INTRODUCTION

The Mazars Insight series on IFRS aim at helping preparers, users and auditors of financial statements develop their theoretical and practical understanding of IFRSs. Our objective is to provide our readers, whether beginners or experts, with useful tools which provide clarity and insight on the challenging issues that may be encountered when applying IFRSs. Concepts are explained in a pedagogical way and illustrated by numerous practical examples.

This IFRS Insight addresses the accounting for financial instruments under IFRS. It draws on several relevant IFRS standards to tackle, in one manual, the entire range of challenges related to financial instruments among which: recognition and derecognition, classification and measurement, impairment for credit risk, derivatives and hedging, and related disclosures. It includes all the new requirements introduced by IFRS 9 and the related amendments to other standards such as IFRS 7.

After a two-pager providing an overview of IFRS requirements for financial instruments in 10 key points, a table of content shows the list of chapters. Each chapter starts with a detailed table of content to direct readers straight to the topic they are searching for. Many cross references have been inserted for improved reading experience. We draw specific attention to chapter 2 which comprises the definitions and the list of abbreviations and acronyms used in this manual.

Our special thanks are addressed to the international team of authors who contributed to this manual: Egle Mockaityte, Florence Michel, Heike Hartenberger, Mohamed Taghia and Nicolas Millot. Additional thanks go to Isabelle Grauer-Gaynor, Marie Fossat and Marion Platevoet for their precious help in finalising this publication.

Vincent Guillard
IFRS Lead Partner for Financial Instruments
10 KEY POINTS TO REMEMBER

1. Scope
The accounting treatment of financial instruments under IFRS is defined by several standards. IFRS 9 – Financial Instruments provides requirements for recognition and derecognition, classification, measurement (including impairment) and hedge accounting. IAS 32 – Financial Instruments: Presentation provides principles for distinguishing issued debt and equity instruments as well as requirements for offsetting financial assets and financial liabilities. IFRS 7 – Financial Instruments: Disclosures deals with most of the disclosure requirements, and IFRS 13 – Fair Value Measurement provides guidance on fair value measurement and related disclosure requirements. Each of these standards has specific scope exclusions, even for items that meet the definition of financial instruments. (see chapter 1)

2. Initial recognition
All financial instruments are initially recognised when the entity becomes party to the contract. Financial assets or liabilities are initially measured at their fair value plus or minus transaction costs, except financial instruments classified at FV-PL for which transaction costs are directly expensed into profit or loss. However, trade receivables are initially measured at their transaction price if they do not contain a significant financing component in accordance with IFRS 15. When the transaction price differs from the initial fair value of that financial instrument, a so called “day one gain or loss” may need to be recognised upon initial recognition in profit or loss. (see chapter 6)

3. Classification of financial assets
Financial assets whose contractual cash flows are Solely Payments of Principal and Interest (the SPPI test) will be classified in accordance with the entity’s business model for managing the asset: Amortised Cost if they are subject to a Hold-To-Collect business model, FV-OCI if they are held within a Hold-To-Collect-and-Sell business model, or FV-PL in any other situation. Financial assets that do not pass the SPPI test (e.g. derivatives and equity instruments) must be classified in the FV-PL category, except for some equity instruments which the entity may irrevocably classify in FV-OCINR.

Subsequent reclassifications are limited to SPPI financial assets, upon a change in the entity’s business model and are thus expected to be very infrequent.

Subject to specific conditions (e.g. when a situation of an accounting mismatch would otherwise arise), an entity may irrevocably classify any financial asset as measured at FV-PL upon initial recognition. (see chapter 7)

4. Impairment for expected credit losses
Entities must recognise an allowance for expected credit losses for all financial assets classified in the Amortised Cost or FV-OCI category, as well as for most loan commitments and financial guarantees issued. Upon initial recognition of the instrument, the loss allowance is equal to the credit losses that the entity expects as a result from default events occurring within the next 12 months (12MECL). This amount is updated at each reporting date. When a Significant Increase in the Credit Risk (SICR) of the asset is identified, the loss allowance must be measured at an amount equal to the credit losses that the entity expects to occur over the full remaining life of the asset (LTECL).

Purchased or originated credit-impaired (POCI) assets (i.e. assets with existing incurred credit losses upon initial recognition) follow a separate impairment and revenue recognition model.
A simplified expected credit loss impairment approach is mandatory for short term trade receivables and contract assets, and optional for other trade receivables and contract assets, and lease receivables. (see chapter 9).

