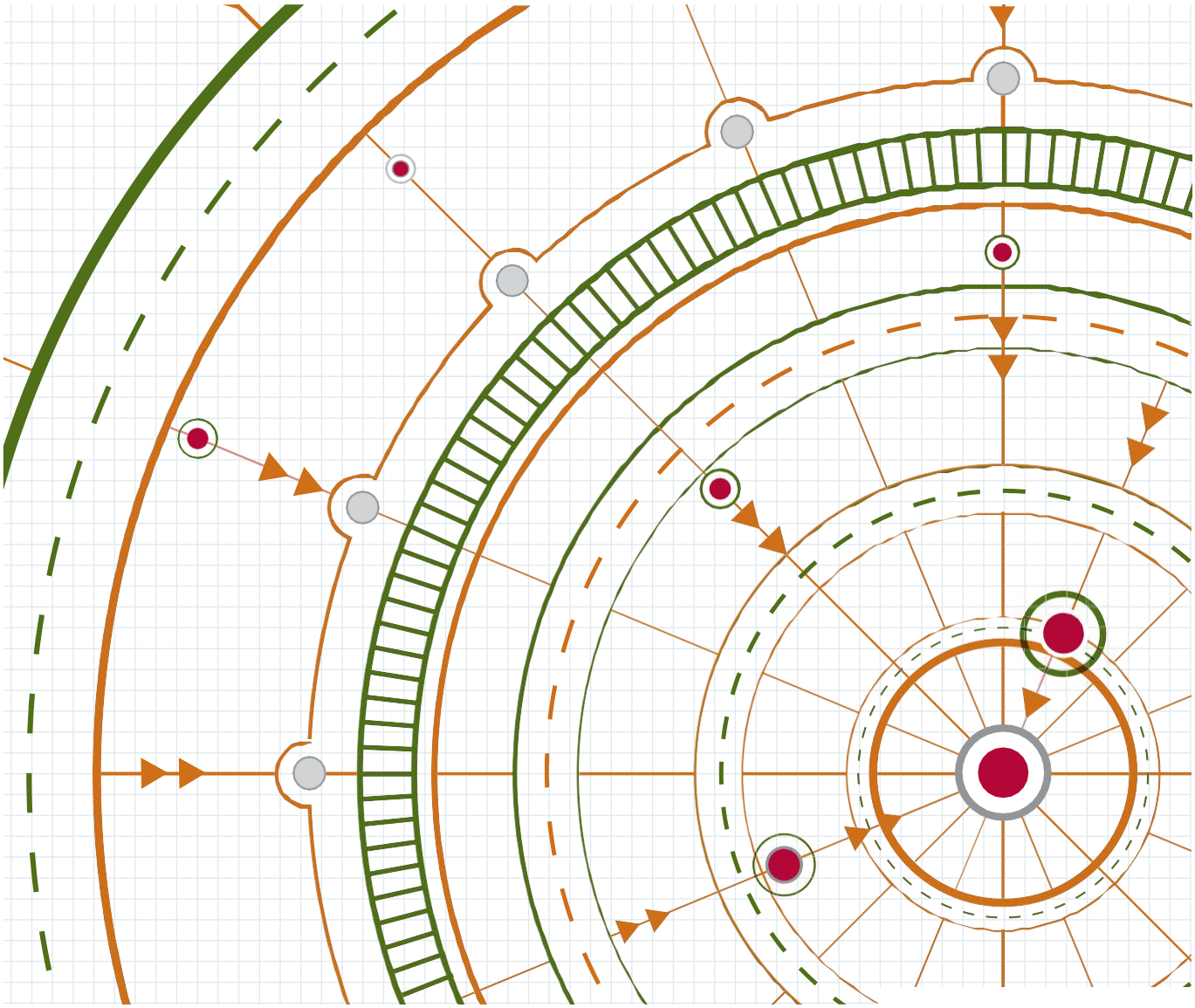
IFRS® Foundation—Supporting Material for the *IFRS for SMEs* Standard

Module 27—Impairment of Assets



IFRS®

IFRS® Foundation Supporting Material for the *IFRS for SMEs*® Standard

including the full text of
Section 27 *Impairment of Assets*
of the *IFRS for SMEs* Standard
issued by the International Accounting Standards Board in October 2015

with extensive explanations, self-assessment questions and case studies

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This module has been prepared by IFRS Foundation (Foundation) education staff. It has not been approved by the International Accounting Standards Board (Board). The module is designed to assist users of the *IFRS for SMEs*® Standard (Standard) to implement and consistently apply the Standard.

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Contents

Module 27—Impairment of Assets

The accounting requirements applicable to small and medium-sized entities (SMEs) discussed in this module are set out in the *IFRS for SMEs* Standard, issued by the International Accounting Standards Board (Board) in October 2015.
This module has been prepared by IFRS Foundation education staff.
The contents of Section 27 *Impairment of Assets* of the *IFRS for SMEs* Standard are set out in this module and shaded grey. The Glossary of terms of the *IFRS for SMEs* Standard (Glossary) is also part of the requirements. Terms defined in the Glossary are reproduced in **bold type** the first time they appear in the text of Section 27. The notes and examples inserted by the education staff are not shaded. These notes and examples do not form part of the *IFRS for SMEs* Standard and have not been approved by the Board.

INTRODUCTION

Which version of the *IFRS for SMEs*® Standard?

When the *IFRS for SMEs* Standard was first issued in July 2009, the Board said it would undertake an initial comprehensive review of the Standard to assess entities' experience of the first two years of its application and to consider the need for any amendments. To this end, in June 2012, the Board issued a Request for Information: *Comprehensive Review of the IFRS for SMEs*. An Exposure Draft proposing amendments to the *IFRS for SMEs* Standard was subsequently published in 2013, and in May 2015 the Board issued *2015 Amendments to the IFRS for SMEs* Standard.

The document published in May 2015 only included amended text, but in October 2015, the Board issued a fully revised edition of the Standard, which incorporated additional minor editorial amendments as well as the substantive May 2015 revisions. This module is based on that version.

The *IFRS for SMEs* Standard issued in October 2015 is effective for annual periods beginning on or after 1 January 2017. Earlier application was permitted, but an entity that did so was required to disclose the fact.

Any reference in this module to the *IFRS for SMEs* Standard refers to the version issued in October 2015.

This module

This module focuses on the general requirements on the accounting for impairment of assets applying Section 27 *Impairment of Assets* of the *IFRS for SMEs* Standard. It introduces the subject and reproduces the official text along with explanatory notes and examples designed to enhance understanding of the requirements. The module identifies the significant judgements required in the accounting for impairment of assets. In addition, the module includes questions designed to test your understanding of the requirements and case studies that provides a practical opportunity to apply the requirements on the accounting for impairment of assets applying the *IFRS for SMEs* Standard.

Module 27—Impairment of Assets

Upon successful completion of this module, you should, within the context of the *IFRS for SMEs* Standard, be able to:

- understand the general principles, and identify and account for the impairment of inventories and assets other than inventories;
- identify the conditions under which an impairment test is required (both external and internal indicators of impairment);
- perform an impairment test, measure the recoverable amount of an asset (the higher of the asset's fair value less costs to sell and its value in use);
- recognise and measure an impairment loss for a cash-generating unit, including intangible assets, goodwill and property, plant and equipment;
- understand the additional requirements for allocating and testing goodwill for impairment;
- understand the accounting for reversing the impairment of individual assets and the assets of a cash-generating unit;
- understand how to disclose information for each class of impaired assets; and
- demonstrate an understanding of the significant judgements required in accounting for the impairment of assets.

Throughout this module, references are made to IAS 36 *Impairment of Assets* for SMEs that may have more complex transactions or need further and more detailed direction and guidance when applying the requirements of this section of the *IFRS for SMEs* Standard. However, these references to IAS 36 are not required to be used.

IFRS for SMEs Standard

The *IFRS for SMEs* Standard is intended to apply to the general purpose financial statements of entities that do not have public accountability (see Section 1 *Small and Medium-sized Entities*).

The *IFRS for SMEs* Standard is comprised of mandatory requirements and other non-mandatory material.

The non-mandatory material includes:

- a preface, which provides a general introduction to the *IFRS for SMEs* Standard and explains its purpose, structure and authority;
- implementation guidance, which includes illustrative financial statements and a table of presentation and disclosure requirements;
- the Basis for Conclusions, which summarises the Board's main considerations in reaching its conclusions in the *IFRS for SMEs* Standard issued in 2009 and, separately, in the 2015 Amendments; and
- the dissenting opinion of a Board member who did not agree with the issue of the *IFRS for SMEs* Standard in 2009 and the dissenting opinion of a Board member who did not agree with the 2015 Amendments.

In the *IFRS for SMEs* Standard, Appendix A: Effective date and transition, and Appendix B: Glossary of terms, are part of the mandatory requirements.

In the *IFRS for SMEs* Standard, there are appendices to Section 21 *Provisions and Contingencies*, Section 22 *Liabilities and Equity* and Section 23 *Revenue.* These appendices provide non-mandatory guidance.

Module 27—Impairment of Assets

The *IFRS for SMEs* Standard has been issued in two parts: Part A contains the preface, all the mandatory material and the appendices to Section 21, Section 22 and Section 23; and Part B contains the remainder of the material mentioned above.

Further, the SME Implementation Group (SMEIG), which assists the Board with supporting implementation of the *IFRS for SMEs* Standard, publishes implementation guidance as 'questions and answers' (Q&As). These Q&As provide non-mandatory, timely guidance on specific accounting questions raised with the SMEIG by entities implementing the *IFRS for SMEs* Standard and other interested parties. At the time of issue of this module (October 2018) the SMEIG has not issued any Q&As relevant to this module.

Introduction to the requirements

The objective of general purpose financial statements of a small or medium-sized entity is to provide information about the entity's financial position, performance and cash flows that is useful for economic decision-making by a broad range of users who are not in a position to demand reports tailored to meet their particular information needs. Such users include, for example, owners who are not involved in managing the business, existing and potential creditors and credit rating agencies.

The objective of Section 27 *Impairment of Assets* is to set out the accounting and reporting for impairments of assets (except those addressed by other sections).

This section identifies the conditions under which an impairment of inventory is recorded. It specifies the measurement of the inventory impairment loss and prescribes the requirements for the reversal of inventory impairments.

The section also identifies the conditions under which assets other than inventory are tested for impairment. It specifies the measurement of the impairment amount, based on comparing the carrying amount to the recoverable amount (the highest of fair value less cost to sell and value in use).

It identifies conditions under which goodwill and assets of a cash-generating unit are tested for impairment.

It specifies the accounting for a reversal of an impairment loss.

The section specifies disclosure requirements when impairment losses and impairment reversals are recorded.

What has changed since the 2009 *IFRS for SMEs* Standard

The following are the changes made to Section 27 by the 2015 Amendments:

Clarification that Section 27 does not apply to assets arising from construction contracts (see paragraph 27.1(f)).

The amendments also include consequential changes to paragraphs 27.6, 27.30(b) and 27.31(b) including the addition of an option to revalue property, plant and equipment in Section 17 and to paragraph 27.14 relating to changes to the fair value measurement guidance in Section 11. The amendments to paragraphs 27.30 and 27.31 shall be applied prospectively from the beginning of the period an entity first applies 2015 amendments to the *IFRS for SMEs* Standard.

In addition this module reproduces other editorial changes.

Module 27—Impairment of Assets

REQUIREMENTS AND EXAMPLES

Objective and scope

27.1 An **impairment loss** occurs when the **carrying amount** of an **asset** exceeds its **recoverable amount**. This section shall be applied in accounting for the impairment of all assets other than the following, for which other sections of this Standard establish impairment requirements:

deferred tax assets (see Section 29 *Income Tax*);

assets arising from **employee benefits** (see Section 28 *Employee Benefits*);

financial assets within the scope of Section 11 *Basic Financial Instruments* or Section 12 *Other Financial Instrument Issues*;

investment property measured at **fair value** (see Section 16 *Investment Property*);

biological assets related to **agricultural activity** measured at fair value less estimated costs to sell (see Section 34 *Specialised Activities*); and

(f) assets arising from **construction contracts** (see Section 23 *Revenue*).

Notes

Impairment recognition is consistent with the view that in general purpose financial statements assets should not be carried in excess of amounts expected to be realised from their sale or use. If financial statements were to present carrying amounts of assets that are not likely to be recoverable, contrary to the requirements of Section 27 *Impairment of Assets*, information presented is not useful to investors, lenders and other creditors making decisions about providing resources to the entity.

This module covers the general requirements for the impairment of assets in the scope of this section, including the impairment of inventories, intangible assets, goodwill and property, plant, and equipment.

The general accounting requirements (other than those for impairment; recognition, initial and subsequent measurement) for assets in the scope of this section are covered by other sections of the *IFRS for SMEs* Standard and by other modules. A number of other sections explicitly made reference to the impairment requirements of Section 27:

- Section 13 *Inventories*, paragraph 13.19;
- Section 14 *Investments in Associates*, paragraph 14.8(d);
- Section 15 *Investments in Joint Ventures*, paragraph 15.10;
- Section 17 *Property, Plant and Equipment*, paragraphs 17.24–17.26;
- Section 18 *Intangible Assets other than Goodwill*, paragraph 18.25;
- Section 19 *Business Combinations and* Goodwill, paragraph 19.23(b);
- Section 20 *Leases*, paragraphs 20.12 and 20.28;
- Section 31 *Hyperinflation*, paragraph 31.8(c);

- Section 34 *Specialised* Activities, paragraph 34.11E; and
- Section 35 *Transition to the IFRS for SMEs*, paragraph 35.10(j).

An entity whose functional currency is the currency of a hyperinflationary economy is required to determine the restated amount of a non-monetary item applying Section 31 *Hyperinflation* before testing the respective asset for impairment.

Impairment of inventories

Selling price less costs to complete and sell

27.2 An entity shall assess at each **reporting date** whether any **inventories** are impaired. The entity shall make the assessment by comparing the carrying amount of each item of inventory (or group of similar items—see paragraph 27.3) with its selling price less costs to complete and sell. If an item of inventory (or group of similar items) is impaired, the entity shall reduce the carrying amount of the inventory (or the group) to its selling price less costs to complete and sell. That reduction is an impairment loss and it is recognised immediately in **profit or loss**.

Notes

The carrying amount of inventories might not be recoverable if the inventories are damaged, if they have become wholly or partially obsolete, or if their selling prices have declined. The carrying amount of inventories might also not be recoverable if the estimated costs of completion or the costs to be incurred to make the sale have increased.

Inventory is assessed for impairment at each reporting date. The impairment assessment for assets other than inventory is performed only when there are impairment indicators, which is required to be assessed at each reporting date (see paragraph 27.7).

