



Article from

**Reinsurance News**

March 2018

Issue 90

# With Age Comes Wisdom: Understanding Maturity Extension Riders

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Living to 100 and beyond is an exciting proposition. However, as this notion becomes a reality for more and more people, it raises questions for universal life policyholders on whether their existing coverage meets their financial needs.

## HOW DID IT ALL START?

Prior to the introduction of the modern universal life product, most insurance products sold were whole life products that matured at face value when the policyholder reached a maturity age. Generally, maturity can be thought of as an automatic surrender, where the cash value will be paid out to the policyholder and the contract will terminate. Due to requirements in the tax code, more specifically from Internal Revenue Code 7702 and the Technical and Miscellaneous Revenue Act of 1988 (TAMRA), permanent life contracts were designed to mature at the end of the then-available Commissioners Standard Ordinary (CSO) mortality tables, between ages 95 and 100. For whole life products, as well as rare highly funded universal life products, cash value was prescribed to accumulate to be equal to face amount by maturity. The primary issues of policyholders surviving to and past the maturity age were the tax implications of receiving the full amount while still alive.

Beginning in the 1980s, sales of more nuanced universal life products began to surge in popularity. Compared with other products on the market at the time, new universal life contracts offered a significantly more flexible product design, including flexibility on premium payments, ability to take withdrawals or loans, and ability to tailor coverage periods, all while participating in investment gains from a booming economy and high interest rates. Over the decades, sales of universal life and variable universal life grew rapidly—from \$2 trillion in the 1980s to more than \$8 trillion in the 2000s.

While universal life products do offer more flexible funding and coverage patterns, their design of low cash values upon maturity are likely to pose complications to both insurers and policyholders. As this in-force block of universal life policyholders ages,



nuances from the effect of TAMRA requirements impacting contractual maturity age are surfacing. Consistent with industry mortality tables at the time and safe harbors guidelines put forth from TAMRA, common practice was to offer cost of insurance (COI) rates only up to attained age 100 for most universal life products sold through the 2000s. Myriad efforts were undertaken to extend mortality rates beyond age 100 as life expectancy increased; however, less attention was dedicated toward how to account for business sold during the time when actuarial views of mortality ceased at age 100. Attempts to address this issue began in the late 1990s and early 2000s, when many insurers began adding maturity extension riders (MERs) to their products.

MERs offer policyholders a means to prolong insurance lifetime coverage past maturity age and are generally structured for the policyholder to pay an additional premium for a preset period before reaching maturity age. Following the maturity age, an MER would allow for policyholders to maintain full face amount coverage until death. However, especially at a time when centenarians represented only 1 out of every 5,600 Americans, the features and uses of an MER may not have been fully understood by policyholders, who, despite contract specifications, may have been under the impression that a universal life product provides full coverage for life. To account for products that were issued before MERs were developed, many insurers allowed for policyholders to elect into an MER at any age before MER premiums were due, which may have also lent itself toward later complications for policyholders who may not recall either the specificities of MERs or opting in at all.

This article analyzes the cost of MERs under the current and the original pricing industry mortality views, the different structures of MERs, sufficiency of the premiums collected to cover MER costs, as well as limitations of MERs and how to address them.

### HOW MUCH DOES AN MER COST?

In order to quantify the cost of MERs, we evaluated the probability of incurring a claim after the original maturity age given that the policyholder has elected the rider. Since the maturity age was most commonly set to attained age 100 with MER premiums beginning at attained age 90, these ages will serve as the standard for this study. Therefore, the cost of MERs is calculated as the probability of reaching age 100 given that the policyholder survives to pay rider premiums beginning at age 90. Furthermore, for simplicity, our analysis excluded any discounting of the death benefit because most MERs provide insurance coverage for life and guarantee a death benefit payout to the policyholder provided they reach attained age 100.

The sample illustrations were selected based on a representative business mix from the 2000s, which is the decade where MERs were most widely sold in the industry. During this target decade, most policies were sold to insureds between the ages of 30 and 60. Policyholders were more commonly male, and the average issue was approximately 50 years old. However, there was also a significant amount of business that was sold outside of this range, and almost a third of total face amount was sold to policyholders over the age of 60, with a higher concentration of women at older ages.