5. Classification of financial liabilities
Most financial liabilities are classified in the Amortised Cost category unless they are held for trading, or meet the conditions for a voluntarily classification in the FV-PL category upon their initial recognition. (see chapter 8)

6. Debt vs. Equity
Financial instruments issued that are in the scope of IAS 32 must be analysed to determine whether they meet the definition of an equity instrument or that of a financial liability. An instrument is generally classified as a financial liability if it requires the entity either to deliver cash or another financial asset, or to deliver a variable number of its own equity instruments. A derivative may qualify as an equity instrument if it will be settled only by the issuer exchanging a fixed amount of cash for a fixed number of own equity instruments. Compound instruments contain both a liability and an equity component which must be accounted for separately.

7. Embedded derivatives
Derivative instruments may be either stand-alone contracts, or a feature embedded in a financial liability host contract or a non-financial host contract. Embedded derivatives must be bifurcated and accounted for separately as a stand-alone derivative if they are not economically closely related to their host contract. (see chapter 13)

8. Hedge accounting
Under IAS 39 and IFRS 9, most derivatives are by default measured at FV-PL whereas non-derivative financial assets and financial liabilities are often measured at amortised cost or FV-OCI. This situation may trigger accounting mismatches in profit or loss despite a proper economic offset between the hedging derivative and the hedged exposure. To better reflect the hedging strategy of the entity, IFRS 9 provides specific and optional accounting treatments for hedging relationships. The accounting impact depends on the nature of the hedging relationship (fair value hedge, cash flow hedge or net investment hedge). Hedge accounting is subject to eligibility, effectiveness and documentation-related conditions. (see chapter 14)

9. Derecognition
A financial asset is derecognised when and only when the contractual rights to the cash flows expire, or when the asset is transferred and this transfer meets the derecognition requirements. This test relies mainly on two criteria: the transfer of the contractual rights to the cash flows, and the transfer of the risks and rewards of ownership of the financial asset.

A financial liability is removed from the statement of financial position when it is extinguished. An exchange or modification of debt instruments, between an existing lender and borrower, is considered as an extinguishment of the original instrument if the terms of the original and the “new” instrument are substantially different.

10. Disclosures on financial instruments
The disclosure requirements aim at enabling the users to assess the significance of financial instruments for the entity, the nature and extent of risks arising from them, and how the entity manages those risks. (see chapter 16)
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ON FINANCIAL INSTRUMENTS

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CHAPTER 4
AMORTISED COST
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4.1. Introduction

Following their initial recognition in the balance sheet, financial instruments are measured either at fair value or at amortised cost depending on their contractual features and the entity’s business model for managing them, as explained in chapter 7.

The principles of fair value measurement are detailed in chapter 3 whereas chapter 4 deals with the principles for the calculation of the amortised cost.

The amortised cost of a financial instrument takes into account all the contractual terms and conditions of the instrument (e.g. its amortisation schedule, type of interest rate, etc.). It does not reflect however the changes in its market value. Amortised cost therefore normally generates less volatility in the financial statements than measurement at fair value.

IFRS 9 requires that amortised cost be determined using the Effective Interest Rate method which is a technique for allocating the different fees, costs and remuneration (interest payments, premiums, discounts…) of a debt financial instrument over its expected life.

Note: in this chapter, to simplify the examples, we will assume that no impairment on financial assets takes place at their initial recognition or during subsequent periods, so amortised cost is systematically equal to gross carrying amount.

4.2. Scope

Amortised cost must be calculated for the following financial assets / liabilities:

— financial assets and financial liabilities measured on the balance sheet at their amortised cost subsequently to their initial recognition. These include:
  > financial assets that meet the following criteria:
    - they both pass the SPPI test and are managed within the Hold-to-Collect business model (see sections 7.4.3 and 7.4.2.2),
    - and they have not been designated by the entity as measured at FV-PL (see section 7.4.5);
  > most financial liabilities, except for (a) all derivatives and (b) for financial liabilities held-for-trading or designated as measured at FV-PL, subject to conditions (see IFRS 7.4.2.1 and chapter 8).

— financial assets that are debt instruments measured at fair value through other comprehensive income with recycling to profit or loss (FV-OCI). These are financial assets that:
  > both pass the SPPI test and are managed within the Hold-to-Collect-and-Sell business model (see sections 7.4.3 and 7.4.2.3); and
  > have not been designated by the entity as measured at FV-PL (see section 7.4.5).

