

MILLIMAN REPORT

2024 report on survey of long-term care insurance valuation

An industry survey of assumptions and methodologies

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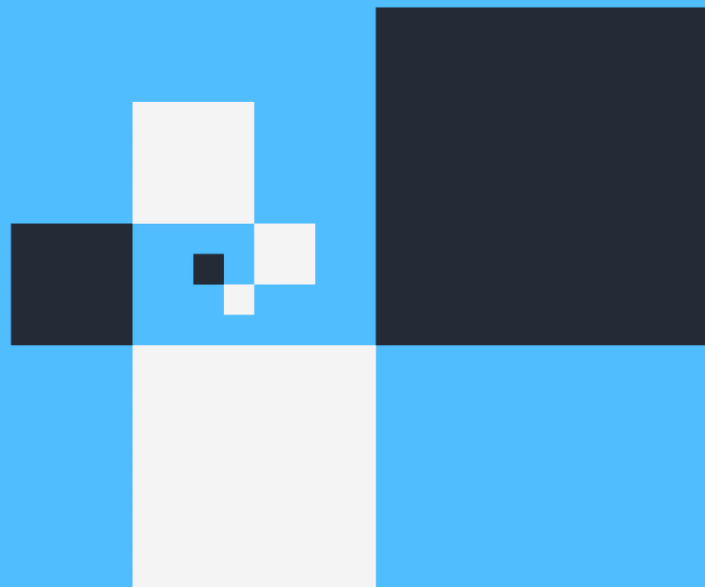


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Overview

Milliman conducted its eighth triennial private long-term care insurance (LTCI) valuation survey in 2024. Previous valuation surveys have been conducted every three years from 2003 through 2021. The objectives of this survey are to review and document the assumptions and methodologies related to the determination and testing of active life and disabled life reserves, as well as the asset strategies and investments backing the reserves. This report documents our compilation and analysis of responses to key survey questions from 20 distinct private long-term care insurance carriers. Please note, not all companies responded to every question and some companies had multiple answers depending on the question asked, resulting in the number of responses varying by question.

This report assumes that the reader is familiar with LTCI, including product design, benefits, and current valuation standards.

Most of the survey questions in the 2024 survey are consistent with the 2021 survey, which allows for reviewing trends in responses over time. Note, when comparing results to the 2021 survey, shifts in responses may be due to the mix of participating companies and may not reflect an overall shift in the market. New questions this year focus on first principles assumptions, long-duration targeted improvement, and Actuarial Guideline 53.

The results of this survey are intended to serve as a set of general benchmarks regarding insurers' current valuation assumptions. We provide commentary on the application of various methods and approaches of several technical LTCI valuation issues. This commentary is based on the authors' opinions, which may not necessarily represent those of Milliman. Because our commentary may be viewed as general in nature, we recommend that our readers seek the advice of an actuary or attorney before taking any action.

We relied on companies to accurately report their valuation assumptions and methodologies. While we reviewed the responses for general reasonableness, we largely included them as reported. The survey is merely a tabulation of valuation assumptions, and the results do not necessarily represent a carrier's actual experience.

Appendix A provides a list of participating carriers.

Appendix B documents the valuation assumptions and methodologies used to calculate the active life reserves balance. We opted to cover the section on ALR valuation as an appendix, as many of these assumptions have prescribed elements.

Appendix C provides all figures but only with companies that participated in both the 2021 and 2024 surveys.

Appendix D provides the original survey questionnaire for reference.

We, the authors of this report, are associated with Milliman, Inc., and are members of the American Academy of Actuaries. We are qualified under the Academy's qualification standards to render the opinions regarding the actuarial calculations set forth herein.

Note, values in figures throughout the report in the report may not appear to sum to 100% due to rounding.

Section 1: ALR adequacy testing

This section describes the approach and methodologies used to test the adequacy of active life reserves (ALR; may also be referred to as contract or policy reserves) at year-end 2023. Details of the valuation assumptions and methodologies specifically used to calculate the ALR balance are included in Appendix B.

Responses below focus on the adequacy testing of statutory reserves unless otherwise specified.

In this section, we provide results and observations on the following facets of reserve adequacy testing:

A. ALR ADEQUACY TESTING	E. PREDICTIVE MODELING	I. MORBIDITY ASSUMPTIONS
B. MODELING	F. LONG-DURATION TARGETED IMPROVEMENT	J. FUTURE RATE INCREASES
C. CURRENT ASSUMPTION MONITORING	G. MORTALITY ASSUMPTIONS	K. INTEREST RATE ASSUMPTIONS
D. COVID-19 PANDEMIC	H. LAPSE RATE ASSUMPTIONS	L. PROVISION FOR ADVERSE DEVIATION

Before diving into these specific topics, we summarize the following general information regarding the companies who participated in the survey.

Q7 - Is the company currently selling new business?

Thirty percent of respondents reported currently selling new business.

Q8 - What is the latest year of new policies (base policies, not future purchase options) issued?

See Figure 1 for a summary of results.

FIGURE 1: LATEST YEAR OF NEW POLICIES ISSUED

YEAR BAND	2021 SURVEY	2024 SURVEY
PRIOR TO 2010	32%	20%
2010 TO 2014	21%	20%
2015 TO 2019	16%	15%
2020 TO 2024	32%	45%

Responses: 19 in 2021, 20 in 2024

A. ALR ADEQUACY TESTING

Q38 - What approach is used (e.g., gross premium valuation, cash flow testing, etc.)?

The responses to this question were categorized between companies that only conduct cash flow testing (CFT), which includes asset modeling and may include testing stochastic interest rate scenarios, and companies that only conduct a gross premium valuation (GPV). Some companies also reported conducting both CFT and GPV.

FIGURE 2: TESTING APPROACH

APPROACH	2021 SURVEY	2024 SURVEY
CASH FLOW TESTING	65%	55%
GROSS PREMIUM VALUATION	15%	20%
BOTH CFT AND GPV	20%	25%

Responses: 20 in 2021, 20 in 2024

Q39 - Do you test ALR adequacy on both a gross and net of reinsurance basis?

Eighty percent of respondents reported not having any reinsurance or only testing adequacy on one basis (net only for all respondents). See Figure 3 for a summary of results.

FIGURE 3: ALR ADEQUACY BY REINSURANCE BASIS

APPROACH	2024 SURVEY
N/A – NO REINSURANCE	30%
NET ONLY	50%
BOTH GROSS AND NET	20%

Responses: N/A in 2021 (new question in 2024), 20 in 2024

Q40 - Do you hold additional reserves on each reinsurance basis or just on a net basis?

Ten respondents indicated not having any reinsurance or not holding additional reserves. Eight indicated holding reserves on a net basis, and two companies indicated holding additional reserves on both a gross and net basis.

Q41, Q42 - Is a premium deficiency reserves (PDR) or asset adequacy reserve currently held? If so, what approach was used to strengthen reserves (e.g., PDR, assumption change)?

As a result of reserve testing, approximately half of respondents indicated they currently hold a premium deficiency reserve (PDR) or asset adequacy reserve (AAR).

Q43 - What approach is used to aggregate reserve testing results (e.g., by line of business or across the company)?

Respondents reported following different approaches to aggregate adequacy testing results, as shown in Figure 4.

FIGURE 4: AGGREGATION OF ADEQUACY TESTING RESULTS

METHOD	2021 SURVEY	2024 SURVEY
ACROSS THE COMPANY	50%	55%
BY LINE OF BUSINESS	40%	45%
COMBINING HEALTH LINES OF BUSINESS	10%	0%

Responses: 20 in 2021, 20 in 2024

Q44 - In cash flow testing, how are interim years with deficiencies handled?

Approximately half of respondents typically do not account for interim year deficiencies, as adequacy testing is measured over the lifetime, or interim results are looked at in aggregate for the company. The remaining respondents reported evaluating interim deficiencies for materiality and holding an additional reserve if necessary.

Q45, Q46 - Is an interest maintenance reserve (IMR) utilized in cash flow testing? Is an asset valuation reserve (AVR) utilized in cash flow testing?

Two-thirds of respondents reported utilizing an interest maintenance reserve (IMR) in cash flow testing. A couple respondents utilize an asset valuation reserve (AVR).

B. MODELING

Q11 - What projection system is used for gross premium valuation, asset adequacy, and / or planning?

Figure 5 shows the prevalence of projection systems reported:

FIGURE 5: PROJECTION SYSTEM

SYSTEM	2021 SURVEY	2024 SURVEY
MOODY'S AXIS	20%	43%
FIS PROPHET	5%	14%
MG-ALFA / INTEGRATE	35%	24%
HOME-GROWN	25%	14%
POLYSYSTEMS	10%	5%
MG-TRITON	5%	0%

Responses: 20 in 2021, 21 in 2024

Q12 - Do you perform stochastic testing on your model(s)?

Approximately 35% of respondents report performing stochastic testing on their models.

Q13 - Does the model use a claim cost (please specify active or total lives) or first principles (e.g., separate incidence and continuance) basis?

A **first principles model** breaks down assumptions for policy behavior (e.g., incidence rates, claim termination rates, and utilization) into components and models them. In contrast, a **claim cost model** composites these assumptions into claim costs per dollar of benefit before entering them into the model. Although actuaries still develop assumptions in aggregate (not at the policy level), a first principles modeling approach allows companies to understand individual policy performance at a deeper level.¹ In the 2024 survey, approximately 70% of respondents reported using a first principles approach.

C. CURRENT ASSUMPTION MONITORING / CHANGES

Q14 - How frequently are the assumptions monitored (e.g., monthly, quarterly, annually)?

The most common reported frequency for monitoring assumptions is annually (as it was in the 2021 survey). However, of the cohort of respondents monitoring more often than annually, a greater proportion reported monitoring monthly rather than quarterly. In a few cases, some companies monitored some assumptions (claims, policy terminations) more frequently than others.

FIGURE 6: FREQUENCY OF MONITORING ASSUMPTIONS

FREQUENCY	2021 SURVEY	2024 SURVEY
MONTHLY	25%	19%
QUARTERLY	10%	10%
ANNUALLY	65%	71%

Responses: 20 in 2021, 21 in 2024

Q15 - How often are the current assumptions changed if necessary?

Most respondents report changing assumptions annually.

1. Gaspar, Nicole, Lu, Alyssa, & Spector, Juliet (July 2020). Key Insights From LTC First Principles Modeling. Retrieved July 29, 2024, from <https://us.milliman.com/en/insight/key-insights-from-ltc-first-principles-modeling>.

Q16, Q17, Q18, Q19, Q20, Q21, Q22, Q23, Q24, Q25, Q26, Q27 - How have the following assumptions changed in the last three years? Active life mortality, lapse, incidence, claim termination rates, disabled life mortality, recovery, utilization, incidence improvement, active life mortality improvement, morbidity improvement, cost of care, other assumptions.

Figure 7 summarizes how respondents reported changing various assumptions.

FIGURE 7: ASSUMPTION CHANGES

ASSUMPTION	2021 SURVEY			2024 SURVEY		
	INCREASED	NO CHANGE	DECREASED	INCREASED	NO CHANGE	DECREASED
ACTIVE LIFE MORTALITY (Q17)	N/A	N/A	N/A	36%	18%	45%
LAPSE (Q18)	14%	50%	36%	18%	41%	41%
INCIDENCE (Q19)	40%	30%	30%	50%	25%	25%
CLAIM TERM RATES (Q20)	15%	62%	23%	35%	24%	41%
DISABLED LIFE MORT (Q21)	N/A	N/A	N/A	67%	11%	22%
RECOVERY (Q22)	N/A	N/A	N/A	36%	36%	27%
UTILIZATION (Q23)	15%	62%	23%	45%	36%	18%
INCIDENCE IMPRVMT (Q24)	N/A	N/A	N/A	0%	86%	14%
ACTV LIFE MRT IMPRVMT (Q25)	N/A	N/A	N/A	8%	67%	25%
MORBIDITY IMPRVMT (Q26)	N/A	N/A	N/A	0%	70%	30%
COST OF CARE (Q27)	N/A	N/A	N/A	62%	38%	0%
TOTAL MORTALITY	30%	30%	40%	0%	80%	20%

Responses: 14 in 2021, 17 in 2024; note, 11 respondents in 2024 split mortality assumptions between active and disabled; 6 do not split

Beyond the assumptions in Figure 7, a few respondents reported increases in economic (i.e., interest rate) assumptions.

