AMERICAN ACADEMY of ACTUARIES

May 20, 2005

To: Ms. Julia Philips, Chair, Accident and Health Working Group (AHWG) of the NAIC Life and Health Actuarial Task Force

Mr. Michael Boerner, Chair, Long-Term Care Reserves Subgroup of the NAIC Accident and Health Working Group (AHWG)

From: Mr. Warren R. Jones, Chair, American Academy of Actuaries'[1] Subgroup on LTC Experience Forms

Dear Ms. Philips,

The American Academy of Actuaries' Subgroup on LTC Experience Forms presented the proposed LTC loss experience exhibit forms (Forms 1, 2, and 3) along with the proposed instructions to the AHWG during the conference call on April 14, 2005. As discussed during the call, we have continued work on numerical illustrations to assist company actuaries in completing the proposed forms. We have attached an electronic copy of those numerical illustrations as a MS Excel file. We have also made revisions to the instructions regarding incurred claim formula in Form 1, and transferred policies in Form 3. Form 3 has been revised from five (5) parts each for Individual and Group to four (4) parts each for Individual and Group. We feel this revision better illustrates the development of transferred policies. A complete set of the updated instructions is also attached.

As you review the numerical examples, please note that they are to be used for reporting as of December, 31, 2008. In designing the examples, it was assumed that the first reporting of the proposed forms would be December 31, 2006.

The numerical examples are calculated from a set of two hundred (200) illustrative records. Half of those records are reported as individual policy form LTC-1. The remaining 100 records are reported as group policy form GLTC-1. The GLTC-1 policies are illustrated as transferred to the reporting company in 2006.

Form 3 currently shows five years of incurred experience. The form can be extended easily to display more than five years of experience. There may be potential issues regarding availability of past claim data. We look forward to a discussion with you in this regard.

[1] The American Academy of Actuaries is the public policy organization for 14,000 actuaries practicing in all specialties within the United States. A major purpose of the Academy is to act as the public information organization for the actuarial profession. The Academy is non-partisan and assists the public policy process through the presentation of clear and objective actuarial analysis. The Academy regularly prepares testimony for Congress, provides information to federal elected officials, comments on proposed federal regulations, and works closely with state officials on issues related to insurance. The Academy also develops and upholds actuarial standards of conduct, qualification and practice and the Code of Professional Conduct for all actuaries practicing in the United States.

We appreciate the opportunity to provide these numerical examples for the proposed experience forms and look forward to your thoughts. If there are any questions regarding these documents, I invite you to contact Geralyn Trujillo, staff liaison to the subgroup, at (202) 785-6924 or trujillo@actuary.org.

Very truly yours,

Warren R. Jones
Chair, Subgroup on Experience Forms
State LTC Task Force
American Academy of Actuaries

CC: Mark D. Peavy

April 8, 2005

To: Ms. Julia Philips, Chair, Accident and Health Working Group (AHWG) of the NAIC Life and Health Actuarial Task Force

Mr. Michael Boerner, Chair, Long-Term Care Reserves Subgroup of the NAIC Accident and Health Working Group (AHWG)

From: Mr. Warren R. Jones, Chair, American Academy of Actuaries'[1] Subgroup on LTC Experience Forms

Dear Ms. Philips,

At the request of the AHWG, the American Academy of Actuaries' State Long-Term Care (LTC) Task Force formed a subgroup to review the current LTC loss experience forms. Attached to this memo are the proposed LTC loss experience exhibit forms (forms 1, 2, and 3) along with the proposed instructions that we have developed[2].

The current experience forms have a focus on the incurred claims relative to original pricing[3] expectations. The proposed experience forms have a focus on the emergence of valuation assumptions relative to actual experience. These forms are intended to provide the regulator with an additional tool to monitor the appropriateness of valuation assumptions as experience emerges.

The first form, Form 1, reports individual and group business by type of coverage: (1) integrated, (2) facility only, and (3) home health only. Experience and valuation assumptions are reported for the most recent five (5) years, the period since the inception of the new reporting form, and the total inception to the reporting date. Actual-to-expected incurred claims and actual-to-expected lives in force are calculated. Open claim count, new claim count, and lives inforce indicate a measure of the significance of the calculated actual-to-expected metrics. The form includes a summary of the earned premiums and incurred claims for each period since the inception of the new reporting form, as well as total inception to the reporting date.

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[2] Because the proposed forms are substantially different from the current forms, we have labeled them as Exhibit 1, 2, 3, instead of A, B, C.

[3] Original pricing includes assumptions for interest, morbidity, etc., but also an assumed distribution of sales which distorts cumulative results when major variations from the distribution occur.

