \sqrt{N_M / K_M}, 1 \right)$  where  $N_M$  is the number of expected death counts determined by using claim mortality rates from the 2023 GTLW Mortality Valuation Table, and

- 2)  $K_M$  is a set of constants defined by duration group as follows for mortality:

Group 1:  $K_M = 800$

Group 3:  $K_M = 800$

Group 2:  $K_M = 800$

- 3)  $Z_R$  shall be a recovery credibility weighting factor, between 0 and 1, developed for each duration group according to the following specifications:

Group 1-3:  $Z_R = \text{Min}\left(\sqrt{N_R/K_R}, 1\right)$  where  $N_R$  is the number of expected recovery counts determined by using claim recovery rates from the 2023 GTLW Recovery Valuation Table, and

- 4)  $K_R$  is a set of constants defined by duration group as follows for recoveries:

Group 1:  $K_R = 1,700$   
Group 2:  $K_R = 1,700$

Group 3:  $K_R = 1,700$

- 5)  $F_M$  shall be the ratio of the company's actual death counts to the expected death counts in the 2023 GTLW Mortality Valuation Table for each duration group specified above and  $F_R$  shall be the ratio of the company's actual recovery counts to the expected recovery counts in the 2023 GTLW Recovery Valuation Table for each duration group specified above.

If the actuary has reserve adequacy or other significant analysis that demonstrates in the development and use of company-specific experience (see Section VI.C below) that an alternative measurement is deemed appropriate, such as:

- I. Use of some other weighting of claims (for example, death benefit amount) that is not only appropriate for measuring actual to expected (A to E), but also is expected to generally produce reserves not less than those produced by using a claim count measurement.
- II. Use of an increased mortality credibility factor  $Z_M$  if  $F_M$  is greater than 1 and / or use of an increased recovery credibility factor  $Z_R$  if  $F_R$  is less than 1 to give unfavorable company experience more weight.

Then, a basis other than claim count may be used.

- 6)  $M_M$  and  $M_R$  are the company experience margins for mortality and recovery respectively, determined for each duration group, according to the following formulas:

$$M_M = \text{Min}\left(15\%, \text{Max}\left(5\%, 3\% + 1.65 * \sqrt{A_M/C_M}\right)\right)$$

$$M_R = \text{Min}\left(15\%, \text{Max}\left(5\%, 3\% + 1.65 * \sqrt{A_R/C_R}\right)\right)$$

where  $A_M$  is a set of constants defined by duration group as follows for mortality:

Group 1:  $A_M = 1.0$   
Group 2:  $A_M = 1.0$

Group 3:  $A_M = 1.0$

and  $A_R$  is a set of constants defined by duration group as follows for recoveries:

Group 1:  $A_R = 2.0$                       Group 3:  $A_R = 2.0$   
Group 2:  $A_R = 2.0$

and  $C_M$  shall be the company's actual number of death counts by duration group.

and  $C_R$  shall be the company's actual number of recovery counts by duration group.

These are the minimum values for the definition of  $M_M$  and  $M_R$  prior to any reserve adequacy analysis. Adequacy tests and analysis of experience (for example, sharpness of fluctuations, trends over the period of the mortality rate study or recovery rate study, changing claims practices) may indicate that larger values of  $M_M$  or  $M_R$  may be more appropriate. If so, such values are deemed appropriate.

- iii. The company shall not use mortality rates that are less than those produced by computing  $T_M$  as  $T_M = 0.75$ .

#### C. Company-Specific Experience - Own Experience Measurement

In computing values  $F_M$ ,  $F_R$ ,  $T_M$ , and  $T_R$  to comply with section VI.B above, the Appointed Actuary may consider the following:

- i. Segment the company claim mortality experience and claim recovery experience into any major subgroups that may produce significantly different results (for example, market niches, claims operations, and unique benefit designs).
- ii. Combine affiliated statutory entities and assumed reinsurance, where claim management is under a common structure, when considering company experience. It is also appropriate to evaluate experience separately when specific blocks of company business have distinct claim management practices or significantly different risk characteristics.
- iii. Include all relevant experience the company is capable of providing for as many of the last five years as possible (not including the lag period described below). However, there are two situations where using other than a five-year period may be more appropriate. The first is when a company's experience in a longer period not only increases credibility but is still relevant and appropriate for the company's products and claim management practices. In this case, the period to be used is not to exceed ten years. The second is for a company that has had significant changes in product and/or claim management practices within the past five years that has diminished the relevance of the company's experience early in the five year period. In this second situation, less than five years of experience may be used for any duration band for which there is compelling logic and when either the company's experience to be used is at least 90% credible, or the shorter experience period produces higher reserves than using five years.
- iv. Recognize a suitable lag period to allow for a full resolution of claim status. For example, the lag period used in the 2019 Group Term Life Waiver Experience Study performed by the Society of Actuaries was 12 months. However, the Appointed Actuary may use a different lag period based on his or her company experience. For example, company experience indicates that all changes after the selected lag period are negligible.

- v. Measure actual (A) to expected (E) deaths and A to E recoveries based on claim count (unless another weighting is deemed more appropriate, as mentioned in Section VI.B(ii)(b)(5)), where the E is based on expected deaths and recoveries, respectively, from the 2023 GTLW Mortality Valuation Table and the 2023 GTLW Recovery Valuation Table. Claim count is also used in the measurement of credibility.
- vi. Recognize where appropriate any flexibility built into the 2023 GTLW Mortality and Recovery Valuation Tables, such as not utilizing diagnosis-specific mortality rates and recovery rates when the information is deemed unreliable.
- vii. Do not count as deaths or recoveries those claims that are closed due to settlement, or that have reached the end of the maximum benefit duration, or that are closed due to any other contractual limit.
- viii. Use experience that is otherwise relevant in accordance with the professional judgment of the Appointed Actuary.

In the above paragraphs, the term “company” refers to a single company or a group of legally related companies subject to the same claim management.

#### D. Own Experience Measurement Exemption

Determine the number of claims that, according to the provisions of this Guideline, are subject to valuation using the 2023 GTLW Mortality and Recovery Valuation Tables. If, at the time of valuation, a company has fewer than 50 such open claims disabled within two years of the effective date of the valuation, and fewer than 200 such open claims disabled more than two years prior to the effective date of the valuation, the company is exempt from the requirement that the 2023 GTLW Mortality and Recovery Valuation Tables be modified by the company’s own experience. Said company will use, based on the maximum values of  $M_M$  and  $M_R$  for any duration group according to Section VI(B)(ii)(b)(6) above, 115% of the 2023 GTLW Mortality Valuation Table for all duration groups to calculate claim mortality rates and 85% of the 2023 GTLW Recovery Valuation Table for all duration groups to calculate claim recovery rates in order to comply with the minimum valuation standard.

<<< END OF GLW-ADAPTED GLTD AG 47 SECTION >>

[ATTACHMENT A = 2005 GTLW Mortality Rates, Select Period]  
[ATTACHMENT B = 2005 GTLW Mortality Rates, Ultimate Period]  
[ATTACHMENT C = 2005 GTLW Recovery Rates, Select Period]  
[ATTACHMENT D = 2005 GTLW Recovery Rates, Ultimate Period]  
[ATTACHMENT E = 2023 GTLW Mortality Rates, Select Period]  
[ATTACHMENT F = 2023 GTLW Mortality Rates, Ultimate Period]  
[ATTACHMENT G = 2023 GTLW Recovery Rates, Select Period]  
[ATTACHMENT H = 2023 GTLW Recovery Rates, Ultimate Period]

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