Q48 - How has the company changed reserve adequacy testing as a result of AG 51?

Actuarial Guideline 51 (The Application of Asset Adequacy Testing to Long-Term Care Insurance Reserves) requires all insurers with more than 10,000 in-force LTC contracts issued on a gross basis or assumed through reinsurance transactions to perform specific asset adequacy testing. Approximately 80% of respondents reported no changes as a result of the onset of AG 51. Of the 17% of respondents that did make changes, most reported adding additional documentation.

D. COVID-19 PANDEMIC

Q28 - How has the COVID-19 pandemic affected your assumption-setting process?

Most respondents reported making no changes. The remaining respondents excluded 2020 data or monitored past experience closely for any assumption setting. We also asked what time period was used for the experience studies in Q61 (mortality), Q79 (incidence and / or claim cost), and Q96 (claim terminations). Respondents tended to agree in their responses that a longer-term view on assumption setting for LTCI products is appropriate. However, there were varying selections of time period, with some choosing to stop at 2018 or 2019 and others using more recent time periods.

Q29 - Describe any short-term or long-term adjustments to baseline assumptions.

Seventy-five percent of respondents reported not making any adjustments (either short-term or long-term) to their baseline assumptions as a result of the pandemic. For those few that did make adjustments, they were for higher disabled life mortality going forward, higher home healthcare utilization, and release of IBNR held for COVID.

For more information on how COVID-19 has impacted the LTC industry, please refer to [the Society of Actuaries COVID-19 survey report](#).

E. PREDICTIVE MODELING

Q30, Q31, Q32, Q33, Q34, Q35, Q36, Q37 - Is predictive modeling used to develop any of the following assumptions? Active life mortality, lapse, incidence, claim termination rates, disabled life mortality, recovery, utilization, incidence improvement, active life mortality improvement, morbidity improvement, cost of care, other assumptions.

As technology and modeling techniques continue to advance, we asked respondents how predictive modeling plays a role in their assumption-setting process. Thirty percent of respondents reported using predictive modeling for some of their assumption setting, with active life mortality, lapse, incidence, claim termination rate, and disabled life mortality assumptions being the most common assumptions for which predictive modeling was used.

The most common techniques leveraged were generalized linear models (GLMs), penalized GLMs, and logistic regression analysis. Respondents who engage in predictive modeling reported using the same techniques across assumptions.

F. LONG-DURATION TARGETED IMPROVEMENT

The Financial Accounting Standards Board (FASB) released Accounting Standards Update (ASU) 2018-12, Targeted Improvements for Long-Duration Contracts (LDTI), in August 2018. It represents a fundamental change in the measurement and reporting of long-duration insurance contracts under GAAP accounting that will alter the incidence and volatility of reported income and equity.²

The LDTI standard introduces the following specific major improvements:

- First, the standard updates best estimate assumptions used to measure the future liability for traditional and limited-payment contracts (including LTC contracts).
- Second, a new category of benefits, market risk benefits (MRBs), is introduced and measured at fair value.
- Third, straight-line amortization of deferred acquisition costs (DAC) is now required.
- Fourth, more detailed disclosures are required, including such items as liability roll-forwards and information about assumptions and methods used in the measurement.

These new requirements went into effect in 2023 for large insurers and will go into effect in 2025 for small insurers. Ten respondents provided answers to the following questions.

Q50 - If you do not have a first principles model, have the requirements of LDTI / ASU 2018-12 to use a reserving approach which identifies the expected timing of cash-flows for all policies accelerated the need in your organization to develop first principles models?

Of the respondents that are required to report under U.S. GAAP, all but one reported already using first principles models for preparing reserves (and the remaining respondent did not indicate an accelerated need for converting to a first principles model).

Q51, Q52, Q53, Q54 - Please summarize the key steps of the approach you intend to use to update the net premium ratio for actual experience and assumption updates. Overall, in what range do you expect the solved-for net premium ratios to fall? If you intend to use a reserving approach which combines the ALR and DLR, please describe how you intend to determine the locked-in discount rate at transition with respect to the following: Blending, level equivalent.

The process of updating net premium ratios is quite similar across companies; however, the timing on when to update actual experience and net premium ratios varies.

Most respondents that are required to report under U.S. GAAP reported a net premium ratio between 75% and 100%. Two respondents reported a ratio that is already capped at 100%, and one respondent reported a ratio below 75%.

For companies using a reserving approach that combines the ALR and DLR, most chose to use level equivalent locked-in discount rates at transition.

2. Dauphin, Francois & Hines, William (April 2019). Observations on Emergence of Earnings Under U.S. GAAP Targeted Improvements. Milliman Report. Retrieved October 6, 2024, from <https://www.milliman.com/en/insight/observations-on-emergence-of-earnings-under-us-gaap-targeted-improvements>.

Q55 - What primary source(s) of information do you intend to use for the determination of the current discount rate?

The primary source of current discount rate going forward for most respondents is underlying bond data collected from Bloomberg (Barclays).

Q56, Q57 - Do you intend to report the ALR and DLR separately on the balance sheet and / or in the required disclosures?

All U.S. GAAP-reporting respondents indicated that they do not intend to report the ALR and DLR separately on the balance sheet or for the required disclosures.

G. MORTALITY ASSUMPTIONS*Q58 - Do you track deaths in your data?*

All respondents indicated that they track deaths in their data.

Q59 - If yes, what sources do you use to track deaths?

All respondents reported utilizing their own data to track deaths. Beyond that, a few respondents reported also using third-party data (such as the Social Security Death Master File) or consultant data as a supplemental data source.

Q60 - Have you observed underreporting?

The responses were split on whether each respondent had observed underreporting, with a slight majority observing underreporting (55%).

Q61 - What years are you including in the experience study?

All respondents indicated using five or more years in their experience study, with 75% reporting using 10 or more years of experience in this study. Note, about half of the respondents reported only using experience prior to 2020. The remaining respondents reported using post-2020 experience (with only three of those respondents explicitly excluding 2020).

FIGURE 8: LENGTH OF MORTALITY EXPERIENCE STUDY

SOURCE	2024 SURVEY
LESS THAN 5 YEARS	0%
5 TO 9 YEARS	25%
10 OR MORE YEARS	75%

Responses: 20 in 2024

Q62 - Are mortality assumptions applied in aggregate (total lives) or split between active and disabled lives?

As described in the *B. Modeling* section above, the LTCI market has undergone a shift over the last several years toward a first principles modeling approach. Following that trend, the valuation survey asked respondents to comment on whether they project lives by splitting them between active and disabled lives or project in aggregate (i.e., using a total life mortality approach), which implicitly blends active and disabled life mortality. Seventy percent of respondents reported splitting their mortality assumptions between active and disabled, and the remaining 30% use mortality assumptions in aggregate.

Total life mortality assumptions

Q63 - Please provide the underlying table used (include any factor used against table and ultimate level).

Of the respondents using mortality assumptions in aggregate, the most common mortality table used in statutory reserve testing is the 2000 Annuity table.

FIGURE 9: BASIS FOR TOTAL LIFE MORTALITY RATES

MORTALITY TABLE	2021 SURVEY	2024 SURVEY
1983 IAM	0%	17%
1994 GAM	0%	17%
2000 ANNUITY	56%	33%
2012 IAM	11%	17%
INSURED EXPERIENCE	33%	17%

Responses: 9 in 2021, 6 in 2024

Q64 - Are mortality selection factors used?

Five of the six respondents that use mortality assumptions in aggregate indicated that they apply mortality selection factors. While respondents report significantly different selection factors, many grade up their selection factors to 100% over 10 to 20 years.

Q65 - Is any total life mortality improvement used (past and / or future)?

Finally, four of the six respondents that use mortality assumptions in aggregate indicated that they assume future mortality improvement. A couple respondents reported using one of the projection scales associated with the underlying tables, such as G2, while others reported using a flat amount, ranging from 0.5% to 1.0% per year. Generally, respondents report assuming that improvement wears off over 20 years.

Active life mortality rates

Q66 - Is active life mortality derived by backing disabled life mortality out of total life mortality, or by studying active life mortality separately?

Twelve out of the 14 respondents that split mortality assumptions between active and disabled report studying active life mortality separately rather than backing out disabled mortality from total mortality.

Q67 - Please provide the underlying table used (include any factor used against table and ultimate level).

The most common mortality table reported by respondents who split their mortality assumptions is the 2012 Individual Annuitant Mortality (IAM) table, as shown in Figure 10.

FIGURE 10: BASIS FOR ACTIVE LIFE MORTALITY RATES

MORTALITY TABLE	2021 SURVEY	2024 SURVEY
2015 VBT	0%	8%
2000 ANNUITY	0%	8%
2012 IAM	82%	62%
INSURED EXPERIENCE	9%	23%
OTHER	9%	0%

Responses: 11 in 2021, 13 in 2024

Q68 - Are mortality selection factors used?

Nine of the 14 respondents that split active and disabled mortality indicated that they apply mortality selection factors.

Q69 - Is any active life mortality improvement and / or trend used (past and / or future)?

Nine of the 14 respondents that split active and disabled mortality indicated that they assume future active life mortality improvement. Some respondents reported using one of the projection scales associated with the underlying tables, such as G2, while others reported using a flat amount, ranging from 0.5% to 1.0% per year. Generally, respondents reported assuming that improvement wears off over 10 years, which is shorter than the respondents that reported using a total life mortality approach.

Q70 - Do you use separate factors for NFO or paid-up policies?

Approximately 25% of respondents reported using separate factors for NFO or paid-up policies.

H. LAPSE RATE ASSUMPTIONS**Q71 - Are lapse rates applied to total lives or active lives?**

Approximately 75% of respondents indicated that they apply lapse rates to active lives only, with the remaining respondents reporting applying lapses to total lives.

Q72 - What do lapse rates vary by (e.g., gender, marital status, inflation type, etc.)?

Virtually all companies indicated that they vary their lapse assumptions by some combination of issue age, attained age, gender, benefit period, inflation, marital status, premium payment option, and / or product characteristics.

Q73 - What is the ultimate lapse rate for a single male, issue age 55, lifetime BP, with no inflation protection?**Q74 - What is the ultimate lapse rate for married female, issue age 65, 5-year BP, with 5% compound inflation?**

To consistently compare lapse assumptions, we requested the ultimate lapse rates for the two different plans and demographic characteristics described in the questions immediately above. For the purposes of the figures below, assume that Q73 describes Plan 1 and Q74 describes Plan 2. The figures summarize respondents' ultimate lapse rates under each sample plan described above. Most respondents assume a lapse rate in the range of 0.5% to 1.0%. Note, eight respondents reported different ultimate lapse rates between the two sample plans.

FIGURE 11: ULTIMATE LAPSE RATES APPLIED TO TOTAL LIVES

ULTIMATE LAPSE RATES	2021 SURVEY		2024 SURVEY	
	PLAN 1	PLAN 2	PLAN 1	PLAN 2
0% TO 0.5%	22%	56%	40%	40%
0.51% TO 1.0%	44%	22%	40%	40%
1.01% TO 1.5%	22%	22%	20%	0%
1.51% TO 2.0%	11%	0%	0%	20%

Responses: 9 in 2021, 5 in 2024

FIGURE 12: ULTIMATE LAPSE RATES APPLIED TO ACTIVE LIVES

ULTIMATE LAPSE RATES	2021 SURVEY		2024 SURVEY	
	PLAN 1	PLAN 2	PLAN 1	PLAN 2
0% TO 0.5%	25%	13%	17%	50%
0.51% TO 1.0%	63%	88%	58%	42%
1.01% TO 1.5%	0%	0%	17%	8%
1.51% TO 2.0%	13%	0%	8%	0%

Responses: 8 in 2021, 12 in 2024

Q75 - Is the ultimate active lapse flat or increasing by age / duration?

Seventy percent of respondents reported flat ultimate active lapses, with the remainder reporting increasing ultimate active lapses.

Q76 - Is exhaustion of benefits included in lapse rates or modeled separately?

Almost all responding companies model exhaustion of benefits separately from lapse rates.