The cost of MERs is presented under both the current industry mortality view and that at the time of pricing. When MERs were first offered, life insurance mortality tables only included rates up to attained age 100, and a wide range of approaches were used to overcome this issue. A common practice was to use annuity industry mortality tables to extend the tail past age 100, which is why both life and annuity tables have been considered in this analysis. Although underwriting practices differ between life and annuity products, it was assumed that any substantive

underwriting effects are likely to have worn off by attained ages 90 and above.

Pricing life insurance mortality is represented by the 75-80 Society of Actuaries (SOA) Basic Table, commonly used through the 2000s, and the 83 Individual Annuity Mortality (IAM) Basic Table. The current life insurance and annuity mortality views are represented by the adjusted<sup>1</sup> 2015 Valuation Basic Tables (VBT) Basic Table and the 2012 IAM Basic Table. To illustrate the expected exposure at the time MER premiums are due, the probability of reaching attained age 90 for the model points was calculated under both the current and pricing life insurance mortality views.<sup>2</sup>

As evidenced by the probabilities of reaching age 90, these results indicate that the MER exposure will be applicable to a sizable block of the in-force business that is much higher than expected at the time of pricing, especially for the more common issue ages. Furthermore, for the policyholders who will reach age 90, the current views of mortality suggest a substantive likelihood of incurring claims during the maturity extension period, ranging from 11 to 17 percent, which is a notable increase since the time of pricing. This increase is partially driven by actual-to-expected adjustments made from the 2009-2013 SOA Individual Life Insurance (ILI) Mortality Experience Report in addition to differences in the underlying basic tables, such as more recent claims data and table construction methodology. These MER costs show to be comparable among current life and annuity mortality tables, suggesting that the tail mortality views between life and annuity tables have been relatively aligned with each other within the same era. The only exception for these observations is issue age 85; this is a direct consequence of the 75-80 SOA Basic Table's use of a 15-year select period structure versus the 2015 VBT Basic Table use of a vanishing select period that tapers down to only eight years by issue age 85.

Table 1  
Cost of MERs Analysis

| Sample Policyholder |           |               | Probability of Reaching Attained Age 90 |           | Probability That an MER Claim Is Paid Out |          |           |        |
|---------------------|-----------|---------------|---|-----------|---|----------|-----------|--------|
| Gender              | Issue Age | Smoker Status | Adjusted 2015 VBT                       | SOA 75-80 | Adjusted 2015 VBT                         | 2012 IAM | SOA 75-80 | 83 IAM |
| Male                | 35        | Nonsmoker     | 35%                                     | 12%       | 12%                                       | 11%      | 6%        | 9%     |
| Male                | 50        | Nonsmoker     | 36%                                     | 13%       | 12%                                       | 11%      | 6%        | 9%     |
| Male                | 75        | Nonsmoker     | 52%                                     | 34%       | 12%                                       | 11%      | 6%        | 9%     |
| Male                | 85        | Nonsmoker     | 84%                                     | 72%       | 13%                                       | 11%      | 13%       | 9%     |
| Female              | 55        | Nonsmoker     | 48%                                     | 29%       | 15%                                       | 17%      | 12%       | 12%    |
| Female              | 75        | Nonsmoker     | 61%                                     | 52%       | 15%                                       | 17%      | 12%       | 12%    |
| Female              | 85        | Nonsmoker     | 88%                                     | 84%       | 17%                                       | 17%      | 25%       | 12%    |

## HOW ARE MERS CURRENTLY FUNDED?

A selection of large universal life insurers were considered for analysis of premium funding, and it was found that the premiums charged for MERs vary widely in structure and amount. Companies largely fund the MER for a defined number of years prior to the maturity age, most commonly the 10 years between attained ages 90 and 99, as opposed to throughout the life of the policy. Premium payment patterns tend to vary, even amongst different products sold by a single company. Common premium formats include the following:

- Level flat extras, with amounts potentially varying by gender and risk class
- Flat extras increasing by attained age, with amounts potentially varying by gender and risk class
- Additional surcharge applied to base premiums during the specified period

Regardless of the premium payment pattern used to pay for the MER, the total amount of MER premium paid over the defined payment period is meant to cover the mortality risk of an insured surviving to age 100. This was assessed by comparing the total premium collected as a percentage of face amount against the probability that an MER claim is paid out, excluding any potential benefits from time value of money from the timing of both claims and premiums for simplicity and conservatism.