Examples—inventory impairment

Ex 1 **A retailer holds three items of inventory (X, Y, and Z) at 31 December 20X0. It is likely that all items of inventory will be sold. Based on the information provided in the table below, is the entity required to record any impairment loss at 31 December 20X0?**

Information provided by the entity's management:

	Carrying amount	Expected selling price at the time of acquiring the item	Selling price estimated at 31/12/20X0	Costs to sell estimated at 31/12/20X0
	CU[1]	CU	CU	CU
Item X	70,000	80,000	64,000	4,000
Item Y	86,000	88,000	94,000	10,000
Item Z	150,000	200,000	180,000	22,000

The calculation of impairment loss is based on the comparison of an item of the inventory's carrying amount and its estimated selling price in the ordinary course of business, less the estimated costs of completion and the estimated costs necessary to make the sale as presented in the table below:

		Item X CU	*Item Y* CU	*Item Z* CU
Carrying amount at 31/12/20X0	(A)	70,000	86,000	150,000
Selling price estimated at 31/12/20X0	(B)	64,000	94,000	180,000
Costs to sell estimated at 31/12/20X0	(C)	(4,000)	(10,000)	(22,000)
Selling price less cost to sell	(D) = (B) minus (C)	60,000	84,000	158,000
Impairment loss for the year ended 31/12/20X0	(E) = (A) minus (D)	10,000	2,000	–

To recognise the impairment loss on an item by item basis at 31 December 20X0, the entity would make the following entry to record the impairment:

Dr	Profit or loss (impairment of inventories)	CU12,000[a]	
	Cr Inventories		CU12,000

To recognise the impairment on inventories.

[a]CU10,000 impairment loss of Item X + CU2,000 impairment loss of Item Y = CU12,000.

Unless it is impracticable to do so, an entity is required to perform an impairment assessment item by item (see paragraph 27.3). The impairment losses of Items X and Y cannot be offset by the expected profit on Item Z.

[1] In this example, and in all other examples in this module, monetary amounts are denominated in 'currency units (CU)'.

After the impairment loss is recognised, the carrying amount of the inventory is: CU60,000 (Item X), CU84,000 (Item Y) and CU150,000 (Item Z).

Note: the comparison between the expected selling price measured at the time of purchasing the inventory item and the estimated selling price measured at the end of the reporting period (31 December 20X0) is not relevant. However, that information may be relevant for managers in assessing the performance of sales staff and market conditions and in performing other management activities.

Ex 2 **At the end of the reporting period an entity that retails perishable products holds 1,000,000 units of a product in inventory. The carrying amount of each unit cost is CU10 (cost per unit before impairment assessment).**

The entity expects to sell only 800,000 of the units held. The expected selling price per unit is CU21. Expected costs to sell are CU1 per unit. Must the entity record an impairment loss?

On the basis of the information provided, the entity expects that 200,000 units of its inventory of perishable product will not be sold. Consequently, at the end of the reporting period the entity is required to recognise an impairment loss (expense) of CU2,000,000 (200,000 unsaleable units × cost of CU10 each).

No impairment is required for the 800,000 units that the entity expects to sell, as the expected selling price less the expected costs to sell for each of these units (CU20) exceeds their cost per unit (CU10).

Ex 3 **On 31 December 20X1 an entity holds raw materials to be consumed in the manufacturing of Product A. Before testing for impairment, the entity carries the raw materials at their cost of CU100,000. At 31 December 20X1 the replacement cost of the raw materials is CU80,000.**

On 31 December 20X1 management estimates that converting the CU100,000 of raw material into finished goods will cost CU60,000. Furthermore, the management estimates that it will incur CU25,000 to sell those finished goods. The finished goods are expected to be sold for CU200,000.

Must the entity record an impairment loss?

On the basis of the information provided, the raw material inventory is not impaired. The selling price of the finished good to be manufactured using the raw material minus the costs to complete (convert the raw material into the finished good) and to sell is CU115,000 (CU200,000 selling price of the finished good minus CU60,000 costs to complete minus CU25,000 costs to sell). CU115,000 is greater than the CU100,000 cost of the raw material. The entity has no impairment loss despite the fact that the replacement cost of the raw material (CU80,000) is lower than its carrying amount (historical cost). The impairment test is based on a comparison between the carrying amount of the raw material (not the replacement cost) and the selling price minus costs to complete and sell the finished good.

Ex 4 **On 30 September 20X6, a fire destroyed inventory with a carrying amount of CU500,000. The entity immediately registered an insurance claim of CU700,000 for the replacement cost of the inventory. However, the insurance company disputed the claim, citing negligence by the entity.**

On 15 November 20X6, the fire authorities completed their investigation and found an electrical fault to be the cause of the fire. As a result of these findings, the insurance company notified the entity that its claim for CU700,000 would be settled in full. The insurance company paid the entity CU700,000 on 30 November 20X6.

How would the entity account for its inventories for the year ended 31 December 20X6?

30 September 20X6

Dr	Profit or loss (impairment of inventories)	CU500,000	
Cr	Inventories		CU500,000

To derecognise inventory destroyed by fire (an impairment loss).

15 November 20X6

Dr	Receivable	CU700,000	
Cr	Profit or loss (insurance compensation)		CU700,000

To record the compensation to be received from the insurance company for inventory destroyed by fire.

30 November 20X6

Dr	Cash	CU700,000	
Cr	Receivable		CU700,000

To record receipt of the compensation from the insurance company for inventory destroyed by fire.

27.3 If it is **impracticable** to determine the selling price less costs to complete and sell for inventories item by item, the entity may group items of inventory relating to the same product line that have similar purposes or end uses and are produced and marketed in the same geographical area for the purpose of assessing impairment.

Notes

When measuring the impairment of inventory, entities do not have a free choice between the item-by-item basis and the group-of-items approach. An entity is required to use the item-by-item basis and can use the group-of-items approach only when it is impracticable to determine the selling price less costs to complete and sell for inventories on the item-by-item basis.

Applying a requirement is impracticable when the entity cannot apply it after making every reasonable effort to do so (see the Glossary of terms of the *IFRS for SMEs* Standard (Glossary)).

Example—inventory impairment for a group of items

Ex 5 **The facts are the same as in Example 1. However, in this example, it is impracticable to determine the selling costs on an item by item basis. The three items (X, Y and Z) have similar purposes and end uses and are produced and marketed in the same geographical area. At 31 December 20X0 management estimated that incremental costs to sell did not differ by product and that it will incur selling costs of CU36,000 to sell the group of three items for CU338,000.**

The entity determines the impairment for the group of items in inventory as presented in the table below:

	Carrying amount	Expected selling price at the time of acquiring the item	Selling price estimated at 31/12/20X0	Costs to sell estimated at 31/12/20X0
	CU	*CU*	*CU*	*CU*
Group of items	306,000	368,000	338,000	36,000

The calculation of impairment is based on comparing the inventory's carrying amount and its selling price minus costs to complete and sell, as presented in the table below:

		Group of items
		CU
Carrying amount at 31/12/20X0	(A)	306,000
Selling price estimated at 31/12/20X0	(B)	338,000
Costs to sell estimated at 31/12/20X0	(C)	(36,000)
Selling price less cost to sell	(D) = (B) minus (C)	302,000
Impairment loss for the year ended 31/12/20X0	(E) = (A) minus (D)	4,000

To recognise the impairment loss on a group basis at 31 December 20X0, the entity would make the following entry to record the impairment:

Dr	Profit or loss (impairment of inventories)	CU4,000	
	Cr Inventories		CU4,000
	To recognise the impairment on inventories.		

After recognising the impairment loss, the carrying amount of the inventory is CU302,000.

Reversal of impairment

27.4 An entity shall make a new assessment of selling price less costs to complete and sell at each subsequent reporting date. When the circumstances that previously caused inventories to be impaired no longer exist or when there is clear evidence of an increase in selling price less costs to complete and sell because of changed economic circumstances, the entity shall reverse the amount of the impairment (ie the reversal is limited to the amount of the original impairment loss) so that the new carrying amount is the lower of the cost and the revised selling price less costs to complete and sell.

Notes

Under no circumstances can a reversal of an impairment loss result in the carrying amount of an item of inventory being reported at an amount in excess of its cost had no impairment been recognised.

Examples—inventory impairment reversal

Ex 6 **The facts are the same as in Example 1 and the inventory is unsold at 31 December 20X1.**

Information about inventory at 31 December 20X1:

	Cost	*Accumulated impairment loss at 31/12/20X0*	*Carrying amount at 31/12/20X1 before impairment reversal test*	*Selling price estimated at 31/12/20X1*	*Costs to sell estimated at 31/12/20X1*
	CU	*CU*	*CU*	*CU*	*CU*
Item X	70,000	10,000	60,000	69,000	4,000
Item Y	86,000	2,000	84,000	94,000	5,500
Item Z	150,000	–	150,000	175,000	26,000

The calculations of impairment are presented in the table below:

		Item X CU	Item Y CU	Item Z CU
Cost	(A)	70,000	86,000	150,000
Accumulated impairment loss recognised in 20X0	(B)	(10,000)	(2,000)	–
Carrying amount at 31/12/20X1 before impairment test	(C) = (A) minus (B)	60,000	84,000	150,000
Selling price estimated at 31/12/20X1	(D)	69,000	94,000	175,000
Costs to sell estimated at 31/12/20X1	(E)	(4,000)	(5,500)	(26,000)
Selling price less cost to sell	(F) = (D) less (E)	65,000	88,500	149,000
Impairment loss for the year ended 31/12/20X1	(G) = higher of (C) minus (F) and CU0	–	–	1,000
Reversal of impairment loss for the year ended 31/12/20X1	(H) = higher of CU0 and (C) minus lower of (A) and (F)	5,000	2,000	–

At 31 December 20X1 the entity would make the following entries to record the reversal of impairment:

Dr	Inventories	CU7,000[(a)]	
	Cr Profit or loss (reversal of prior period impairment)		CU7,000

To recognise the reversal of a prior period impairment of inventories.

[(a)]CU5,000 impairment reversal of Item X + CU2,000 impairment reversal of Item Y.

Note: at 31 December 20X1 the entity would also make the following entries to record the impairment loss of Item Z:

Dr	Profit or loss (impairment of inventories)	CU1,000	
	Cr Accumulated impairment loss on inventories		CU1,000

To recognise impairment on inventories.

After recognising the reversal of the prior period's impairment loss and recognising the impairment loss for the year ended 31 December 20X1, the carrying amount of the inventory is CU65,000 (Item X), CU86,000 (Item Y) and CU149,000 (Item Z).

Note: applying paragraph 2.52, an entity cannot offset income and expenses, unless required or permitted by the *IFRS for SMEs* Standard. Consequently, the reversal of the prior period's impairment loss and the recognition of the impairment loss for the period are presented separately when an entity presents an analysis of expenses using a classification based on the nature of expenses.

Ex 7 **The facts are the same as in Example 6. However, in this example, it is impracticable to determine the selling costs on an item by item basis and the other requirements for determining the impairment of inventories as a group of items are satisfied. Information about the entity's inventory is presented in the table below:**

	Cost	Accumulated impairment loss recognised in 20X0	Carrying amount at 31/12/20X1 before testing for impairment	Selling price estimated at 31/12/20X1	Costs to sell estimated at 31/12/20X1
	CU	CU	CU	CU	CU
Group of items	306,000	4,000	302,000	338,000	35,500

The calculations of impairment are presented in the table below:

		Group of items
		CU
Cost	(A)	306,000
Accumulated impairment loss at 31/12/20X0 before impairment test	(B)	(4,000)
Carrying amount at 31/12/20X1 before impairment test	(C) = (A) minus (B)	302,000
Selling price estimated at 31/12/20X1	(D)	338,000
Costs to sell estimated at 31/12/20X1	(E)	(35,500)
Selling price less cost to sell	(F) = (D) minus (E)	302,500
Accumulated impairment loss at 31/12/20X1	(G) = if (F) < (A), (F) minus (A)	(3,500)
Impairment loss (reversal)	(H) = (B) less (G). Alternatively, (H) = (C) minus the lower of (A) and (F)	(500)

To recognise the reversal of the impairment at 31 December 20X1, the entity makes the following entry:

Dr	Inventories	CU500	
	Cr Profit or loss (reversal of prior period impairment)		CU500

To recognise the reversal of impairment on a group of inventories.

After recognising the reversal of the prior period's impairment loss, the carrying amount of the inventory is CU302,500.

Impairment of assets other than inventories

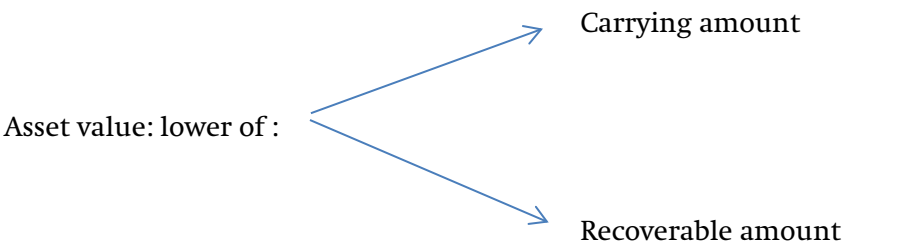
General principles

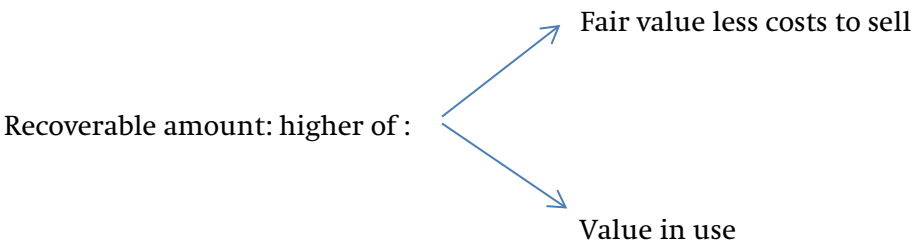
27.5 If, and only if, the recoverable amount of an asset is less than its carrying amount, the entity shall reduce the carrying amount of the asset to its recoverable amount. That reduction is an impairment loss. Paragraphs 27.11–27.20 provide guidance on measuring recoverable amount.

27.6 An entity shall recognise an impairment loss immediately in profit or loss, unless the asset is carried at a revalued amount in accordance with the revaluation model in Section 17 *Property, Plant and Equipment*. Any impairment loss of a revalued asset shall be treated as a revaluation decrease in accordance with paragraph 17.15D.

Notes

When indicators require an entity to conduct an impairment test, the entity is required to determine whether it records an impairment loss by comparing the carrying amount of an asset with its recoverable amount. The carrying amount of an asset is the amount at which an asset is recognised in the statement of financial position (see the Glossary). The recoverable amount is the higher of an asset's fair value less costs to sell and its value in use (see the Glossary). If the carrying amount before recognising the impairment loss is greater than the recoverable amount, an entity reduces the carrying amount to the recoverable amount and records an impairment loss in profit and loss.