I. MORBIDITY ASSUMPTIONS

The remainder of this subsection of the report will focus on details surrounding each of the following:

- Incidence rate / claim cost assumptions
- Morbidity improvement / incidence improvement
- Continuance / claim termination rate assumptions
- Utilization assumptions
- Cost of care assumptions

Incidence rate and / or claim cost assumptions*Q77 - Please provide the source used for morbidity (e.g., own experience, consultant data, reinsurer data, etc.).*

Half of respondents reported using their company's own data, while the other half reported either supplementing their company's own data with consultant data or using consultant data outright. The most common reported approach for using consultant data is to use it as a starting point and adjust to company experience.

FIGURE 13: MORBIDITY AND / OR INCIDENCE RATE DATA SOURCE

SOURCE	2021 SURVEY	2024 SURVEY
OWN COMPANY DATA	30%	50%
CONSULTANT DATA	65%	20%
OWN COMPANY + CONSULTANT DATA	N/A	30%
SOA DATA	5%	0%

Responses: 20 in 2021, 20 in 2024

Q78 - What do incidence rate (or claim cost) assumptions vary by?

Respondents reported varying rates by some combination of gender, attained age, initial site of coverage, marital status, elimination period, benefit period, tax qualified status, non-forfeiture status, and / or inflation option, among other factors.

Q79 - What experience years are included in the incidence rate (or claim cost) experience study?

All respondents indicated using five or more years in their incidence rate development study, while 85% reported using at least 10 years. Note, about half of the respondents reported only using experience prior to 2020. The remaining respondents reported using post-2020 experience (with only three of those respondents explicitly excluding 2020).

FIGURE 14: LENGTH OF EXPERIENCE STUDY INCLUDED IN INCIDENCE RATE

SOURCE	2024 SURVEY
LESS THAN 5 YEARS	0%
5 TO 9 YEARS	15%
10 OR MORE YEARS	85%

Responses: 20 in 2024

Morbidity improvement / Incidence improvement

Q80, Q81, - What do you assume for the following assumptions? Past incidence improvement, past disabled life mortality improvement.

Four companies assumed past incidence improvement up to 2.6%, G2 scale, or some factor of the G2 scale.

Most companies did not assume past disabled life mortality improvement.

Q82, Q83, Q84, Q85 - What do you assume for the following assumptions? Future morbidity improvement, future incidence improvement, future claim termination improvement, future disabled life mortality improvement.

Future morbidity improvement in projections has been an area of increased focus the past several years in the LTCI market. There was an SOA study³ in 2021 and Actuarial Guideline 51 requires additional support for future morbidity improvement.

- Of the four respondents reporting future incidence improvement, results are varied: some respondents reported between 0% and 3% for 10 or more years, while others reported using a percentage of G2 scale for 10 to 20 years.
- Of the respondents using a claim cost model, all but one reported no claim cost improvement.
- No respondents reported using past or future claim termination improvement.
- One respondent reported assuming disabled life mortality improvement.

Q86 - Are improvement studies based on population data, internal data, or something else?

Fifty percent of respondents reported using internal data or a combination of internal and consultant or population data, while the remaining 50% of respondents reported not conducting improvement studies.

Q87 - How do you conduct improvement studies?

Most respondents who conduct improvement studies reported measuring actual to expected changes by policy duration or calendar year.

Continuance / claim termination rate assumptions

Q88, Q89 - Are aggregate assumptions used or do they vary by care setting (e.g., skilled nursing facility [SNF], assisted living facility [ALF], or home health care [HHC])? If they vary by care setting, do they vary by first or current care setting?

Most respondents reported varying their assumptions by care setting, and a majority of respondents base the care setting on the first situs of care.

FIGURE 15: CONTINUANCE ASSUMPTION SITUS

METHOD	2021 SURVEY	2024 SURVEY
VARY BY CARE SETTING – FIRST SITUS	67%	58%
VARY BY CARE SETTING – CURRENT SITUS	25%	32%
AGGREGATE	8%	10%

Responses: 12 in 2021, 19 in 2024

Q90, Q91, Q92 - Please provide the source of the following assumptions (e.g., own experience, consultant data, reinsurer data, modified published table, etc.) for SNF, ALF, and HHC.

Of the respondents who vary continuance assumptions by care setting, almost all respondents reported using their own experience data (or a blend of company experience and consultant data). A couple respondents indicated using consultant data alone to set these assumptions.

3. Society of Actuaries. Researching Long-Term Care Insurance Incidence Rates Over Time. Retrieved July 29, 2024, from <https://www.soa.org/resources/experience-studies/2021/researching-ltc-insurance-incidence/>.

Q93 - How often are continuance tables updated?

Roughly two-thirds of respondents reported reviewing and updating continuance and claim termination rate assumptions annually, while the remaining respondents reported updating less than annually (i.e., every two to three years, or as needed).

Q94 - Are assumption updates indicating shorter or longer lengths of stay than previous assumptions?

When updating assumptions, approximately 40% of respondents noted that their updates are indicating longer lengths of stay than prior assumptions would indicate. Meanwhile, 25% noted no change in length of stay, and 35% noted shorter lengths of stay (though several respondents noted only slightly shorter length of stay, due to higher disabled life mortality or as a result of COVID-19).

Q95 - By what characteristics do assumptions vary (e.g., age, gender, benefit period, diagnosis code, marital status)?

Most respondents reported varying their continuance assumptions by at least age, gender, and benefit period. Many also reported varying by elimination period and / or care setting.

Q96 - What experience years are included in your claim termination study?

All respondents indicated using five or more years of experience in developing their claim termination rates. Eighty-two percent indicated using 10 or more years. Note, about half of the respondents reported only using experience prior to 2020. The remaining respondents reported using post-2020 experience (with only three of those respondents explicitly excluding 2020).

FIGURE 16: LENGTH OF EXPERIENCE STUDY INCLUDED IN CLAIM TERMINATION RATE

SOURCE	2024 SURVEY
LESS THAN 5 YEARS	0%
5 TO 9 YEARS	18%
10 OR MORE YEARS	82%

Responses: 17 in 2024

Q97, Q98 - Are claim termination rates studied for determining disabled life mortality and recoveries? If yes, how do disabled life mortality rates vary (beyond age and duration)?

Finally, most respondents indicated using claim termination rate studies for the purpose of determining disabled life mortality and recoveries, and they typically vary these assumptions by age, gender, benefit period, and care setting.

Utilization assumptions

Utilization refers to the proportion of available benefits per day (or week or month) actually paid relative to the contractual maximum.

Q99, Q100 - What are your base days and dollars assumptions for SNF, ALF, and HHC?

Respondents reported assuming seven days of utilization for SNF and ALF and between five and six days for HHC. Dollars utilization varied widely among respondents. Many reported higher dollars utilization for facility care settings than for a home setting (though a few reported the same dollars utilization for facility and home care settings). Reported SNF and ALF dollars utilization varied generally from 60% to 100%, while HHC dollars utilization varied generally between 50% and 75%.

Q101 - Is utilization based on first or current situs?

Two-thirds of respondents reported basing their utilization assumption on the first situs, while the others reported using current situs.

Q102 - What do utilization assumptions vary by?

Respondents indicated that utilization assumptions vary by many factors, including but not limited to site of care, duration, benefit period, daily maximum benefit, disabled age, diagnosis, inflation rate, and inflation type.

Cost of care assumptions*Q103 - What sources do you use to determine utilization (i.e., salvage) in future durations?*

To determine utilization in future durations, many respondents reported using a mix of internal data, the consumer price index (CPI), and some broader studies, such as the Genworth Cost of Care Survey or consultant data.

Q104 - Please summarize your cost of care assumption.

The reported cost of care trend assumption ranged from 3% to 6% among almost all respondents who provided a numerical response (eight respondents). Many respondents reported varying this assumption by care setting (typically with a higher trend on facility care settings over the long term). A few respondents indicated varying the assumption by additional variables including daily benefit maximum, benefit inflation option, and / or benefit period. A couple respondents reported higher trends in the short term before grading down over several years to a steady state, long-term assumption.

Q105, Q106 - Is the long-term care cost inflation assumption tied to economic or interest rate assumptions? If yes, what approach is used to tie the inflation assumption to economic or interest rate assumptions?

About 25% of respondents reported that they peg LTC cost of care trend to either the CPI or long-term Treasury rates.

Q107, Q108 - If the inflation assumption is less than the contractual benefit increase, is utilization floored? If yes, at what level?

Only about one-third of respondents reported flooring their utilization assumption. The reported floors typically are some base utilization number from the experience, adjusted for inflation.

J. FUTURE RATE INCREASES*Q109, Q110, Q111, Q112 - Do you assume future rate increases?*

We asked several questions related to how future rate increases are assumed in reserve testing. The results of those answering each question affirmatively are shown in Figure 17.

Most respondents indicated reflecting future increased premium for rate increases that were approved but not yet implemented. For future increases that are filed but not yet approved, there was a wide range of assumptions reported. Several companies reported filing rate increases in the 20% to 50% range with approvals in the 10% to 25% range. For future increases not yet filed, roughly half reflect rate increases in modeling according to their corporate rate increase plan.

FIGURE 17: PERCENT RESPONDING “YES” TO QUESTIONS REGARDING FUTURE RATE INCREASES

QUESTION: DO YOU ASSUME FUTURE RATE INCREASES IN ALR ADEQUACY TESTING?	2021 SURVEY	2024 SURVEY
APPROVED BUT NOT IMPLEMENTED (Q109)	79%	85%
FILED BUT NOT APPROVED (Q110)	59%	63%
NEXT ROUND OF FILINGS (Q111)	63%	63%
FUTURE ROUNDS (Q112)	63%	44%

Responses: 19 in 2021, 20 in 2024 (note: not all companies answered every question)

Q113 - Is there a shock lapse assumption? If so, what level and does it vary by level of the rate increase and / or by the number of rounds of rate increase?

Thirty-five percent of respondents reported including assumptions for shock lapses (down from 50% in the 2021 survey report). For those that reported yes, they indicated that this could vary by level of rate increase, round of rate increase, product, and state.

Q114 - Is there any incidence anti-selection assumption following a rate increase? If so, what level and is it temporary or permanent? How do you assume shock lapse and anti-selection interact?

Forty percent reported including an assumption for anti-selection impacting incidence (roughly consistent with the 2021 survey report), with the level of anti-selection varying among companies. Some assumed that the level of anti-selection is a flat percentage of the shock lapse assumption. Others tied the anti-selection assumption to the level of rate increase. Ten percent reported assuming that the anti-selection is permanent.

Q115 - Are any reduced benefit options assumed to be elected following a rate increase?

Thirty-five percent reported including assumptions for reduced benefit offerings associated with the rate increases.

Note, Milliman is preparing a refreshed rate increase survey report, currently slated for public release in Spring 2025.

K. INTEREST RATE ASSUMPTIONS

Q125 - Please provide the interest rate used (if used for discounting in a gross premium valuation).

For testing the statutory ALR, eight respondents reported their interest rates, which varied from roughly 2.5% to 6.0%, with an average of about 4.9%. In general, these interest rates are slightly higher than the 2021 survey.

FIGURE 18: INTEREST RATE ASSUMPTIONS

INTEREST RATE RANGE	2021 SURVEY	2024 SURVEY
2.5% TO 4.0%	38%	25%
4.0% TO 5.0%	38%	13%
5.0% TO 6.0%	25%	63%
AVERAGE INTEREST RATE REPORTED	4.6%	4.9%

Responses: 8 in 2021, 8 in 2024

Q126 - What is the long-term assumed structure of the risk-free interest rates (e.g., level, implied forward curve, mean reversion, econometric model, other)?

About 40% of respondents indicated that they use a level risk-free interest rate assumption, while other respondents indicated using a variety of structures, including implied forward curve, mean reversion, and prescribed scenarios.

L. PROVISION FOR ADVERSE DEVIATION

Q117, Q118, Q119, Q120, Q121, Q122, Q123, Q124 - Please provide the PAD used for the following: Active life mortality, lapse, incidence, claim termination rates, disabled life mortality, recovery, utilization, other assumptions.

We found that approximately half of the companies do not include explicit provisions for adverse deviation (PADs) in their assumptions used for reserve testing. See Figure 19 for a distribution of respondents' PADs by cash flow testing assumption.

