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New mortality tables in Thailand

Introduction

The Thai insurance regulator, the Office of Insurance Commission (OIC), has recently released new insured lives mortality tables for Ordinary and Industrial business. These tables were widely anticipated, although the details of the final new mortality rates have been the subject of considerable industry debate for several months.

In this e-Alert, we provide commentary on the introduction of these new mortality tables, the differences in the new tables compared to the prior tables, and some of the implications for life insurers in Thailand.

The 2017 mortality tables

On 31 August 2017, the OIC released the TMO17 mortality table for Ordinary business and the TMI17 mortality table for Industrial[1] business. They replace the prior tables (2008 series), TMO08 and TMI08 respectively.

It is compulsory for these mortality tables to be used to set the pricing basis central to product filing, which determines maximum premium rates, cash surrender values and the net premium valuation (NPV) valuation mortality basis for traditional products. For unit linked and universal life products, the new mortality tables are used to cap the cost of insurance (COI) charges that can be applied.

According to the announcement, all new life insurance products that are filed with the OIC on or after 1 September 2017 must use the new 2017 mortality tables.

For life insurance products that were filed before 1 September 2017, the announcement states that no product re-filing is required until further notice. Although there has been no timeframe officially stated, several industry observers believe that a subsequent announcement may soon be made that:

i) Require protection products (i.e. life products without survival benefits) in existence before 1 September 2017 to be re-filed using the new mortality tables by a specified date

ii) Clarify that COI charges for unit linked and universal life policies must be capped at a maximum of 100%[2] of the new mortality rates for such products filed before 1 September 2017 (as well as for products filed after this date)

The new mortality tables have been set by reference to emerging death claims experience of the Thai life insurance industry over recent years, which has seen, in general, continuing mortality improvements.

There is also allowance in the new mortality tables for an explicit margin on top of the base mortality rates calibrated from industry experience. This margin is set according to the following formula:

[1] Industrial business is a category of life insurance in Thailand covering policies sold to lower socio-economic groups with small face amount and with higher premium collection frequency.

[2] For policies rated as substandard mortality risks, a higher cap for COI charges can be applied but must use a maximum COI charge of 100% of the new tables for an equivalent standard rated mortality risk.

Margin = $y\ (q_x + z)\ /\ 2$

where

y is between 0 and 10%

q_x is the mortality rate at age x from the base 2017 mortality table (before allowance for the margin);

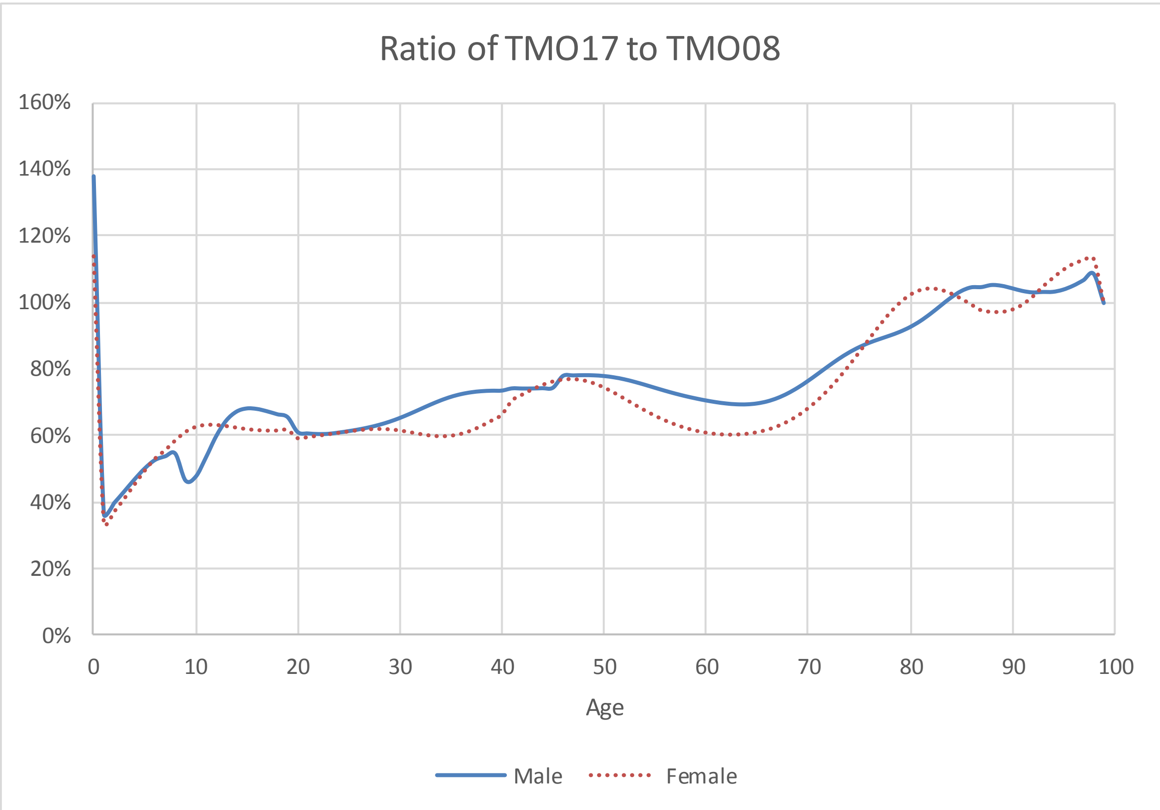
z = 0.0011574 for Ordinary and 0.0039355 for Industrial (the base mortality rate for a 43-year old female under TMO17 and for a 54-year old female under TMI17 respectively).

