Article from

The Financial Reporter

June 2017
Issue 109

Setting Ascribed Premiums for Market Risk Benefits under FASB Targeted Improvements

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On Sept. 29, 2016, FASB released an exposure draft of Proposed Accounting Standards Update for Financial Services—Insurance (Topic 944) or "FASB Targeted Improvements to the Accounting for Long-Duration Contracts."[1]

Paragraph 944-40-25-25C introduced a new concept of market risk benefits (MRB), defined as:

"A market risk benefit shall be recognized for contracts and benefits that meet both of the following criteria:

a. Contract: The contract holder has the ability to direct funds to one or more separate account investment alternatives maintained by the insurance entity, and investment performance, net of contract fees and assessments, is passed through to the contract holder. The separate account need not be legally recognized or legally insulated from the general account liabilities of the insurance entity.

b. Benefit: The insurance entity provides a benefit protecting the contract holder from adverse capital market performance, exposing the insurance entity to other-than-nominal capital market risk. A nominal risk, as explained in paragraph 944-20-15-21, is a risk of insignificant amount or a risk that has a remote probability of occurring. A benefit is presumed to have other-than-nominal capital market risk if the net amount at risk (that is, the guaranteed benefit in excess of the account balance, cash value, or similar amount) varies more than an insignificant amount in response to capital market volatility. Capital market risk includes equity, interest rate, and foreign exchange risk."

The various guaranteed minimum benefit (GMxB) guarantees embedded in variable annuity contracts clearly fall under this definition. There is still debate as to which riders should be scoped in as MRB, but it is undeniable that certain GMxB rider types that previously did not qualify as embedded derivatives (ED), as defined in FAS 133, will be scoped in as MRB (e.g., GMIBs and certain life-time GMWBs that are not valued as ED).

Currently GMxB riders are generally valued as either embedded derivatives (as defined in FAS 133) or insurance risk benefits. EDs are valued at fair value using risk neutral valuation techniques. Insurance risk benefits are valued as SOP 03-1 reserves using assumptions consistent with those used for DAC valuation (real-world economic assumptions).

FAIR VALUE RESERVE CALCULATION

Fair value reserves are based on a prospective projection of guarantee cash flows and computed as

PV(claim costs)-PV(ascribed premiums or ascribed fees)

At rider issue, the ascribed fees are set and locked in so that there is no gain or loss at inception; that is, the fair value reserves at inception is zero.

Ascribed fees are commonly expressed in two ways:

- A constant proportion of rider charges, and
- A percentage charge independent of rider fees.

If a GMxB rider is scoped in as an MRB, one task a responsible valuation actuary is faced with is to set the ascribed fees for the rider. For existing riders that are valued as ED, the valuation actuary will continue current practice. However, if a rider is currently valued according to SOP 03-1, the actuary will need to set the ascribed fees for such a rider even though the rider may have been issued a long time ago. Such a seemingly easy task may turn out to be challenging. There are several alternative approaches and each has its merits and shortfalls.

This article discusses several alternative approaches to setting ascribed fees for riders that are not currently valued at fair value.

ALTERNATIVES FOR SETTING ASCRIBED FEES FOR MRB

Alternative 1: Go back to issue

A natural approach is to go back to the inception of a rider and set ascribed fees as if it were a new contract. Cash flows associated with the riders would then be projected based on the market conditions at inception and other cash flow assumptions.

This approach is based on first principles and consistent with how ascribed fees are normally set for a rider. This approach is a theoretically correct way to set ascribed fees. It will produce materially correct fair value reserves at the transition date and

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going forward only if the assumptions are materially consistent with how they would have been set at inception.

However, this approach is not without shortcomings. It would create potential bias in assumption setting, be costly to implement, pose projection system challenges, and require balance sheet restatement.

When computing ascribed fees as of rider inception, the actuary must come up with assumptions (economic and policyholder behavior) based on the environment at rider inception.

In fair value projections, one is required to use as much market observable information as possible. To the extent that an assumption is observable from the market, there would be little controversy. Two examples are risk-free rate of return and implied volatility.

However, certain assumptions are not observable. One example is volatility for long durations. The derivative market is liquid only for shorter durations and the actuary needs to set volatility assumptions for durations beyond observation. Liquidity for long-dated derivatives since the 2008 financial crisis has become very limited. If a rider was issued prior to the 2008 financial crisis, knowledge about the high volatility during the financial crisis could naturally bias the assumption setting.

Another example is policyholder behavior assumptions. When a GMxB type is new in the market, little to no experience exists. With accumulated policyholder behavior experience, the actuary's assumption setting could be influenced by recent experience. Over time, the assumptions an actuary would set at rider inception and the assumptions used in today's valuation would potentially converge through assumption updates as more experience emerges. However, ascribed fees are normally locked-in at inception, so the assumptions used to set such fees will affect the fair value reserves for the life of the rider guarantee.

Assumption setting involves a great deal of professional judgment and the knowledge the actuary has gained since rider inception could filter into the assumption setting process. Consequently, the assumptions might be different from what he would use if he was performing the work when the rider was issued.

This approach would also be very costly to implement. It would entail a great amount of work to set assumptions and run projection models at various rider issue dates. One key consideration for this accounting update is cost/benefit tradeoff. Incurring a great deal of costs to set ascribed fees for valuing MRB may not be in the spirit of the standard update.