FIGURE 19: PROVISIONS FOR ADVERSE DEVIATION (PAD)

ASSUMPTION	2021 SURVEY			2024 SURVEY		
	NO PAD	0-2%	> 2%	NO PAD	0-2%	> 2%
ACTIVE LIFE MORTALITY (Q117)	N/A	N/A	N/A	41%	24%	35%
LAPSE (Q118)	67%	22%	11%	47%	20%	33%
INCIDENCE (Q119)	50%	22%	28%	47%	24%	29%
CLAIM TERMINATION RATES (Q120)	72%	11%	17%	73%	9%	18%
DISABLED LIFE MORTALITY (Q121)	N/A	N/A	N/A	64%	21%	14%
RECOVERY (Q122)	N/A	N/A	N/A	67%	8%	25%
UTILIZATION (Q123)	78%	11%	11%	58%	25%	17%

Responses: 18 in 2021, 17 in 2024

Additionally, a few respondents reported PADs for expenses, and a couple respondents reported PADs for mortality improvement, morbidity, and / or morbidity improvement.

Section 2: Disabled life reserves

This section describes the approach and methodologies used to calculate disabled life reserves (DLR; may also be referred to as claim reserves). The DLR reflects the value of future claim payments for claims that have already been incurred. The amount of disabled life reserves associated with a block of LTC insurance business generally increases as the block ages, which is due to the increasing claim incidence by policyholder age.

Responses below focus on the adequacy testing of statutory reserves unless otherwise specified.

In this section, we provide results and observations on the following facets of reserve adequacy testing:

A. VALUATION SYSTEM	D. UTILIZATION ASSUMPTIONS	G. DLR ADEQUACY
B. CONTINUANCE ASSUMPTIONS	E. OTHER DLR CALCULATION SPECIFICATIONS	H. PROVISION FOR ADVERSE DEVIATION
C. LOSS ADJUSTMENT EXPENSE	F. DLR ADJUSTMENTS	

A. VALUATION SYSTEM

Q10 - What valuation system is used for the disabled life / claim reserves?

A slight majority of respondents reported using a commercial valuation system for their disabled life reserves versus those that use a home-grown system.

FIGURE 20: DLR SYSTEM

SYSTEM	2021 SURVEY	2024 SURVEY
HOME-GROWN	35%	40%
COMMERCIAL	65%	60%

Responses: 20 in 2021, 20 in 2024

B. CONTINUANCE ASSUMPTIONS

Q155, Q156 - Are aggregate assumptions used or do they vary by care setting? If they vary by care setting, do they vary by first or current care setting?

Ninety-five percent of respondents reported varying continuance assumptions by care setting. Of those that vary by care setting, 63% vary by first care setting as opposed to current.

Q158, Q159, Q160 - Please provide the source of the following assumptions (e.g., company experience, consultant data, reinsurer data, modified published table, etc.) for SNF, ALF, and HHC.

Most respondents reported using their company's own data (representing a big increase from the 2021 survey). However, many still reported supplementing with consultant data or using consultant data outright. The most common approach used for consultant data is to use it as a starting point and adjust to company experience. The approach did not vary by care setting.

FIGURE 21: CONTINUANCE TABLE DATA SOURCE

DATA SOURCE	2021 SURVEY	2024 SURVEY
OWN COMPANY DATA	32%	63%
CONSULTANT DATA	68%	26%
OWN COMPANY DATA + CONSULTANT DATA	N/A	11%

Responses: 20 in 2021, 19 in 2024

Q161 - How often are continuance tables updated?

Roughly half of the respondents indicated that they review the continuance tables at least annually, with the remainder reporting that they perform an update less frequently, though several indicated that they review the tables at least every three years. More companies report updating these assumptions annually than in the 2021 survey.

Q162 - Are assumption updates indicating shorter or longer lengths of stay than previous assumptions?

Forty-one percent of respondents noted that their updates indicate shorter lengths of stay than prior assumptions would project (though many report only slightly shorter due to higher disabled life mortality or as a result of COVID-19). Meanwhile, 24% reported stable lengths of stay and 35% reported longer lengths of stay.

Q163 - By what characteristics do assumptions vary (e.g., age, gender, benefit period, diagnosis code, marital status)?

Figure 22 shows what percentage of respondents included each of several common variables in their continuance table development. Consistent with prior survey reports, respondents continue to report using more variables in their DLR calculations. This may indicate that companies are developing more sophisticated and detailed assumptions as they have additional data available and try to develop more accurate and precise claim reserve estimates.

FIGURE 22: CONTINUANCE TABLE VARIABLES

VARIABLE	2021 SURVEY	2024 SURVEY
AGE	83%	94%
GENDER	100%	94%
CARE SETTING	89%	95%
BENEFIT PERIOD	56%	76%
DIAGNOSIS	17%	24%
OTHER (INCLUDING EP, CLAIM DURATION, ETC.)	33%	76%

Responses: 20 in 2021, 18 in 2024

C. LOSS ADJUSTMENT EXPENSE**Q164 - Please provide the loss adjustment expense (LAE) percentage used.**

Almost all companies report including a flat percentage load to their DLR. The range of the LAE load varies by company, as shown in Figure 23.

FIGURE 23: LAE AS A PERCENT OF DLR

PERCENT RANGE	2021 SURVEY	2024 SURVEY
0%	17%	11%
0.1% to 2.5%	28%	39%
2.6% to 5.0%	50%	44%
> 5.0%	6%	6%
AVERAGE LAE %	3.0%	2.9%

Responses: 18 in 2021, 19 in 2024

The average reported LAE held on a statutory basis is 2.9%, which is largely consistent with the 2021 survey.

D. UTILIZATION ASSUMPTIONS

Q165, Q166, Q167 - Is utilization (i.e., salvage) assumed? If so, at what level? Is utilization developed on a seriatim, grouped basis (such as care setting), or on an aggregate basis?

Utilization assumptions account for whether claimants utilize less than the maximum daily, weekly, or monthly amount specified in the policy contract.

All respondents who answered this question reported making explicit utilization adjustments in their claim reserve calculations. Respondents reported using utilization adjustments on a seriatim, grouped (such as by care setting), or aggregate basis, as demonstrated in Figure 24. Note, “Grouped” is a new option for the 2024 survey. Each approach has its own merits when considering variability, credibility, and calculation issues.

The number of respondents that assume less than 100% utilization has increased steadily since our 2009 valuation survey report and through successive versions of the survey.

FIGURE 24: DLR UTILIZATION METHODOLOGY

METHODOLOGY	2021 SURVEY	2024 SURVEY
NOT REFLECTED	5%	0%
SERIATIM	32%	39%
GROUPED	N/A	56%
AGGREGATE	63%	6%

Responses: 19 in 2021, 18 in 2024

E. OTHER DLR CALCULATION SPECIFICATIONS

Q168 - Are waiver-of-premium (WOP) benefits included in the DLR / claim reserve?

Most companies reflect waiver-of-premium benefits in their claim reserve calculations, as shown in Figure 25. This is similar to prior surveys. It is important to carefully consider the treatment of waiver of premium in the ALR and DLR calculations.

FIGURE 25: DLR WAIVER OF PREMIUM METHODOLOGY

METHODOLOGY	2021 SURVEY	2024 SURVEY
WAIVER REFLECTED IN DLR	79%	70%
WAIVER NOT REFLECTED IN DLR	21%	30%

Responses: 19 in 2021, 20 in 2024

Q169 - How are inflation options reflected (e.g., load reserve up x%, adjust explicitly in calculation)?

Virtually all respondents reported adjusting explicitly in the calculation.

Q170 - How are transfers between care settings reflected?

Figure 26 shows the approach reported in reflecting transfers between care settings for comprehensive plans (plans that cover care in both a facility and at home) and respondents that vary the continuance tables by care setting. Slightly more respondents reported making explicit or implicit adjustments for future transfers than in the 2021 survey.

FIGURE 26: FUTURE TRANSFERS METHODOLOGY

METHODOLOGY	2021 SURVEY	2024 SURVEY
TRANSFERS NOT REFLECTED	44%	35%
EXPLICIT ADJUSTMENT	38%	10%
IMPLICIT ADJUSTMENT	19%	55%

Responses: 16 in 2021, 20 in 2024

To demonstrate the care setting transfer issue, consider the following example. A carrier may offer home-care-only policies, as well as comprehensive policies. Some carriers hold an identical reserve if a policyholder goes on claim while receiving home care under the two different policy types. If the underlying continuance tables are based solely on home care experience, this methodology can potentially understate the liability on the comprehensive policy because the claimant will continue to be benefit-eligible even if transferred to a facility. The materiality of these transfers depends on how the underlying continuance curves are constructed.

The survey responses classified as “explicit” refer to companies that make an explicit adjustment with respect to transfers. As an example of an explicit adjustment for transfers of care, a company might adjust all comprehensive facility DLRs by X% and adjust all comprehensive non-facility DLRs by Y%.

The companies with “implicit adjustments” take an approach in which the underlying continuance tables are developed from comprehensive policies, based on starting care site. These companies assume that the transfers are then implicitly reflected in the DLR calculation because any historical transfer experience is reflected in the claim runoff assumed. This approach relies on a consistent mix of nursing home and home care claim experience over time.

Q171 - How is the incurred date defined (e.g., first date of service, first date after EP satisfied, other)?

Roughly half of respondents reported using the first date of service with the other half reporting using the first date after the EP is satisfied.

Q172 - What is the incurred but not reported (IBNR) approach used (e.g., loss ratio, lag triangle, percent of premium)?

Figure 27 indicates the approach reported by respondents with respect to their IBNR calculations. Among the wide variety of approaches used to calculate the IBNR, the completion method (or claim triangle approach) is the most common. Another commonly reported approach is to subtract the reported incurred loss ratio from the anticipated loss ratio times earned premium to estimate the amount of IBNR claims. A similar approach would be to subtract the reported incurred claims from the amount of expected claims. In Figure 27, the “Other” category includes a combination of the completion method and loss ratio approaches or high-level estimation. A few more respondents than in the 2021 survey reported using a completion method or loss ratio approach.

FIGURE 27: INCURRED BUT NOT REPORTED (IBNR) METHODOLOGY

METHODOLOGY	2021 SURVEY	2024 SURVEY
COMPLETION / LAG TRIANGLE	61%	55%
LOSS RATIO / % OF PREMIUM OR EXPECTED CLAIMS	11%	30%
OTHER	28%	15%

Responses: 18 in 2021, 20 in 2024

F. DLR ADJUSTMENTS

As the size of the claim reserve increases, more companies are refining the claim reserve calculation to address complex claim situations (besides open claims currently drawing benefits), as described in the questions below.

Q173 - Do you hold an explicit DLR / claim reserve or make an explicit adjustment for claimants before satisfying their elimination period?

Figure 28 shows that the most common approach for claims in the elimination period is to explicitly account for them in the disabled life reserve. Some companies reported holding a percentage of the DLR for claims in the elimination period. Another approach is to implicitly include them in the IBNR development.

FIGURE 28: CLAIMS DURING THE ELIMINATION PERIOD

APPROACH	2021 SURVEY	2024 SURVEY
EXPLICITLY ACCOUNTED FOR IN DLR	74%	70%
IMPLICITLY INCLUDED IN IBNR	26%	30%

Responses: 19 in 2021, 20 in 2024

Q174 - Do you hold an explicit DLR / claim reserve or make an explicit adjustment for pending claimants?

Most respondents reported not explicitly reserving for pending claims (a reversal since the 2021 survey), as shown in Figure 29. These claims are known to the company but are in the process of having their benefit eligibility verified. The most common adjustment approach reported was to include these claims with the known disabled life reserve, with some respondents reporting applying an adjustment factor to reflect the probability that the claim will be approved.

FIGURE 29: PENDING CLAIMS WAITING FOR APPROVAL

APPROACH	2021 SURVEY	2024 SURVEY
EXPLICITLY ACCOUNTED FOR IN DLR	63%	45%
IMPLICITLY INCLUDED IN IBNR	37%	55%

Responses: 19 in 2021, 20 in 2024

Q175 - Do you hold an explicit DLR / claim reserve or make an explicit adjustment for closed claimants that are expected to reopen?

Figure 30 shows that the most common approach for closed claims that may reopen is to reflect no adjustment. This is very similar to the 2021 survey results, when 74% of companies reported making no adjustment. Depending on the definition of a claim, some claims may close but reopen later as the same claim. For example, a claimant may recover and stop claiming benefits but relapse a couple months later and need to resume benefits. In that situation, the previously closed claim will reopen. Most of the respondents making an explicit adjustment indicated that they make separate calculations to hold reserves for those types of claims. A few indicated that those types of claims are covered in the general IBNR.