Form 2 reports Individual and Group business by policy form or by policy form grouping. Results based on actual experience and valuation assumptions are reported for the most recent three (3) years. The focus of form 2 is to calculate the ratio of an experience reserve to the reported reserve. The experience reserve is defined as the accumulation of the valuation net premiums using experience persistency, experience claims, and the valuation interest rate. For the first filing of form 2, the experience reserve for the second prior year is set equal to the reported reserve. Emergence of experience relative to the valuation assumptions will be indicated by the ratio of the experience reserve to the reported reserve and the trend in that ratio. Adverse experience morbidity and/or persistency, relative to valuation assumptions, will result in the ratio of the experience to the reported reserve to be less than one (1.0). The trend in the ratio of the experience to the reported reserve will indicate that the adverse experience is continuing or if it is returning to valuation assumptions. Additionally, the form includes a total of the current year reported values.

Form 3 is a multi-year development of the incurred claims by Individual and Group business. This experience form is similar to Schedule O of the NAIC Blank. Form 3 includes an interest-adjusted development of incurred claims. This adjusts the claim reserve of each valuation date for the accretion of interest in the claim reserve since the incurred date. This adjustment is required for the analysis of LTC claim reserves due to the long continuance of claims.

The subgroup on experience forms has begun work on numerical examples for each form, which will assist reporting companies in the preparation of the experience forms. We intend for the numerical examples to be completed shortly and intend to base the examples upon our proposed forms. The numerical examples will be updated to reflect any changes to match the approved experience forms.

We appreciate the opportunity to provide these proposed experience forms and look forward to your thoughts. If there are any questions regarding these comments, I invite you to contact Geralyn Trujillo, staff liaison to the subgroup, at (202) 785-6924 or trujillo@actuary.org.

Very truly yours,

Warren R. Jones
Chair, Subgroup on Experience Forms
State LTC Task Force
American Academy of Actuaries

CC: Mark D. Peavy

# LTC EXPERIENCE FORMS

## INSTRUCTIONS FOR FORM 1

### OVERVIEW

Long-Term Care Insurance Experience Form 1 is intended to track actual claims and persistency against expected. Individual and group business are reported separately. Policy forms are grouped into three categories: integrated, facility only and home health care only. Yearly as well as cumulative comparisons are exhibited. Even though only policy form groupings are displayed, policy form level information should be kept. It may facilitate rating reviews by the regulators.

### DEFINITIONS AND FORMULAS

***Integrated***

Policy forms that provide a combination of facility and home health care coverage. These include facility only policies with home health care riders.

***Facility Only***

Policy forms that provide facility coverage only.

***Home Health Care Only***

Policy forms that provide only home health care coverage.

***Current***

Current calendar year of reporting.
*Example: For a specific policy form category, the first year of issue was 2000. This Form 1 is required starting for the year 2005 and the reporting year is 2007. The current year would be 2007.*

***Prior***

The year immediately prior to the year of reporting.
*Example: 2006*

***2nd Prior***

Two years prior to the year of reporting.
*Example: 2005*

***3rd Prior***

Three years prior to the year of reporting.
*Example: Blank, since the first year of reporting is 2005.*

***4th Prior***

Four years prior to the year of reporting.
*Example: Blank, since the first year of reporting is 2005.*

***5th Prior***

Five years prior to the year of reporting.
*Example: Blank, since the first year of reporting is 2005.*

***Form Inception-to-Date***

All experience data since the adoption of this Form 1.
*Example: Data from 2005 through 2007.*

***Total Inception-to-Date***

All experience data since issuance of policies.
*Example: Data from 2000 through 2007.*

***Column 1 – Earned Premiums***

Earned premiums:

> Collected Premiums + Change in Due Premiums – Change in Advanced Premiums – Change in Unearned Premium Reserves.

Total earned premiums should equal direct earned premiums for LTC business from Schedule H (Part 1 line 2 less Part 4 line A 2 plus Part 4 line B 2).

***Column 2 – Incurred Claims***

If iy = incurral year
T = report year – incurral year, and
v = discount rate, then

Incurred claims for incurral year iy :

$$\text{Paid Claims}_{iy} \times v^{1/4} + \text{Paid Claims}_{iy+1} \times v^{1} + \text{Paid Claims}_{iy+2} \times v^{2} + \ldots + \text{Paid Claims}_{iy+T} \times v^{T} + \text{Case Reserve}_{iy} \times v^{T+1/2} + \text{IBNR}^{*} \times v^{1/2}$$

* apply only if T = 0

This is the developed claim amounts for claims incurred during the specific calendar year. For each claim, the incurred claim equals to the present values of all claim payments and the present value of any outstanding case reserve. This will be different from the reported financial incurred claims. The financial incurred claims including the change in claim reserves which, in terms, contains gain or loss due to reserve estimation different from actual payments for claims incurred in prior years.

