



AMERICAN ACADEMY *of* ACTUARIES

**Report of the American Academy of Actuaries' (Academy)
Group Life Waiver of Premium Valuation Table Work Group (GTLWPWG)**

**Presented to the National Association of Insurance Commissioners' (NAIC)
Life and Health Actuarial Task Force (LHATF)**

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Group Life Waiver of Premium Valuation Table Work Group

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Background and Purpose

Disabled life reserves for extended death benefits of the group life premium-waiver type, commonly referred to as waiver of premium claims, are significant liabilities on the balance sheets of group term life insurers. However, to date no formal guidance for valuing these liabilities exists. In the absence of any such guidance, many companies use the 1970 Intercompany Group Life Disability Valuation Table (1970 Table), or some modification of this table. This table, often referred to as the Krieger Table, has become the de-facto standard in the industry, although it was never formally recognized as a valuation standard by the NAIC, and is now outdated. As this table has become outdated, some states have begun to allow companies to use their actual experience to establish reserves.

In March 2006, the Society of Actuaries' Group Life Insurance Experience Committee (GLEC) released the results of a new study, which was intended to provide an update to the 1970 Table. As a result of this study, the GLEC produced the 2005 Group Term Life Waiver Reserve Table (2005 Table). In addition to providing more current information, the 2005 Table was constructed from gender-specific data totaling six times the number of life-years and 60 times the face amount used to produce the 1970 Table, which allowed the GLEC to produce sex distinct tables.

In March 2007, the Academy's Group Life Waiver of Premium Valuation Table Work Group (Academy Work Group) was formed in response to LHATF's request to review the 2005 Table and to make recommendations regarding the appropriate margins and use of the table.

In October 2007, the Academy Work Group released its initial report, which included a draft version of what eventually became the current LHATF exposure draft of Actuarial Guideline GWP (AG GWP). The report detailed the Work Group's thinking behind the provisions of the draft and therefore provides useful background information regarding the current draft.

In July 2008, after several interim versions, LHATF exposed the current draft of AG GWP (see Exhibit I). LHATF then requested the Academy Work Group to comment on the "protections" in Section IV.B of the AG, Use of Company Experience, to include a discussion of the margins that may be produced by Section IV.B. This report contains the Academy Work Group's response to LHATF's request.

AG GWP Section IV.B. Protections

Section IV.B of the current draft of AG GWP contains several provisions to help facilitate appropriate reserves levels.

- Required Experience Reviews: Section IV.B.1 is intended to prevent blind application of the 2005 Table. It requires periodic reviews of company experience. In addition, several critical aspects of the review are spelled out, such as the requirement to exclude experience more than six years old.
- Higher Reserves For Unfavorable Experience: Section IV.B.2 is intended to prevent "cherry picking" of company experience. If the results of the experience review indicate that company experience is unfavorable relative to the 2005 Table, this section allows the commissioner to require the use of company experience (plus a margin from Section IV.B.4) instead of the 2005 Table.
- Prior Written Consent To Use Company Experience: Sections IV.B.3 & IV.B.4 outline two different methods to use company experience. Both sections require "written permission from the domiciliary commissioner" before company experience may be used. Requiring prior written permission to use company experience is intended to facilitate clear communication between the company and the commissioner regarding the facts and details surrounding the experience in question and the application of that experience to produce the waiver reserves.
- No Favorable Unlocking Without Prior Consent: Sections IV.B.3 and IV.B.4 contain provisions that prevent reducing reserves for prior incurred claims "unless otherwise exempted or required," even if the experience review required in Section IV.B.1 warrants such an adjustment.