Example—recognition of impairment of assets other than inventories

Ex 8 **At 31 December 20X1 Entity A has equipment that was acquired for a total cost of CU26,000, for which accumulated depreciation is CU14,000 (including CU6,000 depreciation for the year ended at 31 December 20X1). The equipment has an estimated useful life of four years and a residual value of CU2,000. The asset is depreciated using the straight-line basis.**

The recoverable amount for this asset at 31 December 20X1 is CU11,000. Entity A's assessment of the equipment's useful life, depreciation method and residual value are unaffected by the impairment.

Entity A makes the following entry to record the impairment of its equipment:

Dr	Profit or loss (impairment of PPE)	CU1,000	[a]	
	Cr Accumulated impairment loss (equipment)			CU1,000

To recognise the impairment of property, plant and equipment.

[a]CU12,000 carrying amount[b] minus CU11,000 recoverable amount = CU1,000 impairment loss.

[b]CU26,000 cost minus CU14,000 accumulated depreciation at 31/12/20X1 = CU12,000 carrying amount.

Note: because there is an indication that the equipment (asset) may be impaired, Entity A reviews the remaining useful life, the depreciation method or the residual value of the asset (see paragraph 27.10).

Example—Treatment of an impairment loss/revaluation decrease of a revalued asset

Ex 9 **An item of property, plant and equipment costs CU100 and is depreciated over 10 years on a straight-line basis, with nil residual value. The entity uses the revaluation model in Section 17. At the end of year 1 the asset is revalued to CU135. The revaluation gain of CU45 (CU135 minus CU90 (CU100 minus CU10 depreciation)) is recognised in other comprehensive income and accumulated in equity.**

At the end of year 2, the asset's fair value has fallen to CU50. After depreciation for the year of CU15 (CU135 divided by 9), a revaluation decrease of CU70 is recognised (CU120 (CU135 − CU15) − CU50).

Under Section 17 the revaluation decrease of CU70 is first recognised in other comprehensive income to the extent of any credit balance existing in the revaluation surplus in respect of that asset (CU45), with the balance of CU25 being recognised in profit or loss.

	CU
Carrying amount at beginning of year 2	135
Depreciation for the year	(15)
Carrying amount at end of year 2 just before revaluation	120
Revaluation decrease recognised in other comprehensive income	(45)
	75
Revaluation decrease recognised in profit or loss	(25)
Carrying amount (revalued amount) at end of year 2	50

Indicators of impairment

27.7 An entity shall assess at each reporting date whether there is any indication that an asset may be impaired. If any such indication exists, the entity shall estimate the recoverable amount of the asset. If there is no indication of impairment, it is not necessary to estimate the recoverable amount.

27.8 If it is not possible to estimate the recoverable amount of the individual asset, an entity shall estimate the recoverable amount of the **cash-generating unit** to which the asset belongs. This may be the case because measuring recoverable amount requires forecasting cash flows and sometimes individual assets do not generate cash flows by themselves. An asset's cash-generating unit is the smallest identifiable group of assets that includes the asset and generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets.

Notes

For assets in the scope of this section, other than inventory, the first step in determining whether an impairment loss is required to be recognised is to consider whether, at the reporting date, there are any indications that the asset is impaired. Indicators of impairment are discussed in paragraph 27.9. If there is an indication that an asset may be impaired, the entity is required to calculate the asset's recoverable amount.

If it is not possible to estimate the recoverable amount for an individual asset, the entity is required to determine the recoverable amount of the cash-generating unit to which the asset belongs. Identifying a cash-generating unit requires judgement. To identify the cash-generating unit, the focus is on the 'smallest identifiable group of assets' that generate 'independent' cash inflows (paragraph 27.8).

IAS 36 *Impairment of Assets* provides the following guidance for identifying a cash-generating unit:[(2)]

- in determining the independence of cash flows, an entity considers how management monitors the entity's operations (for example, by product lines, businesses, individual locations, districts or regional areas) or how management makes decisions about the continuing or disposing of an entity's assets and operations (paragraph 69); and
- if an active market exists for the output of a group of assets, then this group of assets is a cash-generating unit. If the output is used internally, management shall estimate future cash flows associated with the output using an arm's length prices (paragraph 70).

An active market is a market in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis (see the Glossary).

[(2)] In the absence of explicit guidance in the *IFRS for SMEs* Standard an entity can (but is not required to), applying paragraph 10.6 of Section 10 *Accounting Policies, Estimates and Errors*, consider the requirements and guidance in full IFRS Standards.

Examples—identification of cash-generating units

Ex 10 **A mining entity owns a private railway to support its mining activities. The private railway can only be sold for scrap value and it does not generate cash inflows that are largely independent of the cash inflows from the other assets of the mine.**

It is not possible to estimate the recoverable amount of the private railway because its value in use cannot be determined and is probably different from scrap value. Therefore, the entity estimates the recoverable amount of the cash-generating unit to which the private railway belongs (the mine as a whole).

Ex 11 **A bus company provides services under contract with a municipality that requires minimum service on each of five separate routes. Assets devoted to each route and the cash flows from each route can be identified separately. One of the routes operates at a significant loss.**

Because the entity does not have the option to curtail any one bus route, the lowest level of identifiable cash inflows that are largely independent of the cash inflows from other assets or groups of assets are the cash inflows generated by the five routes together. The cash-generating unit for each route is the bus company as a whole.

Ex 12 **An entity owns three hotels in the same location. The hotels use the same pricing structure and are advertised by the owner as alternates. They all use the entity's central reservations system. Guests are regularly transferred between hotels. The entity also owns a hotel in another location. This hotel uses the central reservation system but does not share advertising or guests with the other hotels.**

The three hotels in the same location would form a single cash-generating unit because they are managed as one business. The fourth hotel, in a separate location, would be another cash-generating unit because it is likely to be managed independently of the entity's other hotels and its management are likely to be held accountable for the profitability of the hotel as an independent business.

Ex 13 **An entity manufactures Product 1 in Country A. All of Product 1 is transferred to Country B where it is used in the manufacture of Product 2. The entity does not sell Product 1.**

If Product 1 has an active market, the operations in Country A would be a separate cash-generating unit. The cash flows associated with the operations in Country A are determined by the market price of Product 1 (an arm's length price).

27.9 In assessing whether there is any indication that an asset may be impaired, an entity shall consider, as a minimum, the following indications:

External sources of information

during the period, an asset's market value has declined significantly more than would be expected as a result of the passage of time or normal use.

significant changes with an adverse effect on the entity have taken place during the period, or will take place in the near future, in the technological, market, economic or legal environment in which the entity operates or in the market to which an asset is dedicated.

(c) market interest rates or other market rates of return on investments have increased during the period, and those increases are likely to affect **materially** the discount rate used in calculating an asset's **value in use** and decrease the asset's **fair value less costs to sell.**

(d) the carrying amount of the net assets of the entity is more than the estimated fair value of the entity as a whole (such an estimate may have been made, for example, in relation to the potential sale of part or all of the entity).

Internal sources of information

(e) evidence is available of obsolescence or physical damage of an asset.

(f) significant changes with an adverse effect on the entity have taken place during the period, or are expected to take place in the near future, in the extent to which, or manner in which, an asset is used or is expected to be used. These changes include the asset becoming idle, plans to discontinue or restructure the operation to which an asset belongs and plans to dispose of an asset before the previously expected date.

(g) evidence is available from internal reporting that indicates that the economic performance of an asset is, or will be, worse than expected. In this context economic performance includes operating results and cash flows.

Notes

The presence of impairment indicators will not always lead to recognition of an impairment loss (expense). For example, while an increase in interest rates may be a useful indicator, it may not lead to an impairment if the rate of return on an entity's asset is unaffected by the change in market rates. In addition, the list of external and internal indications of impairment is not exhaustive. An entity may identify other indications that an asset may be impaired, which would also indicate that the entity is required to determine the recoverable amount. IAS 36 (paragraph14) further states that the internal indicators that an asset may be impaired include evidence from the internal reporting of:[3]

(a) cash flows for acquiring the asset, or subsequent cash needs for operating or maintaining it, that are significantly higher than those originally budgeted;

(b) actual net cash flows or operating profit or loss flowing from the asset that are significantly worse than those budgeted;

[3] In the absence of explicit guidance in the *IFRS for SMEs* Standard an entity can (but is not required to), applying paragraph 10.6 of Section 10, consider the requirements and guidance in full IFRS Standards.

(c) a significant decline in budgeted net cash flows or operating profit or a significant increase in budgeted loss flowing from the asset; or

(d) operating losses or net cash outflows for the asset when current period amounts are aggregated with amounts budgeted for the future.

The identification of the indications of impairment is crucial in the process of recognising an impairment loss. Judgement is required when entities consider their response to internal indications that the future performance of assets will be worse than expected. Entities should consider whether performance will be significantly below that previously budgeted.

Examples—impairment indicators

Ex 14 **An entity uses equipment that can have a high rate of obsolescence. Recent price quotes in the used equipment market indicate that the resale value of the entity's equipment has declined dramatically due to the introduction of new and improved technology for the equipment.**

The decline in resale prices is an external indicator of impairment. The decline in resale prices indicates that the recoverable amount of the entity's equipment may be below its carrying amount and an impairment test are required to be performed.

Ex 15 **Recent production and maintenance reports indicate that machinery used by an entity in its operations is wearing out at a much higher rate than expected.**

The evidence that the machinery is worn out at a much higher rate than expected is an internal impairment indicator. The declining condition of the machinery relative to expectations indicates that the recoverable amount of the entity's equipment may be below its carrying amount and an impairment test is required to be performed.

27.10 If there is an indication that an asset may be impaired, this may indicate that the entity should review the remaining **useful life**, the **depreciation** (**amortisation**) method or the **residual value** for the asset and adjust it in accordance with the section of this Standard applicable to the asset (for example, Section 17 and Section 18 *Intangible Assets other than Goodwill*), even if no impairment loss is recognised for the asset.

Notes

If, on reviewing an asset's useful life, the entity changes the depreciation (amortisation) method or the residual value, the depreciation expense for the year of the change (and future years) is required to be adjusted to reflect the changes (see paragraphs 17.23, 27.10 and 10.16(b)).

Example—recognition of impairment with adjustments to residual value

Ex 16 **The facts are the same as in Example 8. However, in this example, on 31 December 20X1 the estimated residual value of the equipment changes from CU2,000 to zero.**

On the basis of the information in Example 8 and a residual value of zero, the entity would initially have recorded depreciation expense for the year ended 31 December 20X1 at CU6,000 (CU24,000 depreciable amount ÷ 4 years). Consequently, in 20X1 the entity recognises the change in accounting estimate as follows:

Dr	Profit or loss (depreciation expense)	CU750	(a)	
	Cr Accumulated depreciation (equipment)			CU750

To increase the depreciation recognised in 20X1 to CU6,750.

Dr	Profit or loss (impairment loss)	CU250	(h)	
	Cr Accumulated impairment (equipment)			CU250

To recognise the impairment on property, plant and equipment.

(a) CU6,750 annual depreciation based on the new estimated residual value(b) minus CU6,000 depreciation already recognised for the year ended at 31 December 20X1 = CU750.

(b) (CU18,000 carrying amount at 31 December 20X0(c) minus CU0 residual value) ÷ 32 months remaining useful life(e) × 12 months = CU6,750 annual depreciation.

(c) CU26,000 cost minus CU8,000 accumulated depreciation at 31 December 20X0(d) = CU18,000.

(d) CU14,000 accumulated depreciation at 31 December 20X1 minus CU6,000 depreciation already recognised for the year ended at 31 December 20X1 = CU8,000.

(e) 4 years original estimated useful life × 12 months minus 16 months depreciated until 31 December 20X0(f) = 32 months (remaining expected useful life at 30 December 20X0).

(f) CU8,000 accumulated depreciation at 31 December 20X0 ÷ CU24,000 original depreciable amount(g) × 4 years original estimated useful life × 12 months = 16 months (number of months depreciated up to 30 December 20X0).

(g) CU26,000 cost minus CU2,000 original expected residual value = CU24,000.

(h) CU11,000 recoverable amount minus CU11,250 carrying amount at 31 December 20X1(i) = CU250.

(i) CU26,000 cost minus CU8,000 accumulated depreciation at 31 December 20X0 minus CU6,750 depreciation for the year ended at 31 December 20X1 = CU11,250.

Measuring recoverable amount

27.11 The recoverable amount of an asset or a cash-generating unit is the higher of its fair value less costs to sell and its value in use. If it is not possible to estimate the recoverable amount of an individual asset, references in paragraphs 27.12–27.20 to an asset should be read as references also to an asset's cash-generating unit.

27.12 It is not always necessary to determine both an asset's fair value less costs to sell and its value in use. If either of these amounts exceeds the asset's carrying amount, the asset is not impaired and it is not necessary to estimate the other amount.

27.13 If there is no reason to believe that an asset's value in use materially exceeds its fair value less costs to sell, the asset's fair value less costs to sell may be used as its recoverable amount. This will often be the case for an asset that is held for disposal.

Notes

The requirement that the recoverable amount is the higher of fair value less the costs to sell and value in use stems from the decision that measurement of the recoverable amount of an asset reflects the likely behaviour of rational management. Value in use is an entity-specific measure, and generally will require much judgement, based on entity-specific information. On the other hand, fair value less costs to sell is based on more objectively determined market indicators. If an asset's fair value less costs to sell is greater than its value in use, but management decides to keep the asset, the extra loss (the difference between the fair value less the costs to sell and the value in use) properly falls in later periods because it results from management's decision to keep the asset in these later periods.[4]

Fair value less costs to sell

27.14 Fair value less costs to sell is the amount obtainable from the sale of an asset in an arm's length transaction between knowledgeable, willing parties, less the costs of disposal (paragraphs 11.27–11.32 provide guidance on fair value measurement).

Notes

The hierarchy of the quality of the evidence about an asset's fair value in paragraph 11.27 is similar to the Level 1, 2, and 3 inputs of the fair value hierarchy in IFRS 13 *Fair Value Measurement*. The hierarchy gives highest priority to objective measures and lowest priority to unobservable measures.

Many tangible and most intangible assets do not have an active market. Consequently, fair value would usually need to be estimated using valuation techniques in paragraphs 11.27(b) and (c) of Section 11 *Basic Financial Instruments*.

Costs of disposal may include legal costs, stamp duty and other transaction taxes, costs of moving the asset and other direct incremental costs.

[4] See paragraph BCZ22(b) of the Basis for Conclusions for IAS 36.

Example—estimating fair value less costs to sell

Ex 17 **An entity owns a fleet of vehicles that it uses to deliver its products. At the end of 20X0, one truck has a carrying amount of CU9,000 (original cost CU19,000 minus accumulated depreciation of CU10,000). The original estimate of useful life of the truck is seven years (measured from the date the truck was first recognised by the entity) and it has an estimated residual value of CU5,000. Because of the low fuel efficiency of this truck, the entity has dramatically decreased use of the truck. The market price for similar trucks in an active resale market is CU6,000. Licence and title fees associated with selling the truck are CU200.**

The change in use is an internal indicator that the truck is impaired. The decline in the market price of the truck is an external indicator of impairment.

