Measurement of insurance liabilities in accordance with IFRS 17

A practical example
The new standard will have far-reaching consequences for insurance companies, not only as regards modelling, data collection, processes or systems but, most of all, it may profoundly change the presentation of profits by such entities.

After a long-standing debate, IFRS 17, a new reporting standard applicable to insurance contracts, has been published and will become effective as of 1 January 2021. Its implementation is aimed to introduce a consistent approach to the measurement of liabilities under insurance contracts and to guarantee more transparent methods for insurance companies to recognize their profits during the period of provision of insurance services.

While the purpose of our previous article was to discuss the key challenges posed by the new requirements (Seven reasons to focus on IFRS 17), this time we would like to focus on illustrating the basic differences between the existing IFRS 4 and the new IFRS 17 with respect to the measurement of liabilities as well as recognition of profits over time. To this end, we will use the example of a simple life insurance product.

A BRIEF REMINDER

Before we consider the practical example, though, we would like to present a concise summary of the key liability measurement methods available under the new standard. IFRS 17 introduces a General Model for the measurement of liabilities, which is frequently referred to as the Building Block Approach or BBA, and its simplified version called the Premium Allocation Approach (PAA).

BBA is the basic method that may be used for all products, both life and non-life insurance contracts. For products which satisfy detailed requirements for the insured’s direct share in the profit or loss on specific underlying instruments, such as an asset, index, the entity’s profit or loss or other, a modified method is used, which is known as the Variable Fee Approach (VFA). PAA is a method used in insurance where the coverage period is relatively short (e.g. property or group insurance). It is allowed only in the case of liabilities which are related to future coverage.

In this article, we will focus on BBA exclusively as it illustrates the most important ideas lying behind the approach adopted by the authors of the new standard. In line with the said method, a liability is measured as the total of

- Block 1 and Block 2. Present value of future cash flows necessary to fulfil insurance obligations under a contract ("Fulfilment Cash Flows" or "FCF"). It is a current estimate of all future cash flows of an insurance company that are directly related to a contract (e.g. premiums, benefits, directly allocable costs etc.). Calculations should be based on as up-to-date assumptions as possible and take account of a wide range of scenarios as to the development of cash flows. The value of Block 1 is the nominal value of
cash flows, while Block 2 represents an adjustment that needs to be made to reflect changes in the time value of money (effects of discounting). On the graphs included into the example, the component is marked as EPV (expected present value of future cash flows).

- **Block 3. Risk Adjustment (“RA”).** As the first two Blocks describe the expected value of future benefits, it is advisable to earmark additional funds for an uncertainty related to the first Block estimate. They will constitute an additional buffer to guarantee a safety margin should a negative scenario play out.

- **Block 4. Contractual Service Margin (“CSM”).** It is the present value of expected profits on an insurance contract which are attributable to future periods and recognized over time as the insurance service is performed. The introduction of CSM, which is determined explicitly and presented on the balance sheet, is a fundamental change in the previous approach to the measurement of liabilities.
A NEW STATEMENT OF PROFIT OR LOSS

A statement of profit or loss in IFRS 17 will differ from the existing one in several key respects. The said change is driven by the intention to standardize financial statements and the approach to insurance in the same way as it is the case for other types of activity which involves the provision of financial services. The new statement of profit or loss will rely more heavily on actuarial calculations. Additionally, it introduces a very clear distinction between insurance and investment profit or loss. However, elimination of the approach to recognition of revenue based on premiums written in each period is by far the major modification. Here, it is natural to ask what to replace the information that has been presented before with. IASB has got an interesting idea based on the principle of equivalence of benefits. Instead of recognizing premiums written within revenue, one may present those components which the premiums collected are supposed to finance. Consequently, insurance companies will present the amounts of claims, benefits and costs expected in the period (which represent the performance of an insurance service), amortization of the risk adjustment (relating to the expiry of a portion of risk involved in the provision of an insurance service in the period) and of CSM (fee for service performance). Let’s have a closer look at the much-simplified new form of the financial statements in the part concerning insurance activity (see the table).