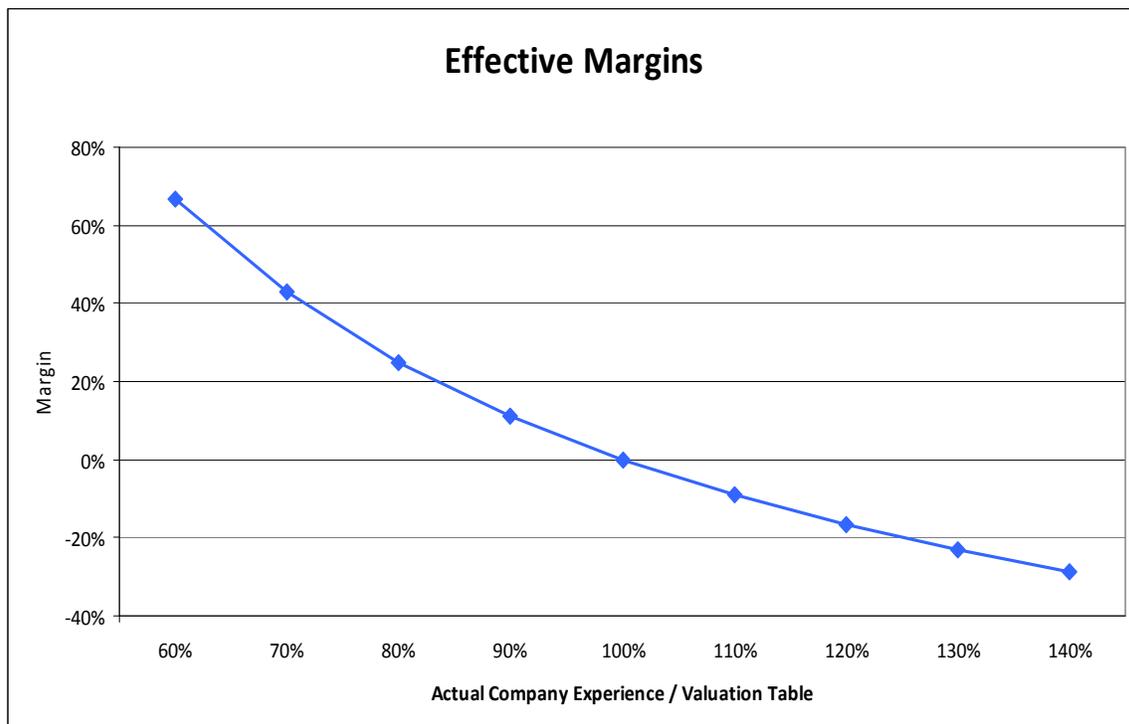
- **Required Margins:** Sections IV.B. 2, IV.B.3 and IV.B.4 require a margin to be added to company experience. A detailed discussion of the minimum required margin can be found in the following section of this report.

AG GWP Section IV.B Margins

Active life group term life liabilities are typically short-term in nature, normally one year or less. However, disabled life liabilities under the premium waiver clause can persist far beyond the expiration of the group master policy, potentially 40 years or more. This long term nature gives rise to the importance of appropriate margins as one of the key protections to the adequacy of the resulting liabilities.

Section IV.A of AG GWP specifies the 2005 Table as the appropriate default valuation standard for group term life waiver of premium benefits. The 2005 Table is based on industry experience from 1993 to 2002. Margins have been added to the industry experience so that the resulting valuation table covers at least 85% of the underlying exposures, which is consistent with the traditional target for valuation tables. The final 2005 Table contains a 25% margin for mortality and a 35% margin for recoveries.

The margins stated above are appropriate for use with industry-wide experience. However, regardless of the margin that is used to build an industry-wide valuation table, the effective margin for an individual company using that valuation table is a function of that company's unique experience versus the valuation table. Company experience for disabled lives of group term life business can vary widely from company to company due to a number of factors, including different underwriting considerations and different concentrations in niche markets.

