MILLIMAN REPORT

Life/LTC hybrid products

2020 survey

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Background

Writers of hybrid long-term care (LTC) plans—i.e., life or annuity policy forms that offer LTC extension of benefit (EOB) riders in addition to LTC acceleration riders—have faced an array of challenges in the last six months. Principle-based reserves (PBR) was effective for new issues on January 1, 2020, causing companies to reprice on a PBR basis. COVID-19 has prompted companies to review mortality and morbidity assumptions on these plans. In addition, the continuing low interest rate environment has only been exacerbated by the coronavirus pandemic. Insurers appear to have stepped up to these challenges and repriced new business. Repricing efforts were significant and, in some cases, cumulative rate increases were very substantial for new business. LTC hybrid products were repriced largely because of the sensitivity of profits to the net investment income assumption. Milliman conducted a LTC hybrid product survey intended to capture the industry's views of this unique environment, and provide high-level current sales information and future outlooks.

The survey was conducted in July 2020; nine companies selling life/LTC hybrid products submitted responses.

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Survey information

Survey responses included information about the following key topics:

1. National Association of Insurance Commissioners (NAIC) Valuation Manual (VM-20) reserves
2. Pricing
3. Sales

VM-20 RESERVES

Survey participants were asked to report the type of base product for the LTC hybrid product. Seven of the nine participants reported using one type of base product, and the remaining two reported using two base products. A summary of the responses is shown in Figure 1.

FIGURE 1: BASE PRODUCT TYPE

BASE PRODUCT TYPE	NUMBER OF RESPONSES
Universal life product categorized as ULSG policy under VM-20	**4**
Universal life product not categorized as ULSG policy under VM-20	3
Non-participating whole life	2
Participating whole life	1
Indexed universal life product	1

Seven of the nine participants reported the morbidity margin assumption that is assumed for a hybrid product under VM-20 where the product requires either a deterministic reserve (DR) or stochastic reserve (SR) to be generated. The question asked that all factors contributing to the margin be considered together, including incidence, recoveries, disabled mortalities, and claim utilization, if applicable. The margin applicable to the ultimate level was requested for assumptions that vary by duration. Of seven companies, two reported a margin of less than or equal to 10%, four reported a margin ranging from 10% to 20%, and one reported a margin of 20% or more.

The majority of participants (7) plan to develop margins for each morbidity risk factor, rather than use a single aggregate margin for the purpose of VM-20 DR or SR projections. One of the remaining participants plans to use an aggregate morbidity margin. The final participant indicated this question is not applicable.

When developing prudent estimate morbidity assumptions for morbidity risk factors, such as incidence, recovery, disabled mortality, and claim utilization, six of the nine survey participants rely on a third party (other than reinsurers) to provide prudent estimate assumptions. The remaining three participants use a combination of the following methods:

- Credible internal LTC claim experience
- Reinsurers to provide prudent estimate assumptions
- Third parties (other than reinsurers) to provide prudent estimate assumptions

The methodology used when developing morbidity margins for morbidity risk factors, such as incidence, recovery, disabled mortality, and claim utilization, was reported by seven of the nine participants, with the final two indicating this question does not apply to them. Three of the seven reported two methods and four reported a single method. Figure 2 shows a summary of the responses from these seven participants.

FIGURE 2: METHODS USED FOR MORBIDITY MARGINS

METHOD	NUMBER OF PARTICIPANTS USING
Actuarial judgment is used to develop margins	**5**
A sensitivity test approach is used to develop margins	4
A credibility or other statistical calibration approach is used to develop margins	2

Four survey participants apply mortality margins for DR or SR projections, with rider cash flows integrated with the base contract by applying margins to the active lives mortality and disabled lives mortality separately. One participant applies margins to the total population mortality as a whole. The final four participants indicated this question is not applicable to them.

The survey included a question asking how the direction of each risk factor's margin for DR and SR projections is determined in cases where the LTC cash flows are integrated with the base contract for pricing purposes. Three participants indicated that the direction of margins is determined for each material risk and without regard to any margins in any other risk factors and ignoring any correlation among risk factors, per Section 9.B.1. of VM-20. A fourth participant uses this approach and also performs stepwise sensitivity tests to ensure that the direction of the margin for each risk factor results in a higher total reserve at the time of the current valuation year and selected future valuation years. Another participant performs stepwise sensitivity tests only. One participant reported that the direction of margins is determined for each material risk factor such that the LTC benefit cash flows are increased, regardless of the impact on cash flows of other benefits. The first of the remaining three participants reported that it does not integrate LTC cash flows with the base contract for pricing purposes. The second reported that its products are not yet on principle-based reserves, so it does not calculate the DR and SR. The third participant reported that this determination is still being analyzed. This participant is considering both the stepwise sensitivity test approach, as well as determining the direction for each material risk without regard to any margins in any other risk factors and ignoring any correlation among risk factors.