For purposes of the present value calculation, assume all payments are made on the middle of calendar years and the case reserve is at the end of the calendar year. The discount rate is the statutory valuation interest rate for case reserve. For the current calendar year, an Incurred But Not Reported reserve should be assigned.

The incurred claims should be consistent with the claims exhibited on Form 3.

***Column 3 – Valuation Expected Incurred Claims***

The expected claim cost for an individual covered under a policy inforce[*] at the beginning the calendar year based on statutory active life reserve morbidity assumption. This is the interpolation of successive policy year expected claim cost for all coverages inforce at the beginning of the year. Simple averaging is acceptable.

An acceptable approximation is the expected claim cost times an exposure adjustment where expected claim cost is the sum of claim costs during the year, based on the valuation morbidity assumption, of each life inforce at the beginning of the year. The valuation claim cost during the year is an interpolation of successive claim costs by policy year. Other approximations may also be acceptable. Any changes in method should be disclosed on the Form.

[*] If active life reserves are not held for claimants, then exclude the claimants.

The exposure adjustment is:

> [Actual Number of Lives Inforce at Beginning of Year – (Expected Deaths + Expected Lapses) ÷ 2]  ÷ Actual Number of Lives Inforce at Beginning of Year,

where Expected Deaths and Expected Lapses are based on valuation assumptions.  They can be derived from a single average decrement rate combining deaths and lapses or specific decrement rates applying to actual exposures.  If there is no inforce at the beginning of the year, the expected claim cost can be zero.

***Column 4 – Actual to Expected Incurred Claims***

Actual incurred claims as percentage of valuation expected incurred claims.

***Column 5 – Open Claim Count***

Number of claims that have at least one benefit payment made during the year after the elimination period.  For the purpose of including a claim in this count, payments that do not require satisfaction of the elimination period are excluded.  A claim should be included in the count even though it has terminated by the end of the year.

***Column 6 – New Claim Count***

Number of claims that have at least one benefit payment made during the year after the elimination period but have no payments in previous years.  If a claimant has prior claims, he or she should be counted if the current claim is considered as a new claim.  For the purpose of including a claim in this count, payments that do not require satisfaction of the elimination period are excluded.  A new claim should be included in the count even though it has terminated by the end of the year.

***Column 7 – Lives Inforce End of Year***

Actual number of lives inforce at the end of the year.  Joint policies should be counted by number of lives.

***Column 8 – Expected Lives Inforce End of Year***

Expected number of lives inforce at the end of the year:

> Actual Number of Lives Inforce at Beginning of Year + New Issue Lives – Expected Deaths – Expected Lapses,

where Expected Deaths and Expected Lapses are based on valuation assumptions. They can be derived from a single average decrement rate combining deaths and lapses or specific decrement rates applying to actual exposures. Joint policies should be counted by number of lives.

***Column 9 – Actual to Expected Lives Inforce***

Actual number of lives inforce as percentage of expected number of lives inforce at the end of the year.

## NOTES

1. Form 1 applies to direct business only.

2. Prior years' figures, except for incurred claim, should be the same as the figures from prior years' Form 1.

3. Form Inception-to-Date figures, except for incurred claims, should be the corresponding figures from prior year Form 1 plus the figures for the current year. No interest discounting is required to determine Form Inception-to-Date and Total Inception-to-Date figures.

4. If Incurred But Not Reported reserves must be allocated by policy form, the allocation should be based on paid claims and change in case reserves.

5. Use the valuation assumptions corresponding to the current reserves being held. They are not necessarily the original reserve assumptions if strengthening or release of reserves have been made in the past. The assumptions for each year should be applied to the actual in-force (age, gender, plan distribution) not the distribution originally expected or issued.

6. An insurance company may use more refined methods in determining the required information than those described in the definitions and instructions. Methods must be consistent from report year to report year.

# INSTRUCTIONS FOR FORM 2

## Overview

The purpose of Form 2 is to calculate a ratio of an experience reserve to the reported reserve by calendar year. Summary data by policy form is to be reported. Data for the current reporting year as well as that reported each of the prior two reporting years is to be shown in Form 2.