Actuarial projection systems advance at a fast pace in today's environment. The assumption frameworks change as well, as the industry gets more sophisticated in modeling complex guarantees and accumulates more policyholder behavior experience. Going back in time to old systems and assumptions could pose challenges to actuaries.

Using this approach would very likely produce a reserve that is different from the carrying amount at the transition date. An equity adjustment would be necessary.

Alternative 2: Match transition date reserves

A second alternative is to set ascribed fees so that the fair value MRB reserves are equal or close to the carrying amount for SOP 03-1 reserves at the transition date.

This alternative has several advantages. First, the current market is observable. Any potential bias in assumption setting due to foreknowledge could be avoided. Additionally, by matching SOP 03-1 reserves and MRB reserves, a restatement to GAAP equity can be avoided. The actuary can also use the same cash flow assumptions and certain other economic assumptions that are used to calculate SOP 03-1 reserves; however, the actuary needs to consider adding risk margins to certain best estimate assumptions. Unlike the first alternative, no or limited changes to projection systems would be required. And finally, this approach would naturally incur much less costs.

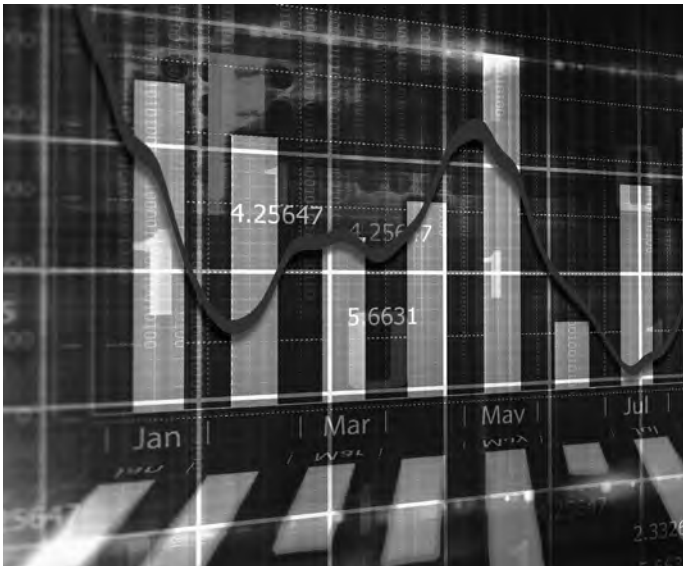

Table 1

	Go back to inception	Match carrying reserves	Use transition date assumptions
Pros	• Theoretically correct way to set ascribed fees	• Transparency in assumption setting • Balance sheet restatement unnecessary • No need to come up with assumptions as of inception • No or limited system challenges • Less costly	• Easy to implement • Least costly
Cons	• Potential bias in setting assumptions • Costly • Potential system challenges • Balance sheet restatement	• May require several trial runs • Differences between SOP 03-1 reserves and fair value reserves	• A reserve balance of zero on transition date • Balance sheet restatement

This alternative is not without its own drawbacks. Matching the reserves may require several trial and error runs. Additionally, SOP 03-1 and fair value reserves are fundamentally different. The former is calculated with a retrospective and prospective component and the reserves are accrued over time. The latter is purely a prospective view of the liabilities. SOP 03-1 reserves are normally calculated at a cohort level, so there may be diversification benefits within a cohort. Fair value reserves, however, are normally computed at the liability cell level. SOP reserves are required to be floored at zero, and fair value reserves are not.

Alternative 3: Set ascribed fees based on transition date market conditions

Under this alternative, the in-force business would be treated like new business. The ascribed fees would be set for the in-force business using market conditions at the transition date, so that the MRB reserves would be zero or close to zero.

This alternative is easy to implement. It would require a one-time ascribed fee computation without the need to come up with additional assumptions.

On the other hand, this approach will result in an MRB reserve of zero or close to zero, which may not be appropriate for in-force business. Additionally, it would require a restatement to GAAP equity.

The pros and cons of each of the three alternatives are summarized in Table 1.

DISCUSSIONS

Comparing the three alternatives discussed in this article, the second alternative (matching carrying liability reserve on the transition date) has the most advantages and the fewest disadvantages.

Avoiding a GAAP equity restatement may be the primary consideration because many companies use return on equity (ROE) as a key GAAP performance measure. Without a disruption to the GAAP equity balance, the existing ROE measure can continue to serve as an important GAAP measure. It would be easy to compare historical ROE metrics with those after the transition date. Such consistency may be well-received by the industry.

One difference between fair value reserves and SOP 03-1 reserves is that the former are not subject to flooring and the latter are floored at zero. One reason an SOP 03-1 reserve can be floored at zero is due to the retrospective nature of the calculation. When historical claim costs exceed accumulated assessments, the SOP reserve will be negative, and many actuaries will floor the reserve at zero. Fair value reserves are calculated using a prospective approach, considering future claims and premiums without regard to historical claims. The author would not suggest removing the SOP 03-1 floor when matching the current carrying value of the liability. ■

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ENDNOTES

1 http://www.fasb.org/jsp/FASBDocument_CDocumentPage?cid=1176168477111&acceptedDisclaimer=true