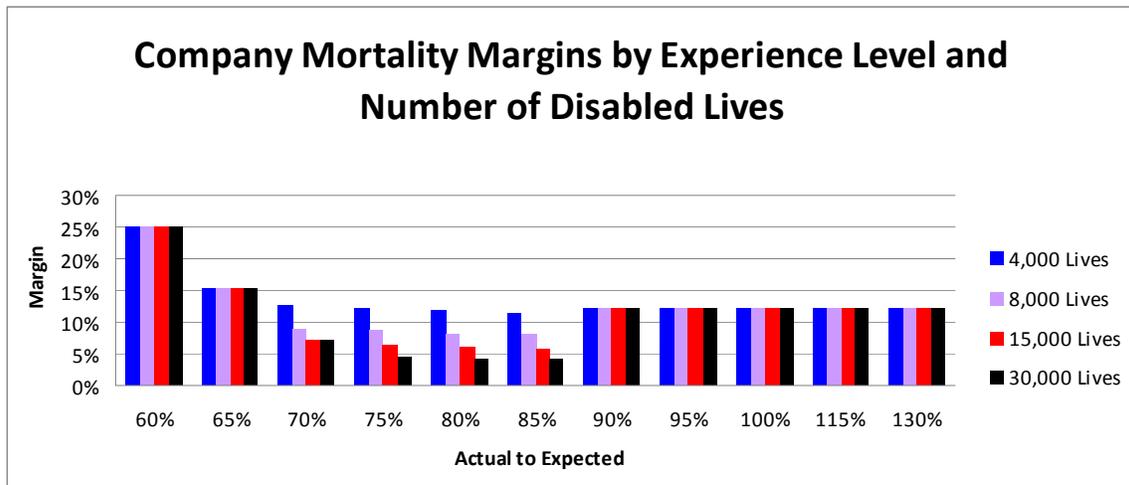


In this graph, various companies that have actual to valuation experience ranging from 60% to 140% are illustrated. The effective margin disappears when company experience matches the valuation table and actually becomes negative for company experience that is less favorable than the valuation table. Solvency at this point is dependent upon tools such as an asset adequacy analysis, which may be weakened by inclusion of other lines of business and the appointed actuary's own conception of adequate margin.

Section IV.B of AG GWP addresses this issue using concepts underlying principle-based reserving. Before resorting to aggregate asset adequacy analysis, the guideline requires an examination of the specific underlying experience. As discussed above, Section IV.B.2 of AG GWP is intended to prevent the pattern illustrated in the chart above. This provision applies to all companies, whether they are approved to use company experience or not. To the extent that the thresholds described in Section IV.B.2 are breached, the resulting margin will follow the pattern of companies with unfavorable experience using the credibility formula provisions in section IV.B.4. Such margin patterns are discussed and illustrated below.

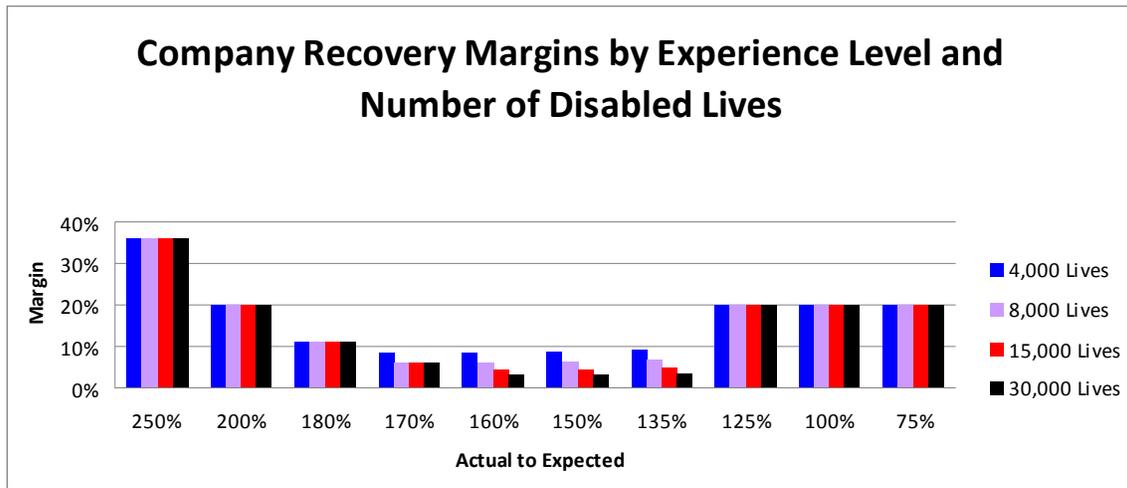
For companies that have received approval to use the company experience provisions in Section IV.B.3 and IV.B.4, AG GWP requires companies to add a margin to their experience. Companies that are approved to use Section IV.B.3 are required to add margin sufficient to demonstrate 85% statistical confidence in covering their exposure. Companies that are approved to use Section IV.B.4 are required to use a specified margin on their own experience which is then credibility weighted with the 2005 Table. Both methods impose a floor for mortality and a ceiling for recoveries, resulting in margins exceeding those built into the valuation table for companies with favorable experience. And, as discussed above, a minimum margin is required by Section IV.B.2 for those companies with unfavorable experience. A discussion of the margins resulting from these provisions follows.

