Long Term Care Insurance: Factors Impacting Premiums and The Rationale for Rate Adjustments

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- The information contained in this presentation is for discussion purposes only and should not to be relied upon by its recipients.

- The data contained in this presentation are for illustrative purposes only. Actual results for any specific situation would differ.

- This presentation is intended for state regulators and may not be distributed to other third parties without Milliman’s prior consent.
Presentation Outline

- Purpose of Presentation

- LTCI Industry Profile

- LTCI Economics – Sample Block
  - Key LTCI risks
  - Pricing expectations – premiums, claims, number of lives
  - Actual results, using current assumptions – at 10 years
  - Rate increase needed and effect on cumulative future loss ratios – at 10 years
  - Cost of waiting - rate increase needed after 5, 10, 15, 20 or 25 years
  - Key sensitivities

- Future State of LTCI Rate Regulation
Purpose of Presentation

- To show the potential financial ramifications that LTC insurers may face when original pricing assumptions are not met.
- To demonstrate the effect that immediate versus delayed rate increases may have on a LTCI block of business.
- To emphasize the need for immediate, cohesive regulatory action, such that the rate increase landscape can become more predictable and efficient.
LTCT Industry Profile – New Sales
(2013 Broker World Survey)

LTCT policy design features that increase probability of rate adjustments – lifetime BP, 0-day EP, 5% compound inflation – are either no longer being offered or are emphasized less. Other anti-selective risk elements being offered less: full cash benefits, limited pay options.
Long Term Care Insurance is a Complex Product…

Pricing is on a lifetime basis (level premium, increasing age curve), and major factors affect the rates:

- Morbidity - made up of frequency (probability of starting a claim), continuance curves (probability of person staying on claim – determines length of claim), and utilization (average cost per service and number/mix of services)
- Lapse and mortality – determines how many people get to durations when claims are expected to be high
- Interest rate environment – determines how much money is made on large reserves that are accumulating
Effect of Changes in the Three Major Risks

- LTCI carriers have been subjected to a “perfect storm” in recent years:
  - Morbidity could be higher or lower than expected. Lengths of stay have been increasing.
  - Lapse rates and mortality have been lower than expected, and have dropped since early generations were priced.
  - Interest rates have declined substantially.

- Net impact…more policies last to later durations, where claims are high, and companies are earning less investment income than they had expected on reserves.
LTC Insurance – Per Policy Sample Financial Results by Duration
Original Pricing – 10 Years Ago (All Ages)

- Lifetime loss ratio at 4.0% = 62.3%
- Statutory IRR = 15.1%
Example of Assumption Change for Sample Company
Original Pricing - 10 Years Ago

Three significant changes:

- Morbidity
  - 10% higher than originally assumed

- Voluntary lapse rate
  - Original assumed ultimate lapse rate = 4.75%
  - Actual ultimate lapse rate = 1.0%

- Interest rate environment
  - Original assumed rate = 6.9%
  - Actual current rate = 4.5%
Effect of Voluntary Lapse Rates on Number of Insureds Inforce (assuming no change in mortality)

<table>
<thead>
<tr>
<th>Beginning of Policy Year</th>
<th>Original Pricing*</th>
<th>Revised**</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1000</td>
<td>1000</td>
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<tr>
<td>6</td>
<td>688</td>
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<td>16</td>
<td>316</td>
<td>507</td>
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<tr>
<td>21</td>
<td>189</td>
<td>366</td>
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</tbody>
</table>

* Original assumed voluntary lapse rate assumptions = 8%, 6.75%, 5.75%, 4.75%
** Actual voluntary lapse rates = 8%, 5%, 3.5%, 2.5%, 2%, 1.5%, 1.0%
LTCL Policy Premiums and Claims –
Effect of the Three Changes on Sample Block

Pricing Assumptions
of Sample Block

Revised Assumptions/Actual Experience
of Sample Block

- Lifetime loss ratio at 4.0% = 62.3%
- Statutory IRR = 15.1%

- Lifetime loss ratio at 4.0% = 104.6%
- Statutory IRR = -0.9%

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Effect of Revised Assumptions on Sample LTCI Block’s Lifetime Financial Results

