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Asset Dependency Discounting—A Flaw in IFRS 17?

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I n this article, I will discuss the issue of asset dependency discounting as addressed by IFRS 17.

According to paragraph B74:

> Estimates of discount rates shall be consistent with other estimates used to measure insurance contracts to avoid double counting or omissions; for example:
>
> a. Cash flows that do not vary based on the returns on any underlying items shall be discounted at rates that do not reflect any such variability;
>
> b. Cash flows that vary based on the returns on any financial underlying items shall be:
>
> i. Discounted using rates that reflect that variability; or
>
> ii. Adjusted for the effect of that variability and discounted at a rate that reflects the adjustment made.

At first glance, the application of the standard seems to be clear: discount asset-dependent cash flows (ADCF) by a risk discount rate, and discount non-asset-dependent cash flows (NADCF) by the risk-free rate. In the example of a traditional life (TL) participating (PAR) product, dividend-related cash flows will be asset-dependent, while other guaranteed cash flows, including premium and expenses, will be non-asset-dependent. The intention for this is good in that cash flows will be discounted at the discount rate that reflect their risk characteristics. If a company is using fixed cash flows to fund risky investments, those cash flows will be discounted at a lower rate (i.e., risk-free rate) and the interest spread will be earned in a separated line called "finance result" (i.e., investment margin) instead of "insurance service result" (i.e., underwriting margin).

However, the above statement is faulty since it ignores the cash flows' ability to affect the returns on the underlying item. To illustrate this, consider the following hypothetical product: a 3-pay-5 universal life contract where the policyholder gets 100 percent of the investment return (assumed 5 percent). A benefit is only payable upon maturity, regardless of whether the policyholder died or not. For illustrative purpose, assume no policyholder will lapse and no expenses, charges or deductions. Assume the risk-free rate to be 3 percent. Table 1 shows the account value roll-forward and the cash flows.

Table 1

AV Roll Forward			Cashflows	
Premium	Return	AV	Premium	Mat Ben
100	5%	105.00	100	
100	5%	215.25	100	
100	5%	331.01	100	
	5%	347.56		
	5%	364.94		364.94

And the split cash flow discounting is as shown in Table 2.

Table 2

Split CF Discount		
ADCF	NADCF	BEL
285.94	-291.35	-5.41
300.24	-197.09	103.15
315.25	-100.00	215.25
331.01	0.00	331.01
347.56	0.00	347.56
0.00	0.00	0.00

One can see that if we use the risk-free rate to discount the premium (which does not vary based on the returns on any underlying items), but use a risk-discount rate to discount the maturity benefit, this will result in day-one negative best estimated liability (BEL). This negative BEL will become the contractual service margin (CSM) at initial recognition, and amortized in future years.

However, there is no gain or loss from the insurer side for this contract. Since the insurer is crediting exactly what it earns to the policyholder, even if we considered there is an interest spread (5 percent investment return vs 3 percent interest expense), this gain is solely attributed to the policyholder, not the insurer. The day-one CSM built up from the insurer side is double counting the economic value of this contract.

Therefore, I believe the correct statement for B74 should be "two-way" instead of "one-way." I believe that (a) should read "cash flows that do not vary based on, and do not affect the returns on, any underlying items …" and that (b) should read "cash

flows that vary based on, or may affect the returns on, any financial underlying items. …"

In the amended statement, there are two ways of splitting the cash flow:

1. Consider all cash flows as ADCFs. Say, for a unit-linked contract, even the "guaranteed" part of cash flows like guaranteed minimum death benefit (GMDB) will not be paid since the contract is lapsed if the account value drops to 0. By nature it is like a deep out-of-the-money (OTM) call contract, and hence is an embedded derivative, thereby all cash flows are asset dependent.

2. Split the cash flows with the premiums backing it. Say, for a TL PAR contract, we can consider the guaranteed cash flows to be non-asset-dependent but the non-guaranteed cash flows to be asset-dependent. It is theoretically possible to separate the portions of premium backing each part. For example, calculate the NADCF BEL and ADCF BEL, determine their ratios and use the same ratio to split the premium. This is shown in Table 3. (However, this method should only be used if the NADCFs will not affect the underlying item and its subsequent sharing mechanism, like bonuses for TL PAR, or fees and charges for UL)

Table 3

Split CF Discount		
NADCF BEL (Excl Prem)	ADCF BEL (Excl Prem)	BEL (Excl Prem)
138.02	142.97	280.99
142.16	150.12	292.28
146.42	157.63	304.05
150.82	165.51	316.32
155.34	173.78	329.12
0.00	0.00	0.00

Portion	
NADCF %	ADCF %
49%	51%

One may argue that, according to Paragraph B77, the splitting of cash flows is not required:

> IFRS 17 does not require an entity to divide estimated cash flows into those that vary based on the returns on underlying items and those that do not. If an entity does not divide the estimated cash flows in this way, the entity shall apply discount rates appropriate for the estimated cash flows as a whole, for example, using stochastic modelling technique or risk-neutral measurement techniques.

This statement appears to be referencing B74(b)(ii), such that using risk-neutral measurement techniques may avoid the split of cash flow problem. Firstly, I believe that the risk-neutral measurement technique should not be allowed in IFRS 17 except for calculating the time value of options and guarantees (TVOG). Secondly, even if a risk-neutral measurement technique is adopted, the above logic still does not stand. In the variable fee approach (VFA) model, the subsequent measurement needs to be unlocked by a change in the NAD BEL and a change in variable fees from the underlying item. The splitting of premium is still required to calculate the underlying item (i.e., asset share) backing ADCFs but not NADCFs assuming the NADCFs will not affect the underlying item.

To conclude, I believe the IASB should change the wording in B74 as noted above. And even after this change, the classification of asset dependent cash flows and splitting of premium will still be another debatable topic, regardless of whether the company uses risk-neutral measurement techniques. ■

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