Under Section IV.B.3 (and Section IV.B.2 for companies with unfavorable experience) the pattern of the mortality margins for a given number of lives on waiver resembles a U-shaped curve. The minimum margins are high for companies with very favorable experience, decrease for companies with less than favorable experience, and return to a higher minimum margin for companies with unfavorable experience. The relatively high margins on companies with the most favorable experience are a result of the minimum mortality specified in Section IV.B.3.iv. The bottom of the curve is defined by the statistically supportable minimum based upon the number of lives on waiver as specified in Section IV.B.3.i.b. Finally, the higher minimum for companies with the least favorable experience is a result of the provisions of Section IV.B.2. This pattern is illustrated by the following chart.



Note that since the mortality margin in the 2005 Table is 25%, the “average” experience implicit in the table is represented at the 80% Actual to Expected (A/E) level. Also note that any company with fewer than 4,000 lives on waiver would have margins at or above those represented in the chart above by the company experience for 4,000 lives. Such a company would have its A/E experience supported by an experience study with up to 12,000 to 24,000 life-years of exposure based upon use of a three to six year exposure period.

A similar chart is displayed for recovery margins and demonstrates a similar shape. Note that since the recovery margin in the 2005 Table is 35%, the “average” experience implicit in the table is represented at the 154% Actual to Expected (A/E) level.

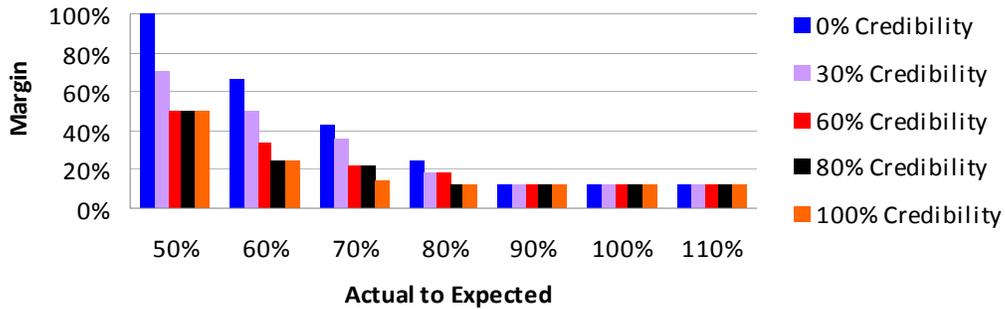


The right-hand sides of both charts show the positive margins required by Section IV.B.2 for companies with unfavorable experience, as compared to the negative margins implicit in the traditional valuation table approach. Where the margins are lower than the nominal table margin is where they are most strongly supported by statistical analysis, which must be acceptable to the commissioner. Note that adjustments that the actuary has made as part of the assessment of company experience (e.g., lag in death and recovery reporting, data quality issues, etc.) are not included in the charts above. Margins in the charts above would be added after such adjustments.

