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Statutory Reserving for Fixed Indexed Annuities with Guaranteed Lifetime Withdrawal Benefits

By Kush Kotecha, Ben Yahr and James Collingwood

In recent years, insurers have introduced fixed indexed annuity (FIA) products with guaranteed lifetime withdrawal benefit (GLWB) riders. Often, these riders are designed to generate attractive levels of guaranteed income. Target customers are typically baby boomers who are concerned about retirement planning and who are seeking ways to protect their nest eggs while generating income in retirement. The base FIA contract offers the policyholder limited equity-market exposure with full downside protection. With the addition of a GLWB rider, the policy also provides guaranteed income for life. FIA writers typically offer a slightly richer GLWB for a little less than variable annuity writers because the account value of the base contract isn't as volatile.

With the popularity and sales of these products growing, companies are considering the statutory reserving requirements for these products. Currently, the applicable statutory reserving guidance for these products is Actuarial Guideline XXXIII (AG33), which requires that a company set a reserve for each policy equal to the greatest present value of guaranteed benefits the policyholder may elect, regardless of the likelihood the policyholder would choose that option. Consequently, reserves for these products should reflect the withdrawal scenario that results in the highest present value of cash flows, since AG33 in its current state forces the carrier to assume the policyholder will elect the option most valuable to the policyholder.

As companies have applied AG33 to products with a GLWB, they are finding that the GLWB feature results in higher reserves than anticipated. The higher reserves result from using the GLWB utilization scenario that results

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in the highest preset value of cash flows. Although consistent with the requirements and intent of AG33, some companies believe that this worst-case utilization scenario produces reserves that are overly conservative and are based on unlikely policyholder behavior. These expectations have resulted from companies becoming accustomed to the more principle-based framework underlying Actuarial Guideline 43 (statutory reserving guidance for variable annuities and associated riders).

As a result, statutory reserve requirements for FIA products with a GLWB rider have captured the attention of both industry organizations and state regulators. The American Academy of Actuaries Annuity Reserves Working Group (ARWG) has taken up the issue from the industry's perspective, while the Life Actuarial Task Force of the NAIC has created the Fixed Annuity Subgroup to address the issue from a regulatory perspective. Discussions between these two groups have focused on three potential courses of action that would represent an interim solution until the introduction of principle-based reserving (PBR) for FIA products:

1. **Current AG33:** Some have argued that the current standard should continue to be utilized, given that the standard already provides guidance on how to reserve for these products. Additionally, some have argued that while the current standard may be conservative in some respects (e.g., benefit utilization), it could be seen as not conservative in other respects (e.g., static interest rate environment is assumed).
2. **Modifications to the AG33:** Potential modifications to the AG33 framework have been discussed, with a focus on areas that companies have identified as particularly conservative. Specifically, modifications to utilization and lapse assumptions have been proposed to reflect that not all policyholders will persist indefinitely and elect their benefit at the most optimal time. As such, a reserve calculation tool was developed by the ARWG to illustrate the impact of allowing for utilization and lapses in determining the present value of benefits for the GLWB benefit under a modified AG33 approach.
3. **PBR AG43-like:** Noting that these products are similar to variable annuity products with guaranteed living benefits, the ARWG has also proposed using an AG43 approach to the Fixed Annuity Subgroup. The use of an AG43-like approach could be implemented via minor wording changes in AG33, which would allow companies to use this type of approach.

Discussions about what approach to take as an interim step until the introduction of PBR for fixed-deferred annuity products are ongoing, with both the ARWG and Fixed Annuity Subgroup reviewing the current AG33 standard and considering these potential courses of action.

CASE STUDY

We developed a case study to analyze the potential reserve impact of the interim solutions currently being discussed. We analyzed six issue ages ranging from age 45 to age 70 for two sample product designs represent-

Table 1

GLWB Parameter	Product 1: High-Value GLWB	Product 2: Modest-Value GLWB
Rollup rate	7% compound	5% compound
Maximum years for roll-up	20 years	15 years
GLWB charge	0.50% of the benefit base	0.65% of the benefit base
Guaranteed withdrawal rates at sample ages		
50	3.5%	4.0%
55	4.0%	4.5%
60	4.5%	5.0%
65	5.5%	5.5%
70	5.5%	6.0%
75	6.0%	6.5%

ing a “high-value” and “modest-value” GLWB under each of the interim solutions. The GLWB features are shown in Table 1 (pg. 4).