Even though financial assets in the FV-OCI category are not presented on the balance sheet at their amortised cost (but rather at their fair value), entities do need to calculate their amortised cost at each reporting date. This is because the FV-OCI category leads simply to (a) present the fair value of the asset on the balance sheet and (b) determine the impacts in profit or loss of the period (i.e.
Interest revenue and impairment losses and gains) in accordance with amortised cost measurement. Thus, the impacts in OCI act mechanically as a buffer between the two measurement methods.

See chapter 9 for details on which categories of financial instruments are measured at amortised cost or at fair value after their initial recognition.

4.3. Definitions

IFRS 9 (Appendix A) defines amortised cost as:

— the amount at which a financial asset or a financial liability is measured at initial recognition
— minus principal repayments
— plus or minus the cumulative amortisation using the effective interest method of any difference between that initial amount and the maturity amount, and,
— for financial assets, adjusted for any loss allowance 1.

The effective interest rate (EIR) method is a technique used to calculate the amortised cost of a financial asset or a financial liability and allocate and recognise the financial revenues / expenses in profit or loss over the relevant period.

The effective interest rate is the rate that exactly discounts the estimated cash payments or receipts through the expected life of a financial asset (or financial liability) to the gross carrying amount of that financial asset (or financial liability) (IFRS 9 Appendix A).

The effective interest rate of a financial instrument is normally determined once and for all upon the initial recognition of that instrument. It will only be revised subsequently in one of the following 5 situations:

> floating rate instruments with EIR calculated in accordance with IFRS 9.B5.4.5 (see section 4.7);
> when new transaction costs are incurred (for example, costs incurred in relation to a modification of the contractual terms of a financial instrument that does not lead to its derecognition); or
> upon the discontinuation of a fair value hedge of a financial instrument measured at amortised cost (IFRS 9.6.5.10, see chapter 14 for more details); or
> when a financial instrument ceases to be remeasured at fair value in accordance with the option to designate a credit exposure as measured at FV-PL (see chapter 14); or
> upon the reclassification of a financial asset out the FV-PL category into the amortised cost or FV-OCI category (IFRS 9.5.6.3, 5.6.6 and B5.6.2, see section 7.5).

When calculating the effective interest rate, an entity must estimate the expected cash flows by considering all the contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) but must not consider the expected credit losses. The only exception is the very specific case of Purchased or Originated Credit Impaired instruments (POCI). See chapter 9 for more details on this specific accounting treatment.

1 In this chapter, to simplify the examples, we will assume that no impairment on financial assets takes place at their initial recognition or during subsequent periods, so amortised cost is systematically equal to gross carrying amount.
The calculation of the EIR also includes all fees and points paid or received between parties to the contract that are an integral part of the effective interest rate (see below), transaction costs / fees and all other premiums or discounts.

IFRS 9 (Appendix A) defines transaction costs as incremental costs that are directly attributable to the acquisition, issue or disposal of a financial asset or financial liability. An incremental cost is one that would not have been incurred if the entity had not acquired, issued or disposed of the financial instrument.

Fees that are an integral part of the effective interest rate of a financial instrument include:

- origination fees received by the entity relating to the creation or acquisition of a financial asset. Such fees may include compensation for activities such as evaluating the borrower’s financial condition, evaluating and recording guarantees, collateral and other security arrangements, negotiating the terms of the instrument, preparing and processing documents and closing the transaction. These fees are an integral part of generating an involvement with the resulting financial instrument;
- commitment fees received by the entity to originate a loan when the loan commitment is not measured at FV-PL and if it is probable that the entity will enter into a specific lending arrangement. These fees are regarded as compensation for an ongoing involvement with the acquisition of a financial instrument. If the commitment expires without the entity making the loan, the fee is recognised as revenue on expiry;
- origination fees paid on issuing financial liabilities measured at amortised cost. These fees are an integral part of generating an involvement with a financial liability. An entity distinguishes fees and costs that are an integral part of the effective interest rate for the IFRS 9 financial liability from origination fees and transaction costs relating to the right to provide services, such as investment management services.

Fees that are not an integral part of the effective interest rate of a financial instrument are accounted for in accordance with IFRS 15. They include:

- fees charged for servicing a loan;
- commitment fees to originate a loan when the loan commitment is measured at FV-PL, or if it is unlikely that a specific lending arrangement will be entered into; and
- loan syndication fees received by an entity that arranges a loan and retains no part of the loan package for itself (or retains a part at the same effective interest rate for comparable risk as other participants).

### 4.4. Amortised cost and initial recognition

Any financial instrument that will subsequently be measured at amortised cost is initially recognised at its initial fair value, plus or minus transaction costs that are directly attributable to the acquisition or issue of that financial instrument (IFRS 9.5.1.1), plus or minus any fees that are an integral part of the effective interest rate (IFRS 9.B5.4.1).