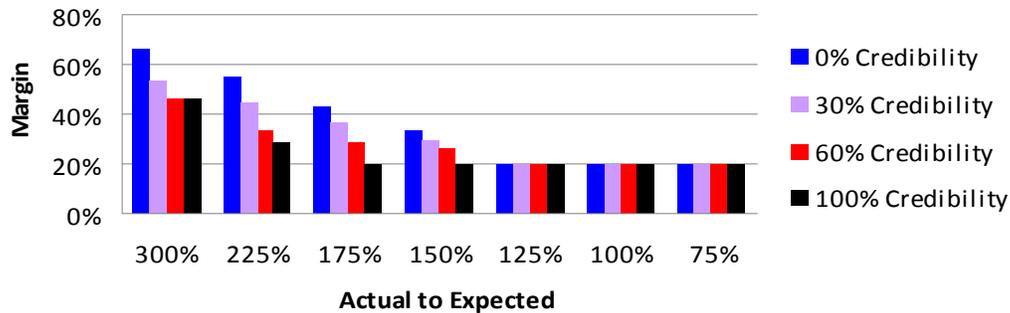
The preceding two charts were based upon one statistical approach defining the required valuation tables using company experience. This approach was derived by a method supported by the Society of Actuaries' examination syllabus materials. Only the largest three or four companies within the industry have volume comparable to 30,000 lives. Note that a 3% to 5% margin for a company with 30,000 lives on waiver is statistically as strong as the margin set in previous valuation tables and applied uniformly to the industry (i.e., approximately 85% statistical confidence).

Similar charts can be developed for the margins underlying results using Section IV.B.4 (and Section IV.B.2 for companies with unfavorable experience). However these charts show a minimum margin of 12% for mortality and 20% for recoveries, with margins increasing with improving experience.

Company Mortality Margins by Experience Level and Credibility Level



Company Recovery Margins by Experience Level and Credibility Level



These charts exhibit a similar pattern to that of the classic margin approach, except that the margin with deteriorating experience remains level at the 12% mortality and 20% recovery levels due to the provisions in Section IV.B.4.i.c¹.

In summary, the margin patterns produced when the company experience provisions of Sections IV.B.3 and Section IV.B.4 (and Section IV.B.2 for companies with unfavorable experience) are invoked solve the problem of continuously deteriorating margins created by the traditional valuation table approach depicted in the first chart.

¹ Due to the rounding of T, the actual margin will range from 9.5% to 14.5%. T is rounded to the nearest multiple of 5%, so at F = 110%, raw T would be $110\% * 112\% = 123.2\%$, which is rounded to 125%. The resulting margin is $125\% / 110\% - 1 = 13.6\%$.

EXHIBIT I

[Source: http://www.naic.org/documents/committees_lhatf_AG-GWP.doc; draft date 7/22/08]

ACTUARIAL GUIDELINE GWP – GROUP TERM LIFE WAIVER OF PREMIUM DISABLED LIFE RESERVES

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 2005 Group Term Life Waiver (GTLW) Mortality and Recovery Tables.

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, 2008. 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, 2008, 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.

IV. Text

A. Group Waiver of Premium Reserve Calculation

1. 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.
2. Except as provided in Section 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 on or after the effective date of this guideline. 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. Section 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.

3. The maximum interest rate 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. This maximum interest rate shall be used for determining the minimum standard of valuation for any group term life waiver of premium disabled life benefit incurred on or after the effective date of this guideline. 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. For most groups and companies this would mean the maximum interest rate shall be the rate for life insurance with duration greater than 20 years.

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 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 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 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.

ATTACHMENT A
2005 GTLW Mortality and Recovery Tables
Graduated Death Rates (1,000Q[X])
Select Period (duration 9 months to 10 years)