FIGURE 30: CLOSED CLAIMS THAT MAY REOPEN

APPROACH	2021 SURVEY	2024 SURVEY
NOT ADJUSTED	74%	75%
ADJUSTMENT MADE	26%	25%

Responses: 19 in 2021, 20 in 2024

Q176 - Do you hold an explicit DLR / claim reserve or make an explicit adjustment for claims in “final payment” status?

Finally, Figure 31 shows that about half of the respondents do not adjust for claims that are known to be in a final payment status. Note, this percentage is less than in the 2021 survey. Sometimes it is known that an open claim is about to be closed but there is only one payment left (such as in the case of death, but the final bill is outstanding). Half of the respondents reported adjusting for those claims, thereby reducing the claim reserve.

FIGURE 31: CLAIMS IN FINAL PAYMENT STATUS

APPROACH	2021 SURVEY	2024 SURVEY
NOT ADJUSTED	53%	65%
ADJUSTMENT MADE	47%	35%

Responses: 19 in 2021, 20 in 2024

G. DLR ADEQUACY

Q177 - What method is used to test the DLR / claim reserve?

Almost all respondents indicated that they perform reserve adequacy testing on their claim reserves, such as a claim retrospective reserve analysis, (DLR + accrued claim liability at beginning) - PV of benefits paid to cohort during observation period - PV (DLR + accrued claim liability on cohort at end of observation period.). This was also referred to as a Schedule H test, runoff test or NAIC Experience Form 3 test.

Q178 - How often is the DLR / claim reserve tested?

Seventy-nine percent of the 19 respondents who answered this question indicated that these tests were performed annually while others were more frequent. These results were similar to those in the 2021 survey.

H. PROVISION FOR ADVERSE DEVIATION

Q179, Q180, Q181 - Please provide the PAD used for the following: Claim termination rates, utilization, other assumptions.

The results of this year’s survey indicated a similar percentage of respondents that include explicit PADs in the DLR calculation. Of the eight respondents that reported holding explicit PADs:

- Three companies added explicit PADs of 5% to 10% in their claim termination rates.
- No companies added explicit PADs in their utilization assumptions.
- Five companies added an explicit PAD of 6% to 10% to total claim reserves.

Section 3: Asset assumptions

This section describes the underlying assets and asset strategies employed to support the reserves. In the 2024 survey, we included questions related to asset allocation, actual portfolio yield, and current pricing interest rate relating to each company's LTC product line. In addition, we asked about any investment hedging strategies that may be used, as well as compliance with Actuarial Guideline 53.

A. ASSET ALLOCATION

B. ACTUARIAL GUIDELINE 53

C. ASSET STRATEGY

A. ASSET ALLOCATION

Q182, Q183, Q184, Q185, Q186, Q187, Q188, Q189, Q190, Q191, Q192, Q193, Q194, Q195, Q196, Q197, Q198 - Note, the percentage of assets in each asset class supporting your LTC portfolio.

Figure 32 summarizes the average reported asset allocation by different asset classes and compares the responses from this year's survey with the responses from the 2021 survey. The average asset allocation shown is based on taking a simple average of the responses.

The asset allocation varied considerably by respondent. Some respondents reported holding large portions of their assets in Treasuries and AAA and AA bonds, while other companies hold greater proportions of riskier assets.

FIGURE 32: ASSET ALLOCATION

ASSET CLASS	2021 SURVEY	2024 SURVEY	CHANGE
TREASURIES (Q182)	6.0%	3.5%	-2.5%
AAA BONDS (Q184)	8.2%	3.2%	-5.0%
AA BONDS (Q185)	11.2%	8.7%	-2.5%
A BONDS (Q186)	20.7%	22.9%	2.2%
BBB BONDS (Q187)	22.4%	27.1%	4.7%
BB BONDS AND LOWER (Q188)	3.4%	3.4%	0.0%
PREFERRED STOCK (Q189)	0.6%	0.2%	-0.4%
PUBLIC EQUITY (Q190)	2.8%	3.1%	0.2%
REAL ESTATE (Q191)	2.4%	1.8%	-0.6%
COMMERCIAL MORTGAGES (Q192)	5.9%	6.7%	0.8%
RESIDENTIAL MORTGAGES (Q193)	0.5%	0.8%	0.3%
PRIVATE EQUITY (Q194)	2.9%	5.4%	2.5%
COMMERCIAL REAL ESTATE (Q195)	1.5%	1.4%	-0.1%
HEDGE FUNDS (Q196)	0.4%	0.2%	-0.3%
SECURITIES LENDING (Q197)	0.3%	0.0%	-0.3%
OTHER (Q198)	10.7%	11.6%	0.9%

Responses: 21 in 2021, 20 in 2024

The "Other" category, as commented on by a few respondents, contains assets, such as cash, short-term bonds, exchange-traded funds (ETFs), fixed-income equivalents, emerging-markets debt (EMD), commodities, municipal bonds, Ginnie Mae product loans (GMPLs), asset-backed securities (ABSs), collateralized loan obligations (CLOs), corporate-owned life insurance (COLI), and private activity bonds (PABs).

When determining asset allocation for LTC products, it is important to consider matching asset and liability risks. For example, the prepayment risk in some callable bonds and mortgages should be carefully considered for LTC. When interest rates drop, callable bonds and mortgages are more likely to be called, reducing the portfolio yield. As a result, unlike other product lines, for LTC there is no offsetting adjustment on the liability side for changes in asset yield (such as changing the crediting rate), thereby making these assets potentially riskier for LTC than for other products.

In addition, companies should be aware of the potential risk-based capital implications with respect to asset allocation selection. For example, the National Association of Insurance Commissioners (NAIC) requires more risk-based capital to be held on more risky assets. Therefore, the additional yield from those riskier assets is reduced by the additional cost of capital for holding those assets, as well as the higher default risk.

B. ACTUARIAL GUIDELINE 53

Q200 - Is your company subject to AG53 filing requirements? If no, has your company implemented any measures to avoid the need for AG53 filing?

Seventy-five percent of respondents reported being subject to AG53 filing requirements. Those who reported not being subject to these requirements report reducing or not modeling specific assets.

Q201 - Has your company taken any steps to lessen the impact of AG53 requirements, such as altering asset selection, investment strategies, default assumptions, etc.?

Most respondents indicated that they do not take any steps to lessen this impact. Those who reported taking steps did not elaborate on the steps they pursued.

Q202 - Have any investment decisions been altered by AG53 within your company?

Nearly all respondents reported not altering investment decisions.

C. ASSET STRATEGY

Q199 - Please provide your current portfolio yield.

Figure 33 shows the current portfolio yields reported by the respondents. The average yield was 4.8% and ranged between 3.5% and 8.1%. Overall, the average yield declined slightly from 4.9% in the 2021 survey. Under LDTI, insurers are required to discount their liabilities using A-rated investment yields. With liabilities sensitive only to movements in A-rated yields, there may be a disconnect with the movements in asset portfolio yields that are typically distributed across various asset qualities.

FIGURE 33: CURRENT PORTFOLIO YIELD

PORTFOLIO YIELD	2021 SURVEY	2024 SURVEY
LESS THAN OR EQUAL TO 4.50%	29%	30%
4.51% TO 5.00%	43%	25%
5.01% TO 5.50%	7%	15%
5.51% TO 6.00%	14%	20%
GREATER THAN 6.00%	7%	10%
AVERAGE PORTFOLIO YIELD	4.9%	4.8%

Respondents: 14 in 2021, 20 in 2024

Q203 - Please provide your asset duration.

Compared with the 2021 survey, the average duration decreased from 12.1 years in the 2021 survey to 10.3 years in the 2024 survey. See Figure 34 for a summary of results.

FIGURE 34: ASSET DURATION

ASSET DURATION	2021 SURVEY	2024 SURVEY
LESS THAN OR EQUAL TO 7 YEARS	0.0%	10.5%
7.01 TO 10 YEARS	30.8%	47.4%
10.01 TO 13 YEARS	38.5%	26.3%
13.01 TO 16 YEARS	23.1%	5.3%
GREATER THAN 16 YEARS	7.7%	10.5%
AVERAGE DURATION	12.1 YEARS	10.3 YEARS

Respondents: 13 in 2021, 19 in 2024

Q204 - Please provide the most recent pricing interest rate assumption.

Figure 35 shows the most recent pricing interest rate. The average response was 4.3% and ranged from 3.0% to 6.0%. Compared with the 2021 survey, the average pricing interest rate decreased from 4.5%. However, please note that the 2021 survey was limited only to companies currently selling LTC insurance.

FIGURE 35: MOST RECENT PRICING INTEREST RATE ASSUMPTION

ASSUMPTION	2021 SURVEY	2024 SURVEY
LESS THAN OR EQUAL TO 4.00%	27%	56%
4.01% TO 4.50%	27%	0%
4.51% TO 5.00%	36%	22%
5.01% TO 5.50%	0%	0%
GREATER THAN 5.50%	9%	22%

Responses: 11 in 2021, 9 in 2024 survey

Q205 - Does your company use a hedging strategy?

The survey also asked about the use of any interest rate hedging strategies, either internally between various product lines or with external parties. Figure 36 shows the responses. Most respondents (60%) reported not utilizing any form of interest rate hedging. Four respondents reported using an external hedge, such as an interest rate swap. Two respondents reported using an internal hedge between different product lines. This is generally consistent with the 2021 survey. As may be expected, companies that employ hedging strategies tend to have larger blocks of business where they achieved the critical mass needed for efficiently establishing an external hedging approach.

FIGURE 36: INTEREST RATE HEDGING APPROACH

APPROACH	2021 SURVEY	2024 SURVEY
DO NOT HEDGE	71%	58%
INTERNAL AND EXTERNAL HEDGE	6%	0%
EXTERNAL HEDGE	24%	42%

Responses: 17 in 2021, 19 in 2024

Q206 - Has your company changed any investment decisions resulting from the COVID-19 pandemic?

Of the 14 companies that responded, a couple indicated a shift away from Treasuries.

Appendix A: List of participating companies

- Ability Insurance Company
- Aetna Life Insurance Company
- CNA
- Employers Reassurance / Union Fidelity
- Genworth
- Knights of Columbus
- MassMutual
- MedAmerica Insurance Company
- Mutual of Omaha
- New York Life
- Northwestern Mutual
- Physicians Mutual Insurance Company
- Prudential Financial
- Riversource Life Insurance Company
- State Farm Mutual Automobile Insurance Co.
- Thrivent Financial
- Transamerica
- TruStage

Note: Two additional companies opted to remain anonymous, and one company provided limited information.

Appendix B: Active life reserves

This appendix documents the valuation assumptions and methodologies used to calculate the active life reserves (ALR; may also be referred to as contract or policy reserves) balance. Active life reserves (ALR) reflect the liability for future contingent claim events and are typically the largest reserve held by LTC insurance companies.

We opted to cover the section on ALR valuation as an appendix because many of these assumptions have prescribed elements. Topics covered in this section relating to active life reserves include:

A. VALUATION SYSTEM	D. INTEREST RATE ASSUMPTIONS	G. OTHER ALR CALCULATION SPECIFICATIONS
B. MORTALITY ASSUMPTIONS	E. MORBIDITY ASSUMPTIONS	H. ALR ADJUSTMENTS
C. LAPSE RATE ASSUMPTIONS	F. LOSS ADJUSTMENT EXPENSE	I. PROVISION FOR ADVERSE DEVIATION

A. VALUATION SYSTEM

Q9 - What valuation system is used for the active life / contract reserves?

Figure B-1 shows the number of companies using a commercial valuation system for their active life reserves versus those that have “home-grown” systems. In general, the results are consistent with prior surveys.

FIGURE B-1: ALR SYSTEM

SYSTEM	2021 SURVEY	2024 SURVEY
HOME-GROWN	20%	25%
COMMERCIAL	80%	75%

Responses: 20 in 2021, 20 in 2024

B. MORTALITY ASSUMPTIONS

Q127 - Are mortality assumptions applied in aggregate (total lives) or split between active and disabled lives?

In this year’s survey, we asked companies for more information about how the mortality rates are applied. Sixty-five percent of companies indicated that they apply mortality rates to total lives, as opposed to splitting between active and disabled lives.

Q128 - Please provide the underlying table used (include any factor used against table and ultimate level).