The price in an active market provides an estimate of fair value. The entity has no reason to believe that the truck's value in use is higher than its fair value less costs to sell. Consequently, the recoverable amount of the truck is CU5,800 (CU6,000 fair value less CU200 costs to sell). The entity makes the following entries to record the impairment of the truck:

Dr	Profit or loss (impairment of vehicles)	CU3,200	[a]	
	Cr Accumulated impairment (property, plant and equipment)			CU3,200

To recognise impairment loss on property, plant and equipment.

[a] CU9,000 carrying amount minus CU5,800 fair value less costs to sell = CU3,200.

Value in use

27.15 Value in use is the **present value** of the future cash flows expected to be derived from an asset. This present value calculation involves the following steps:

(a) estimating the future cash inflows and outflows to be derived from continuing use of the asset and from its ultimate disposal; and

(b) applying the appropriate discount rate to those future cash flows.

Notes

Unlike fair value, value in use is an entity-specific measure—it is the present value of the net cash flows the reporting entity expects to generate from using the asset and from its disposal.

27.16 The following elements shall be reflected in the calculation of an asset's value in use:

an estimate of the future cash flows the entity expects to derive from the asset;

expectations about possible variations in the amount or timing of those future cash flows;

the time value of money, represented by the current market risk-free rate of interest;

the price for bearing the uncertainty inherent in the asset; and

other factors, such as illiquidity, that market participants would reflect in pricing the future cash flows the entity expects to derive from the asset.

Notes

Measuring value in use requires the entity to carry out four steps:

identify unit of account for the impairment test (individual asset or particular cash-generating unit);

(a) estimate expected future net cash flows;

(b) determine appropriate discount rate; and

(c) aggregate expected future net cash flows in (b) and apply the discount rate in (c) to arrive at value in use.

27.17 In measuring value in use, estimates of future cash flows shall include:

(a) projections of cash inflows from the continuing use of the asset;

(b) projections of cash outflows that are necessarily incurred to generate the cash inflows from continuing use of the asset (including cash outflows to prepare the asset for use) and can be directly attributed, or allocated on a reasonable and consistent basis, to the asset; and

(c) net cash flows, if any, expected to be received (or paid) for the disposal of the asset at the end of its useful life in an arm's length transaction between knowledgeable, willing parties.

The entity may wish to use any recent financial budgets or forecasts to estimate the cash flows, if available. To estimate cash flow projections beyond the period covered by the most recent budgets or forecasts an entity may wish to extrapolate the projections based on the budgets or forecasts using a steady or declining growth rate for subsequent years, unless an increasing rate can be justified.

(a)
(b)

27.18 Estimates of future cash flows shall not include:

(a) cash inflows or outflows from financing activities; or

(b) **income tax** receipts or payments.

27.19 Future cash flows shall be estimated for the asset in its current condition. Estimates of future cash flows shall not include estimated future cash inflows or outflows that are expected to arise from:

a future restructuring to which an entity is not yet committed; or

improving or enhancing the asset's performance.

Notes

Management is required to assess the reasonableness of the assumptions upon which its current cash flow projections for measuring value in use are based.

The assumptions is required to be consistent with actual past events (unless circumstances have changed). Management's estimates of future cash flows should be based on the most recent forecasts. Preparers of financial statements under the *IFRS for SMEs* Standard may also consider the specific guidance in paragraph 33(b) of IAS 36, that projections based on budgets and forecasts shall only cover a maximum period of five years (unless longer period forecasts are reliable).

Future cash flows are estimated from budgets and forecasts and are projected using a growth rate for subsequent years. As shown in the table below (in which cash flows from 20X1 to 20X6 are discounted to their present value on 31 December 20X0), the growth rate is steady or declining beyond the budget and forecast years (unless an increase is supported by objective information) because larger than average growth rates are unlikely to be sustained due to competitors entering the market.[5]

Estimating cash flows

Year	Growth rate	Cash flows CU	Present value factor 15% discount rate	Discounted future cash flows CU
20X1		125	0.86957[a]	109
20X2		130	0.75614[b]	98
20X3		144	0.65752[c]	95
20X4	-2%	141	0.57175[d]	81
20X5	-5%	134	0.49718[e]	67
20X6		(75)	0.43233[f]	(32)
Value in use				418

[a] $1 \div (1 + 15\%)^1$
[b] $1 \div (1 + 15\%)^2$
[c] $1 \div (1 + 15\%)^3$
[d] $1 \div (1 + 15\%)^4$
[e] $1 \div (1 + 15\%)^5$
[f] $1 \div (1 + 15\%)^6$

The following principles should guide management's estimations of cash flows:

(a) Cash projections should be management's best estimate, reflecting conditions that will exist over the remaining useful life of the asset. In years 20X1–20X3 financial budgets predict an increase in net cash flows, followed by a declining growth rate (on the prior year) of 2% in 20X4 and 5% in 20X5.
(b) Cash flows should reflect continuing use and include cash outflows at the end of an asset's life (estimated at CU75 in 20X6). Estimations relate to the asset in its current condition.

[5] See paragraphs 34–38 of IAS 36. In the absence of explicit guidance in the *IFRS for SMEs* Standard an entity can (but is not required to), applying paragraph 10.6 of Section 10, consider the requirements and guidance in full IFRS Standards.

27.20 The discount rate (rates) used in the present value calculation shall be a pre-tax rate (rates) that reflect(s) current market assessments of:

the time value of money; and

the risks specific to the asset for which the future cash flow estimates have not been adjusted.

The discount rate (rates) used to measure an asset's value in use shall not reflect risks for which the future cash flow estimates have been adjusted, to avoid double-counting.

(b)

Notes

The discount rate chosen should capture the time value of money and the entity's estimation of other risks, including those that are specific to the asset but are not reflected in the estimation of future cash flows.

Determining the discount rate

The discount rate (or rates) to be used is a pre-tax rate that reflect(s) current market assessments of the time value of money and estimation of other risks, including those that are specific to the asset for which the future cash flows have not been adjusted.

The discount rate represents the rate the market would expect on an investment with the same risks as the item that will be discounted. The rate is estimated from:

(a) the rate implicit in current market transactions for similar assets; or

(b) the weighted average cost of capital of a listed entity that has an asset (or assets) with similar risks and service potential to the asset under consideration.

Such rates are unlikely to be commonly available. Thus the entity might estimate a
(a) market rate considering:[6]

(b) the entity's weighted average cost of capital (for example, using the capital asset
(c) pricing model);

the entity's incremental borrowing rate; and

(a) other market borrowing rates.

Once the market rate is estimated, the rate used as a starting point may need to be
(b) adjusted to reflect:

the way the market would assess the risks associated with the estimated cash flows (for example, country, currency and price risk); and

the exclusion of risks not relevant to the cash flows or for which the cash flows have been adjusted.

Expected present value: adjusting the discount rate:[7]

An entity's management aims to predict a set of cash flows that represents the probability-weighted average of cash flows (the expected cash flows). The table below provides a set of cash flows. Assume that the risk-free interest rate for a set of cash flows with a one-year horizon is 5%. The risk premium for an asset with same risk profile is 3%.

[6] See Appendix A paragraph A17 of IAS 36.

[7] This example is based on IFRS 13 *Fair Value Measurement*, Appendix B paragraphs B23–B30.

Possible cash flows during a year *CU*	Probability	Probability-weighted cash flows *CU*
500	15%	75
800	60%	480
900	25%	225
Total		**780**

Method 1—adjust the cash flows for risk. It is likely no market data directly indicates the amount of the risk adjustment. However, an asset pricing model can be used to estimate the rate. The risk premium (3%) can be used to calculate the risk-adjusted expected cash flows as follows:

Risk-adjusted expected cash flows = CU758 (CU780 minus CU22)[a]

[a] CU22 = (CU780 minus [CU780 x (1.05/1.08)])[b].

[b] 5% risk-free rate divided by risk-adjusted discount rate = 8% (5% risk-free rate + 3% risk premium)

Value in use = the risk-adjusted cash flows discounted at the risk-free rate = CU758/1.05 = CU722.

Method 2—the expected cash flows are not adjusted for risk but instead the adjustment for risk is included in the discount rate.

Risk-adjusted discount rate = 8% (5% risk-free rate + 3% risk premium)

Value in use = CU722 (CU780/1.08).

Note: for simplicity, tax is ignored in this module. Consequently, pre-tax discount rates are used. The Board explains that '…when the basis used to estimate the discount rate is post-tax, that basis is adjusted to reflect a pre-tax rate'.[8]

It further states:

> In theory, discounting post-tax cash flows at a post-tax discount rate and discounting pre-tax cash flows at a pre-tax discount rate should give the same result, as long as the pre-tax discount rate is the post-tax discount rate adjusted to reflect the specific amount and timing of the future tax cash flows. The pre-tax discount rate is not always the post-tax discount rate grossed up by a standard rate of tax … The 'real' pre-tax discount rate differs from the post-tax discount rate grossed up by the standard rate of tax depending on the tax rate, the post-tax discount rate, the timing of the future tax cash flows and the useful life of the asset… [9]

[8] See paragraph A20 of Appendix A of IAS 36.

[9] See BCZ85 of the Basis for Conclusions on IAS 36.

Example—estimating value in use

Ex 18 **At the end of 20X0 an entity tests a machine for impairment. The machine was bought five years earlier for CU300,000, when its useful life was estimated to be 15 years and the estimated residual value was nil. At 31 December 20X0, after recognising the depreciation charge for 20X0, the machine's carrying amount was CU200,000 and its remaining useful life was estimated at 10 years.**

The machine's value in use is calculated using a pre-tax discount rate of 14% a year. Budgets approved by management reflect expected cash inflows net of the estimated costs necessary to maintain the level of economic benefit expected to arise from the machine in its current condition.

Assume, for simplicity, that the expected future cash flows occur at the end of each reporting period. An estimation of the value in use of the machine at the end of 20X0 is shown below:

Year	Probability-weighted future cash flow CU	Present value factor 14%[(a)]	Discounted cash flow CU
20X1	22,742	0.877193	19,949
20X2	25,090	0.769468	19,306
20X3	26,794	0.674972	18,085
20X4	35,497	0.592080	21,017
20X5	39,985	0.519369	20,767
20X6	41,959	0.455587	19,116
20X7	43,462	0.399637	17,369
20X8	47,344	0.350559	16,597
20X9	47,287	0.307508	14,541
20Y0[(b)]	46,574	0.269744	12,563
Value in use			**179,310**

[(a)]The present value factor is calculated as $k = 1 \div (1 + i)^n$, where i is the discount rate and n is the number of periods of discount (for 20Y0 the present value factor (k_{20Y0}) is calculated as follows: $1 \div (1 + 0.14)^{10} = 1 \div (1.14)^{10} = 1 \div 3.707221 = 0.269744$.

[(b)]The expected future cash flow for year 20Y0 includes CU1,000 expected to be paid to dispose of the asset at the end of its useful life. The residual value is nil because it is expected that the machine will be scrapped at the end of 20Y0.

Assuming the fair value less cost to sell is lower than the value in use, the calculation of the impairment loss at the end of 20X0 is as follows:

Carrying amount before impairment loss	CU200,000
Minus recoverable amount	(CU179,310)
Impairment loss	CU20,690
Carrying amount after impairment loss (recoverable amount)	CU179,310

The entity recognises the impairment loss at 31 December 20X0 as follows:

Dr	Profit or loss (impairment loss)	CU20,690	
	Cr Accumulated impairment (machine)		CU20,690

To recognise impairment loss on property, plant and equipment.

As a consequence of the impairment loss recognised at 31 December 20X0, the carrying amount of the machine immediately after the impairment recognition is equal to the machine's recoverable amount (CU179,310). In this case, in subsequent periods (20X1–20Y0), assuming all variables remain the same as at the end of 20X0, the depreciable amount will be CU179,310 (see paragraph 17.18), so the depreciation charge will be CU17,931 a year (CU179,310 ÷ 10 years).

Recognising and measuring an impairment loss for a cash-generating unit

27.21 An impairment loss shall be recognised for a cash-generating unit if, and only if, the recoverable amount of the unit is less than the carrying amount of the unit. The impairment loss shall be allocated to reduce the carrying amount of the assets of the unit in the following order:

(a) first, to reduce the carrying amount of any **goodwill** allocated to the cash-generating unit; and

(b) then, to the other assets of the unit pro rata on the basis of the carrying amount of each asset in the cash-generating unit.

Notes

An asset's cash-generating unit is the smallest identifiable group of assets that includes the asset and generates cash inflows largely independent of the cash inflows from other assets or groups of assets (see paragraph 27.8). An asset is not tested on a stand-alone basis when it does not generate cash inflows; instead, it is tested only in combination with other assets as part of a cash-generating unit. Most assets do not qualify to be tested alone.

The approach to identifying and accounting for the impairment of a cash-generating unit is consistent with that for an individual asset. If, at the end of the reporting period, indicators of impairment are present, the entity is required to compare the carrying amount of the cash-generating unit with its recoverable amount. If the carrying amount of the cash-generating unit is greater than its recoverable amount, the difference (an impairment loss) is recognised in profit or loss as an expense. The entity is required to also allocate the impairment loss to the assets of the cash-generating unit applying paragraph 27.21.

An additional factor relevant to testing some cash-generating units for impairment is the allocation of goodwill to cash-generating units. When goodwill is allocated to a cash-generating unit, any impairment loss recognised will first reduce goodwill. When using the approach, an entity simply assumes goodwill is impaired and writes it off before reducing the carrying amount of other assets.

Examples—impairment loss for a cash-generating unit

Ex 19 **An entity produces a product in a continuous process using three machines (the output of Machine A is the input (raw material) for Machine B, the output of which is the raw material for Machine C. The output from Machine C is the entity's only marketable product.) After recognising depreciation for the year ended 31 December 20X1, the carrying amount of machines A, B and C are:**

Asset items	Machine A	Machine B	Machine C	Cash-generating unit (comprised of Machines A, B and C)
Carrying amount	CU13,000	CU29,250	CU22,750	CU65,000
Item's carrying amount in relation to the cash-generating unit's carrying amount (%)	20%	45%	35%	

The entity is required to conduct an impairment test because of a significant market downturn for its products.

Products produced by machines A and B have no active market. Machines A, B and C are assets of the cash-generating unit for which the impairment test is performed.

