Solvency II: Recalculation of the Transitional Measure on Technical Provisions

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INTRODUCTION

The Transitional Measure on Technical Provisions (**TMTP relief**) permits (re)insurers to gradually phase in any increase in technical provisions[1] that must be held for business written prior to 1 January 2016 (**TMTP business**) arising from the introduction of Solvency II at that date (**Day 1**). The TMTP relief will be gradually phased out over a transitional period of 16 years, with recalculations of the amount of TMTP relief required every two years (or earlier at the request of the Prudential Regulation Authority (**PRA**) or if firms consider there has been a material change in their risk profile).

In the last six months, the PRA has released three updates on the TMTP relief in the form of:

- A Consultation Paper (CP47/16)
- An update to a previous May 2016 Supervisory Statement (SS6/16)
- A summary of the PRA's responses to feedback received during the consultation process and the changes that have been made to SS6/16

Milliman provided summaries of these updates in Solvency II e-alerts in December 2016[2] and May 2017[3].

As at 1 June 2017, 33 UK firms had approval for TMTP relief[4] and so they will need to perform a recalculation at the end of 2017 (the first biennial recalculation). For many, this will be the first time that they have needed to recalculate the amount of TMTP relief, although some firms have already applied and received approval for a recalculation following a material change in their risk profile.

The primary driver of risk profile changes during 2016 was interest rate movements. However, business transfers, changes to reinsurance arrangements and other management actions have also served as triggers for recalculation.

Milliman has recalculated the TMTP for a number of clients, performed independent reviews of recalculated TMTP relief and provided assistance with the development and review of firms' recalculation policies. This update summarises our findings along with our own views on different approaches to recalculating the TMTP relief and the associated key issues and challenges.

OVERALL APPROACH TO RECALCULATING TMTP RELIEF

We have identified a number of possible approaches that could be taken by firms when recalculating the TMTP relief. These approaches are highlighted as potential approaches that firms have used and that appear reasonable at this stage. We expect to see market practice emerging and convergence towards a standardised approach following the first biennial recalculations and feedback from the PRA (if provided). The approaches are:

1. Update the Day 1 balance sheet and calculations for current economic, operational and structural conditions. The recalculated TMTP relief could then be phased out by 1/16th each year from Day 1.
2. Follow the same approach as detailed under Approach 1 above, but adjust the 1/16th deduction factor to allow for the actual run-off of the business between Day 1 and the recalculation date, and then phase out the remaining TMTP relief over the rest of the transitional period.
3. Recalculate the TMTP relief at the recalculation date using only TMTP business data in-force as at that date and run the resulting amount of TMTP relief off over the remaining transitional period.
4. Follow the same approach as detailed under Approach 3 above and then 'gross up' the TMTP relief based on actual run-off to an approximate Day 1 value, which is run off by 1/16th each year from Day 1.

The above four approaches are summarised in the grid below.

	EFFECTIVE DATE*: DAY 1	EFFECTIVE DATE: RECALCULATION DATE
RUN-OFF: 1/16TH OF TMTP	APPROACH 1	APPROACH 4
RUN-OFF: ACTUAL BUSINESS RUN-OFF	APPROACH 2	APPROACH 3

*The 'Effective Date' is the date at which data for TMTP business is used in the recalculation

[1] Subject to certain restrictions
[2] Maintenance of the 'Transitional Measure on Technical Provisions' under Solvency II – Milliman Solvency II Update
[3] Maintenance of the 'Transitional Measure on Technical Provisions' under Solvency II – update – Milliman Solvency II update
[4] Consolidated list of Solvency II Approval Written Notices as at 1 June 2017 – Prudential Regulation Authority

From a practical perspective, the approaches can be grouped into pairs such that Approaches 1 and 2 are considered similar because they use a "Day 1 approach" whereas Approaches 3 and 4 use a "recalculation date approach".

However, Approaches 2 and 3 adopt a similar view that the calculation should be based on actual run-off to the recalculation date whereas Approaches 1 and 4 utilise the $1/16^{th}$ run-off factor.

KEY ISSUES AND CHALLENGES

We set out below some of the key issues and challenges that firms are facing when recalculating the TMTP relief.

ASSUMPTION CHANGES

Under all four approaches, the Solvency I models (i.e., those used to produce Pillar 1 (**Statutory Basis**) and Pillar 2 **(ICA**) results) and Solvency II models will need to be updated to reflect economic conditions and future assumptions at the recalculation date.