As shown in Figure B-2, the 1994 Group Annuity Mortality (GAM) table is the most common valuation assumption used throughout the industry for calculating active life reserves. This may be because the 1994 GAM table is the referenced table for LTC insurance in the current version of the NAIC Health Insurance Reserves Model Regulation. The current prescribed table is presently under review by the NAIC, which may be proposing a new prescribed mortality and lapse assumption soon.

The survey indicates 52% of responding companies use 1994 GAM for statutory active life reserves.

FIGURE B-2: VALUATION MORTALITY TABLE USED

MORTALITY TABLE USED	2021 SURVEY	2024 SURVEY
1983 GAM	11%	14%
1994 GAM	44%	52%
2000 ANNUITY	0%	14%
2012 IAM	28%	19%
OTHER	17%	0%

Responses: 18 in 2021, 21 in 2024

Q129 - Are mortality selection factors used? If yes, please note in the comments what is the pattern.

Thirty-seven percent of respondents reported using mortality selection factors in statutory valuation.

Q130 - Is any mortality improvement used (past and / or future)?

Roughly 20% of respondents reported including future total life mortality improvement in their valuation assumptions.

C. LAPSE RATE ASSUMPTIONS

Q131 - Are lapse rates applied to total lives or active lives?

Similar to the mortality assumption, 65% of companies indicated they apply lapse rates to total lives, as opposed to active lives only.

Q132 - What do lapse rates vary by (e.g., gender, marital status, inflation type, etc.)?

Respondents indicated they vary their valuation lapse assumptions by issue age, attained age, gender, benefit period, inflation, marital status, premium payment option, and product.

Q133 - What is the ultimate lapse rate for a single male, issue age 55, lifetime BP, with no inflation protection?

Q134 - What is the ultimate lapse rate for married female, issue age 65, five-year BP, with 5% compound inflation?

To consistently compare lapse assumptions, we requested the ultimate lapse rate for the two different plans, as described in the questions immediately above. For the purposes of the figures below, Q133 describes Plan 1 and Q134 describes Plan 2.

In this year's survey, the median ultimate lapse rate assumed for statutory reserving is 0.8% for Plan 1 and 0.7% for Plan 2. The ultimate lapse rate for Plan 1 is slightly down from the rate in the 2021 survey while the ultimate lapse rate for Plan 2 is in line with the 2021 survey rate.

FIGURE B-3: ULTIMATE LAPSE RATES

ULTIMATE LAPSE RATES	2021 SURVEY		2024 SURVEY	
	PLAN 1	PLAN 2	PLAN 1	PLAN 2
0% TO 0.5%	44%	50%	31%	47%
0.51% TO 1.0%	33%	33%	38%	12%
1.01% TO 1.5%	0%	0%	13%	6%
1.51% TO 2.0%	17%	11%	13%	6%
2.01% +	6%	6%	6%	29%

Responses: 18 in 2021, 16 in 2024

D. INTEREST RATE ASSUMPTIONS

Q135 - What interest rate is used for discounting?

Most respondents reported using the prescribed valuation interest rate (3.5% for recent years until 2020, 3.0% in 2024).

E. MORBIDITY ASSUMPTIONS

As there is no standardized morbidity table for LTC, companies can set their own morbidity assumptions when reserving. The magnitude and slope of the age-cost curve can have a dramatic impact on the durational development of LTC active life reserves.

Q136 - Please provide the source used for morbidity (e.g., own experience, consultant data, reinsurer data, etc.)

Respondents were split on the data source used for morbidity assumptions, as summarized in Figure B-4. Note, the "Own Company Data" category in the figure implies that the assumptions were developed solely from company data and not blended with a second source.

FIGURE B-4: MORBIDITY SOURCES

SOURCE	2021 SURVEY	2024 SURVEY
OWN COMPANY DATA	22%	47%
CONSULTANT DATA	61%	47%
OWN COMPANY + CONSULTANT DATA	N/A	5%
SOA DATA	17%	0%

Responses: 18 in 2021, 19 in 2024

Q137, Q138 - What past morbidity improvement is assumed (from time period of experience data to current date)? What future morbidity improvement is assumed?

The NAIC Health Insurance Reserves Model Regulation prohibits the use of morbidity improvement in the calculation of statutory active life reserves. However, four companies indicated that they assumed future morbidity improvement for GAAP reserves. These results are generally consistent with prior years. It should be noted that, while companies do not assume morbidity improvement when calculating their statutory reserves, some do include it when testing their reserves (see Section 1 of this report for details).

F. LOSS ADJUSTMENT EXPENSE

Q139 - Please provide the loss adjustment expense (LAE) percentage used.

Figure B-5 includes a summary of reported LAE loads as a percentage of the active life reserves (note that the percentage of ALR is generally equivalent to percentage of incurred claims).

FIGURE B-5: LOSS ADJUSTMENT EXPENSE (LAE)

LAE AS % OF ACTIVE LIFE RESERVES (ALR)	2021 SURVEY	2024 SURVEY
0%	63%	53%
0.1% - 2.5%	11%	27%
2.6% - 5.0%	26%	20%

Responses: 19 in 2021, 15 in 2024

Consistent with the surveys from previous years, most respondents exclude explicit provisions for LAE in their statutory active life reserve bases.

Because of GAAP reserving requirements and because GAAP reserves are typically developed with best estimate assumptions and modest PADs, most companies include more explicit LAE assumptions in the GAAP active life reserve development. GAAP LAE is typically reflected via a load to the benefit reserves or a separate expense reserve. In general, the level of GAAP LAE is consistent with prior surveys.

G. OTHER ALR CALCULATION SPECIFICATIONS

Q140 - Please provide the waiver-of-premium (WOP) method used (e.g., included in both premium and claims or excluded).

The most common approach, reported by approximately 75% of respondents, is to increase benefit payments in the reserve calculation to reflect the cost associated with the waiver (waiver of premium is included in both premium and claims). The remaining respondents reported assuming that only active policyholders (versus both active and disabled policyholders) pay premiums (i.e., waiver of premium is excluded from both premium and claims).

Q141 - For claimants, are both an ALR (contract reserve) and DLR (claim reserve) held?

Consistent with prior survey responses, almost all respondents reported holding active life reserves for those on claim.

Q116 - Have valuation assumptions been unlocked for statutory or GAAP reserves for any business segments? If yes, what approach is used to unlock?

Seventy percent of companies indicated assumptions had not been unlocked.

Q142, Q143 - How are riders modeled for each of the following? Non-forfeiture, shared care.

Modeling for some riders for LTC can be quite complex. For the nonforfeiture rider, approximately half of respondents said they follow a simple approach of increasing the reserve by applying an adjustment to expected claim costs. The remainder of respondents indicated that they followed a complex calculation of the benefits.

Slightly more than half of respondents said they use a simple approach for the shared care rider.

Q144 - Are reserves calculated on a seriatim basis or do they follow a model cell approach?

All respondents reported calculating reserves on a seriatim basis.

Q145 - Do you change reserves after implementing a rate increase?

Ninety percent of respondents reported not changing reserves after implementing a rate increase.

Q146 - How are reserves changed after benefit reductions?

Most respondents indicated that they reflect the new benefit characteristics as if they had always been in force.

Q47 - Do you hold an unearned premium reserve (UEPR) on a gross premium or net valuation premium basis?

The NAIC Health Insurance Reserves Model Regulation states that the sum of the unearned premium reserve and active life reserve cannot be less than the gross unearned premium reserve. Therefore, after the first few policy durations, companies can hold the net unearned premium reserve. Figure B-6 summarizes the responses for statutory reserving.

FIGURE B-6: UNEARNED PREMIUM RESERVE METHODOLOGY

METHODOLOGY	2021 SURVEY	2024 SURVEY
GROSS	24%	53%
NET	53%	42%
NO UEPR	24%	5%

Responses: 17 in 2021, 19 in 2024

H. PROVISION FOR ADVERSE DEVIATION

Q147, Q148, Q149, Q150, Q151, Q152, Q153, Q154 - Please provide the PAD used for the following: Active life mortality, lapse, incidence, claim termination rates, disabled life mortality, recovery, utilization, other assumptions.

We observed that the use of morbidity PADs varies widely, with many respondents not including any explicit PAD. Some respondents reported applying a flat percentage increase to total incurred claims while others apply separate PADs to incidence, claim termination rates, and utilization. A few respondents indicated that they include a PAD on mortality and lapse. Given how the use of PADs varies widely, it is not feasible to provide a numerical representation of how much margin is included in the assumptions. It should also be noted that there may be additional margins in the reserves due to the prescribed valuation interest rates.

Appendix C: Tables with companies responding in both 2021 and 2024

This appendix contains all figures from the report but only for companies that participated in both the 2021 and 2024 survey.

FIGURE C-1: LATEST YEAR OF NEW POLICIES ISSUED

YEAR BAND	2021 SURVEY	2024 SURVEY
PRIOR TO 2010	15%	15%
2010 TO 2014	15%	15%
2015 TO 2019	23%	23%
2020 TO 2024	46%	46%

Responses: 13

FIGURE C-2: TESTING APPROACH

APPROACH	2021 SURVEY	2024 SURVEY
CASH FLOW TESTING	54%	54%
GROSS PREMIUM VALUATION	23%	31%
BOTH CFT AND GPV	23%	15%

Responses: 13

FIGURE C-3: ALR ADEQUACY BY REINSURANCE BASIS; NEW QUESTION FOR 2024; NO TABLE

FIGURE C-4: AGGREGATION OF ADEQUACY TESTING RESULTS

METHOD	2021 SURVEY	2024 SURVEY
ACROSS THE COMPANY	62%	54%
BY LINE OF BUSINESS	38%	46%
COMBINING HEALTH LINES OF BUSINESS	0%	0%

Responses: 13

FIGURE C-5: PROJECTION SYSTEM

SYSTEM	2021 SURVEY	2024 SURVEY
MOODY'S AXIS	23%	31%
FIS PROPHET	8%	15%
MG-ALFA	31%	31%
HOME-GROWN	23%	15%
POLYSYSTEMS	15%	8%

Responses: 13

FIGURE C-6: FREQUENCY OF MONITORING ASSUMPTIONS

FREQUENCY	2021 SURVEY	2024 SURVEY
MONTHLY	31%	23%
QUARTERLY	8%	8%
ANNUALLY	62%	69%

Responses: 13

FIGURE C-7: ASSUMPTION CHANGES

ASSUMPTION	2021 SURVEY			2024 SURVEY		
	INCREASED	NO CHANGE	DECREASED	INCREASED	NO CHANGE	DECREASED
ACTIVE LIFE MORTALITY	N/A	N/A	N/A	29%	29%	43%
LAPSE	22%	33%	44%	22%	33%	44%
INCIDENCE	33%	17%	50%	29%	29%	43%
CLAIM TERMINATION RATES	11%	56%	33%	23%	31%	46%
DISABLED LIFE MORTALITY	N/A	N/A	N/A	57%	14%	29%
RECOVERY	N/A	N/A	N/A	43%	29%	29%
UTILIZATION	13%	50%	38%	50%	17%	33%
INCIDENCE IMPROVEMENT	N/A	N/A	N/A	0%	100%	0%
ACTIVE LIFE MORT IMPROVEMENT	N/A	N/A	N/A	0%	60%	40%
MORBIDITY IMPROVEMENT	N/A	N/A	N/A	0%	75%	25%
COST OF CARE	N/A	N/A	N/A	71%	29%	0%
TOTAL MORTALITY	29%	29%	43%	0%	80%	20%

Responses: 9

FIGURE C-8: MORTALITY EXPERIENCE STUDY PERIOD; NEW QUESTION FOR 2024; NO TABLE**FIGURE C-9: BASIS FOR TOTAL LIFE MORTALITY RATES**

MORTALITY TABLE	2021 SURVEY	2024 SURVEY
2000 ANNUITY	40%	60%
INSURED EXPERIENCE	60%	40%

Responses: 5

FIGURE C-10: BASIS FOR ACTIVE LIFE MORTALITY RATES

MORTALITY TABLE	2021 SURVEY	2024 SURVEY
2015 VBT	0%	11%
2000 ANNUITY	0%	11%
2012 IAM	67%	56%
INSURED EXPERIENCE	22%	22%
OTHER	11%	0%

Responses: 9

FIGURE C-11: ULTIMATE LAPSE RATES APPLIED TO TOTAL LIVES

ULTIMATE LAPSE RATES	2021 SURVEY		2024 SURVEY	
	PLAN 1	PLAN 2	PLAN 1	PLAN 2
0% TO 0.5%	n/a	n/a	n/a	n/a
0.51% TO 1.0%	n/a	n/a	n/a	n/a
1.01% TO 1.5%	n/a	n/a	n/a	n/a

