Discounted vs. Undiscounted coverage units

In this article, we will explore some implications of using discounted or undiscounted coverage units.

In the previous article, we discussed how to identify coverage units for a group of contracts. The next step for an entity is to determine the CSM allocation rate (also referred to as 'CSM amortization rate') to use for the current reporting period. This rate represents the entity's view of the amount of service provided in that period as a proportion of total service to be provided (i.e. in all future time periods including the current period).

A question arises at this point in estimating the amount of service provided in the future, should an entity use undiscounted or discounted coverage units?

First, let us consider the scenario where an entity uses undiscounted coverage units. In the example shown below, we have identified coverage units that results in a reducing pattern of expected coverage units over a period of five years (shown in row a). Row b is calculated as the sum of expected coverage units in the current and future periods.The amortization rate (row c) in each period is then calculated as a ratio of (a) and (b). The CSM at inception (row d) is assumed to be 10,000 units and unwind of the discount rate on the CSM (row e) is calculated at an assumed interest rate of 10% p.a. The amount of CSM released in a given period (row f) is determined by applying the amortization rate on the CSM after allowance for interest accretion for the period. The CSM at the end of period is consequently the net result of each of the elements above.

Policy year	1	2	3	4	5
Expected coverage units (a)	100,000	90,000	80,000	70,000	60,000
Sum of expected coverage units (b)	400,000	300,000	210,000	130,000	60,000
Amortisation rate (c) = (a) / (b)	25%	30%	38%	54%	100%
CSM at beginning of period (d)	10,000	8,250	6,353	4,326	2,196
Interest / Unwind (e) = (d) x (i)	1,000	825	635	433	220
Release of CSM (f) = - [(d) + (e)] x (c)	-2,750	- 2,723	- 2,662	- 2,562	- 2,416
CSM at end of period (g) = (d)+(e)+(f)	8,250	6,353	4,326	2,196	-
Release pattern (h) = - (f) / (a)	2.75%	3.03%	3.33%	3.66%	4.03%

Discount rate (i): 10%

For the purposes of explanation, we have also calculated a release ratio (row h) by considering the amount of CSM released as a proportion of the amount of service provided i.e. expected coverage units. This ratio does not need to be calculated or disclosed, it is only being presented here for explanatory purposes. We find that this ratio increases at each reporting period which means that we are proportionally releasing more CSM in the later years compared to the amount of service identified in that period. This is because the undiscounted coverage unit results in the deferral of interest earned on CSM in current period and hence inflates the service provided in future years.

Let us now approach the same example with discounted coverage units. In this scenario, the future coverage units are adjusted for the time value of money and we have a revised denominator in the computation of amortisation rate. The interest rate applied to unwind the discount rate on

the CSM and the rate used to calculate the present value of coverage units has been kept equal in this example for consistency.

Policy year	1	2	3	4	5
Expected coverage units (a)	100,000	90,000	80,000	70,000	60,000
Present value of expected coverage units (b)	341,507	265,657	193,223	124,545	60,000
Amortisation rate (c) = (a) / (b)	29%	34%	41%	56%	100%
CSM at beginning of period (d)	10,000	7,779	5,658	3,647	1,757
Interest / Unwind (e) = (d) x (i)	1,000	778	566	365	176
Release of CSM (f) = - [(d) + (e)] x (c)	- 3,221	- 2,899	- 2,577	- 2,255	-1,933
CSM at end of period (g) = (d)+(e)+(f)	7,779	5,658	3,647	1,757	-
Release pattern (h) = - (f) / (a)	3.22%	3.22%	3.22%	3.22%	3.22%

Discount rate (i): 10%

The release pattern (row h) in this case is a constant ratio in each period and shows a more uniform release pattern compared to the undiscounted coverage units scenario. Note however that this does not mean that a constant ratio should be locked in to or should even be expected the rest of the policy term; the ratio will change as actual experience emerges and as the entity's assumptions about the future change.

We note that the results will be materially different under the two approaches for business with longer duration. On the other hand, for contracts with a short duration, the release pattern may not be significantly different and an entity may apply undiscounted coverage units for ease of computation (though consistency between methodologies for different portfolios should also be taken into account).

As mentioned earlier, there is no prescribed approach and an entity needs to form their own opinion as to whether discounted or undiscounted coverage units best capture their view of measurement of service. If you have any questions or comments on this topic, please get in touch through the comments section.

On behalf of the IFRS 17 CSM Working Party

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