Seven of the nine participants provided a response when asked how they have dealt with margins on surrender assumptions and mortality assumptions if and when a margin on the base plan assumption that would increase base plan reserves has the effect of reducing rider reserves. Following are the responses received:

- We look to increase overall reserves
- We look at the total reserve (base plus rider) to establish margins
- We look at the reserve in total (including rider) when making the decision of which way to add the margin
- We do not use a margin if the effect is uncertain and compensate for this by adding to margins in which the direction is certain (such as morbidity)
- For DR and SR, we only consider the impact to the aggregate reserve. We do not value the base plan reserve and rider reserve separately.
- The methodology is under development/analysis (two responses)

The primary challenges in modeling LTC hybrid riders under VM-20 were reported by survey participants. Two of the nine participants reported one challenge and six reported from two to four challenges. The final participant reported that it is not yet modeling VM-20 for its hybrid products. A tally of the responses is shown in Figure 3.

FIGURE 3: CHALLENGES IN MODELING HYBRID LTC RIDERS UNDER VM-20

CHALLENGES	NUMBER OF PARTICIPANTS REPORTING
Integrating rider cash flows with base contract	**6**
Determining the appropriate level and direction of margins for each risk factor under VM-20, i.e., balancing natural risk offsets	5
Developing a net premium reserve (NPR) for the rider	4
Auditing results for DR and SR projections	4
Other	2

The other challenges reported were:

- Allocating DR and SR to a per policy basis for pricing purposes
- Projecting the SR is very time-consuming with the current modeling platform

PRICING

Four of the nine participants have repriced their hybrid products once in the last 12 months. Two participants have repriced three or more times, and one has repriced two times in the last 12 months. The final two participants have not repriced their hybrid products.

Of the seven participants that repriced their hybrid products in the last 12 months, anywhere from one to four factors were cited as driving the repricing. None of the participants indicated that mortality impacts due to COVID-19, adverse mortality experience, or change of profit target drove the repricing. The low interest rate environment was reported as a factor by all seven participants. Figure 4 shows a summary of the responses.

FIGURE 4: FACTORS DRIVING HYBRID REPRICING

NUMBER OF PARTICIPANTS REPORTING	RESERVE REQUIREMENT CHANGE DUE TO VM-20	LOW INTERST RATE ENVIRONMENT	MARKET COMPETITION	OTHER
1	X	X	X	X
2	X	X		
2		X	X	
3	X	X	X	
1		X		

The other factor that drove repricing was described as updates to mortality and morbidity assumptions.

SALES

Over the last 12 months, four participants reported that single premium life hybrid product sales volumes increased. Another four reported that these sales decreased, and the final participant reported that a single premium life hybrid product is not offered. Six participants reported that periodic pay life hybrid sales increased, and two reported that they decreased. The final participant reported that a periodic pay life hybrid product is not offered.

Eight of the nine participants reported the primary factors that are leading to changes in sales. One of the eight reported that sales have been fairly flat, and there has been no major change contributing to this. Three of the remaining seven participants reported the following factors that led to an increase in sales:

- Company leadership (includes sales) getting behind the product and promoting it to agents
- Wholesaling support and the competitive environment
- New product features and competitive pricing

Another three participants reported the following factors that led to a decrease in sales:

- Price increases
- Market environment and increased prices
- Increased competition and COVID-19

The seventh participant reported a decrease in single premium sales, but an increase in periodic pay sales. The changes in sales were primarily due to the economy and stay-at-home orders.

All nine participants indicated they believe that lifetime guarantees in the base plan are critical for sales success in the LTC hybrid market. Seven of the nine indicated that lifetime guarantees in the LTC rider component are important for sales success in the LTC hybrid market. The remaining two participants do not believe lifetime guarantees in the rider are critical for sales success.

Seven of the nine participants reported changing issue age limits or other parameters (including underwriting) as a result of COVID-19 or other factors. Six of the seven described their changes to issue age limits as follows:

- Maximum issue age changed to 69
- Temporarily suspended sales to ages 70+
- Product is currently only available through age 70 (was age 79)
- Reduced maximum issue age
- Limiting older age sales
- Decreased maximum issue age and tightened up our mortality guidelines

The change reported by the seventh participant was the development of COVID-19 guidelines.

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