For a financial liability, transaction costs as well as fees paid upfront are deducted from the fair value at initial recognition (IFRS 9.IG.E.1.1).
Example 4.1

For a debt issued for €100 where €5 were paid to the bank in fees and costs, the initial amortised cost is equal to €95.

For a financial asset, transaction costs are added to the fair value at initial recognition (IFRS 9.IG.E.1.1) whereas fees received upfront are deducted from the fair value at initial recognition.

Example 4.2

For a bond purchased for €100 where €1 transaction cost was incurred (e.g. intermediary fees), the initial amortised cost is equal to €101.

Example 4.3

For a loan granted for €100 where €3 upfront fees (prepaid interest) have been received by the bank, the initial amortised cost is equal to €97.

For more information on the initial measurement of financial instruments, see chapter 6.

4.5. Amortised cost at subsequent periods: a numerical example of amortised cost and EIR calculation

The following example illustrates the principles underlying the calculation of the amortised cost and the effective interest rate (EIR) for a fixed-rate financial asset:

— On 1 January 2019, entity A purchases a non-amortising, non-callable debt instrument with five years remaining to maturity for its fair value of €995 and incurs transaction costs of €5. The instrument has a nominal value of €1,250 and carries a contractual fixed interest of 4.7% payable annually at the end of each year (4.7% * €1,250 = €59). Its redemption amount is equal to its nominal value plus accrued interest.

— The instrument qualifies for a measurement at amortised cost. As explained in the preceding section, its initial carrying amount is the sum of the initial fair value plus transaction costs, i.e. €1,000.

— The Effective Interest Rate (EIR) is the rate that exactly discounts the expected cash flows of this financial asset, presented in the table below, to its initial gross carrying amount (i.e. €995 + €5 = €1,000 in this example). In practice, entities will need to establish a timetable of all the expected cash flows of the financial instrument (see the table below) and then use for example an Excel formula to determine this rate. The table below summarises the timing of the expected cash flows of the instrument:
In the present case, using an Excel formula, the EIR amounts to 10%. The following table shows that the sum of the discounted cash flows amounts to zero:

<table>
<thead>
<tr>
<th>Acquisition cost (1)</th>
<th>01/01/19</th>
<th>31/12/19</th>
<th>31/12/20</th>
<th>31/12/21</th>
<th>31/12/22</th>
<th>31/12/23</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-1,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interest revenue (2)</th>
<th>31/12/19</th>
<th>31/12/20</th>
<th>31/12/21</th>
<th>31/12/22</th>
<th>31/12/23</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>294</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reimbursement of the principal at the maturity date (3)</th>
<th>31/12/19</th>
<th>31/12/20</th>
<th>31/12/21</th>
<th>31/12/22</th>
<th>31/12/23</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,250</td>
<td>1,250</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2,500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TOTAL OF EXPECTED CASH FLOWS</th>
<th>01/01/19</th>
<th>31/12/19</th>
<th>31/12/20</th>
<th>31/12/21</th>
<th>31/12/22</th>
<th>31/12/23</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1,000</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>1,309</td>
<td>544</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXPECTED CASH FLOWS DISCOUNTED AT EIR (10%)</th>
<th>01/01/19</th>
<th>31/12/19</th>
<th>31/12/20</th>
<th>31/12/21</th>
<th>31/12/22</th>
<th>31/12/23</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1,000</td>
<td>53</td>
<td>49</td>
<td>44</td>
<td>40</td>
<td>814</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

(1) including transaction costs (commissions, fees...) to be included in the initial carrying amount of the asset
(2) 4.7% * €1,250 = €59
(3) in our example, redemption price equals the nominal value

The table below provides information about the amortised cost, interest income and cash flows of the debt instrument in each annual reporting period:

<table>
<thead>
<tr>
<th>Amortised cost at the beginning of the reporting period</th>
<th>Interest income to be recognised in P&amp;L</th>
<th>Cash flows</th>
<th>Amortised cost at the end of the reporting period</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000</td>
<td>100</td>
<td>59</td>
<td>1,041</td>
</tr>
<tr>
<td>1,041</td>
<td>104</td>
<td>59</td>
<td>1,086</td>
</tr>
<tr>
<td>1,086</td>
<td>108</td>
<td>59</td>
<td>1,136</td>
</tr>
<tr>
<td>1,136</td>
<td>113</td>
<td>59</td>
<td>1,190</td>
</tr>
<tr>
<td>1,190</td>
<td>119</td>
<td>1,309</td>
<td>0</td>
</tr>
</tbody>
</table>