Since the methodology for a modified AG33 approach and an AG43-like approach have not been finalized, we implemented these approaches as follows:

For our analysis, we calculated reserves using the following three approaches:

1. Current AG33: reserves based on the GLWB utilization scenario that produces the greatest present value of benefits.
2. Modified AG33: reserves based on the weighted-average of a range of GLWB utilization scenarios.
3. AG43-like: reserves being the greater of (i) the Standard Scenario Amount and (ii) the CTE 70 Amount using best estimate GLWB utilization rates.

The weighted-average utilization rates in the modified AG33 reserve calculation were based on the GLWB utilization used in the CTE 70 calculation. GLWB utilization rates varied by age, with the majority of the policies starting withdrawals between ages 65 and 70.

Table 2 compares the reserve in excess of the cash surrender value for the three approaches.

Under the “high-value” GLWB design, the present value of the GLWB under the AG33 approaches exceeded the cash surrender value for the younger issue ages. Under a “modest-value” GLWB design, the present value of the GLWB under the AG33 approaches is less than the cash surrender value. For both designs in our case study, the AG43-like approach is driven by the CTE 70 and tends to produce lower reserves than the AG 33 approaches.

The benefit design of the GLWB rider will determine whether the benefit stream resulting from the GLWB wins under the AG33 framework. In general, higher roll-up rates, longer deferral periods and higher guaran-

Table 2: Excess reserve at issue as a % of CSV

Issue Age	Product 1: High-Value GLWB			Product 2: Modest-Value GLWB		
	AG33	AG33 Mod	AG 43-like	AG 33	AG 33 Mod	AG 43-like
45	41%	6%	0%	0%	0%	0%
50	21%	4%	0%	0%	0%	0%
55	10%	0%	0%	0%	0%	0%
60	0%	0%	0%	0%	0%	0%
65	0%	0%	0%	0%	0%	0%
70	0%	0%	0%	0%	0%	0%

teed withdrawal rates will result in a greater likelihood that the AG33 approaches lead to reserves in excess of the cash surrender value.

While the above table may look benign at first blush, the potential excess reserve strain for Product 1, the high-value GLWB, is significant. If a company selling Product 1 received 10 percent of the premium from younger policyholders (e.g., age 50 or younger), the initial reserve it establishes may be 2 percent to 4 percent greater than the initial cash surrender value for the entire block. To put this in perspective, a company may hold approximately 6 percent of reserves as capital to support an FIA product. As such, an extra 2 percent in reserves would translate to a 33 percent increase in capital strain.

Because pricing exercises typically approximate AG33 reserves instead of applying the same rigor used in valuation, some companies were surprised at the additional reserve strain that was generated when the valuation department developed the actual statutory reserves. They were particularly surprised by the large statutory reserves generated in the AG33 calculation from situations the companies believed very unlikely to occur. As companies learn that the AG33 reserves are much higher than their pricing expectations, they are approaching their states of domicile to request alterna-

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tive valuation options, such as an AG43-like approach. In addition, these companies are revisiting and altering specific product features and limitations to minimize the impact of AG33 on future business.

LOOKING AHEAD

As noted above, the potential modifications being discussed are being considered as interim solutions until PBR for fixed deferred annuities is implemented. The ARWG is currently working on assisting the Life Actuarial Task Force with the development of VM-22 for fixed deferred annuities. While progress has been made on developing this long-term solution, companies are interested in exploring the use of alternative approaches like those discussed above in the interim. However, given the progress to date, it seems unlikely that a widely accepted interim solution will be in place by year-end 2012.



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As a result, we expect to see companies with large blocks of this type of business explore the feasibility of obtaining a permitted practice from their state of domicile to allow them to use a modified calculation approach (such as an AG43-like approach). Companies heading down this path will likely leverage the work products of the ARWG and the discussions with the Life Actuarial Task Force. In addition, they will want to reference other companies that have successfully obtained permission from their states of domicile in recent years to utilize a modified approach.



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In addition to addressing the reserve strain on in-force policies, companies are re-pricing their current products and/or modifying their current product designs. For example, firms have lowered the rate at which the GLWB benefit-base rolls up, shortened the length of the benefit-base roll-up period, increased the minimum issue age for GLWB benefits and/or redefined death-benefit provisions, all with an eye toward reducing reserves calculated under AG33 in its current form. Companies will likely continue to investigate product design modifications that can be implemented to reduce reserve strain under the current framework.

In summary, there is no one-size-fits-all solution for

companies looking for statutory-reserve relief. We expect solutions to be company-specific. Therefore, any insurer with a meaningful in-force block of FIAs with GLWBs or looking to enter the market will need to remain watchful of new developments as they emerge.

The views expressed herein are those of the authors and do not necessarily reflect the views of Ernst & Young LLP. ■