It should be emphasized that the new statement of profit or loss no longer includes an item directly describing a change in the reserve which used to be one of the crucial (but least transparent at the same time) factors affecting the entity’s profit or loss. To put it simply, a profit or loss under IFRS 17 will result from:

- a difference between the previous expectations as to costs, claims and benefits and their actual level in the current period;
- release of a portion of CSM related to insurance services provided currently;
- release the risk adjustment in connection with insurance risk expiry.

EXAMPLE – INTRODUCTION

We have decided to illustrate the differences between IFRS 4 and IFRS 17 based on a single-premium term life insurance product. Assumptions made for purposes of measurement:

- the starting number of policies is 1,000;
- the insurance contract is entered into for a term of 5 years and the sum insured is EUR 500,000;
- the death probability in each year is estimated at a conservative level of 1% (for purposes of mathematical reserves in IFRS 4), while the best estimate of the mortality rate is 0.5%;
- regular annual expenses are estimated at EUR 400,000 for the entire portfolio;
• the single premium is EUR 29,000 per policy;
• non-recurring acquisition costs (fee) are EUR 9,000 per policy.

As a simplification, let’s assume that the insured do not resign before the contract termination date and ignore all investment effects (the technical rate of 0%). We have been working on the assumption that when creating a mathematical reserve, a cost component is considered and the acquisition costs are deferred by the insurance company, which recognizes and amortizes DAC (deferred acquisition costs) on a straight-line basis.

This example has been simplified deliberately so that we can focus on the new aspects of IFRS 17, the mechanics of determining changes in the level of liabilities as well as comparing IFRS 17 with IFRS 4, without complicating the calculations too much.

In the calculations presented below we assumed that, for the purpose of reporting in accordance with IFRS 4, the insurance company relies on measurements made in line with Hungarian Accounting Standards.

INITIAL MEASUREMENT

In order to measure the contract, first we have to determine the expected amount of cash flows that are directly related to that contract, to include premiums, benefits and costs (along with those relating to acquisition) over its entire term. In this example, cash flows will total EUR -5.50 million and include the components indicated in Figure 1.

As a result of a simplification where we ignore the investment effects, the said amount does not have to be adjusted – Block 2 equals zero. We assume that Block 3 (risk adjustment) represents 6% of the single premium amount (EUR 1.74 million) and that it will be amortized on the straight-line basis in subsequent years.

![Figure 1: Measurement at recognition](image)

Considering that before single premium collection the liability should total zero, CSM is recognized in the amount of EUR 3.76 million. The initial
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measurement and the expected development of the Blocks at the end of each projection year have been presented in Figure 2.

A comparison of the projected profit or loss of the insurance company under IFRS 4 and under IFRS 17 has been presented in Figure 3. Let’s analyze the profit sources in each year, applying the current accounting standards. In the first year, we will realize the entire surplus of collected premium over the amount of the mathematical and cost reserves recognized before. In the subsequent years, profits are derived from the difference between the expected amount of benefits paid (with a mortality rate of 1%), as assumed at the time when the reserves are recognized, and the actual benefits paid by the entity (with a 0.5% mortality rate). The said profits are reduced by amortization of the costs of fees incurred at the time when the insurance product is sold. Thus, profits are generated by way of releasing the safety margins embedded in reserves.

The presentation of profit or loss under IFRS 17 is strikingly different. The new standard does not allow entities to realize profits immediately when the premium is written. The entire expected profit is deferred through CSM and released over time as the insurance service is performed. Assuming that the rate of return on investment is 0%, the total profits generated within a 5-year projection period are the same in both cases, with the only difference being the time when they are earned.

Figure 2: The initial measurement and the expected development of the Blocks at the end of each projection year
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Figure 3: Performance under IFRS4 and IFRS17

**Year 1**

**Full compliance with actuarial assumptions**

For purposes of our example, let’s assume that the actual level of claims and benefits paid and costs incurred by the entity is consistent with the assumptions. Consequently, Block measurement and realized profits are the same as projected at initial recognition of the contract.