Even if effective interest rate calculation principles are straightforward the implementation for some complex instruments could be challenging. Section 4.8 provides additional examples on how to calculate the amortised cost for financial instruments.
4.6. Revision or modification of cash flows

4.6.1. Revision of cash flow estimates

The EIR of a financial instrument carried at amortised cost is determined on the basis of the contractual cash flows expected by the entity. Some cash flows are not certain to occur, or their timing may not be known with certainty from the outset because of contractually specified contingencies / options. Entities must make estimates for these cash flows when initially calculating the effective interest rate. One example of such situation is cash flows resulting from early repayment options: the initial assumption as to the early repayment date and its amount (or the absence of early repayment) will have a direct impact on the initial effective interest rate. Another example where estimates are needed is the case of an instrument with an interest step-up mechanism where the step-up is not certain to occur (e.g. step-up of 5 b.p. in case of a downgrade of the borrower by an external credit agency).

The amortised cost mechanics will be more complex for such instruments since the amortised cost will have to be recalculated whenever there is a revision of the initially expected cash flows. Revision of estimated cash flows occurs, for example, when an entity no longer expects to early repay its financial liability whose early repayment was initially integrated in the effective interest rate calculation.

IFRS 9.B5.4.6 requires that when an entity revises its estimates of cash flows of a financial instrument measured at amortised cost, the carrying amount of the financial instrument is adjusted to reflect the “newly” expected cash flows. The analysis of the revision or modification of cash flows under this section excludes any change in the expected credit losses.

To calculate the adjustment mentioned above, the entity recalculates the gross carrying amount of the financial asset or financial liability as the present value of the “newly” expected contractual cash flows (i.e. the revised) discounted using the financial instrument’s original effective interest rate (see IFRS 9.6.5.10). The difference between the previous carrying amount of the instrument and the new carrying amount thus calculated at the date of revision is accounted for immediately as of the cash flows’ estimates revision date as income or expense in profit or loss: this is the so-called “catch-up” adjustment. The “catch-up” mechanism is further illustrated in section 4.8.1, for a prepayable financial instrument.

4.6.2. Contractual modification of cash flows

A revision of estimated cash flows differs from a modification of cash flows as the former occurs without any modification to the contractual terms and conditions of the financial instrument. If the contractual terms of a debt instrument are modified, the entity first determines whether this modification shall trigger the derecognition of the instrument (see chapters 10 and 11).

Whenever the contractual terms and conditions of a financial instrument are modified and this modification does not result in the derecognition of that instrument (see chapters 10 and 11), the carrying amount of the financial instrument is adjusted to reflect the “modified” cash flows (IFRS 9.5.4.3 and BC4.253). As the asset has not been derecognised, the original EIR is maintained and will be used to determine the amount of the “catch-up” adjustment that will be recognised in profit or loss in a way similar to the one described in section 4.6.1.
4.7. Floating rate debt instruments

IFRS 9 does not provide clear guidance for the calculation of the amortised cost of floating rate debt instruments.

For floating rate instruments entities do not have a contractual schedule with known amounts of interest. The interest contractual amounts for future periods are uncertain upon the initial recognition of the financial instrument. Applying the guidance in section 4.6.1 to the revision of contractual cash flows of a floating rate instrument, the EIR would be calculated initially based on the projected levels of the underlying floating rate index over the entire expected life of the instrument, and subsequent revisions to the initially expected cash flows would give rise to a “catch-up” gain or loss in profit or loss at each reporting date, while still using the initially set EIR over the remaining periods. This approach would be quite complex to implement.

IFRS 9.B5.4.5 specifies that re-estimation of the cash flows of a floating rate financial instrument to reflect the movements in the market rates alters the effective interest rate and that if a floating-rate financial instrument is recognised initially at an amount equal to the principal receivable or payable on maturity, re-estimating the future interest payments normally has no significant effect on the carrying amount of the asset or the liability.

In the absence of more specific guidance, most entities use, for floating rate instrument, an effective interest rate that is re-estimated at each reset of the underlying rate. Such an approach may be declined in several ways. One sophisticated way is presented further in section 4.8.3.

In practice, the most common interpretation is to simply account for periodic floating-rate payments on an accrual basis in the period they are earned, adjusted to take into account amortisation of transaction costs and other premium or discount.

4.8. Illustrative examples

4.8.1. Fixed rate debt instrument with a prepayment option

Assume the same example as in section 4.5 except that the contract specifies that the borrower has an option to early repay the instrument without penalty.