The following formulae specify data by calendar duration (t) and calendar year of issue (n). Data at this detail is required for the calculation of the experience reserve although only totals by policy form are illustrated. Experience data is notated by a superscript E to distinguish from valuation assumptions. The experience reserve reported in column 13 is developed from (1) the experience reserve at the end of the prior reporting year (E-1); (2) valuation net premiums and interest rates; and, (3) experience incurred claims, earned premiums, and actual persistency. The valuation net premiums used are the actual net premiums used for that reporting year. *As an example, if a factor file method is used, the valuation net premiums used to calculate the reserve factors would be used for Form 2.*

For the first filing of this Form, the experience reserve as of the second prior year (earliest year illustrated) is set equal to the reported reserve as of that date. Similarly, for acquired business, the experience reserve as of the year-end following acquisition is set equal to the reported reserve as of that date. The experience reserve as of subsequent periods is developed from the first experience reserve reported in this Form.

Experience and valuation data are reported by base policy form. Rider forms will be reported with the base forms to which they are attached.

Only summary data by reporting year is illustrated. *The reporting company should have detail by calendar duration available upon request.*

## DEFINITIONS AND FORMULAS

### *Column 4 – Earned Premiums*

${}_{t}EP_{n}$ = The direct earned premium in calendar duration t for all business of Calendar Year of Issue (CYI) n. Include earned premiums only for the reporting year. Total direct earned premiums should equal direct earned premiums for LTC business from Schedule H (Part 1 line 2 less Part 4 line A 2 plus Part 4 line B 2).

*Column 5 – Incurred Claims*

${}_{t}IC^{E}{}_{n}$ = The experience incurred claims of all business of CYI n in calendar duration t for the reporting year. Total direct incurred claims should equal direct incurred claims for LTC business from Schedule H (Part 1 less Part 4).

$${}_{t}IC^{E}{}_{n} = [{}_{t}(\text{Paid Claims})_{n}] + [{}_{t}IBNR^{E}{}_{n} - ({}_{t-1}IBNR^{E-1}{}_{n})*(1+i_{n})] + [{}_{t}DLR^{E}{}_{n} - ({}_{t-1}DLR^{E-1}{}_{n})*(1+i_{n})]$$

Where:

${}_{t}(\text{Paid Claims})_{n}$ = The paid claims of all business of CYI n in calendar duration t for the reporting year. Paid claims is the total direct paid claims for LTC business from Exhibit 8 Part 2, line 1.1.

$i_{n}$ = The valuation interest rate for CYI n.

${}_{t}IBNR^{E}{}_{n}$ = The claim liability of all business of CYI n in calendar duration t for the reporting year. $IBNR^{E}$ is the total direct claim liability for LTC business from Exhibit 8 Part 2, line 2.1.

${}_{t-1}IBNR^{E-1}{}_{n}$ = The claim liability of all business of CYI n in calendar duration t-1 for the prior reporting year. $IBNR^{E-1}$ is the total direct claim liability for LTC business from Exhibit 8 Part 2, line 4.1.

${}_{t}DLR^{E}{}_{n}$ = The Disabled Life Reserves (PVANYD) of all business of CYI n in calendar duration t for the reporting year. $DLR^{E}$ is the total direct claim reserve for LTC business from Exhibit 6 line 14 for the current year.

${}_{t-1}DLR^{E-1}{}_{n}$ = The Disabled Life Reserves (PVANYD) of all business of CYI n in calendar duration t-1 for the prior reporting year. $DLR^{E-1}$ is the total direct claim reserve for LTC business from Exhibit 6 line 14 for the prior year.

***Column 6 – Loss Ratio***

${}_tLR_n$ = The incurred claims loss ratio in calendar duration t for all business of CYI n.

$${}_tLR_n = {}_tIC^E_n \,/\, {}_tEP_n$$

Column 6 = Column 5 / Column 4

***Column 7 – Annual Net Premium : Annual Gross Premium***

Annual Net Premium = ∑ (annual valuation net premiums for policies issued in calendar year n at the start of calendar duration t). Companies may report zero (0) for the net premiums during the Preliminary Term period.

Annual Gross Premium = ∑ (Annualized Premium Inforce including mode loadings for policies issued in calendar year n at the start of calendar duration t).

For calendar duration 0, the net premiums and gross premiums at issue should be used.

***Column 8 – Current Year Net Premiums***

${}_tP_n$ = The annual valuation net premium for all business of CYI n in calendar duration t.