**Year 2**

**Higher costs in the current reporting period**

Let’s assume that a one-off (double) increase in the level of costs incurred by the entity is observed in the second year of insurance. The insurance company presumes that the increase is a non-recurring event and does not necessitate modification of the assumptions applicable to future costs. Consequently, the change will be reflected in profit or loss for the period without having any impact on the profile of future profits. This is due to the fact that differences in assumptions which do not affect the measurement of future cash flows and concern losses that have occurred (equalization reserves) or the current period are disclosed in the year of the change (Figure 4).

A reduction in profits is the case for both standards in the second projection year, exactly by the amount that has increased the operating expenses (i.e. 400,000).

**Year 3**

**Change in future cost assumptions**

Let’s assume that higher costs are also observed in the following year. This may be a strong indication that the effect is not non-recurring but may last over time.

In such a case, future cost assumptions should be revised when liabilities are measured in accordance with IFRS 17.
This will increase the expected future cash flows (Block 1+2). It does not necessarily mean, though, that a large loss relating to an increase in the value of insurance liabilities will have to be recognized on a one-off basis, as it will be mostly absorbed by CSM (but only to the unamortized margin level).

Therefore, a change in future cost assumptions shall not materially affect the current year’s performance (the possible impact is limited to a partial margin adjustment, which shall be allocated to profit or loss for the current period), while it will be reflected in the performance profile of subsequent years.

Figure 4: Comparing the performance under IFRS 4 and IFRS 17 after cost modification

<table>
<thead>
<tr>
<th>Year</th>
<th>IFRS4</th>
<th>IFRS17</th>
<th>Performance under IFRS 17 prior to modification of assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>3 000 000</td>
<td>1 107 596</td>
<td>1 107 596</td>
</tr>
<tr>
<td>Year 2</td>
<td>300 000</td>
<td>703 798</td>
<td>703 798</td>
</tr>
<tr>
<td>Year 3</td>
<td>300 000</td>
<td>431 980</td>
<td>1 100 000</td>
</tr>
<tr>
<td>Year 4</td>
<td>200 000</td>
<td>829 535</td>
<td>1 096 202</td>
</tr>
<tr>
<td>Year 5</td>
<td>100 000</td>
<td>827 091</td>
<td>1 092 404</td>
</tr>
<tr>
<td>Total</td>
<td>3 900 000</td>
<td>3 900 000</td>
<td>5 100 000</td>
</tr>
</tbody>
</table>

Figure 5: Comparing the performance under IFRS 4 and IFRS 17 after modification of cost assumptions
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Figure 6 presents the effect of changes in cost assumptions in the analyzed scenario on the values of each Block of a liability determined in accordance with IFRS 17 at the end of the third projection year.

Figura 6: Effects of changes in cost assumptions on the value of each liability block

At the same time, the profits observed in a projection prepared in accordance with IFRS 4, which is currently in force, are considerably lower. Recognition of the major part of profit that was taken into consideration in insurance premium calculation in the first projection year has considerably reduced the possibility to absorb the effects of future adverse changes.

SUMMARY

The above example shows how considerable the difference in the profile of profits recognized by an entity under the same insurance contract may be following the transition from IFRS 4 to IFRS 17. The new standard will have far-reaching consequences for insurance companies, not only as regards modelling, data collection, processes or systems but, most of all, it may profoundly change the presentation of profits by such entities. No doubt, preparation of financial statements will become a more demanding process. However, the presentation of profit or loss will be more transparent as most of the safety margins embedded thus far in reserves will be shown explicitly, through CSM and RA.

The standard will not become effective in the next few years. But in the context of the revolutionary changes to the presentation of profit it seems advisable now to ask oneself the following question: "What will my insurance company's profit profile look like in the future in light of IFRS 17?"