At inception, entity A expects that the borrower will repay the instrument at the end of the third year and includes this assumption in the calculation of the effective interest rate. The following table summarises the timing of the expected cash flows of the instrument:
The effective interest rate in this case amounts to 13.2% (this rate exactly discounts the expected cash flows of the financial instrument, as presented in the table below, to its initial amortised cost).

### Figure 4.5

<table>
<thead>
<tr>
<th></th>
<th>01/01/19</th>
<th>31/12/19</th>
<th>31/12/20</th>
<th>31/12/21</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected cash flows discounted at EIR (13.2%)</td>
<td>-1,000</td>
<td>52</td>
<td>46</td>
<td>902</td>
<td>0</td>
</tr>
</tbody>
</table>

(1) including transaction costs (commissions, fees...) to be included in the initial carrying amount of the asset
(2) 4.7% * €1,250 = €59
(3) in our example, redemption price equals the nominal value

The table below provides information about the amortised cost, interest income and cash flows of the debt instrument in each annual reporting period in the scenario where the cash flows are realised as expected (i.e. complete reimbursement occurs at the end of the third year):

### Figure 4.6

<table>
<thead>
<tr>
<th></th>
<th>(a)</th>
<th>(b = a * 13.2%)</th>
<th>(c)</th>
<th>(d = a + b - c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amortised cost at the beginning of the reporting period</td>
<td>1,000</td>
<td>Interest income to be recognised in P&amp;L</td>
<td>132</td>
<td>59</td>
</tr>
<tr>
<td>2019</td>
<td>1,073</td>
<td>Cash flows</td>
<td>142</td>
<td>59</td>
</tr>
<tr>
<td>2020</td>
<td>1,156</td>
<td>Amortised cost at the end of the reporting period</td>
<td>153</td>
<td>1,309</td>
</tr>
</tbody>
</table>

### 4.8.2. Revision of estimates

Assume the same fact pattern as in the example of section 4.8.1.

At 31 December 2020, entity A revises its estimates for the cash flows and expects now that the reimbursement will occur at the end of 2022 rather than at the end of 2021 as initially expected.

At 31 December 2020, entity A adjusts the carrying amount of the debt instrument to reflect the newly expected cash flows (reminder: the revised cash flows are discounted using the original effective interest rate). Any difference between the carrying amount just before the revision of cash flows and the carrying amount just after the revision of cash flows should be recognised in profit or loss (IFRS 9.B5.4.6, see section 4.6).
In this example, the carrying amount of the debt instrument following the revision of cash flow estimates at 31 December 2020 amounts to €1,073.

---

**Figure 4.7**

<table>
<thead>
<tr>
<th>Revised cash flows*</th>
<th>31/12/20</th>
<th>31/12/21</th>
<th>31/12/22</th>
<th>31/12/23</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revised cash flows discounted at the original EIR (13.2%)</td>
<td>0</td>
<td>59</td>
<td>1,309</td>
<td>0</td>
<td>1,073</td>
</tr>
</tbody>
</table>

*following the revision of the early repayment date

Thus, at 31 December 2020, entity A recognises a catch up adjustment of €83 (€1,1562 - €1,073) triggering a loss in profit or loss. This reflects the fact that the principal will be repaid later than expected initially, thus resulting in a partial reversal of the amortisation of the initial discount and transaction costs recognised in previous periods.

The table below provides information about the amortised cost, interest income and cash flows of the debt instrument in each annual reporting period in the scenario where the remaining cash flows are realised as expected in 2021 and 2022:

---

**Figure 4.8**

<table>
<thead>
<tr>
<th>in €</th>
<th>(a)</th>
<th>(b = a * 13.2%)</th>
<th>(c)</th>
<th>(d = a + b - c)</th>
<th>Amortised cost at the end of the reporting period</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>1,073</td>
<td>142</td>
<td>59</td>
<td>1,156</td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td>1,156</td>
<td>153</td>
<td>1,309</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

---

### 4.8.3. Floating rate instrument without a prepayment option

**Section 4.7** describes the principles for calculating the EIR for a floating rate instrument. The following example illustrates how entities may account for a floating rate debt instrument (this is one possible approach, other approaches may also be envisaged):

---

— On 1 January 2019, entity A purchases a non-amortising, non-callable debt instrument with five years remaining to maturity for its fair value of €995 and incurs transaction costs of €5. The instrument has a nominal value of €1,250 and carries floating rate of interest indexed to 12-month Euribor (not floored) plus a 2% credit margin payable annually at the end of each year. The instrument’s redemption amount is equal to its nominal value plus accrued interest.