Responses: less than 5; therefore, we censor the results

FIGURE C-12: ULTIMATE LAPSE RATES APPLIED TO ACTIVE LIVES

ULTIMATE LAPSE RATES	2021 SURVEY		2024 SURVEY	
	PLAN 1	PLAN 2	PLAN 1	PLAN 2
0% TO 0.5%	17%	0%	17%	33%
0.51% TO 1.0%	67%	100%	83%	67%
1.01% TO 1.5%	0%	0%	0%	0%
1.51% TO 2.0%	17%	0%	0%	0%

Responses: 6

FIGURE C-13: MORBIDITY AND / OR INCIDENCE RATE DATA SOURCE

SOURCE	2021 SURVEY	2024 SURVEY
OWN COMPANY DATA	38%	38%
CONSULTANT DATA	62%	15%
OWN COMPANY + CONSULTANT DATA	N/A	46%

Responses: 13

FIGURE C-14: INCIDENCE EXPERIENCE STUDY PERIOD; NEW QUESTION FOR 2024; NO TABLE**FIGURE C-15: CONTINUANCE ASSUMPTION SITUS**

SOURCE	2021 SURVEY	2024 SURVEY
VARY BY CARE SETTING – FIRST SITUS	69%	62%
VARY BY CARE SETTING – CURRENT SITUS	15%	31%
AGGREGATE	15%	8%

Responses: 13

FIGURE C-16: CONTINUANCE EXPERIENCE STUDY PERIOD; NEW QUESTION FOR 2024; NO TABLE

FIGURE C-17: PERCENT RESPONDING “YES” TO QUESTIONS REGARDING FUTURE RATE INCREASES

QUESTION: DO YOU ASSUME FUTURE RATE INCREASES IN ALR ADEQUACY TESTING?	2021 SURVEY	2024 SURVEY
APPROVED BUT NOT IMPLEMENTED	85%	85%
FILED BUT NOT APPROVED	58%	58%
NEXT ROUND OF FILINGS	64%	58%
FUTURE ROUNDS	64%	50%

Responses: 13

FIGURE C-18: INTEREST RATE ASSUMPTIONS

SOURCE	2021 SURVEY	2024 SURVEY
2.5% TO 4.0%	33%	33%
4.0% TO 5.0%	33%	17%
5.0% TO 6.0%	33%	50%
AVERAGE INTEREST RATE	4.2%	4.7%

Responses: 6

FIGURE C-19: PROVISION FOR ADVERSE DEVIATION

DATA SOURCE	2021 SURVEY RESULTS			2024 SURVEY RESULTS		
	NO PAD	0-2%	>2%	NO PAD	0-2%	>2%
MORTALITY	58%	17%	25%	50%	25%	25%
LAPSE	58%	25%	17%	55%	27%	18%
INCIDENCE	50%	33%	17%	50%	25%	25%
CLAIM TERMINATION RATES	67%	17%	17%	67%	11%	22%
UTILIZATION	67%	17%	17%	50%	20%	30%

Responses: 13

FIGURE C-20: DLR SYSTEM

SYSTEM	2021 SURVEY	2024 SURVEY
HOME-GROWN	31%	38%
COMMERCIAL	69%	62%

Responses: 13

FIGURE C-21: CONTINUANCE TABLE DATA SOURCE

DATA SOURCE	2021 SURVEY	2024 SURVEY
OWN COMPANY DATA	38%	46%
CONSULTANT DATA	62%	31%
OWN COMPANY + CONSULTANT	N/A	15%

Responses: 13

FIGURE C-22: CONTINUANCE TABLE VARIABLES

VARIABLE	2021 SURVEY	2024 SURVEY
AGE	69%	59%
GENDER	92%	65%
CARE SETTING	85%	85%
BENEFIT PERIOD	54%	59%
DIAGNOSIS	23%	18%
OTHER (INCLUDING EP, CLAIM DURATION, ETC.)	46%	76%

Responses: 13

FIGURE C-23: LAE AS A PERCENT OF DLR

PERCENT RANGE	2021 SURVEY	2024 SURVEY
0%	25%	17%
0.1% TO 2.5%	25%	42%
2.6% TO 5.0%	42%	42%
> 5.0%	8%	0%
AVERAGE LAE %	2.7%	2.8%

Responses: 12

FIGURE C-24: DLR UTILIZATION METHODOLOGY

METHODOLOGY	2021 SURVEY	2024 SURVEY
NOT REFLECTED	8%	0%
SERIATIM	33%	42%
GROUPED	N/A	50%
AGGREGATE	58%	8%

Responses: 12

FIGURE C-25: DLR WAIVER OF PREMIUM METHODOLOGY

METHODOLOGY	2021 SURVEY	2024 SURVEY
WAIVER REFLECTED IN DLR	69%	69%
WAIVER NOT REFLECTED IN DLR	31%	31%

Responses: 13

FIGURE C-26: FUTURE TRANSFERS METHODOLOGY

METHODOLOGY	2021 SURVEY	2024 SURVEY
TRANSFERS NOT REFLECTED	55%	27%
EXPLICIT ADJUSTMENT	18%	18%
IMPLICIT ADJUSTMENT	27%	55%

Responses: 11

FIGURE C-27: INCURRED BUT NOT REPORTED (IBNR) METHODOLOGY

METHODOLOGY	2021 SURVEY	2024 SURVEY
COMPLETION / LAG TRIANGLE	46%	62%
LOSS RATIO / % OF PREMIUM OR EXPECTED CLAIMS	8%	15%
OTHER	46%	23%

Responses: 13

FIGURE C-28: CLAIMS DURING THE ELIMINATION PERIOD

APPROACH	2021 SURVEY	2024 SURVEY
EXPLICITLY ACCOUNTED FOR IN DLR	77%	69%
IMPLICITLY INCLUDED IN IBNR	23%	31%

Responses: 13

FIGURE C-29: PENDING CLAIMS WAITING FOR APPROVAL

APPROACH	2021 SURVEY	2024 SURVEY
EXPLICITLY ACCOUNTED FOR IN DLR	62%	46%
IMPLICITLY INCLUDED IN IBNR	38%	54%

Responses: 13

FIGURE C-30: CLOSED CLAIMS THAT MAY REOPEN

APPROACH	2021 SURVEY	2024 SURVEY
NOT REFLECTED	23%	69%
SOME ADJUSTMENT MADE	77%	31%

Responses: 13

FIGURE C-31: CLAIMS IN FINAL PAYMENT STATUS

APPROACH	2021 SURVEY	2024 SURVEY
NOT REFLECTED	46%	54%
SOME ADJUSTMENT MADE	54%	46%

Responses: 13

FIGURE C-32: ASSET ALLOCATION

ASSET CLASS	2021 SURVEY	2024 SURVEY	CHANGE
TREASURIES	3.9%	2.6%	-1.2%
AAA BONDS	10.1%	4.6%	-5.4%
AA BONDS	10.8%	8.0%	-2.9%
A BONDS	18.3%	22.2%	3.9%
BBB BONDS	22.8%	26.7%	3.9%
BB BONDS AND LOWER	4.2%	3.9%	-0.3%
PREFERRED STOCK	0.4%	0.4%	-0.1%

ASSET CLASS	2021 SURVEY	2024 SURVEY	CHANGE
PUBLIC EQUITY	4.1%	4.1%	0.0%
REAL ESTATE	2.9%	3.1%	0.2%
COMMERCIAL MORTGAGES	6.3%	6.6%	0.3%
RESIDENTIAL MORTGAGES	0.5%	1.1%	0.6%
PRIVATE EQUITY	2.4%	4.9%	2.5%
COMMERCIAL REAL ESTATE	1.5%	2.4%	0.9%
HEDGE FUNDS	0.4%	0.3%	-0.2%
SECURITIES LENDING	0.0%	0.0%	0.0%
OTHER	11.5%	9.3%	-2.2%

Responses: 12

FIGURE C-33: CURRENT PORTFOLIO YIELD

PORTFOLIO YIELD	2021 SURVEY	2024 SURVEY
LESS THAN OR EQUAL TO 4.50%	22%	33%
4.51% TO 5.00%	56%	33%
5.01% TO 5.50%	11%	11%
5.51% TO 6.00%	0%	22%
GREATER THAN 6.00%	11%	0%

Responses: 9

FIGURE C-34: ASSET DURATION

ASSET DURATION	2021 SURVEY	2024 SURVEY
LESS THAN OR EQUAL TO 7 YEARS	0.0%	10.0%
7.01 TO 10 YEARS	30.0%	60.0%
10.01 TO 13 YEARS	40.0%	10.0%
13.01 TO 16 YEARS	20.0%	10.0%
GREATER THAN 16 YEARS	10.0%	10.0%

Responses: 9

FIGURE C-35: MOST RECENT PRICING INTEREST RATE ASSUMPTION

ASSUMPTION	2021 SURVEY	2024 SURVEY
LESS THAN OR EQUAL TO 4.00%	50%	67%
4.01% TO 4.50%	17%	0%
4.51% TO 5.00%	17%	17%
5.01% TO 5.50%	0%	0%
GREATER THAN 5.50%	17%	17%

Responses: 6

FIGURE C-36: INTEREST RATE HEDGING APPROACH

APPROACH	2021 SURVEY	2024 SURVEY
DO NOT HEDGE	67%	58%
INTERNAL AND EXTERNAL HEDGE	0%	0%
EXTERNAL HEDGE	33%	42%

Responses: 12

Appendix D: 2024 valuation survey questions

SECTION 1: GENERAL INFORMATION

Q1. Name of company

Q2. Can we list your company as having participated in this survey?

Respondent contact information

Q3. Name

Q4. Title

Q5. Email

Q6. Phone number

Q7. Is the company currently selling new business?

Q8. What is the latest year of new policies (base policies, not future purchase options) issued?

Modeling (used for projections and / or reserve testing)

Q9. What valuation system is used for the active life / contract reserves?

Q10. What valuation system is used for the disabled life / claim reserves?

Q11. What projection system is used for gross premium valuation, asset adequacy, and / or planning?

Q12. Do you perform stochastic testing on your model(s)?

Q13. Does the model use a claim cost (please specify active or total lives) or first principles (e.g., separate incidence and continuance) basis?

SECTION 2: CURRENT RESERVE TESTING

Current assumption monitoring and development (for persistency and morbidity assumptions)

Q14. How frequently are the assumptions monitored (e.g., monthly, quarterly, annually)?

Q15. How often are the current assumptions changed if necessary?

Q16. How have the following assumptions changed in the last three years?

- Q17. Active life mortality
- Q18. Lapse
- Q19. Incidence
- Q20. Claim termination rates
 - Q21. Disabled life mortality
 - Q22. Recovery
- Q23. Utilization
- Q24. Incidence improvement
- Q25. Active life mortality improvement
- Q26. Morbidity improvement
- Q27. Cost of care
- Q27b. Other assumptions (please describe in comments)

COVID-19 pandemic

Q28. How has the COVID-19 pandemic affected your assumption setting process?

Q29. Describe any short-term or long-term adjustments to baseline assumptions.

Predictive modeling

Is predictive modeling used to develop any of the following assumptions? If yes, please provide a brief description of what type of predictive modeling approaches are used for in the comments.

Q30. Active life mortality

Q31. Lapse

Q32. Incidence

Q33. Claim termination rates

- Q34. Disabled life mortality
- Q35. Recovery

Q34. Utilization

Q35. Incidence improvement

Q36. Active life mortality improvement

Q36. Morbidity improvement

Q36. Cost of care

Q37. Other assumptions (please describe in comments)

ALR adequacy testing (please explain in the comments if testing varies between NY and non-NY business)

Q38. What approach is used (e.g., gross premium valuation, cash flow testing, etc.)?

Q39. Do you test ALR adequacy on both a gross and net of reinsurance basis?

Q40. Do you hold additional reserves on each reinsurance basis (gross, ceded, net) or just on a net basis?

Q41. Is a premium deficiency reserves (PDR) or asset adequacy reserve currently held?

- Q42. If so, what approach was used to strengthen reserves (e.g., PDR, assumption change)?

Q43. What approach is used to aggregate reserve testing results (e.g., by line of business or across the company)?