Assuming a pre-tax discount rate of 11%, the value in use of the cash-generating unit is estimated as follows:

	Probability-weighted estimated future cash flow[(a)]	Present value factor 11%[(b)]	Discounted cash flow
	CU		*CU*
20X2	14,165	0.900901	12,761
20X3	12,450	0.811622	10,105
20X4	10,550	0.731191	7,714
20X5	10,340	0.658731	6,811
20X6	9,500	0.593451	5,638
20X7	22,390	0.534641	11,971
Value in use			**55,000**

(a) For simplicity, assume that all cash flows will occur at the end of each year. Cash flow estimates reflect the probability that the cash flows will be received (see notes in paragraph 27.20).

(b) The present value factor is calculated as $PV = 1 \div (1 + i)^n$, where i is the discount rate and n is the period of discounting (for example, the present value of factor of 20X7 is calculated as follows: $1 \div (1 + 0.11)^6 = 1 \div (1.11)^6 = 1 \div 1.8704146 = 0.534641$).

The determination of the impairment, the allocation of the impairment loss to machines A, B and C and the new carrying amount after impairment follow:

	CU
Carrying amount	65,000
Recoverable amount[(c)]	55,000
Impairment loss	10,000

Asset items	Item's carrying amount in relation to the cash-generating unit's carrying amount (%)	Impairment allocation CU
Machine A	20%	2,000
Machine B	45%	4,500
Machine C	35%	3,500
Total		10,000

(c) It is assumed that the cash-generating unit's fair value less costs to sell is lower than its value in use.

The carrying amounts of machines A, B and C immediately after recognising the impairment loss follow:

	Machine A	*Machine B*	*Machine C*
Items' carrying amount in relation to cash-generating unit's carrying amount (%)	20%	45%	35%
Carrying amount before impairment	CU13,000	CU29,250	CU22,750
Impairment loss	(CU2,000)	(CU4,500)	(CU3,500)
Carrying amount after impairment	CU11,000	CU24,750	CU19,250

Ex 20 **The facts are the same as in Example 19. However, in this example, at 31 December 20X1 the cash-generating unit also has goodwill of CU7,220.**

The impairment loss is first allocated to the goodwill (CU7,220) and then to the other assets of the cash-generating unit on a pro-rata basis reflecting the carrying amount of each asset in the cash-generating unit (see paragraph 27.21).

The remaining impairment loss of CU2,780 (total impairment CU10,000 minus CU7,220 allocated to goodwill) is allocated to machines A, B and C as follows:

Asset items	Carrying amount before impairment	Item's carrying amount in relation to cash-generating unit's carrying amount (%)	Impairment allocation
	CU		CU
Machine A	13,000	20%	556
Machine B	29,250	45%	1,251
Machine C	22,750	35%	973
Total	65,000		2,780

Following are the new carrying amounts of the goodwill and machines A, B and C immediately after recognising the impairment loss.

	Goodwill	Machine A	Machine B	Machine C
	CU	CU	CU	CU
Carrying amount before impairment	7,220	13,000	29,250	22,750
Impairment loss	(7,220)	(556)	(1,251)	(973)
Carrying amount after impairment	–	12,444	27,999	21,777

27.22 However, an entity shall not reduce the carrying amount of any asset in the cash-generating unit below the highest of:

its fair value less costs to sell (if determinable);

its value in use (if determinable); and

zero.

27.23 Any excess amount of the impairment loss that cannot be allocated to an asset because of the restriction in paragraph 27.22 shall be allocated to the other assets of the unit pro rata on the basis of the carrying amount of those other assets.

Notes

When allocating an impairment loss to the assets of a cash-generating unit, an entity is required to not write down an asset below its fair value less costs to sell, value in use or zero. The entity is required, therefore, to make an initial measurement of each asset's carrying amount after the impairment loss has been allocated on a pro-rata basis (see Example 19). If the resulting carrying amount for any asset is less than the highest of the asset's fair value less costs to sell, value in use or zero, then the impairment allocation for that asset is limited to an amount that does not reduce the carrying amount below the highest of its fair value less costs to sell, value in use or zero. Applying paragraph 27.23, the amount of impairment not allocated to that particular asset shall be allocated under the pro-rata approach to the other assets in the cash-generating unit.

Examples—impairment loss for a cash-generating unit

Ex 21 **The facts are the same as in Example 19. However, in this example, at 31 December 20X1 Machine A's fair value less costs to sell is determined as CU12,500. Management could neither determine the fair value less costs to sell nor the value in use of any other individual asset within the cash-generating unit.**

As shown in Example 19, the pro-rata allocation of impairment loss to Machine A is CU2,000 (CU10,000 total impairment of the cash-generating unit × 20% carrying amount of Machine A in relation to the cash-generating unit's carrying amount).

Asset items	Carrying amount before impairment	Item's carrying amount in relation to the cash-generating unit's carrying amount (%)	Notional impairment Allocation	Notional carrying amount after impairment
	CU		CU	CU
Machine A	13,000	20%	2,000	11,000
Machine B	29,250	45%	4,500	24,750
Machine C	22,750	35%	3,500	19,250
Total	65,000		10,000	55,000

However, this allocation would reduce the carrying amount of Machine A to CU11,000 (CU13,000 carrying amount before impairment minus CU2,000 impairment), which is lower than its fair value less costs to sell of CU12,500. Consequently, applying paragraph 27.22(a), the impairment loss allocated to Machine A is limited to CU500 (CU13,000 carrying amount before impairment minus CU12,500 fair value less costs to sell).

The remaining impairment loss of CU1,500 (CU2,000 minus CU500 allocated to Machine A) is allocated to machines B and C according to each machine's carrying amount in relation to the total carrying amount of the two machines as follows:

Asset items	Notional carrying amount after impairment	Item's carrying amount in relation to the cash-generating unit's carrying amount (%)	Impairment allocation
	CU		CU
Machine B	24,750	56.25%	844
Machine C	19,250	43.75%	656
Total	44,000		1,500

The total impairment loss allocated to each machine is shown in the table, together with the carrying amounts of machines A, B and C immediately after recognising the impairment loss.

Asset items	Carrying amount before impairment	First impairment allocation	Second impairment allocation	Total impairment	Carrying amount after impairment
	CU	CU	CU	CU	CU
Machine A	13,000	500	–	500	12,500
Machine B	29,250	4,500	844	5,344	23,906
Machine C	22,750	3,500	656	4,156	18,594
Total	65,000	8,500	1,500	10,000	55,000

Ex 22 **The facts are the same as in Example 21 (Machine A's fair value less costs to sell is determined as CU12,500). However, in this example, at 31 December 20X1 Machine B's fair value less costs to sell is determined as CU24,000. Management could not determine the fair value less costs to sell or the value in use of Machine C.**

As shown in Example 21, the impairment loss allocated to Machine A is limited to CU500 (CU13,000 carrying amount before impairment minus CU12,500 fair value less costs to sell). The remaining impairment loss of CU9,500 (CU10,000 total impairment to be allocated minus CU500 allocated to Machine A) must be allocated to machines B and C.

The pro-rata allocation of the remaining impairment loss to Machine B is CU844 ((the remaining impairment of the cash-generating unit) CU1,500 × 56.25% (the carrying amount of Machine B)) in relation to the carrying amount of the cash-generating unit's other asset (see Example 21).

However, this pro-rata allocation would reduce the carrying amount of Machine B to CU23,906 ((the carrying amount before impairment) CU29,250 − CU5,344 (impairment)), which is lower than its fair value less costs to sell—CU24,000. Consequently, applying paragraph 27.22(a), the impairment loss allocated to Machine B is limited to CU5,250 ((the carrying amount before impairment) CU29,250 − CU24,000 (fair value less costs to sell)). Instead of the impairment loss CU5,344 (CU4,500 + CU844) allocated to Machine B in Example 21, the impairment loss is CU5,250 (CU4500 + CU750). The remaining impairment loss of CU94 (CU844 − CU750) is required to be allocated to Machine C.

The total impairment loss allocated to each machine is shown in the table, together with the carrying amounts of machines A, B and C immediately after recognising the impairment loss.

Asset items	Carrying amount before impairment	First impairment allocation	Second impairment allocation	Third impairment allocation	Total impairment	Carrying amount after impairment
	CU	CU	CU	CU	CU	CU
Machine A	13,000	500	–	–	500	12,500
Machine B	29,250	4,500	750	–	5,250	24,000
Machine C	22,750	3,500	656	94	4,250	18,500
Total	65,000	8,500	1,406	94	10,000	55,000

Additional requirements for impairment of goodwill

27.24 Goodwill, by itself, cannot be sold. Nor does it generate cash flows to an entity that are independent of the cash flows of other assets. As a consequence, the fair value of goodwill cannot be measured directly. Consequently, the fair value of goodwill must be derived from measurement of the fair value of the cash-generating unit(s) of which the goodwill is a part.

27.25 For the purpose of impairment testing, goodwill acquired in a **business combination** shall, from the acquisition date, be allocated to each of the acquirer's cash-generating units that is expected to benefit from the synergies of the combination, irrespective of whether other assets or **liabilities** of the acquiree are assigned to those units.

Notes

The allocation of goodwill should normally be undertaken in the financial year in which the acquisition takes place. Purchased goodwill might relate to a single cash generating unit or a group of cash generating units.

Allocating goodwill to each cash-generating unit that is expected to benefit from the synergies of the business combination can require significant judgement at the time of the acquisition (the acquisition date) from which the goodwill arises.

The goodwill might be attributable to a number of different cash-generating units of the larger group, some of which might have been pre-existing cash-generating units of the acquirer.

Examples—allocating goodwill to cash-generating units for the purpose of impairment testing

Ex 23 **On 1 January 20X1 Entity A acquired Entity Z. As a consequence of the business combination, Entity Z became a wholly-owned subsidiary of Entity A. Entities A and Z each have one cash-generating unit. Goodwill of CU1,000 arose from the business combination, all of which is attributable to synergies of the combination expected to occur only in Entity Z's cash-generating unit.**

For the purposes of impairment testing, CU1,000 goodwill is allocated to Entity Z's cash-generating unit. No goodwill is allocated to Entity A's cash-generating unit.

Ex 24 **The facts are the same as in Example 23. However, in this example, 60% of the goodwill is attributable to synergies of the combination expected to occur in Entity A's cash-generating unit. The rest of the goodwill is attributable to synergies in Entity Z's cash-generating unit.**

For the purposes of impairment testing, CU600 goodwill is allocated to Entity A's cash-generating unit and CU400 goodwill is allocated to Entity Z's cash-generating unit.

27.26 Part of the recoverable amount of a cash-generating unit is attributable to the **non-controlling interest** in goodwill. For the purpose of impairment testing a non-wholly-owned cash-generating unit with goodwill, the carrying amount of that unit is notionally adjusted, before being compared with its recoverable amount, by grossing up the carrying amount of goodwill allocated to the unit to include the goodwill attributable to the non-controlling interest. This notionally adjusted carrying amount is then compared with the recoverable amount of the unit to determine whether the cash-generating unit is impaired.

Notes

Determining the carrying amount of goodwill and allocating goodwill to cash-generating units can require significant judgement at the time of the business combination that gave rise to the goodwill; significant judgement will also be required subsequently when performing impairment tests.

When carrying out goodwill impairment testing on a cash-generating unit with a non-controlling interest:

(a) the carrying amount of the cash-generating unit is notionally adjusted to include goodwill attributable to the non-controlling interest;

(b) the notional carrying amount of the cash-generating unit is compared to its recoverable amount;

(c) if the recoverable amount is less than the carrying amount an impairment loss is calculated;

(d) the impairment loss calculated is reduced by the amount attributable to the goodwill held by the non-controlling interest to calculate the impairment loss to be recognised; and

(e) the impairment loss to be recognised reduces, first, the goodwill recognised by parent then, next, the non-monetary assets on a pro-rata basis.

Example—notionally adjusting the carrying amount of goodwill for non-controlling interests

Ex 25 **On 30 December 20X1 Entity A acquired 75% of Entity Z, making Entity Z a subsidiary of Entity A. Entities A and Z each have one cash-generating unit. Goodwill of CU750 arose from the business combination, all of which is attributable to synergies of the combination that are expected to occur only in Entity Z's cash-generating unit.**

In the group's consolidated statement of financial position (which presents Entities A and Z as a single entity) non-controlling interests are measured at their proportionate interest (25%) of the group carrying amount of Entity B's net assets excluding goodwill.

If Entity Z's cash-generating unit was tested for impairment on 31 December 20X1, the CU750 goodwill asset allocated to Entity Z's cash-generating unit would, solely for the purpose of the impairment test at the group level, be grossed up by CU250 (CU750 / 75% x 25%) to CU1,000 (the goodwill is notionally increased to include goodwill attributable to the non-controlling interests' 25% interest in the cash-generating unit).

Example—impairment loss for a cash-generating unit with allocated goodwill

Ex 26 **On 31 December 20X1, Entity T acquires 100% of voting rights in Entity M for CU10,000. Entity M has manufacturing plants in three countries. The data in the table relates to the end of 20X1.**

	Allocation of purchase price	Fair value of identifiable assets	Goodwill
	CU	CU	CU
Activities in Country A	3,000	2,000	1,000
Activities in Country B	2,000	1,500	500
Activities in Country C	5,000	3,500	1,500

Goodwill arising on the acquisition of Entity M has been allocated to three cash-generating units (Countries A, B and C).

During 20X2, a new government is elected in Country A. It passed legislation that significantly restricts exports of the main product produced by Entity T and its subsidiaries (Group T). As a result, and for the foreseeable future, Group T's production in Country A will be cut by 40%. The significant export restriction and the resulting production decrease require Group T to estimate the recoverable amount of Country A's cash-generating unit at the end of 20X2. Management estimates cash flow forecasts for Country A operations and determines the cash-generating unit's recoverable amount to be CU1,360. The carrying amounts of goodwill and identifiable assets of Country A at 31 December 20X2 are CU800 and CU1,833 respectively. Entity T amortises the identifiable depreciable assets in Country A on a straight-line basis over 12 years and goodwill over five years.

The calculation and allocation of the impairment loss for Country A's cash-generating unit at the end of 20X2 is as follows:

	Goodwill	*Identifiable assets*	*Total*
	CU	CU	CU
Historical cost	1,000	2,000	3,000
Accumulated amortisation/depreciation (20X2)	(200)	(167)	(367)
Carrying amount	800	1,833	2,633
Impairment loss	(800)	(473)	(1,273)
Carrying amount after impairment loss	–	1,360	1,360

At the end of 20X2, Entity T compares the carrying amount of Country A's assets CU2,633 with their recoverable amount CU1,360 and records an impairment loss of CU1,273. The impairment loss is recorded first against the carrying amount of goodwill CU800 and next against the carrying amount of identifiable assets CU473.