— The instrument qualifies for a measurement at amortised cost. As explained in **section 4.5**, its initial carrying amount / amortised cost is the sum of the initial fair value and of the transaction costs, i.e. €1,000.

---

2 amortised cost as of year-end 2020 just before the revision of estimates, see table in **section 4.8.1**.
— At the beginning of 2019, the entity establishes a new timetable of the expected cash flows based on (a) the then applicable 12-month Euribor rate for year-end 2019 (as the contract specifies that the 12-month Euribor is observed at the beginning of the interest period) and (b) on market derived forward rates for the subsequent periods, as displayed in the table below:

**Figure 4.9**

<table>
<thead>
<tr>
<th>in €</th>
<th>01/01/19</th>
<th>31/12/19</th>
<th>31/12/20</th>
<th>31/12/21</th>
<th>31/12/22</th>
<th>31/12/23</th>
</tr>
</thead>
<tbody>
<tr>
<td>Euribor 12 months in % (1)</td>
<td>1.0%</td>
<td>1.5%</td>
<td>1.0%</td>
<td>2.0%</td>
<td>2.0%</td>
<td>NA</td>
</tr>
<tr>
<td>Acquisition cost (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undiscounted interest cash flows (3)</td>
<td>-1,000</td>
<td>38</td>
<td>44</td>
<td>38</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Reimbursement of the principal at the maturity date (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,250</td>
</tr>
<tr>
<td>Total expected cash flows</td>
<td>-1,000</td>
<td>38</td>
<td>44</td>
<td>38</td>
<td>50</td>
<td>1,300</td>
</tr>
</tbody>
</table>

(1) market derived forward interest rates:
- It is assumed that the forward interest rate at the end of a period is the same as the interest rate at the beginning of the following period
- Cash flows for period N are calculated based on the forward interest at the end of the preceding period N-1
- e.g. for 2020, based on 2019 year-end forward rate: 44 = (1.5% forward rate +2% margin) * 1,250
(2) including transaction costs (commissions, fees...) to be included in the initial carrying amount of the asset
(3) (Euribor 12 months (1) +2%) * €1,250
(4) in our example, redemption price equals the nominal value

— Using an Excel formula, the entity determines that at initial recognition, the rate that exactly discounts the expected cash flows of this financial asset – as presented in the table below – to its initial gross carrying amount (i.e. the EIR) is 8.5%. The following table shows that the sum of the discounted cash flows amounts to zero:

**Figure 4.10**

<table>
<thead>
<tr>
<th>in €</th>
<th>01/01/19</th>
<th>31/12/19</th>
<th>31/12/20</th>
<th>31/12/21</th>
<th>31/12/22</th>
<th>31/12/23</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected cash flows discounted at EIR (8.5%)</td>
<td>-1,000</td>
<td>35</td>
<td>37</td>
<td>29</td>
<td>36</td>
<td>863</td>
<td>0</td>
</tr>
</tbody>
</table>

— This EIR will be used by the entity to account for the debt instrument in the first year: the entity will recognise an interest revenue of €85 (€1,000*8.5%) in profit or loss and the amortised cost at the end of the first year will amount to €1,048.

**Figure 4.11**

<table>
<thead>
<tr>
<th>in €</th>
<th>(a)</th>
<th>(b = a * 13.2%)</th>
<th>(c)</th>
<th>(d = a + b - c)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,000</td>
<td>85</td>
<td>38</td>
<td>1,048</td>
</tr>
</tbody>
</table>

interest income to be recognised in P&L | Cash flows | Amortised cost at the end of the reporting period
— At the end of 2019, the entity establishes a new timetable of the expected cash flows based on (a) the then applicable 12-month Euribor rate for year-end 2020 (as the contract specifies that the 12-month Euribor is observed at the beginning of the interest period) and (b) on market derived forward rates for the subsequent periods, as displayed in the table below:

**Figure 4.12**

<table>
<thead>
<tr>
<th>Cash flows in € million and interest rates in %</th>
<th>31/12/19</th>
<th>31/12/20</th>
<th>31/12/21</th>
<th>31/12/22</th>
<th>31/12/23</th>
</tr>
</thead>
<tbody>
<tr>
<td>Euribor 12 months (1)</td>
<td>2.0%</td>
<td>2.0%</td>
<td>2.5%</td>
<td>3.0%</td>
<td>NA</td>
</tr>
<tr>
<td>Undiscounted interest cash flows (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reimbursement of the principal at the maturity date (3)</td>
<td>50</td>
<td>50</td>
<td>56</td>
<td>63</td>
<td>1,250</td>
</tr>
<tr>
<td><strong>Total expected cash flows</strong></td>
<td>0</td>
<td>50</td>
<td>50</td>
<td>56</td>
<td>1,313</td>
</tr>
</tbody>
</table>