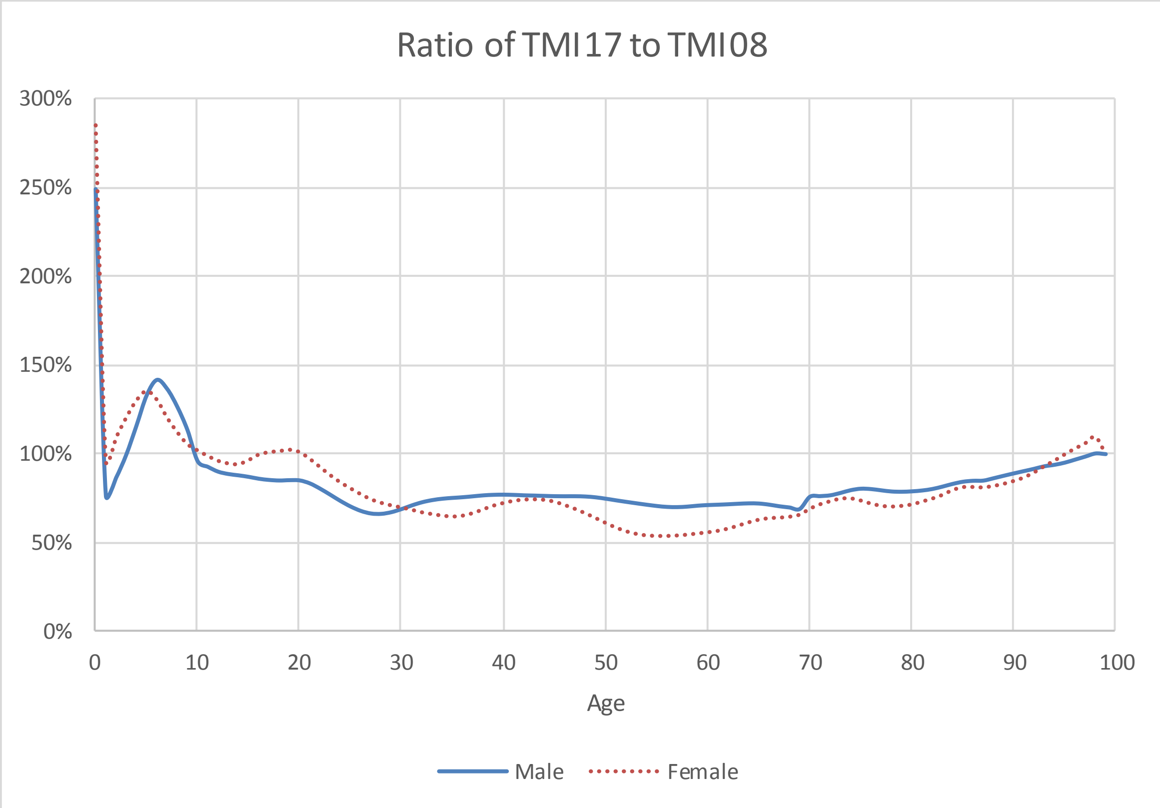
In applying the new mortality tables, it is understood that insurers can decide which y-factor to use (if any) but it must not exceed 10%.

Comparison of 2017 versus 2008 tables

The ratio of the TMO17 to TMO08 and TMI17 to TMI08 mortality rates by age (q_x) for males and females is shown in the charts below (assuming a margin at the maximum level, i.e., y = 10%).

2017 versus 2008 mortality tables (assuming maximum margin with *y* = 10%)





Our analysis points to the following key findings:

- For Ordinary business, the new mortality table rates are at most ages materially lower than the 2008 rates, except for infant mortality below age 1-year and for some ages above 80. The level of reduction varies by age and gender, with rates for ages 10-70 in the range of 20-50% lower for males and 20-40% lower for females. At age 40, the TMO17 table is 26% lower than the TMO08 table for males and 34% lower for females.