Example—impairment loss for a cash-generating unit with allocated goodwill and non-controlling interests

Ex 27 **Entity P acquires an 80% ownership interest in Entity S (ie a subsidiary as a result of the business combination) for CU2,100 on 1 January 20X3, when the fair value of Entity S's net identifiable assets is CU1,500. The group (Entities P and S viewed as a single economic entity) measures the non-controlling interests as the proportionate interest of its subsidiary's net identifiable assets (CU300 (20% of CU1,500)). Goodwill of CU900 is recognised in accounting for the business combination—the excess of the cost of the business combination (CU2,100) over the acquirer's interest in the net fair value of the identifiable assets, liabilities and contingent liabilities (CU1,500 x 80% = CU1,200) (see paragraph 19.22(b)).**

The group considers Entity S to be a cash-generating unit. Because other cash-generating units of Entity P are expected to benefit from the synergies of the combination, goodwill of CU400 related to those synergies has been allocated to other cash-generating units within Entity P, leaving goodwill of CU500 within the carrying amount of Entity S. The goodwill is amortised using the straight-line basis over its 5-year estimated useful life (only CU400 of the goodwill allocated to Entity S's cash-generating unit remained at 31 December 20X3 after deducting CU100 amortisation in 20X3).

At 31 December 20X3, Entity P determines that the recoverable amount of Entity S's cash-generating unit is CU1,000.

The goodwill attributable to the non-controlling interests is included when calculating the impairment loss in relation to Entity S (see paragraph 27.26) because the CU400 goodwill that remains in Entity S's cash-generating unit reflects only Entity P's 80% interest in Entity S. Unrecognised goodwill attributable to the 20% non-controlling interests in Entity S is CU100.

At 31 December 20X3, Entity P determines that the recoverable amount of Entity S's cash-generating unit is CU1,000. The carrying amount of the net assets of the cash-generating unit, excluding goodwill, is CU1,350. The impairment loss of CU850 is allocated first to goodwill (CU500) then to identifiable assets (CU350).

Group carrying amounts on Entity S's cash-generating unit's assets:

31 December 20X3 before impairment testing	Goodwill	Net identifiable assets	Total
	CU	CU	CU
Carrying amount (net of depreciation and amortisation)	400	1,350	1,750
Unrecognised non-controlling interests	100	–	100
Notionally adjusted carrying amount	500	1,350	1,850
Recoverable amount			1,000
Notional impairment loss	500	350	850

At the end of 20X3, the group recognises an impairment loss of CU750 (goodwill CU400 and identifiable assets CU350) on Entity S's cash-generating unit as follows.

Allocation of impairment loss on 31 December 20X3	Goodwill	Net identifiable assets	Total
	CU	CU	CU
Carrying amount (net of depreciation and amortisation)	400	1,350	1,750
Impairment loss	(400)	(350)	(750)
Carrying amount after impairment loss	–	1,000	1,000

To determine the impairment loss to be recognised (CU100), the notional CU850 impairment loss is reduced by the amount attributable to the goodwill held by the non-controlling interest. The remaining impairment loss reduced the goodwill first (CU400) and the remaining amount is allocated to the net identifiable assets of Entity S's cash-generating unit.

Note: assume the facts were different—the recoverable amount of Entity S's cash-generating unit is CU1,800 (instead of CU1,000). The total notional impairment loss would be CU50 (CU1,850 of notionally adjusted carrying amount minus CU1,800 of recoverable amount) and the impairment loss recognised would be CU40—the total notional impairment loss is grossed down so that the impairment expense for goodwill relates only to the ownership interest held (CU50 × 80%).

27.27 If goodwill cannot be allocated to individual cash-generating units (or groups of cash-generating units) on a non-arbitrary basis, then for the purposes of testing goodwill the

(a) entity shall test the impairment of goodwill by determining the recoverable amount of either:

(b) the acquired entity in its entirety, if the goodwill relates to an acquired entity that has not been integrated (integrated means the acquired business has been restructured or dissolved into the reporting entity or other **subsidiaries**); or

the entire group of entities, excluding any entities that have not been integrated, if the goodwill relates to an entity that has been integrated.

In applying this paragraph, an entity will need to separate goodwill into goodwill relating to entities that have been integrated and goodwill relating to entities that have not been integrated. Also the entity shall follow the requirements for cash-generating units in this section when calculating the recoverable amount of, and allocating impairment losses and reversals to assets belonging to, the acquired entity or group of entities.

Notes

Paragraph 27.27 is relevant only when goodwill arising on acquisitions of subsidiaries cannot be allocated to individual or to groups of cash-generating units unless it is allocated arbitrarily. When any allocation would be arbitrary, the entity carries out impairment testing by focusing on the recoverable amount of the entire group, excluding any entities that have not been integrated into the group.

Applying paragraph 27.27, if the group acquires a subsidiary not subsequently integrated into the group, for impairment testing, any goodwill arising on acquisition of the subsidiary should be allocated only to that subsidiary. Allocating goodwill to the

subsidiary will continue into the future while the goodwill is outstanding, unless the subsidiary is integrated at a later date. Hence, the goodwill arising on an acquisition of a subsidiary not integrated is included in the carrying amount of the subsidiary for the purposes of impairment testing. For impairment testing, the carrying amount of the subsidiary is compared to the recoverable amount of the subsidiary.

Applying paragraph 27.27, any goodwill not allocated to individual subsidiaries is included in the carrying amount of the remaining group (the entire group excluding subsidiaries not integrated). For impairment testing, the carrying amount of the remaining group is compared to the recoverable amount of the remaining group.

Example—impairment loss, non-allocated goodwill and integrated/non-integrated subsidiaries

Ex 28 **Group A comprises a parent company and several subsidiaries. Management of Group A decides that goodwill cannot be allocated to individual cash-generating units (or groups of cash-generating units) on a non-arbitrary basis.**

On 1 January 20X2 Group A acquired 100% of the ordinary share capital of Entity Z for CU20,000. Goodwill of CU1,000 arose in accounting for that business combination. That goodwill is amortised using the straight-line basis over 10 years.

At 31 December 20X2, the total carrying amount of goodwill after amortisation, and any impairment made in prior years, in Group A's consolidated financial statements is CU3,900 (note: the CU3,900 includes goodwill from a number of business combinations, including the acquisition of Entity Z).

On 31 December 20X2 Group A performs an impairment test on all of its goodwill (note: the test is only required if impairment indicators are present).

Assume that, at 31 December 20X2, the recoverable amount of Group A (excluding Entity Z) is CU34,000, the recoverable amount of Entity Z is CU10,500 and the recoverable amount of Group A (including Entity Z) is CU44,500.

Scenario 1—non-integrated subsidiary

Entity Z is engaged in dissimilar activities from the rest of Group A. Entity Z has therefore not been integrated into Group A.

At 31 December 20X2 the carrying amounts of the net assets of Group A and Entity Z were as follows:

		Carrying amount at 31/12/20X2 after depreciation and amortisation
	Goodwill	Net assets
	CU	*CU*
Group A (excluding Z)	[1]3,000	30,000
Entity Z	[2]900	10,000
Group A (including Z)	3,900	40,000

[1] Goodwill relating to the acquisition of subsidiaries other than Entity Z.

[2] Goodwill relating to the acquisition of Entity Z (goodwill of CU1,000 minus CU100, ie one-year amortisation on a 10-year useful life using a straight-line basis).

Because Entity Z's activities are not integrated into Group A, applying paragraph 27.27(a), the goodwill arising on acquisition of Entity Z is tested for impairment separately from the goodwill relating to Group A's other business combinations.

The impairment loss is calculated as follows:

Entity Z (non-integrated entity)—impairment = CU400 (carrying amount CU10,900 minus recoverable amount CU10,500). The impairment loss reduces goodwill by CU400.

Group A (excluding Entity Z)—no impairment as recoverable amount of Group A (excluding Entity Z) of CU34,000 exceeds the carrying amount of Group A (excluding Entity Z) of CU33,000.

Total impairment loss for Group A = 400.

Scenario 2—integrated subsidiary

Entity Z has been integrated into Group A.

At 31 December 20X2 the carrying amounts of the net assets of Group A are:

	Goodwill	Carrying amount at 31/12/20X2 after depreciation and amortisation Net assets
	CU	CU
Group A	[(1)]3,900	40,000

[(1)] *Goodwill relating to the acquisition of subsidiaries including the acquisition of Entity Z.*

The goodwill arising on the acquisition of Entity Z is combined with the rest of the goodwill relating to Group A from the date of the acquisition of Entity Z.

The impairment loss is calculated as follows:

Group A: no impairment because the recoverable amount CU44,500 exceeds the carrying amount of CU43,900 (CU3,900 goodwill plus CU40,000 other assets at group carrying amounts).

Reversal of an impairment loss

27.28 An impairment loss recognised for goodwill shall not be reversed in a subsequent period.

27.29 For all assets other than goodwill, an entity shall assess at each reporting date whether there is any indication that an impairment loss recognised in prior periods may no longer exist or may have decreased. Indications that an impairment loss may have decreased or may no longer exist are generally the opposite of those set out in paragraph 27.9. If any such indication exists, the entity shall determine whether all or part of the prior impairment loss should be reversed. The procedure for making that determination will depend on whether the prior impairment loss on the asset was based on:

the recoverable amount of that individual asset (see paragraph 27.30); or

the recoverable amount of the cash-generating unit to which the asset belongs (see paragraph 27.31).

Reversal where recoverable amount was estimated for an individual impaired asset

27.30 When the prior impairment loss was based on the recoverable amount of the individual impaired asset, the following requirements apply:

(a) the entity shall estimate the recoverable amount of the asset at the current reporting date.

(b) if the estimated recoverable amount of the asset exceeds its carrying amount, the entity shall increase the carrying amount to recoverable amount, subject to the limitation described in (c). That increase is a reversal of an impairment loss. The entity shall recognise the reversal immediately in profit or loss, unless the asset is carried at a revalued amount in accordance with the revaluation model in paragraph 17.15B. Any

(c) reversal of an impairment loss of a revalued asset shall be treated as a revaluation increase in accordance with paragraph 17.15C.

(d) the reversal of an impairment loss shall not increase the carrying amount of the asset above the carrying amount that would have been determined (net of amortisation or depreciation) had no impairment loss been recognised for the asset in prior years.

after a reversal of an impairment loss is recognised, the entity shall adjust the depreciation (amortisation) charge for the asset in future periods to allocate the asset's revised carrying amount, less its residual value (if any), on a systematic basis over its remaining useful life.

Examples—impairment reversal: individual impaired asset

Ex 29 **The facts are the same as in Example 18. At 31 December 20X4 the machine has a carrying amount of CU107,586. Management has reassessed the future cash flows based on changed circumstances since the end of 20X0 and determined value in use to be CU122,072 at 31 December 20X4. Management believes fair value less costs to sell is less than value in use.**

At the end of 20X4, the machine's recoverable amount (value in use = CU122,072) is higher than the machine's carrying amount before the recognition of any reversal of the impairment loss recognised in 20X0 (CU107,586). It is an indication that the impairment loss recognised in 20X0 no longer exists or may have decreased.

End of 20X4	*Machine*
	CU
Recoverable amount	122,072
Carrying amount, before the reversal of the impairment loss recognised at 31/12/X0	107,586
Difference	14,486

The difference is only an indication of the amount of the reversal because the reversal cannot increase the carrying amount of the asset above the carrying amount that would have been determined had no impairment loss been recognised for the asset in prior years. At the end of 20X4, the carrying amount that would have been determined had no impairment loss been recognised for the asset in prior years is CU120,000 (cost CU300,000 minus accumulated depreciation CU180,000). Thus CU120,000 is the maximum carrying amount for the asset after the reversal of the impairment.

The entity compares the carrying amount at 20X4 if no impairment loss had been recognised (CU120,000) with the carrying amount at 20X4 (CU107,586) and determines that the maximum impairment reversal is CU12,414 (CU120,000 minus CU107,586).

End of 20X4	Machine	
	CU	
Cost	300,000	
Minus notional depreciation since acquisition until 31/12/20X4	(180,000)	(d)
Notional carrying amount at 31/12/20X4 if no impairment loss had been recognised for the asset in 20X0	120,000	
Minus carrying amount at the year ended 31/12/20X4, before the reversal of the impairment loss recognised in prior reporting periods	107,586	(e)
Reversal of prior year's impairment loss	12,414	

(d) CU300,000 depreciable amount (CU300,000 cost minus nil estimated residual value) ÷ 15 years estimated useful life at the date of purchase × 9 years (period since date of purchase until 31/12/20X4).

(e) CU179,310 revised depreciable amount after impairment loss was recognised ÷ 10 years remaining useful life at the date of impairment recognition x 6 years (remaining useful life since the date of impairment recognition until 31/12/20X4).

The entity recognises the reversal of impairment loss at 31 December 20X4 with the following journal entry:

Dr	Accumulated impairment loss—machine	CU12,414	
	Cr Profit or loss—reversal of impairment loss		CU12,414

To recognise the reversal of the impairment loss.

As a consequence of the reversal of part of the impairment loss recognised at 31 December 20X0, the carrying amount of the machine immediately after the reversal of the impairment loss recognition is CU120,000 (CU300,000 cost minus CU100,000 depreciation recognised for the period since the acquisition of the machine until 31 December 20X0 minus CU71,724 depreciation recognised for the period 20X1–20X4 minus CU8,276 accumulated impairment loss (the impairment loss recognised at 31 December 20X0, CU20,690 minus CU12,414 reversal recognised at 31/12/20X4). In this case, the carrying amount of the machine immediately after the reversal of the impairment loss recognition is equal to the machine's carrying amount that would have been determined had no impairment loss been recognised for the asset in prior years.

Applying paragraph 27.30(d), in subsequent periods (20X5–20Y0), assuming that all variables remain the same as at the end of 20X4, the depreciable amount will be CU120,000 (see paragraph 17.18), so the annual depreciation charge will be CU20,000 (depreciable amount, CU120,000 ÷ 6 years remaining useful life).

Ex 30 **Entity Z uses the revaluation model for all production equipment. The new specialised production equipment is purchased 1 January 20X1 for CU400,000 and immediately placed in service. It is estimated to have a useful life of 20 years. At 31 December 20X3 a trade embargo limits the importation of this equipment produced in Country X, the sole producer of this equipment. The embargo causes the price to increase to CU500,000 for equipment in similar condition. In 20X4, several market entrants from neighbouring countries begin production and flood the market, drastically reversing the price for equipment in similar condition to CU300,000. Entity Z has reassessed the useful life of the equipment and it was determined to have remaining useful life of 15 years as at 31 December 20X4.**

The following are the journal entries to account for the revaluation gain and the subsequent impairment recorded as a revaluation reversal:

Dr	Asset—PPE: equipment	400,000	
	Cr Asset—financial asset: cash		400,000

To recognise purchase of equipment at 1 January 20X1.

Dr	Expense—Depreciation	20,000	
	Cr Asset—PPE: accumulated depreciation		20,000

To recognise annual depreciation expense at 31 December 20X1, 20X2, 20X3 (CU400,000 ÷ 20 years).

Dr	Asset—PPE: equipment	100,000[(a)]	
Dr	Asset—PPE: accumulated depreciation	60,000[(b)]	
	Cr Equity—OCI: revaluation increase		160,000

To recognise revaluation to CU500,000 at 31 December 20X3.