MALES

PROBABILITY OF DEATH (1,000Q[X]+T) - SELECT PERIOD

Central Age => Duration of Disability	17	22	27	32	37	42	47	52	57	62	67	72
1 (4th qtr.)	21.3	25.0	25.0	28.8	35.0	35.0	35.0	37.5	38.8	46.3	42.5	38.8
2 (1st qtr.)	26.3	28.8	30.0	36.3	37.5	37.5	37.5	37.5	37.5	37.5	33.8	30.0
2 (2nd qtr.)	27.5	30.0	30.0	37.5	35.0	35.0	33.8	33.8	33.8	33.8	32.5	28.8
2 (3rd qtr.)	31.3	33.8	33.8	33.8	26.3	26.3	27.5	27.5	28.8	28.8	28.8	25.0
2 (4th qtr.)	33.8	38.8	37.5	32.5	22.5	22.5	22.5	22.5	21.3	21.3	21.3	21.3
2 (annual)	107.2	117.9	119.2	128.2	112.6	113.6	114.0	114.7	114.9	115.2	110.7	100.5
3	37.5	56.3	68.8	70.0	71.3	72.5	73.8	75.0	81.3	83.8	86.3	91.3
4	22.5	32.5	60.0	60.0	61.3	62.5	62.5	62.5	68.8	71.3	73.8	77.5
5	15.0	22.5	41.3	48.8	50.0	51.3	52.5	52.5	56.3	58.8	65.0	68.8
6	15.0	22.5	37.5	41.3	42.5	43.8	45.0	46.3	52.5	53.8	68.8	76.3
7	15.0	22.5	27.5	31.3	32.5	33.8	35.0	37.5	48.8	52.5	71.3	78.8
8	15.0	22.5	25.0	28.8	31.3	32.5	33.8	36.3	55.0	57.5	77.5	85.0
9	15.0	22.5	22.5	23.8	28.8	31.3	33.8	40.0	56.3	60.0	81.3	93.8
10	15.0	22.5	18.8	21.3	23.8	27.5	33.8	42.5	56.3	62.5	87.5	101.3

FEMALES

PROBABILITY OF DEATH (1,000Q[X]+T) - SELECT PERIOD

Central Age => Duration of Disability	17	22	27	32	37	42	47	52	57	62	67	72
1 (4th qtr.)	12.5	15.0	20.0	21.3	22.5	26.3	31.3	33.8	36.3	40.0	37.5	35.0
2 (1st qtr.)	11.3	13.8	17.5	20.0	20.0	23.8	30.0	32.5	33.8	36.3	32.5	28.8
2 (2nd qtr.)	11.3	13.8	17.5	20.0	20.0	21.3	28.8	31.3	31.3	32.5	31.3	27.5
2 (3rd qtr.)	10.0	12.5	16.3	18.8	18.8	21.3	25.0	26.3	27.5	27.5	27.5	23.8
2 (4th qtr.)	10.0	11.3	15.0	16.3	16.3	17.5	20.0	21.3	20.0	20.0	20.0	20.0
2 (annual)	39.4	47.4	61.5	70.0	70.3	78.9	97.8	104.8	106.4	110.3	105.8	95.7
3	18.8	28.8	36.3	37.5	40.0	43.8	52.5	65.0	66.3	67.5	76.3	80.0
4	15.0	21.3	25.0	26.3	28.8	31.3	40.0	48.8	55.0	56.3	63.8	67.5
5	10.0	18.8	23.8	25.0	26.3	28.8	31.3	37.5	45.0	51.3	56.3	58.8
6	10.0	16.3	17.5	17.5	20.0	23.8	30.0	35.0	45.0	48.8	60.0	62.5
7	10.0	13.8	15.0	16.3	17.5	23.8	30.0	35.0	43.8	50.0	63.8	66.3
8	10.0	13.8	15.0	16.3	17.5	22.5	28.8	33.8	43.8	51.3	68.8	71.3
9	10.0	12.5	15.0	16.3	17.5	20.0	28.8	33.8	41.3	52.5	73.8	77.5
10	10.0	11.3	13.8	15.0	17.5	20.0	28.8	33.8	40.0	52.5	78.8	83.8

ATTACHMENT B
2005 GTLW Mortality and Recovery Tables
Graduated Death Rates (1,000Q[X])
Ultimate Period (11+ years)