Q44. In cash flow testing, how are interim years with deficiencies handled?

Q45. Is an interest maintenance reserve (IMR) utilized in cash flow testing?

Q46. Is an asset valuation reserve (AVR) utilized in cash flow testing?

Q47. Do you hold an unearned premium reserve (UEPR) on a gross premium or net valuation premium basis?

AG 51

Q48. How has the company changed reserve adequacy testing as a result of AG 51?

Q49. Please provide your AG 51 sample cells on the next sheet.

Note: when publishing our report, we will provide a range of results so as to maintain anonymity.

Long-duration targeted improvements (LDTI) for GAAP reserving

Q50. If you do not have a first principles model, have the requirements of LDTI / ASU 2018-12 to use a reserving approach which identifies the expected timing of cash-flows for all policies accelerated the need in your organization to develop first principles models?

Q51. Please summarize the key steps of the approach you intend to use to update the net premium ratio for actual experience and assumption updates.

Q52. Overall, in what range do you expect the solved-for net premium ratios to fall?

If you intend to use a reserving approach which combines the ALR and DLR, please describe how you intend to determine the locked-in discount rate at transition with respect to the following.

- Q53. Blending
- Q54. Level equivalent

Q55. What primary source(s) of information do you intend to use for the determination of the current discount rate?

Q56. Do you intend to report the ALR and DLR separately on the balance sheet?

Q57. Do you intend to show the ALR and DLR separately in the required disclosures?

Mortality assumptions

Q58. Do you track deaths in your data?

- Q59. If yes, what sources do you use to track deaths?
- Q60. Have you observed underreporting?
- Q61. What years are you including in the experience study?

Q62. Are mortality assumptions applied in aggregate (total lives) or split between active and disabled lives?

Source used for total life mortality (TLM)

- Q63. Please provide the underlying table used (include any factor used against table and ultimate level).
- Q64. Are mortality selection factors used? If yes, please note in the comments what is the pattern.
- Q65. Is any total life mortality improvement used (past and / or future)? If yes, please describe in the comments.

Source used for active life mortality (ALM)

- Q66. Is active life mortality derived by backing disabled life mortality out of total life mortality, or by studying active life mortality separately?
- Q67. Please provide the underlying table used (include any factor used against table and ultimate level).
- Q68. Are mortality selection factors used? If yes, please note in the comments what is the pattern.
- Q69. Is any active life mortality improvement and / or trend used (past and / or future)? If yes, please describe in the comments.
- Q70. Do you use separate factors for NFO or paid-up policies?

Ultimate lapse rate assumptions

Q71. Are lapse rates applied to total lives or active lives?

Q72. What do lapse rates vary by (e.g., gender, marital status, inflation type, etc.)?

Q73. What is the ultimate lapse rate for a single male, issue age 55, lifetime BP, with no inflation protection?

Q74. What is the ultimate lapse rate for married female, issue age 65, five-year BP, with 5% compound inflation?

Q75. Is the ultimate active lapse flat or increasing by age / duration?

Q76. Is exhaustion of benefits included in lapse rates or modeled separately?

Morbidity assumptions (Incidence / claim costs)

Q77. Please provide the source used for morbidity (e.g., own experience, consultant data, reinsurer data, etc.)

Q78. What do incidence rate (or claim cost) assumptions vary by?

Q79. What experience years are included in the incidence rate (or claim cost) experience study?

Morbidity improvement assumptions

What do you assume for the following assumptions?

- Q80. Past incidence improvement (from time period of experience data to current date).
- Q81. Past disabled life improvement (from time period of experience data to current date).
- Q82. Future morbidity improvement and / or trend.
- Q83. Future incidence improvement and / or trend.
- Q84. Future claim termination improvement and / or trend (e.g., longer length of stay over time).
- Q85. Future disabled life mortality improvement and / or trend.

Q86. Are improvement studies based on population data, internal data, or something else?

Q87. How do you conduct improvement studies?

Continuance / claim termination rate assumptions

Q88. Are aggregate assumptions used or do they vary by care setting (e.g., SNF, ALF, or HHC)?

- Q89. If they vary by care setting, do they vary by first or current care setting?

Please provide the source of the following assumptions (e.g., own experience, consultant data, reinsurer data, modified published table, etc.).

- Q90. Skilled nursing facility (SNF)
- Q91. Assisted living facility (ALF)
- Q92. Home health care (HHC)

Q93. How often are continuance tables updated?

Q94. Are assumption updates indicating shorter or longer lengths of stay than previous assumptions?

Q95. By what characteristics do assumptions vary (e.g., age, gender, benefit period, diagnosis code, marital status)?

Q96. What experience years are included in your claim termination study?

Q97. Are claim termination rates studied for determining disabled life mortality and recoveries?

- Q98. If yes, how do disabled life mortality rates vary (beyond age and duration)?

Utilization assumptions

Q99. What are your base days utilization assumptions for SNF, ALF, and HHC?

Q100. What are your base dollars utilization assumptions for SNF, ALF, and HHC?

Q101. Is utilization based on first or current situs?

Q102. What do utilization assumptions vary by?

Cost of care assumptions

Q103. What sources do you use to determine utilization (i.e., salvage) in future durations?

Q104. Please summarize your cost of care assumption.

Q105. Is the long-term care cost inflation assumption tied to economic or interest rate assumptions?

Q106. If yes, what approach is used to tie the inflation assumption to economic or interest rate assumptions?

Q107. If the inflation assumption is less than the contractual benefit increase, is utilization floored?

- Q108. If yes, at what level?

Rate increase assumptions

Do you assume future rate increases? Please explain in the comments for each category below.

- Q109. Approved but not implemented.
- Q110. Filed but not approved (please provide both average amount requested and amount approved).
- Q111. Next round of filings (such as expected to be filed in the next year or two; please provide both average amount requested and amount approved).
- Q112. Future rounds of filings (beyond what is listed in the row above; please provide both average amount requested and amount approved).

Q113. Is there a shock lapse assumption? If so, what level and does it vary by level of the rate increase and / or by the number of rounds of rate increase? Please describe in the comments.

Q114. Is there any incidence anti-selection assumption following a rate increase? If so, what level and is it temporary or permanent? How do you assume shock lapse and anti-selection interact? Please describe in the comments.

Q115. Are any reduced benefit options assumed to be elected following a rate increase? If so, please describe in the comments.

Q116. Have valuation assumptions been unlocked for statutory or GAAP reserves for any business segments? If yes, what approach is used to unlock? Please describe in the comments.

Explicit provisions for adverse deviation (PADs)

Please provide the PAD used for the following:

- Q117. Active life mortality
- Q118. Lapse
- Q119. Incidence
- Q120. Claim termination rates
 - Q121. Disabled life mortality
 - Q122. Recovery
- Q123. Utilization
- Q124. Other assumptions

Interest assumptions

Q125. Please provide the interest rate used (if used for discounting in a gross premium valuation).

Q126. What is the long-term assumed structure of the risk-free interest rates (e.g., level, implied forward curve, mean reversion, econometric model, other)?

SECTION 3: ACTIVE LIFE RESERVE / CONTRACT RESERVE VALUATION ASSUMPTIONS**Mortality assumptions**

Q127. Are mortality assumptions applied in aggregate (total lives) or split between active and disabled lives?

Q128. Please provide the underlying table used (include any factor used against table and ultimate level).

Q129. Are mortality selection factors used? If yes, please note in the comments what is the pattern.

Q130. Is any mortality improvement used (past and / or future)?

Ultimate lapse rate assumptions (prior to statutory lapse limit formula)

Q131. Are lapse rates applied to total lives or active lives?

Q132. What do lapse rates vary by (e.g., gender, marital status, inflation type, etc.)?

Q133. What is the ultimate lapse rate for a single male, issue age 55, lifetime BP, with no inflation protection?

Q134. What is the ultimate lapse rate for married female, issue age 65, five-year BP, with 5% compound inflation?

Q135. What interest rate is used for discounting?

Morbidity assumptions

Q136. Please provide the source used for morbidity (e.g., own experience, consultant data, reinsurer data, etc.)

Q137. What past morbidity improvement is assumed (from time period of experience data to current date)?

Q138. What future morbidity improvement is assumed?

Q139. Please provide the loss adjustment expense (LAE) percentage used.

Q140. Please provide the waiver of premium (WOP) method used (e.g., included in both premium and claims or excluded).

Q141. For claimants, are both an ALR (contract reserve) and DLR (claim reserve) held?

Riders (complex model, simple add-on, percentage of reserves, or claim costs)

How are riders modeled for each of the following?

- Q142. Non-forfeiture
- Q143. Shared care

Q144. Are reserves calculated on a seriatim basis or do they follow a model cell approach?

Q145. Do you change reserves after implementing a rate increase? Please explain in the comments.

Q146. How are reserves changed after benefit reductions?

Explicit provisions for adverse deviation (PADs)

Please provide the PAD used for the following:

- Q147. Active life mortality
- Q148. Lapse
- Q149. Incidence
- Q150. Claim termination rates
 - Q151. Disabled life mortality
 - Q152. Recovery
- Q153. Utilization
- Q154. Other assumptions

SECTION 4: DISABLED LIFE RESERVE / CLAIM RESERVE ASSUMPTIONS

Continuance assumptions

Q155. Are aggregate assumptions used or do they vary by care setting?

- Q156. If they vary by care setting, do they vary by first or current care setting?

Q157. Please provide the source of the following assumptions (e.g., company experience, consultant data, reinsurer data, modified published table, etc.).

- Q158. Skilled nursing facility (SNF)
- Q159. Assisted living facility (ALF)
- Q160. Home health care (HHC)

Q161. How often are continuance tables updated?

Q162. Are assumption updates indicating shorter or longer lengths of stay than previous assumptions?

Q163. By what characteristics do assumptions vary (e.g., age, gender, benefit period, diagnosis code, marital status)?

Q164. Please provide the loss adjustment expense (LAE) percentage used.

Utilization assumptions

Q165. Is utilization (i.e., salvage) assumed?

- Q166. If yes, at what level?

Q167. Is utilization developed on a seriatim, grouped basis (such as care setting), or on an aggregate basis?

Q168. Are waiver of premium (WOP) benefits included in the DLR / claim reserve?

Q169. How are inflation options reflected (e.g., load reserve up x%, adjust explicitly in calculation)?

Q170. How are transfers between care settings reflected?

Q171. How is the incurred date defined? (e.g., first date of service, first date after EP satisfied, other)

Q172. What is the incurred but not reported (IBNR) approach used (e.g., loss ratio, lag triangle, percent of premium)?

DLR adjustments

Do you hold an explicit DLR / claim reserve or make an explicit adjustment for:

- Q173. Claimants before satisfying their elimination period
- Q174. Pending claimants
- Q175. Closed claimants that are expected to reopen
- Q176. Claims in "final payment" status

DLR adequacy testing

Q177. What method is used to test the DLR / claim reserve?

Q178. How often is the DLR / claim reserve tested?

Explicit provisions for adverse deviation (PADs)

Please provide the PAD used for the following:

- Q179. Claim termination rates
- Q180. Utilization
- Q181. Other assumptions

SECTION 5: ASSETS

Please note the percentage of assets in each asset class supporting your LTC portfolio:

- Q182. Treasuries
- Q183. Corporate bonds
 - Q184. AAA
 - Q185. AA
 - Q186. A
 - Q187. BBB
 - Q188. BB and lower
- Q189. Preferred stock
- Q190. Public equity
- Q191. Real estate
- Q192. Commercial mortgages
- Q193. Residential mortgages
- Q194. Private equity
- Q195. Commercial real estate
- Q196. Hedge funds
- Q197. Securities lending
- Q198. Other

Q199. Current portfolio yield

AG 53

Q200. Is your company subject to AG53 filing requirements? If no, has your company implemented any measures to avoid the need for AG53 filing? Please elaborate in the comments section.

Q201. Has your company taken any steps to lessen the impact of AG53 requirements, such as altering asset selection, investment strategies, default assumptions, etc.? Please provide details in the comments.

Q202. Have any investment decisions been altered by AG53 within your company? If yes, please expand upon this in the comments section.

Q203. Please provide your asset duration.

Q204. Please provide the most recent pricing interest rate assumption

Q205. Does your company use a hedging strategy?

Q206. Has your company changed any investment decisions resulting from the COVID-19 pandemic? If yes, please provide further detail in the comments.

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