Transition Expedient for Market Risk Benefits Under GAAP Targeted Improvements

By Gary Hu and Gregory Goulding

In an effort to establish one measurement model and improve uniformity across companies, the recently published Financial Accounting Standards Board (FASB) guidance provides a new accounting classification for certain benefit features called market risk benefits (MRBs). These features provide protection to the contract holder from other-than-nominal capital market risk and expose the insurance entity to other-than-nominal capital market risk. If a contract contains multiple MRBs, they are bundled together and valued as a single compound market risk benefit. The FASB requires retrospective application to MRBs for all prior periods and requires that companies maximize the use of relevant observable information as of contract inception. If the retrospective application requires assumptions in the prior period which are unobservable or unavailable, a company may use "hindsight" (subject to interpretation) in determining those assumptions. This article discusses challenges inherent in the retrospective application and introduces a potential expedient for performing the calculation.

CHALLENGES

The attributed premium (AP) method is commonly used for the GAAP fair value calculation to achieve a zero reserve value at the contract inception by solving for an AP factor. Ideally, the FASB requirement for retrospective recalculation would require using the models and assumption sets (insurance and economic) at contract inception, generating both compound claim (i.e., for a combination of benefits such as living and death benefits) and fee streams enabling us to solve for the compound AP-factor that would equate reserves to zero at inception. However, this may entail excessive cost to organize and be difficult to validate. The data required to do these calculations may not be available in all cases without complex actuarial judgment and validations. Problems that a company may face in pursuing the calculation regime for various blocks of policies described above include:

- Actuarial models that reproduce the living benefit scenario cash flow streams (i.e., fees and claims) underlying the AP factor calculations at issue may not be available. This

challenge could arise if a company has experienced various actuarial model conversions.

- Assumption sets may not be available corresponding to all AP factors.

- A company might not have calculated the guaranteed minimum death benefits (GMDB) or guaranteed minimum income benefit (GMIB) scenario cash flows streams (i.e., fees and claims) based on the fair value model in the past.

- Validation of new AP factors may be hampered by difficulty in reproducing existing AP factors.

DESCRIPTION OF CIRCUMSTANCES FOR POTENTIAL EXPEDIENT

We describe below an expedient we refer to as the "ratio approach" that companies might consider as a practical interpretation of retrospective calculations under the right conditions and might be compatible with FASB's allowed expedient of using hindsight. The ratio approach applies to the transition adjustment for contracts in the following circumstances:

- The contracts contain a living benefit already valued using the standard fair value technique, with a locked-in AP factor determined at contract inception as the ratio of the present value of excess benefits divided by the present value of fees. The present values are based on risk-neutral scenarios with adjustments for risk margins and own-credit risk.

- The contracts also contain a GMDB or GMIB benefit, currently valued under the insurance accrual model (i.e., SOP 03-1), using real word scenarios. These benefits are classified as MRBs under the Accounting Standards Update (ASU).

- The dominant benefit in the contracts are the living benefits.

RATIO APPROACH

As an interpretation of hindsight, we seek to leverage the information inherent in the AP factor for the living benefit calculated at issue and the current relationship at transition between living and compound benefits. For example, assume that a variable annuity was issued in 2010 that contained both a GMDB accounted for under SOP 03-1 and a guaranteed minimum withdrawal benefit (GMWB) accounted for as an embedded derivative at fair value. Under the ASU, both benefits would be market risk benefits, but the original assumptions and/or models used to determine the attributed premium for GMWB at inception may no longer be available. Since the GMWB attributed premium was locked-in at inception, that attributed premium would contain much of the information about the assumptions that had been used at inception. As such, it may be possible to estimate the attributed premiums for the new compound MRB as follows:

$$a = \frac{PV \text{ at transition of future GMDB} + GMWB \text{ claims at fair value including risk margins}}{PV \text{ at transition of future GMDB and GMWB Fees}}$$

$$b = \frac{PV \text{ at transition of future GMWB claim at fair value including risk margins}}{PV \text{ at transition of future GMWB Fees}}$$

$$AP \text{ } Factor^{\text{ }compound \text{ } MRB} = AP \text{ } Factor^{GMWB} \times \frac{a}{b}$$

where $AP \text{ } Factor^{\text{ }compound \text{ } MRB}$ represents the estimated attributed fee for the compound market risk benefit upon transition and $AP \text{ } Factor^{GMWB}$ represents the attributed fee for the GMWB embedded derivative at inception. Note that a company may conclude that the risk margin in the calculation in "a" may be less than that used for "b."

Since the ratio method is an expedient to ideal calculations, it is advisable to assess whether it adequately reflects the intentions of the ideal calculations. The ratio method implicitly assumes that the ratio relationship between the compound and single benefit is reasonably stable between issue date and transition. We should consider, for example, the effects of changes in policyholder behavior assumptions over time, or changes in economic assumptions.

In order to maximize the use of observable information from the time the market risk benefits were issued, the present values could be based on the yield curves from when the market risk benefits were issued, rather than the yield curve at the transition date. The attributed premium for the compound market risk benefit combining the GMDB and GMWB determined in this manner would capture the information about economic and demographic assumptions from the GMWB attributed premium but would assume that the relative levels of benefits and fees remained reasonably stable during the period between issue and transition.

CONCLUSION

The ratio method may offer a practical expedient in retrospective adjustments required by the ASU in certain cases. As it is an interpretation, a company should evaluate the expedient considering specific circumstances. This may be evaluated through sampling or other means to demonstrate the reasonableness of the approach. ■

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