(a)CU500,000 revalued amount – CU400,000 historical cost

(b)CU20,000 annual depreciation x 3 years

Dr	Expense—Depreciation	31,250[(a)]	
	Cr Asset—PPE: accumulated depreciation		31,250

To recognise depreciation expense at 31 December 20X4.

[(a)]CU500,000 carrying value ÷ 16 remaining years of useful life

Dr	Loss—revaluation decrease	8,750	
Dr	Equity—OCI: revaluation increase	160,000	
Dr	Asset—PPE: accumulated depreciation	31,250	
	Cr Asset—PPE: equipment		200,000

To recognise revaluation and account for impairment at 31 December 20X4 (by reversing previous revaluation gains and accumulated depreciation)

Reversal when recoverable amount was estimated for a cash-generating unit

27.31 When the original impairment loss was based on the recoverable amount of the cash-generating unit to which the asset belongs, the following requirements apply:

(a) the entity shall estimate the recoverable amount of that cash-generating unit at the current reporting date.

(b) if the estimated recoverable amount of the cash-generating unit exceeds its carrying amount, that excess is a reversal of an impairment loss. The entity shall allocate the amount of that reversal to the assets of the unit, except for goodwill, pro rata with the carrying amounts of those assets, subject to the limitation described in (c). Those increases in carrying amounts shall be treated as reversals of impairment losses for individual assets and be recognised immediately in profit or loss, unless the asset is carried at a revalued amount in accordance with the revaluation model in paragraph 17.15B. Any reversal of an impairment loss of a revalued asset shall be treated as a revaluation increase in accordance with paragraph 17.15C.

(c) in allocating a reversal of an impairment loss for a cash-generating unit, the reversal shall not increase the carrying amount of any asset above the lower of:

(d)
(i) its recoverable amount; and

(ii) the carrying amount that would have been determined (net of amortisation or depreciation) had no impairment loss been recognised for the asset in prior periods.

(e) any excess amount of the reversal of the impairment loss that cannot be allocated to an asset because of the restriction in (c) shall be allocated pro rata to the other assets of the cash-generating unit, except for goodwill.

after a reversal of an impairment loss is recognised, if applicable, the entity shall adjust the depreciation (amortisation) charge for each asset in the cash-generating unit in future periods to allocate the asset's revised carrying amount, less its residual value (if any), on a systematic basis over its remaining useful life.

Example—impairment reversal: cash-generating unit

Ex 31 **The facts are the same as in Example 26.**

In 20X4, the government is still in office in Country A, but the business situation is improving. The effects of the export laws on Entity T's production are proving to be less drastic than initially expected by management. As a result, management estimates that production will increase. This favourable change requires Entity T to re-estimate the recoverable amount of the cash-generating unit for the net assets of the Country A operations. Management estimates that the recoverable amount of the Country A cash-generating unit is now CU1,910. To calculate the reversal of the impairment loss, Entity T compares the recoverable amount and the net carrying amount of Country A's cash-generating unit.

	Goodwill	Identifiable assets	Total
	CU	*CU*	*CU*
Historical cost	1,000	2,000	3,000
Accumulated amortisation/depreciation	(200)	(167)	(367)
Accumulated impairment loss	(800)	(473)	(1,273)
Carrying amount after impairment loss at 31/12/X2	–	1,360	1,360
20X3 and 20X4			
Depreciation (2 years)	–	[(a)](247)	(247)
Carrying amount before impairment reversal	–	1,113	1,113
Lower of recoverable amount (CU1,910) and carrying amount of identifiable assets assuming no prior period impairment (CU1,500[(b)])			1,500
Impairment reversal			[(c)]387

(a) Two years' depreciation based on carrying amount of CU1,360 at 1 January 20X3 and remaining useful life of 11 years ([CU1,360/11 years = CU123.6 depreciation a year] x 2 years = CU247.3).

(b) Carrying amount of identifiable assets (excluding goodwill) at 31 December 20X4 assuming no prior period impairment occurred:

	Identifiable assets
	CU
Historical cost	2,000
Accumulated depreciation (CU2,000 ÷ 12 years = CU166.7 x 3 years)	(500)
Depreciated historical cost	1,500

(c) The impairment loss on goodwill is not reversed (paragraph 27.28). Entity T increases the carrying amount of the identifiable assets up to the lower of the recoverable amount CU1,910 and the identifiable assets' depreciated historical cost (paragraph 27.31), that is, the carrying amount if no impairment had occurred, namely CU1,500[(b)].

This table shows the effect of the reversal of impairment loss of CU387 at financial year end 20X4.

Carrying amount at 31 December 20X4 after reversing the impairment	Goodwill	Identifiable assets	Total
	CU	*CU*	*CU*
Historical cost	1,000	2,000	3,000
Accumulated amortisation/depreciation	(200)	(414)	(614)
Accumulated impairment loss	(800)	(473)	(1,273)
Carrying amount	–	1,113	1,113
Reversal of impairment loss	–	387	387
Carrying amount after reversal of impairment loss	–	1,500	1,500

Disclosures

27.32 An entity shall disclose the following for each **class of assets** indicated in paragraph 27.33:

the amount of impairment losses recognised in profit or loss during the period and the line item(s) in the **statement of comprehensive income** (and in the **income statement**, if presented) in which those impairment losses are included; and

the amount of reversals of impairment losses recognised in profit or loss during the period and the line item(s) in the statement of comprehensive income (and in the income statement, if presented) in which those impairment losses are reversed.

27.33 An entity shall disclose the information required by paragraph 27.32 for each of the following classes of asset:

inventories;

property, plant and equipment (including investment property accounted for by the cost method);

goodwill;

intangible assets other than goodwill;

investments in **associates**; and

investments in **joint ventures**.

(f)

Example—disclosures about impairment

Ex 32 **An entity reported the following line items in its statement of financial position at 31 December 20X2.**

Extract from the entity's statement of financial position at 31 December 20X2

	Note	*20X2*	*20X1*
		CU	*CU*
…			
Inventories	11	57,381	47,920
…			
Property, plant, and equipment	13	2,549,945	2,401,455
…			

Extract from the entity's statement of comprehensive income for the year ended 31 December 20X2

	Note	*20X2*	*20X1*
		CU	*CU*
…			
Impairment of inventories	11	(875)	(715)
Impairment of property, plant and equipment	13	(30,000)	–
…			

Extract from the entity's notes to the financial statements
for the year ended 31 December 20X2

Note 11 Inventories

	20X2	*20X1*
	CU	*CU*
Raw materials	42,601	36,450
Work in progress	1,140	900
Finished goods	13,640	10,570
	57,381	47,920

Amounts of write-down in inventory to selling price less costs to complete and sell: CU875 in 20X2, CU715 in 20X1. Reversal of inventory impairment: nil in 20X2 and CU35 in 20X1.

Note 13 Property, plant and equipment

	Land and buildings	**Furniture and equipment**	**Total**
	CU	**CU**	**CU**
Cost			
1 January 20X2	1,960,000	1,102,045	3,062,045
Additions	–	485,000	485,000
Disposals	–	(241,000)	(241,000)
31 December 20X2	1,960,000	1,346,045	3,306,045
Accumulated depreciation and impairment			
1 January 20X2	390,000	270,590	660,590
Depreciation	30,000	240,360	270,360
Impairment	–	30,000	30,000
Accumulated depreciation on assets disposed	–	(204,850)	(204,850)
31 December 20X2	420,000	336,100	756,100

In 20X2, the entity noticed a significant decline in the efficiency of a major piece of equipment and carried out a review of its recoverable amount. The review led to the recognition of an impairment loss of CU30,000.

On 10 December 20X2 the directors resolved to dispose of a machine. The machine's carrying amount of CU1,472 is included in furniture and equipment at 31 December 20X2, and trade payables includes the entity's remaining obligation of CU1,550 on the acquisition of this machine. Because the proceeds on disposal are expected to exceed the net carrying amount of the asset and related liability, no impairment loss has been recognised.

Module 27—Impairment of Assets

SIGNIFICANT ESTIMATES AND OTHER JUDGEMENTS

Applying the requirements of the *IFRS for SMEs* Standard to transactions and events often requires the exercise of judgement, including making estimates. Information about significant judgements made by an entity's management and key sources of estimation uncertainty are useful when assessing an entity's financial position, performance and cash flows. Consequently, in accordance with paragraph 8.6, an entity must disclose the judgements—apart from those involving estimates—that its management has made when applying the entity's accounting policies and that have the most significant effect on the amounts recognised in the financial statements.

Furthermore, applying paragraph 8.7, an entity must disclose information about the key assumptions concerning the future, and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year.

Other sections of the *IFRS for SMEs* Standard require disclosure of information about particular judgements and estimation uncertainties.

Impairment of inventories

An entity tests its inventories for impairment at each reporting date, regardless of whether there are any indicators of impairment. The impairment of inventories is assessed item by item. The use of the alternative assessment basis (a group of similar items) allowed by paragraph 27.3 is not a free choice—it may be applied only when the entity cannot determine the selling price less costs to complete and sell for each inventory item after making every reasonable effort to do so (it is impracticable to do so). In some circumstances judgement is required to assess whether it is impracticable to assess impairment of inventories item by item. Because a group of similar items comprises only 'items of inventory relating to the same product line that have similar purposes or end uses and are produced and marketed in the same geographical area', judgement is required to assess whether, and which, inventory items are required to be clustered to form a group of similar items for assessing impairment.

Other key sources of uncertainty that affect judgement and estimates required to measure the impairment of inventories include:

- estimating the costs to complete the inventory item (other raw material, labour costs and production overhead) which may depend on the assumptions of the cost accounting system and on the business model of the entity; and
- estimating the costs to sell which in some circumstances may also require the use of estimates.

Impairment of assets other than inventories

An entity tests its assets other than inventories that are in the scope of Section 27 for impairment only when there is an indicator of impairment, which is required to be assessed at each reporting date. Judgement is required to assess whether there are indicators of impairment. Note that paragraph 27.9 provides a non-exhaustive list of circumstances that may indicate that an asset is impaired.

Module 27—Impairment of Assets

The impairment of assets other than inventories is assessed on an individual basis. The use of the alternative assessment basis (cash-generating unit) allowed by paragraph 27.8 is not a free choice. It is applied only when it is not possible to estimate reliably the recoverable amount of the individual asset. Judgement is therefore required to assess whether it is impossible to estimate reliably the recoverable amount of an individual asset.

A cash-generating unit is 'the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or group of assets' (see the Glossary). Judgement is therefore required to assess whether, and which, asset items is required to be clustered to comprise a cash-generating unit for assessing impairment.

Additional key sources of estimation uncertainty and other judgements required to measure impairment of assets other than inventories involve:

- Estimating the fair value less costs to sell of an asset ('the amount obtainable from the sale of an asset in an arm's length transaction between knowledgeable, willing parties, less the costs of disposal'—see paragraph 27.14) may require further judgement when there is no binding sale agreement or active market for an asset. In this case the entity may consider the outcome of recent transactions for similar assets within the same industry or use other valuation techniques, such as discounted cash flow calculations. Module 11 covers the significant estimates and judgements in determining fair value (see paragraphs 11.27 to 11.32).
- Estimating the value in use of an asset ('the present value of the future cash flows expected to be derived from an asset'—see paragraph 27.15) is a process that requires significant judgement for determining its relevant parameters (see paragraphs 27.16 and 27.17), for example:
    - projections of cash inflows from continuing use of the asset;
    - projections of cash outflows that are necessarily incurred to generate the cash inflows and that can be directly attributed or allocated on a reasonable and consistent basis to the asset;
    - the length of the expected period of continuing use of the asset (its useful life);
    - expectations about possible variations in the amount or timing of those future cash flows;
    - the time value of money;
    - the price for bearing the uncertainty inherent in the asset;
    - net cash flows expected to be received or paid for the disposal of the asset at the end of its useful life in an arm's length transaction between knowledgeable and willing parties; and
    - other factors, such as liquidity, that market participants would reflect in pricing the future cash flows the entity expects to derive from the asset.

The estimation of the recoverable amount involves greater estimation uncertainty when market conditions are unstable, such as during a financial crisis or in some infant markets, because uncertainties about future cash flows and discount rates might be more significant.

Impairment of goodwill

Because goodwill by itself cannot be sold and does not generate cash flows independent of the cash flows of other assets to an entity, Section 27 includes additional requirements for the impairment of goodwill. In addition to the significant judgement possibilities presented in this module, judgements may be required in testing goodwill for impairment. For example, the allocation of the goodwill to cash-generating units expected to benefit from the business combination affects the impairment test of both the goodwill and the other cash-generating unit's assets.

The use of the alternative assessment basis for determining the recoverable amount (the entire acquired entity that has not been integrated or the entire group of entities) allowed by paragraph 27.27 is not a free choice. It may be applied only when the entity cannot allocate goodwill to individual cash-generating units on a non-arbitrary basis. Consequently, judgement is required to assess whether a non-arbitrary allocation of goodwill to cash-generating units is possible.

Module 27—Impairment of Assets

COMPARISON WITH FULL IFRS STANDARDS

Full IFRS Standards (including IAS 2 *Inventories*, IAS 16 *Property, Plant, and Equipment*, IAS 36 *Impairment of Assets*, and IAS 38 *Intangible Assets*) and the *IFRS for SMEs* Standard (see Section 27 *Impairment of Assets*) share principles for accounting and reporting impairment of assets. However, the *IFRS for SMEs* Standard is drafted in simpler language and includes significantly less guidance on how to apply the principles. Section 27 outlines requirements for the recognition of impairment for inventory and assets other than inventory, while IAS 36 excludes inventory from its scope.

The general accounting requirements for the assets in the scope of Section 27 are mainly specified in other sections, for example Section 13 *Inventories*; Section 17 *Property, Plant and Equipment*; Section 18 *Intangible Assets Other than Goodwill* and Section 19 *Business Combinations and Goodwill*.

Applying IAS 2, inventories are measured at the lower of cost and net realisable value. In Section 27, impairment is assessed by comparing the carrying amount of each item of inventory with its selling price less costs to complete and sell. The *IFRS for SMEs* Standard does not use the term net realisable value but the definition of net realisable value in IAS 2 is consistent with 'selling price less costs to complete and sell'.

Applying full IFRS Standards, indefinite life intangible assets and goodwill are assessed for impairment at least an annually . The *IFRS for SMEs* Standard requires an entity to calculate the recoverable amount of goodwill and other intangible assets (both with finite and indefinite life) only if impairment is indicated. Section 27 includes a list of indicators of impairment, based on both internal and external sources of information, as guidance for SMEs.