In SS6/16, the PRA has highlighted the need for consistency between updates to the bases used for Solvency I and Solvency II, and this may not be straightforward. In particular, there are a number of considerations to take into account when updating the discount rates used:

- The risk-free rates used to discount cash flows on an ICA basis may differ from the prescribed EIOPA risk-free rates. For example, the derivation of the rates from gilts rather than from swaps.
- There are a number of significant differences between the way that the Solvency II matching adjustment, volatility adjustment and typical ICA liquidity premiums are calculated. For example, liquidity premium calculations are usually based on an internal view of credit risk deductions rather than EIOPA-prescribed fundamental spreads.
- For the Statutory Basis, firms will need to derive an appropriate valuation rate of interest based on the assets backing liabilities as at the calculation date.

Updating assumptions under both Solvency I and Solvency II could be more challenging for Approaches 1 and 2 because firms will have to update the models for actual experience between Day 1 and the recalculation date as well as future assumptions after the recalculation date.

However, it is unclear from CP47/16 whether the PRA allows assumption changes since Day 1 to result in a TMTP benefit as they may be considered a reflection of changes in operating conditions rather than a change being introduced by Solvency II requirements.

DATA UPDATES

For Approaches 3 and 4, the Solvency I and Solvency II models will need to be maintained with up-to-date TMTP business data at the recalculation date.

Updating Solvency I models may be difficult as these may become out of date. For example, there could be problems running new data through the models if the format of data files has evolved to meet Solvency II requirements. Solvency II business-as-usual (**BAU**) processes should mean that updating the data inputs to Solvency II models is a straightforward exercise.

Approaches 1 and 2 use TMTP business as at Day 1 and so firms will not need to update the TMTP business data used in either the Solvency I or Solvency II models unless significant developments have occurred in the interim period as discussed in the next section.

SIGNIFICANT DEVELOPMENTS

Under all four approaches, if a firm has acquired (or disposed of) a new block of TMTP business since Day 1 or if there have been significant changes to assets backing the TMTP business, firms may need to update both the Solvency I and Solvency II models to reflect these developments.

Updating the Solvency I models may become challenging as the required knowledge may be lost within firms over time. It could be particularly difficult for firms that have acquired blocks of business since Day 1 and so have not previously modelled these blocks under Solvency I.

With respect to Solvency II model updates, Approaches 1 and 2 will require updates to Day 1 models to reflect the developments. Firms using Approaches 3 or 4, however, are unlikely to need to update their Solvency II models for this calculation as these should already be updated as part of BAU processes.

In addition, firms using Approaches 1 or 2 will need to update their Solvency II models for changes relating to Solvency II waivers or approvals.

PRE- AND POST-DAY 1 BUSINESS

Under Approaches 3 and 4, TMTP business and business written subsequently will need to be separately identifiable. This may not appear too onerous, but firms may need to develop their existing processes to allow for this split. In particular, it may be challenging to split the risk margin, which is typically one of the main drivers of TMTP relief, as this would require allocating the non-hedgeable risk capital between the two blocks of business.

Approach 1 avoids the need for the segregation of pre- and post-Day 1 business. Approach 2 requires some segregation of TMTP business to calculate the amount of TMTP business run-off, but this would be less involved than the segregation and subsequent calculations required by Approaches 3 and 4. The risk margin, which presents complications under Approaches 3 and 4, could be calculated by simply updating the Day 1 models to reflect economic conditions and future assumptions (assuming any significant other developments have been taken into account).

In SS6/16, the PRA has stated that, for a full recalculation of the TMTP relief, the financial resource requirement test (**FRR test**) requires updated Solvency I and Solvency II results in respect of all business in force as at the recalculation date, not just TMTP business. However, it not clear whether this also applies if firms are using Approaches 1 or 2. If not, as seems sensible, this would be a benefit of using Approaches 1 or 2.

THE 'DOUBLE RUN-OFF EFFECT'

One of the points raised by the PRA in SS6/16 was that recalculations should avoid the 'double run-off effect'. This is the impact of allowing for both business run-off and the 1/16th annual deduction in the TMTP relief calculation.

Approaches 2 and 3 aim to reflect actual run-off to the recalculation date, but it is unclear how to allow for continued run-off beyond this point. One possible way to ensure a smooth run-off would be to use a 1/(16-n)th deduction factor. For example, for the TMTP relief calculated at the end of 2017, the future TMTP relief would be phased out by 1/14th each year. However, the PRA have only referred to 1/16th deductions in their communications and updates thus far[5], so further clarity from the PRA would be welcome on this point.

SUMMARY OF KEY ISSUES AND CHALLENGES

We have summarised below how the key issues and challenges may affect each of the four approaches.