- For Industrial business, the new mortality rates are lower than the 2008 rates except for most ages below age 10 and some ages above age 90 for females. The level of reduction for ages 25-70 is in the range of 20-45%, with females showing a higher reduction than males in general from age 30. At age 40, the TMI17 table is 23% lower than the TMI08 table for males and 27% lower for females.

- The allowance for the margin at the maximum level pushes up mortality rates by around 10% (multiplicative) on average for both the TMO17 and TMI17 tables.

Implications for life insurers in Thailand

The new mortality tables may affect the industry in a number of areas, including:

- Profitability pressures for protection business, especially credit life/term life
- Impact on unit linked business due to lower profit margin generated by COI charges
- Practicalities of product refiling
- Product strategy re-evaluation and product re-design

Profitability pressures for protection business

Credit life, including mortgage reducing term assurance (MRTA) and other loan-related term assurance, constitutes a sizable portion of the in-force portfolio for many life insurance companies in Thailand. These products are typically sold through the bancassurance or affinity channels. With improving mortality and the positive selection effects associated with loan issuance, credit life business has generated significant mortality profits for many insurers—for many years in some cases. The lower premium rate caps associated with the new mortality tables will compress profit margins for this business going forward unless products can be appropriately re-designed and/or sales compensation reduced sufficiently to compensate. Both may be challenging in practice.

Impact on unit linked business

Unit linked business in Thailand has historically been much less prevalent than in many other markets in Asia. However, some insurers have been gaining increasing traction in unit linked sales in the past two years, and more companies have been developing products and capabilities to enter this sector of the market. Given the prolonged depressed interest rate environment in Thailand and the increasing focus on capital management, the increase in unit linked business has been a positive development for some insurers grappling with how to sell profitable traditional products with material investment guarantees at a time of low bond yields under a risk based capital regime.

Some market observers have expressed surprise that COI charges for policies sold under existing products filed before 1 September 2017 might be capped retroactively by reference to the new tables, instead expecting the cap to apply only for policies sold under new products filed after this date. If a subsequent announcement does result in COI charges being capped by the 2017 mortality tables for products in existence before 1 September 2017, there would be a negative impact on the value of in-force business (VIF) for unit linked portfolios within the embedded value reporting of insurers. However, the impact on VIF may be muted for many players given the relatively low volumes of unit linked business sold to date. Whilst the lower charges will be beneficial for customers, they will also reduce new business margins for insurers unless product design and/or charging structures can be appropriately revised to compensate.

Overall, the effects will be most pronounced for those insurers selling more protection-focused unit linked offerings, particular those targeting older customers and/or with a material proportion of lives rated as substandard mortality risks.

Practicalities of product refiling

If existing protection products do need to be re-filed, including having to re-price/re-file variants of MRTA products with different mortgage interest rates, this is likely to be a time-consuming and expensive exercise for the industry. It will create additional workload for product pricing and actuarial teams already stretched.

Product strategy re-evaluation and product re-design

The new mortality tables may force some life insurers to re-evaluate their product strategies and result in more new product innovation. In recent years, we have seen several players increase their focus on protection and unit linked products to reduce market risk and improve their capital positions. As mentioned above, the new mortality tables may make credit life/term business and protection-focused unit linked products more challenging from a profitability standpoint. We may see some insurers seeking to adjust the design and charging structures for new unit linked products in light of the new tables, shifting to more savings focus and looking to increase policy fees and/or asset management charges (subject to gaining regulatory approval). We can expect significant re-design and re-pricing activity if products in existence prior to 1 September 2017 need to be re-priced/re-filed.

Conclusion

The Thai regulator has followed a similar pattern of updating mortality tables every decade. The changes reflect the continuing mortality improvements seen within the insured population as a result of factors such as enhancements in medical infrastructure, better access to medical facilities, greater health awareness and improved medical underwriting practices. These are clearly positive developments from a societal perspective. However, the new tables do present a variety of business and operational challenges for Thai life insurers, including potential profit margin pressure on certain product lines and the need for product re-design and re-pricing.

As the Thai population rapidly ages and finances for public retirement system come under increasing strain, annuity business may start to receive greater attention. However, significant obstacles still need to be overcome to materially increase penetration in this area, including a need for higher tax incentives, a greater supply of long-dated bonds and improvements in the provision of financial advice for the post-retirement phase.

It may be an opportune time for companies to re-visit and re-position their product strategies and, for some, consider more wide-reaching changes in business strategies and operating models.

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