(1) market derived interest rates
(2) (Euribor 12 months (1) +2%) * €1,250
(3) in our example, redemption price equals the nominal value

— The entity then determines, using an Excel formula, a new EIR that exactly discounts these expected cash flows to the amortised cost of the debt instrument as of 31 December 2019 – the EIR equals 9.4%. The following table shows that this EIR discounts the new expected cash flows to the amortised cost of the debt instrument at the end of 2019:

**Figure 4.13**

<table>
<thead>
<tr>
<th>Expected cash flows discounted at EIR (9.4%)</th>
<th>31/12/19</th>
<th>31/12/20</th>
<th>31/12/21</th>
<th>31/12/22</th>
<th>31/12/23</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-1,048</td>
<td>46</td>
<td>42</td>
<td>43</td>
<td>918</td>
<td>0</td>
</tr>
</tbody>
</table>

— In 2020, the entity will use this EIR of 9.4%, to account for revenue interest and determine the amortised cost of the instrument at the end of the period.

**Figure 4.14**

<table>
<thead>
<tr>
<th>in € (a)</th>
<th>(b = a * EIR)</th>
<th>(c )</th>
<th>(d = a + b - c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amortised cost at the beginning of the reporting period</td>
<td>Interest income to be recognised in P&amp;L</td>
<td>Cash flows*</td>
<td>Amortised cost at the end of the reporting period</td>
</tr>
<tr>
<td>2020</td>
<td>1,048</td>
<td>98</td>
<td>50</td>
</tr>
</tbody>
</table>

* Cash flow of 50 = (12-month Euribor at the beginning of 2020 + margin) * nominal value = (2% + 2%) * 1,250

— At the subsequent periods, the entity will duplicate the same process as the one described above, i.e.:

> determine the new EIR based on the newly expected cash flows (i.e. the EIR that discounts these cash flows to the amortised cost of the instrument at the end of the preceding period);

> use this EIR to recognise interest revenue and determine the amortised cost of the instrument at the end of the reporting period.
This floating EIR can be determined as being the then Euribor 12 Month interest curve that will be updated at each closing, plus a fixed margin determined initially. In practice entities may consider applying different types of shortcuts to simplify this mechanism provided that the actual outcome is not significantly different from the theoretical outcome.

**4.8.4. Fixed-rate debt instrument with interest step-up**

The following example aims to illustrate how a constant effective interest rate should be calculated for a debt with a contractually specified interest rate step-up.

Assume that on 1 January 2019, entity A issues a debt (the entity did not incur any transaction costs) for a price of €1,250 which is also its principal amount. The debt is repayable in total on 31 December 2023 (i.e. this is a non-amortising financial liability).

The rate of interest is specified in the contract as follows: 6% in 2019 (€75), 8% in 2020 (€100), 10% in 2021 (€125), 12% in 2022 (€150) and 16.4% in 2023 (€205).

In this case, the EIR that exactly discounts the stream of the expected cash flows of the debt is 10%.

Thus, the entity will recognise interest expense based on the effective interest rate (10%) rather than the contractual interest rate with a step-up feature.

The table below provides information about the amortised cost, interest income and cash flows of the debt instrument in each annual reporting period:

**Figure 4.15**

<table>
<thead>
<tr>
<th>in €</th>
<th>(a)</th>
<th>(b = a * 10%)</th>
<th>(c)</th>
<th>(d = a + b - c)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amortised cost at the beginning of the reporting period</td>
<td>Interest income to be recognised in P&amp;L</td>
<td>Cash flows</td>
<td>Amortised cost at the end of the reporting period</td>
</tr>
<tr>
<td>2019</td>
<td>1,250</td>
<td>125</td>
<td>75</td>
<td>1,300</td>
</tr>
<tr>
<td>2020</td>
<td>1,300</td>
<td>130</td>
<td>100</td>
<td>1,330</td>
</tr>
<tr>
<td>2021</td>
<td>1,330</td>
<td>133</td>
<td>125</td>
<td>1,339</td>
</tr>
<tr>
<td>2022</td>
<td>1,339</td>
<td>134</td>
<td>150</td>
<td>1,323</td>
</tr>
<tr>
<td>2023</td>
<td>1,323</td>
<td>132</td>
<td>1,455</td>
<td>0</td>
</tr>
</tbody>
</table>