CSM: Discount rates at initial recognition

[This article is one in a series of articles (which can be found here and here) published on behalf of the IFRS 17 CSM Working Party. Members are Antoon Pelsser, Asim Ghosh, Clarence Er, James Thorpe, Joanna Stansfield, Kruti Malde, Natalia Mirin (Deputy Chair), Richard Dyble, Rob Walton, Timothy Berry, Weihe Qin and Wijdan Yousuf (Chair).]

1. Overview

Under IFRS 17, insurers are required to determine discount rates to reflect the time value of money and financial risks when calculating insurance liabilities.

Paragraphs 36 and B72 – B85 outline the principles for calculating the discount rates and when they should be used. In brief, the discount rates should be market consistent, reflect the timing, currency and liquidity of the underlying liabilities and should allow for credit risk (excluding the own credit risk that is specific to the entity). Discount rates can be calculated using either a top-down or bottom-up approach. That is, in the former case, by starting with an expected return on a reference portfolio and eliminating factors such as credit risk premium, or, in the latter case, by starting with the risk-free-rate and adding a liquidity premium consistent with the underlying liabilities.

For insurance and reinsurance contracts valued using the General Model (GM) approach, discount rates determined at initial recognition are used to accrete interest on the Contractual Service Margin (CSM) and to measure changes to the CSM for changes in estimates of future cash-flows for non-financial assumption changes. At the same time current discount rates will be used to calculate the PV of future cash flows shown on the balance sheet. This contrasts with contracts under the Variable Fee Approach where current discount rates are used to discount fulfilment cash-flows shown on the balance sheet and to value the CSM.

This paper is focused on discount rates at initial recognition (or locked-in rates) for GM business; how they might be determined and the potential impacts of selecting a suitable alternative.

2. Choices of discount rates at initial recognition

Once determined, the discount rate at initial recognition is locked in and applied to all contracts within a group for the whole time until the last contract within this group goes off the books. Paragraph B73 states that this discount rate may represent the weighted average discount rate over the period that the group of contracts are issued, which is limited to be no longer than one year apart. However, a common interpretation is that this is just an option and IFRS 17 does not require a weighted average to be used.

In the simplest case, there may be one contract recognition date for the group of contracts, e.g. for bulk annuity contracts. In this case, setting the discount rate at initial recognition equal to the discount rate at point of sale (POS) or start of month (in-line with potential cash-flow modelling) are suitable options. In this case, as there is no other new business in the year, there is only one discount rate curve used to calculate the CSM and by default will equal the discount rates as at initial recognition.

In other more common cases, new contracts may be included in a group of contracts at various dates throughout the period. The discount rate at initial recognition should aim to represent the characteristics of the underlying liabilities in the entire group of contracts. Given that the initial discount rate is designed to measure initial and subsequent measurements to the CSM liability, a theoretical market consistent interpretation would be to set it equal to the weighted average, by a function of contribution to CSM, of the current rates throughout the period. This is assuming that various current rates have been used to calculate the contribution to Group CSM of new contract issued, e.g. on a monthly basis. However, such theoretical approaches may prove challenging to implement in practice due to circular calculations and multiple model runs required.

In practice, there are various options for determining the discount rate at initial recognition which give similar results to the potential theoretical solution outlined above. Some examples include:

- Weighted average of current discount rates throughout the period, with different choices of weights; e.g. premiums, BEL etc.
- Simple (unweighted) average of current discount rates throughout the period
- Start of period discount rate

Each option has its own operational and commercial implications and the accuracy may depend on the volume of new contracts issued and the volatility of discount rates over the period. For example, the start of period discount rate may be suitable if interest rates have been stable over the year and has the advantage of being market traceable. However, weighted average rates may be more suitable for periods with volatile interest rates and new business volumes, however may be operationally difficult to calculate and track.

3. Why does choice of initial discount rate matter?

As highlighted above, the choice of discount rate can have operational and financial impacts on your business. The key financial impacts arise due to the magnitude of CSM profit released due to:

1. Interest accreted on the CSM
2. Adjustments to the CSM for changes in estimates of future liabilities, measured at the locked-in discount rate.

As illustrated below, these impacts could potentially act in different directions and ultimately results in a trade-off between the CSM recognized in revenue and the insurance finance income and expenses (IFIE) line.

Example:

- 2 year policy
- 1,000 premium
- 500 claims at the end of year 1 and year 2
- 1 policy written at inception and 1 at time 0.5 years
- Discount rate at time 0 = 2%, at time 0.5 = 6%
- One possible method to calculate the initial CSM, split in two stages is;
    - The contribution to CSM from policy 1 calculated at time 0 rates
      = NPV{2%, (0, 1,000), (1, -500), (2, -500)} = 29.2
    - The contribution to CSM from policy 2 calculated at time 0.5 rates
      = NPV{6%, (0, 1,000), (0.5, -500), (1.5, -500)} = 56.2
- This gives an initial CSM of 85.4 (=29.2 + 56.2).
- Two possible options for the discount rate at initial recognition are:
    A. Start of period discount rate = 2%
    B. Simple average discount rate = 4%

Table 1: CSM profile for option A

Year	0	1	2
CSM start	85.4	85.4	43.3
Accrete interest		1.1	0.9
Release		(43.3)	(44.1)
CSM end	85.4	43.3	0.0

CSM for policy 1 calculated at time 0: Accrete interest at locked 2% over 1 year;

CSM for policy 2 calculated at time 0.5: Accrete interest at locked 2% over 0.5

Total undiscounted CSM released into profit over the 2 year period is **87.4** (=43.3 + 44.1)

Table 2: CSM profile for option B

Year	0	1	2
CSM start	85.4	85.4	43.9
Accrete interest		2.3	1.8
Release		(43.9)	(45.6)
CSM end	85.4	43.9	0.0

CSM for policy 1 calculated at time 0: Accrete interest at locked 4% over 1 year;

CSM for policy 2 calculated at time 0.5: Accrete interest at locked 4% over 0.5 year;

Total undiscounted CSM released into profit over the 2 year period is **89.5** (=43.9 + 45.6)

Option B: 4% discount rate, will yield an **additional 2.4** undiscounted CSM **profit** released (which will be offset in the IFIE line).

Suppose now that our example is extended such that at the end of time 1, future claims are expected to reduce by 10%. Therefore, the outstanding claim on each policy reduces to 450, giving a total claim amount for both policies in the CSM group of 900. The change in CSM due to changes in estimates of future liabilities, measure at locked-in rates at time 1 will be:

A. 98.0 = NPV{2%, (1, 1,000)} – NPV{2%, (1, 900)}
B. 96.2 = NPV{4%, (1, 1,000)} – NPV{4%, (1, 900)}

Option A: 2% discount rate, will yield an **additional 1.8** undiscounted CSM **profit** released (which will be offset in the IFIE line).

4. Conclusion:

In summary, the key points covered in relation to the discount rate at initial recognition, used to measure the CSM are:

- Discount rates should be consistent with the characteristics of the underlying liabilities within the group of contracts
- The locked in rate is used for GM contracts to accrete interest on the CSM and to measure subsequent changes in the CSM for changes in estimates to future liabilities
- There are different suitable choices for the locked-in rate, where suitability should be assessed based on the financial and operational impact compared to other solutions
- The choice of locked in discount rate could potentially impact the magnitude of future CSM profit released, which will be offset against within IFIE
- The impact will be dependent on the volume of new contracts issued and volatility of discount rates over the initial period and by subsequent changes to estimates of future liability cash-flows.

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