Based on the companies included in this analysis, it was found that the total amount of MER premium paid varies significantly across companies. This wide range was driven by differing views on what was expected of old age mortality, where a more aggressive view resulted in lower MER premiums, and conversely, a more conservative view resulted in higher MER premiums. Such a broad array of charges indicates that some products are sufficiently charging adequate premiums to cover claims while a substantive portion are likely insufficient. MERs that were priced to the lower conditional claims probabilities of the 75-80 SOA Basic Table are especially likely to exhibit this insufficiency.

## WHAT ARE ALTERNATIVE SOLUTIONS TO MER ISSUES?

In terms of timing, as with most riders, some products require the MER to be elected at policy inception. However, to address older products that were sold before MERs were developed, others allow for election of the MER at any point before the MER premiums are due. For the latter case, simple forgetfulness may be an issue for policyholders who, having purchased coverage over a decade ago, may not recall the details of an MER. Under a more conservative lens for an insurer, policyholders who behave rationally might delay election until their late 80s



when they are most able to gauge their health and remaining life span. Adverse selection then becomes an issue, where those with serious prevailing ailments at that time would be unlikely to elect an MER, resulting in a healthier pool of policyholders who may have a greater chance of surviving past maturity age and incurring claims during their extension period. In light of both the possibility of adverse selection as well as the ongoing development of views of old age mortality, it is important to consider any potential deviations from expectations even for MERs that appear to be sufficiently funded. In these instances, there are several options to remediate the situation.

The most basic solution to fund claims after maturity would be to increase premiums. However, as evidenced by companies that have put forth COI rate increases, such an action is likely to have both legal and reputational ramifications. On the opposite end of the spectrum, an insurer can also opt to absorb all costs



and offer maturity extension at no additional cost to policyholders—a decision that could mitigate any potential reputational damage but come at a substantial cost. As an alternative to the two extremes, companies could also partner with reinsurers to develop tailored excess-of-loss coverage that would extend to cover gaps between the collected premiums and increased experience of longevity beyond maturity.

#### WHAT IS NEXT?

Since MERs were initially priced up through the 2000s, current industry mortality views show that the insured population is living significantly longer than was expected, consequently leading to higher exposures to policyholders approaching maturity age than expected at the time of pricing. As universal life policyholders continue to age and reach MER premium paying ages, insurers may wish to keep in mind the following considerations:

- For product designs where MER may be elected at any moment before MER premiums are due, insurers may be exposed to adverse selection for healthy policyholders who opt into the rider at very old ages, because they may have a higher probability of surviving past maturity age and incurring claims during the extension period.
- Companies may need to ensure that MERs are appropriately accounted for in administrative systems and clarify procedures to support the capability of providing information to existing policyholders regarding their options upon maturity.

- Solutions involving changes to product design will require consideration of tax consequences and regulatory approvals.
- In all of these considerations, reputational risk should also be kept in mind. As this substantial block of policies continues to age, it is important to proactively address these points before in-force policies achieve their centenarian milestones. ■



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#### ENDNOTES

- 1 The 2015 VBT Basic Tables (<https://www.soa.org/experience-studies/2015/2015-valuation-basic-tables/>) were adjusted for actual-to-expected factors by attained ages based on the 2009-2013 SOA ILI Mortality Experience Report (<https://www.soa.org/experience-studies/2017/2009-13-indiv-life-ins-mort-exp/>), both as published by the SOA.
- 2 Mortality tables do not include future mortality improvement for simplicity due to variance in assumptions among companies.