	APPROACH 1	APPROACH 2	APPROACH 3	APPROACH 4
ASSUMPTION CHANGES	●	●	◖	◖
DATA UPDATES	N/A	N/A	●	●
SIGNIFICANT DEVELOPMENTS	●	●	◖	◖
PRE- AND POST-DAY 1 BUSINESS	◖	◖	●	●
THE 'DOUBLE RUN-OFF EFFECT'	N/A	◖	◖	N/A
TABLE KEY	◖ = MINOR ISSUE; ● = MAJOR ISSUE			

Each of the approaches described has its own strengths and weaknesses and ultimately a firm's individual circumstances will dictate which approach would be the most appropriate. For example, firms that have undergone material acquisitions/disposals of blocks of business or other structural changes since the implementation of Solvency II may benefit more from using Approaches 3 or 4 to avoid major overhauls and development of old Day 1 models. By contrast, if a firm's business has not changed materially since Day 1, it would probably be easier to use Approach 1 or 2.

From our experience across the UK market, we have seen firms adopt a variety of approaches, although many firms seem to have adopted an approach whereby an updated Day 1 result is produced and phased out by 1/16th each year (Approach 1). This observation is obviously at this stage based on the subset of firms with current PRA approval for TMTP relief and, whilst this approach may work well for recalculations performed in the few years after Day 1, it is likely that the Day 1 models will become increasingly difficult to support over time.

APPROXIMATIONS USED BY FIRMS

Given the potential challenges and difficulties involved, the PRA has stated in SS6/16 that a proportional approach can be taken when recalculating the TMTP relief. The approximations used should be based on individual firms' circumstances and, for example, they might be based on:

- The material components and drivers of their TMTP relief
- The nature and complexity of the underlying business
- The changes that have occurred in firms' internal and external environments since the last TMTP relief calculation
- The trigger for the recalculation - more detailed calculations may be needed for the formal biennial recalculations of the TMTP Relief.

In any case, all approximations will need to be discussed and approved by the PRA.

Some of the common areas for approximations that we have seen for firms' recalculations of TMTP relief are set out below.

For some firms, the TMTP consists entirely (or to a significant degree) of the risk margin required under Solvency II. Given the complexity of the risk margin calculation and the approximations permitted by the regulations in its calculation, there are approximations used such as:

- Under Approaches 1 and 2, firms have estimated the risk margin using Day 1 results and interest rate sensitivities.
- Under Approaches 3 and 4, firms have used risk drivers or proxies to approximate the amount of non-hedgeable risk capital relating to TMTP business.

Aside from the risk margin, the PRA has mentioned the need for firms to hypothecate assets between TMTP and other business which might be required for estimating the impact of changes in the matching adjustment and liquidity premium. However, several firms have avoided such a hypothecation by making a simplifying assumption that the matching adjustment and liquidity premium, and any changes to these, are uniform for both TMTP and non-TMTP blocks of business.

ICA CALCULATIONS

For the Solvency I ICA calculations, it is sometimes possible to calculate/approximate liabilities and capital requirements using the output from Solvency II models if firms' ICA methodologies and parameters are similar to those under Solvency II

[5] Chapter 2, Section 54, Table 3, Solvency 2 Regulations 2015

Firms may also wish to allow for changes in the size of any Individual Capital Guidance (**ICG**) in the recalculation methodology and a common approach in this regard is to approximate the change by assuming the ICG remains at a constant percentage of the ICA as at Day 1.

STATUTORY BASIS CALCULATIONS

Approximating the Statutory Basis balance sheet information needed for the FRR test is likely to be challenging given that there is less of a link to the Solvency II calculations. Careful consideration will need to be given to how the prudent Day 1 results are likely to move in light of business run-off, new business generation and basis changes. Some firms have taken the decision to not recalculate the Statutory Basis results at all and have provided reasoning that includes the following:

- The Statutory Basis balance sheet is considered unlikely to be the more onerous under the FRR test.
- The FRR test under Statutory Basis and ICA balance sheets have historically been very similar.
- The FRR test has historically had little to no impact on the amount of TMTP relief.

HOW MILLIMAN CAN HELP

Milliman has a wide range of experience of working with our clients to provide support in respect of the TMTP recalculation process.

In the main, our roles have been a combination of the following:

- Assistance to firms in the development of their recalculation frameworks
- The review of firms' existing recalculation frameworks
- Carrying out the TMTP recalculation process and liaising with auditors to provide evidence of accuracy
- Performing an independent review of the recalculated TMTP
- Providing formal sign-off and assurance to the chair of the Audit Committee on the TMTP as recalculated for the year end accounts
- Providing training for the board and/or senior management team on the TMTP and its implications

If you have any questions or comments on this paper or any other aspect of Solvency II, please contact any of the consultants below or your usual Milliman consultant.

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