${}_tP_n = {}_tEP_n$ * ∑ (annual valuation net premiums for policies issued in calendar year n at the start of calendar duration t)/ ∑ (Annualized Premium Inforce for policies issued in calendar year n at the start of calendar duration t). At the detail level of CYI n and calendar duration t, Column 8 = Column 4 * Column 7. *This is not true at the summary level illustrated in Form 2.*

***Column 9 – Inforce Count Beginning of Years***

${}_{t-1}IF_n$ = The inforce count in calendar duration t-1 for all business of CYI n at the end of the calendar year proceeding the reporting year. Inforce Count Beginning of Years should equal inforce end of prior year from the Exhibit of Number of Policies (page 28, Accident and Health Insurance, line 1) for LTC business.

***Column 10 – New Issues Current Year***

The new issues count during the reporting year. New Issues Current Year should equal issued during year from the Exhibit of Number of Policies (page 28, Accident and Health Insurance, line 2) for LTC business.

### *Column 11 – Inforce Count End of Years*

${}_tIF_n$ = The inforce count in calendar duration t for all business of CYI n at the end of the reporting year. Inforce Count End of Years should equal inforce end of year from the Exhibit of Number of Policies (page 28, Accident and Health Insurance, line 10) for LTC business.

### *Column 12 – Inforce End of Years : Beginning of Years*

For calendar duration zero, use the ratio of Column (11) : Column (10). For all other durations, use the ratio of Column (11) : Column (9).

### *Column 13 – Experience Policy Reserves*

$${}_tV^E_n = [({}_{t-1}V^{E-1}_n)+{}_tP_n]*(1+i_n)/p^E_{n+t-1} - {}_tIC^E_n*(1+i_n)^{1/2}$$

Where:

${}_tV^E_n$ = The experience reserve as of the end of the reporting year for calendar duration t, and CYI n.

${}_{t-1}V^{E-1}_n$ = The experience reserve as of the end of the prior reporting year for calendar duration t-1, and CYI n. For the first filing of this Form, the experience reserve as of the second prior year is set equal to the reported reserve as of that date.

${}_tP_n$ = The annual valuation net premium for all business of CYI n in calendar duration t. The total for the reporting year is the amount reported in Column (8).

$i_n$ = The valuation interest rate for CYI n.

$p^E_{n+t-1}$ = The ratio of the inforce counts end of years: beginning of years for all business of CYI n in calendar duration t. The aggregate ratio is the amount reported in Column (12).

${}_tIC^E_n$ = The experience incurred claims for all business of CYI n in calendar duration t. The total amount for the reporting year is reported in Column (5).

*Column 14 – Reported Policy Reserves*

The amount reported in Annual Statement Exhibit 6, line 2.

*Column 15 – Experience : Reported Ratio*

The ratio of Column (13) : Column (14).

# INSTRUCTIONS FOR FORM 3

***Parts 1 and 2***

Instructions will be the same as for the current Schedule O in the Life and A&H Blank ***except that the items will be on a direct basis (including transfers), before any reinsurance.***

Transfer policies are defined as policies that are either purchased or sold, typically through assumption reinsurance. These policies will be recorded in these parts of this exhibit while the company owns them.

***Parts 3 – Transferred Reserves***

Claim reserves for ***transfer claims (acquired or sold)*** is shown here, by claim incurral year, starting from the year of transfer. For sold business, the entries are positive. For acquired business, the entries are negative. For years after the transfer year, the reserves are increased with interest

Claim reserves for the buyer are the reserves initially set by the buyer, not necessarily equal to the reserves for the seller.

***Part 4 – Present Value of Incurred Claims***

Since claim reserves for long duration claims are generally discounted, the year-to-year comparison in Part 2 is misleading to the extent interest income on claim reserves is material. To show consistent values, paid claims, transferred reserves and claim reserves are discounted to a common point in time (assumed to be July 1 of the incurral year).

- Paid claims in the year of incurral are discounted one-quarter year.
- Paid claims subsequent to the year of incurral are assumed to be paid mid-year and discounted back to the midpoint of the incurral year.
- Outstanding claim reserves for a given incurral year plus transferred reserves from Part 3 are discounted from the valuation date to the midpoint of the incurral year.

If $iy$ = incurral year
$cy$ = calendar year
$T$ = calendar year – incurral year, and
$v$ = discount rate,

then the Present Value of Incurred Claims for incurral year iy at calendar year cy :

$$\text{Paid Claims}_{iy} \times v^{1/4} + \text{Paid Claims}_{iy+1} \times v^{1} + \text{Paid Claims}_{iy+2} \times v^{2} + \ldots + \text{Paid Claims}_{iy+T} \times v^{T} + \text{Case Reserve}_{iy,cy} \times v^{T+1/2} + \text{IBNR}_{iy}{}^{*} \times v^{1/2} + \text{Transferred Reserve}_{iy,cy} \times v^{T+1/2}$$

* apply only if T = 0