<table>
<thead>
<tr>
<th>Age Band</th>
<th>Original Pre-tax Margin as % of Premium @ 6.9%*</th>
<th>Revised Pre-tax Margin as % of Premium @ 4.5%*</th>
<th>Original Statutory IRR</th>
<th>Revised Statutory IRR</th>
</tr>
</thead>
<tbody>
<tr>
<td>55-59</td>
<td>31.8%</td>
<td>-32.3%</td>
<td>15.2%</td>
<td>-0.5%</td>
</tr>
<tr>
<td>65-69</td>
<td>21.2%</td>
<td>-20.5%</td>
<td>15.0%</td>
<td>-2.3%</td>
</tr>
<tr>
<td>75-79</td>
<td>13.2%</td>
<td>-7.0%</td>
<td>14.4%</td>
<td>-1.6%</td>
</tr>
<tr>
<td>All</td>
<td>25.1%</td>
<td>-24.8%</td>
<td>15.1%</td>
<td>-0.9%</td>
</tr>
</tbody>
</table>

*Discount rate is equal to the investment earnings rate. For both scenarios, reserves are developed using 4.0% discount rate. Pre-tax margins are BEFORE taxes and risk based capital.
Rate Increase for Sample LTC Block Needed after 10 Years – Varies Based on Criteria Used

- Produces lifetime 60% lifetime loss ratio and 11.9% IRR.
- Produces 58% lifetime loss ratio and 85% loss ratio on rate increase portion of the premium (without adding any moderately adverse margin) and 8.8% IRR.
- Produces 62.3% lifetime loss ratio and 85% loss ratio on rate increase portion of the premium (without adding any moderately adverse margin) and 8.0% IRR.
Projected lifetime loss ratio improves from 104.6% to 65.2% with 173.4% rate increase, or to 67.6% with 157.4% rate increase.

This is still 3 to 5 percentage points higher than the original projected lifetime loss ratio of 62.3%.
LTGI Rate Increase: Cost of Waiting

(58/85 rule used for rate increases)

End of Duration

Rate Increase needed to meet 58/85 loss ratio test, before provision for moderately adverse
LTCTI Rate Increase: Cost of Waiting
(original loss ratio/85 rule used for rate increases)

Cumulative Pricing Loss Ratio
Cumulative Actual Loss Ratio

Rate Increase needed to meet 62.3/85 loss ratio test, before provision for moderately adverse

End of Duration

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Sensitivity of Rates to Assumption Changes

- Effect of an assumption change varies by issue age, by whether or not compound inflation is included, and by profit target used

- Rough rules of thumb of the effect of an assumption change at time of issue (using average age distribution):
  - One percent reduction in lapse rates results in:
    - 9% increase in non-inflationary rates
    - 13% increase in inflationary rates
  - One point drop in investment income rate results in:
    - 7% increase in non-inflationary rates
    - 11% increase in inflationary rates
  - 10% increase in morbidity results in:
    - 10% increase in rates (non-inflationary and inflationary)
Future of LTC Insurance Rate Regulation

- Balanced solution for all parties is necessary, to protect insureds, ensure appropriate regulatory environment for sufficient LTCI offerings, and protect Medicaid

- Need a coordinated solution by regulators, which includes the approval of actuarially-justified rate increases

- Closed blocks’ ability to restore to adequacy without reliance on future business is minimal

- Continue to allow policyholder options to mitigate rate increases (whether those options are actuarially equivalent or not)

- Improved policyholder communications
Future of LTC Insurance Rate Regulation

- Annual rate certifications to demonstrate actual vs. expected experience emergence

- Future expectations for rate increases should be filed, with criteria to address both favorable and unfavorable development

- Modification of requirement to re-certify to moderately adverse at rate increase time…allowing lower increases and/or increases spread out over multiple years; allowing “landing spots” or reduced benefits to mitigate effect of rate increases. *These options are already being done by most carriers.*

- There is a need for immediate, cohesive regulatory action, such that the rate increase landscape can become more predictable and efficient
Questions?