Attained Age	Male	Female	Attained Age	Male	Female
27	12.5	10.0	64	50.0	37.5
28	12.5	10.0	65	52.5	38.8
29	12.5	10.0	66	55.0	40.0
30	13.8	11.3	67	56.3	40.0
31	13.8	11.3	68	58.8	42.5
32	13.8	11.3	69	60.0	45.0
33	13.8	11.3	70	63.8	47.5
34	13.8	11.3	71	65.0	50.0
35	15.0	12.5	72	66.3	52.5
36	15.0	12.5	73	72.5	57.5
37	15.0	12.5	74	77.5	62.5
38	15.0	12.5	75	82.5	67.5
39	16.3	13.8	76	87.5	73.8
40	17.5	13.8	77	92.5	78.8
41	18.8	15.0	78	95.0	80.0
42	18.8	15.0	79	98.8	81.3
43	18.8	15.0	80	100.0	82.5
44	20.0	16.3	81	103.8	83.8
45	20.0	17.5	82	107.5	83.8
46	21.3	17.5	83	113.8	88.8
47	21.3	18.8	84	121.3	93.8
48	22.5	18.8	85	128.8	98.8
49	23.8	18.8	86	136.3	105.0
50	25.0	20.0	87	143.8	111.3
51	26.3	20.0	88	152.5	117.5
52	27.5	20.0	89	161.3	123.8
53	30.0	22.5	90	171.3	131.3
54	31.3	23.8	91	182.5	140.0
55	32.5	25.0	92	195.0	150.0
56	35.0	27.5	93	210.0	161.3
57	36.3	28.8	94	227.5	175.0
58	38.8	30.0	95	248.8	191.3
59	41.3	31.3	96	280.0	215.0
60	42.5	31.3	97	335.0	257.5
61	43.8	32.5	98	448.8	345.0
62	46.3	33.8	99	1000.0	1000.0
63	48.8	35.0			

ATTACHMENT C
 2005 GTLW Mortality and Recovery Tables
 Graduated Recovery Rates (1,000Q[X])
 Select Period (duration 9 months to 10 years)

MALES

PROBABILITY OF RECOVERY (1,000Q[X]+T) - SELECT PERIOD

Central Age => Duration of Disability	17	22	27	32	37	42	47	52	57	62	67	72
1 (4th qtr.)	39.7	39.7	32.5	26.7	25.4	19.5	15.0	9.8	7.8	5.2	3.9	3.3
2 (1st qtr.)	37.7	37.7	31.2	26.0	23.4	16.3	13.7	8.5	7.2	5.2	4.6	3.3
2 (2nd qtr.)	34.5	34.5	28.0	22.8	22.1	15.6	12.4	7.8	6.5	4.6	3.9	3.3
2 (3rd qtr.)	31.9	31.9	26.0	21.5	20.8	15.0	9.8	7.2	5.9	3.9	3.3	2.6
2 (4th qtr.)	28.0	28.0	23.4	19.5	18.9	14.3	8.5	6.5	4.6	3.3	2.6	2.0
2 (annual)	120.9	120.5	99.9	82.5	78.5	56.8	41.6	28.2	22.8	16.0	13.6	10.6
3	111.2	111.2	90.4	73.5	54.0	46.2	37.7	23.4	15.0	10.4	7.8	7.2
4	100.1	100.1	75.4	56.6	43.6	35.8	26.0	17.6	11.1	9.1	5.9	5.2
5	81.3	81.3	59.8	43.6	36.4	29.3	17.6	13.7	8.5	7.2	5.2	4.6
6	49.4	49.4	42.3	35.8	31.2	24.1	13.7	9.1	6.5	6.5	4.6	3.9
7	39.0	39.0	35.1	31.2	28.0	20.8	11.1	7.8	5.2	5.2	3.3	2.6
8	34.5	34.5	31.2	28.0	23.4	16.3	10.4	6.5	5.2	3.9	2.0	1.3
9	28.0	28.0	26.7	24.7	20.2	13.7	8.5	5.2	4.6	3.3	1.3	0.7
10	24.7	24.7	22.8	20.8	15.0	11.1	6.5	4.6	3.9	2.6	1.3	0.0

FEMALES

PROBABILITY OF RECOVERY (1,000Q[X]+T) - SELECT PERIOD

Central Age => Duration of Disability	17	22	27	32	37	42	47	52	57	62	67	72
1 (4th qtr.)	61.1	61.1	50.1	41.0	28.6	24.7	16.9	16.3	13.0	8.5	6.5	5.2
2 (1st qtr.)	46.2	46.2	38.4	31.9	26.7	22.1	16.3	15.0	11.7	8.5	7.2	5.9
2 (2nd qtr.)	38.4	38.4	31.2	25.4	24.7	19.5	14.3	13.7	9.8	7.2	5.9	4.6
2 (3rd qtr.)	34.5	34.5	28.6	23.4	22.8	16.9	11.7	11.1	7.8	5.9	4.6	3.9
2 (4th qtr.)	29.9	29.9	24.7	20.8	20.2	15.0	9.1	8.5	5.9	3.9	3.3	2.6
2 (annual)	138.8	138.3	114.7	95.1	88.5	69.3	48.6	45.4	33.3	24.1	19.9	16.2
3	129.4	129.4	105.3	85.8	70.2	59.2	42.3	31.9	20.2	14.3	11.1	9.8
4	125.5	125.5	94.3	70.9	55.3	44.2	29.3	22.8	13.7	11.7	7.2	5.9
5	106.6	106.6	78.0	57.2	43.6	34.5	21.5	15.0	11.7	10.4	7.8	6.5
6	65.7	65.7	55.9	47.5	35.8	26.7	17.6	11.1	9.8	9.8	6.5	5.2
7	48.8	48.8	43.6	39.0	30.6	22.1	16.3	9.1	7.8	7.8	5.2	3.9
8	40.3	40.3	36.4	32.5	26.0	18.2	15.0	8.5	7.2	5.9	3.3	2.0
9	31.9	31.9	29.9	28.0	22.8	15.6	12.4	7.2	5.9	4.6	2.0	0.7
10	27.3	27.3	24.7	22.8	18.9	11.7	7.2	5.2	5.2	3.3	2.0	0.0

ATTACHMENT D
2005 GTLW Mortality and Recovery Tables
Graduated Recovery Rates (1,000Q[X])
Ultimate Period (11+ years)

Attained Age	Male	Female	Attained Age	Male	Female
27	16.3	16.3	64	3.3	5.2
28	16.3	16.3	65	3.3	4.6
29	16.3	16.3	66	3.3	4.6
30	16.3	16.3	67	3.3	4.6
31	16.3	16.3	68	2.6	3.9
32	16.3	16.3	69	2.0	2.6
33	16.3	16.9	70	2.0	2.0
34	16.3	17.6	71	1.3	1.3
35	16.3	18.9	72	0.7	0.7
36	16.3	20.2	73	0.7	0.7
37	16.3	21.5	74	0.7	0.7
38	15.6	20.8	75	0.7	0.7
39	15.0	20.2	76	0.7	0.7
40	15.0	19.5	77	0.7	0.7
41	14.3	18.2	78	0.7	0.7
42	14.3	17.6	79	0.7	0.7
43	13.7	17.6	80	0.0	0.0
44	13.0	17.6	81	0.0	0.0
45	12.4	16.9	82	0.0	0.0
46	11.7	16.9	83	0.0	0.0
47	11.1	16.9	84	0.0	0.0
48	11.1	15.6	85	0.0	0.0
49	11.1	14.3	86	0.0	0.0
50	10.4	13.0	87	0.0	0.0
51	10.4	11.7	88	0.0	0.0
52	10.4	11.1	89	0.0	0.0
53	9.8	10.4	90	0.0	0.0
54	9.1	9.8	91	0.0	0.0
55	7.8	9.1	92	0.0	0.0
56	7.2	7.8	93	0.0	0.0
57	6.5	7.2	94	0.0	0.0
58	5.9	6.5	95	0.0	0.0
59	5.2	6.5	96	0.0	0.0
60	4.6	5.9	97	0.0	0.0
61	3.9	5.9	98	0.0	0.0
62	3.3	5.2	99	0.0	0.0
63	3.3	5.2			