Other simplifications relate to the allocation of goodwill to individual cash-generating units (or groups of cash-generating units). If goodwill cannot be allocated to individual cash-generating units (or groups of cash-generating units) on a non-arbitrary basis, the *IFRS for SMEs* Standard allows entities to test goodwill for impairment by determining the recoverable amount of:

- the acquired entity in its entirety, if the goodwill relates to an acquired entity that has not been integrated; or
- the entire group of entities, excluding any entities not integrated, if the goodwill relates to an entity that has been integrated.

Unlike full IFRS Standards, the *IFRS for SMEs* Standard requires amortisation of goodwill and all intangible assets. When goodwill is fully amortised (its carrying amount is nil) it cannot be further impaired (and reversal of a prior period impairment of goodwill is prohibited). Consequently, applying the *IFRS for SMEs* Standard, it would no longer be tested for impairment.

When estimating value in use, IAS 36 *Impairment of Assets* provides more extensive guidance on estimating future cash flows than does the *IFRS for SMEs* Standard. Appendix A of IAS 36 describes the use of present value techniques to measure value in use. IAS 36 also provides more extensive guidance on identifying and allocating (if applicable) corporate assets that relate to a cash-generating unit under impairment review.

IAS 36 also requires more detailed disclosures compared to Section 27 of the *IFRS for SMEs* Standard.

Module 27—Impairment of Assets

TEST YOUR KNOWLEDGE

Test your knowledge of the requirements for accounting and reporting the impairment of assets applying the *IFRS for SMEs* Standard by answering the questions provided.

You should assume that all amounts mentioned are material.

Once you have completed the test, check your answers against those set out beneath it.

Mark the box next to the most correct statement.

Question 1

An impairment loss is recognised when:

☐ (a) the carrying amount of an asset is less than its recoverable amount.

☐ (b) the carrying amount of an asset is less than its original acquisition cost.

☐ (c) the carrying amount of an asset exceeds its recoverable amount.

☐ (d) the fair value of an asset is less than the undiscounted expected future cash flows from that asset.

Question 2

An entity assesses inventories for impairment:

☐ (a) only when there are external indicators that an impairment has occurred.

☐ (b) at each reporting date.

☐ (c) only when there are internal indicators that an impairment has occurred.

☐ (d) when there are either internal or external indicators that an impairment has occurred.

☐ (e) when there are both internal and external indicators that an impairment has occurred.

Question 3

The inventory impairment assessment is performed:

☐ (a) only at the individual item level.

☐ (b) by comparing the carrying amount of each item of inventory (or, in specified circumstances, a group of similar items) with its selling price.

☐ (c) by comparing the carrying amount of each item of inventory (or, in specified circumstances, a group of similar items) with its selling price plus costs to complete and sell.

☐ (d) by comparing the carrying amount of each item of inventory (or, in specified circumstances, a group of similar items) with its selling price less costs to complete and sell.

Question 4

Inventory impairment losses:

☐ (a) are recognised immediately in profit or loss.

☐ (b) are recognised in other comprehensive income with recycling to profit and loss when the inventory is sold.

☐ (c) may never be reversed in subsequent periods.

☐ (d) are not recognised as expenses but are disclosed in the notes to the financial statements.

Question 5

An entity assesses intangible assets, goodwill and property, plant and equipment for impairment:

☐ (a) when there are internal or external indicators that an impairment has occurred.

☐ (b) at each reporting date.

☐ (c) only when there are internal indicators that an impairment has occurred.

☐ (d) when there are both internal and external indicators that an impairment has occurred.

Question 6

Impairment losses on intangible assets, goodwill and property, plant and equipment:

☐ (a) are not recognised as expenses but are disclosed in the notes to the financial statements.

☐ (b) are recognised in other comprehensive income with recycling to profit and loss when the asset is sold.

☐ (c) may never be reversed in subsequent periods.

☐ (d) are recognised immediately in profit or loss, unless the asset is carried at a revalued amount applying the revaluation model in Section 17 *Property, Plant and Equipment,* in which case the impairment loss is treated as a revaluation decrease.

Question 7

When there are indicators that intangible assets, goodwill and property, plant and equipment are impaired, an entity tests the asset for impairment by comparing:

☐ (a) the carrying amount of the asset to its fair value.

☐ (b) the carrying amount of the asset to its fair value less costs to sell.

☐ (c) the carrying amount of the asset to its discounted future cash flows.

☐ (d) the carrying amount of the asset to its recoverable amount.

Question 8

The recoverable amount of an item of intangible assets or property, plant and equipment is:

☐ (a) the carrying amount of the asset less costs to sell the asset.

☐ (b) the lower of its fair value less costs to sell the asset and its value in use.

☐ (c) the expected future cash flows of an asset or a cash-generating unit.

☐ (d) the higher of its fair value less costs to sell the asset and its value in use.

Question 9

A cash-generating unit:

☐ (a) is the smallest identifiable group of assets that includes the asset being assessed for impairment, which generates independent cash flows.

☐ (b) is relevant only for assessing goodwill impairments.

☐ (c) is used in assessing the recoverable amount because assets sometimes do not generate cash flows by themselves.

☐ (d) both (a) and (c).

Question 10

Entity G uses the cost model. Entity G conducts an impairment test and determines an impairment loss is required to be recognised for an item of property, plant and equipment. Entity G:

☐ (a) recognises the impairment loss in profit or loss and never evaluates the asset for impairment again.

☐ (b) recognises the impairment loss in profit or loss and reviews the remaining useful life, estimated residual value and depreciation method for the asset.

☐ (c) reviews the remaining useful life, estimated residual value and depreciation method for the asset and modifies the accounting for the asset in future periods.

☐ (d) discloses the impairment loss in the notes and continues to account for the asset using the original estimated useful life, residual value and depreciation (amortisation) method.

Question 11

Entity H uses the revaluation model. Entity H conducts an evaluation of an impaired item of property, plant and equipment and determines the asset is no longer impaired. Entity H:

☐ (a) records the reversal of impairment loss in profit or loss and never evaluates the asset for impairment again.

☐ (b) records the reversal of an impairment loss as a revaluation increase.

☐ (c) continues to account for the asset at its impaired value; reviews the remaining useful life, estimated residual value and depreciation method for the asset and modifies the accounting for the asset in future periods.

☐ (d) discloses the recovery of impairment loss in the notes and continues to account for the asset using the post-impairment estimated useful life, residual value and depreciation (amortisation) method.

Question 12

Value in use:

☐ (a) is the future cash flows expected to be derived from an asset.

☐ (b) is required to always be computed when determining the recoverable amount.

☐ (c) is the present value of the future cash flows expected to be derived from an asset.

☐ (d) should be estimated using an after-tax discount rate.

Question 13

Entity J has performed an impairment test for a cash-generating unit, which includes goodwill. In recognising the impairment loss, Entity J:

☐ (a) allocates the impairment loss to all assets (including goodwill) on a pro-rata basis.

☐ (b) first reduces the carrying amount of the non-goodwill assets and then applies the remaining loss, if any, to goodwill allocated to the unit.

☐ (c) first reduces the carrying amount of goodwill allocated to the cash-generating unit and then allocates the remaining impairment loss to the other assets of the cash-generating unit on a pro-rata basis in proportion to their carrying amounts.

☐ (d) first reduces the carrying amount of goodwill allocated to the cash-generating unit and then allocates the remaining impairment loss to the other assets of the cash-generating unit on a pro-rata basis in proportion to their fair values.

☐ (e) allocates the impairment loss only to the non-goodwill assets and reviews the amortisation period in accounting for goodwill in the current and future periods.

Question 14

With respect to possible reversals of impairment losses, an entity:

☐ (a) recognises an impairment loss reversal for goodwill.

☐ (b) may, as a result of reversing an impairment loss, report an asset at an amount in excess of what the carrying amount would have been had there been no impairment.

☐ (c) measures the reversal of the impairment loss to be recognised in profit or loss by comparing the carrying amount of the asset at the time of its prior period impairment with its current recoverable amount.

☐ (d) assesses at each reporting date whether there is an indication that an impairment loss recognised in prior periods may no longer exist or may have decreased.

Question 15

Disclosures related to impairment of assets:

- ☐ (a) are required in total for all assets impaired, and for all impairment reversals, in a period.
- ☐ (b) are required only for impairments and impairment reversals related to inventories.
- ☐ (c) are required only for impairments and impairment reversals related to inventories and goodwill.
- ☐ (d) are required for each class of asset, disclosing the amount of impairment losses and the amount of impairment reversals recognised in profit or loss.

Module 27—Impairment of Assets

Answers

Q1 (c)–see paragraph 27.1
Q2 (b)–see paragraph 27.2
Q3 (d)–see paragraph 27.2
Q4 (a)–see paragraph 27.2
Q5 (a)–see paragraphs 27.7–27.9
Q6 (d)–see paragraph 27.6
Q7 (d)–see paragraph 27.5
Q8 (d)–see paragraph 27.11
Q9 (d)–see paragraph 27.8
Q10 (b)–see paragraphs 27.6 and 27.10
Q11 (b)–see paragraph 27.30(b)
Q12 (c)–see paragraph 27.15
Q13 (c)–see paragraph 27.21
Q14 (d)–see paragraph 27.29
Q15 (d)–see paragraph 27.32

TEST YOUR KNOWLEDGE

Test your knowledge of the requirements for accounting and reporting the impairment of assets applying the *IFRS for SMEs* Standard by answering the questions provided.

You should assume that all amounts mentioned are material.

Once you have completed the test, check your answers against those set out beneath it.

Inputs in measuring value in use

Question 1

For each row A to E in the table, select one item (A1, A2 or A3; B1, B2 or B3 and so on) that <u>best</u> describes the information to be included in a present value measurement calculation in measuring the value in use of an asset.

	1	2	3
A	A1: an estimate of future net cash flows	A2: an estimate of future cash outflows	A3: an estimate of future cash inflows
B	B1: variation in timing of cash flows	B2: variation in timing or amount of cash flows	B3: variation in amount of cash flows
C	C1: the expected market risk-free rate of interest	C2: the current market risk-free rate of interest	C3: the entity-specific rate of interest
D	D1: the entity's capital structure	D2: the entity's view of past risks associated with cash flows	D3: the market's view of specific risks associated with cash flows
E	E1: interest rates should not be confused with discount rates	E2: interest rates should not reflect a range of possible outcomes	E3: assumptions affecting predictions of both interest rates and cash flows should not be double counted

Question 2

With regard to measuring future cash flows for the purpose of calculating an asset's value in use, indicate whether the following statements are true or false.

	Question	Answer
A	All expectations about all possible cash flows are used (instead of a single 'most likely' cash flow).	
B	Expectations about possible variations in the amount or timing of those cash flows are incorporated.	
C	While useful for financial sector firms, expected values cannot be computed by firms from other sectors.	
D	Expected values cannot be used when the timing of cash flows is uncertain.	
E	Expected values are likely to provide a better estimate of value than an estimate based on the most likely minimum or maximum cash flow.	

Question 3

With regard to determining the discount rate to be used in determining value in use, indicate whether the following statements are true or false.

	Question	Answer
A	Discount rates should not reflect risks for which the cash flows have been adjusted.	
B	An entity would not use more than one discount rate in a calculation over ten years, even if the risks are different in the early years compared to the later years.	
C	If an asset-specific discount rate is not available directly from market information, an entity uses surrogate assets to estimate the discount rate.	
D	The discount rate should not be independent of an entity's capital structure and how the entity financed the asset.	
E	Discount rates should reflect the way the market would assess the specific risks associated with the asset's estimated cash flows.	

Answers—Inputs in measuring value in use

Question 1

Row	Solution	Reference to Section 27
A	A1	Paragraph 27.16 (a) and paragraph 27.17 (a) to (c)
B	B2	Paragraph 27.16 (b)
C	C2	Paragraph 27.16 (c)
D	D3	Paragraph 27.16 (e)
E	E3	Paragraph 27.20

Question 2

Row	Solution	Reference IAS 36 Appendix A
A	True	Paragraph A7
B	True	Paragraph A1
C	False	Paragraph A12
D	False	Paragraph A8
E	True	Paragraph A11

Question 3

Question	Solution	Reference IAS 36 Appendix A
A	True	Paragraph A15
B	False	Paragraph A21
C	True	Paragraph A16
D	False	Paragraph A19
E	True	Paragraph A18

Note:

Though not detailed in Section 27, the impairment concepts in IAS 36 may be applied. This is for those SMEs that may have more complex transactions and/or need further and more detailed guidance when applying the requirements of this section of the *IFRS for SMEs* Standard. However, these references to IAS 36 are not required to be used.

APPLY YOUR KNOWLEDGE

Apply your knowledge of the requirements for accounting and reporting the impairment of assets applying the *IFRS for SMEs* Standard by completing the case studies provided.

Once you have completed the case studies, check your answers against those set out beneath it.

Case study 1

Identification of cash-generating units

The purpose of this case study is:

(a) to indicate how cash-generating units are identified in various situations; and

(b) to highlight certain factors that an entity may consider in identifying the cash-generating unit to which an asset belongs.

Part A—retail store chain

Store X belongs to a retail store chain M. X makes all its retail purchases through M's purchasing centre. Pricing, marketing, advertising and human resources policies (except for hiring X's cashiers and sales staff) are decided by M. M also owns five other stores in the same city as X (although in different neighbourhoods) and 20 other stores in other cities. All stores are managed in the same way as X. X and four other stores were purchased five years ago and goodwill was recognised.

What is X's cash-generating unit?

Part B—plant for an intermediate step in a production process

A significant raw material used for Plant Y's final production is an intermediate product bought from Plant X of the same entity. X's products are sold to Y at a transfer price that passes all margins to X. Eighty per cent of Y's final production is sold to customers outside of the entity. Sixty per cent of X's final production is sold to Y and the remaining 40% is sold to customers outside of the entity.

For each of the following cases, what are the cash-generating units for X and Y?

- **Scenario 1—X could sell its products to Y in an active market. Internal transfer prices are higher than market prices.**
- **Scenario 2: there is no active market for the products X sells to Y.**

Part C—single product entity

Entity M produces a single product and owns plants A, B and C. Each plant is located in a different continent. Plant A produces a component that can be assembled in either B or C. The combined capacity of B and C is not fully utilised. M's products are sold worldwide from either B or C. For example, B's product can be sold in C's continent if the products can be delivered faster from B than from C. Utilisation levels of B and C depend on the allocation of sales between the two sites.

In each of the following scenarios, what are the cash-generating units for A, B and C?

- **Scenario 1—A's products have an active market; and**
- **Scenario 2—A's products have no active market.**

Part D—magazine titles

A publisher owns 150 magazine titles of which 70 were purchased and 80 were self-created. The price paid for a purchased magazine title is recognised as an intangible asset. The costs of creating magazine titles and maintaining the existing titles are recognised as an expense when incurred. Cash inflows from direct sales and advertising are identifiable for each magazine title. Titles are managed by customer segments. The level of advertising income for a magazine title depends on the range of titles in the customer segment to which the magazine title relates. Management has a policy to abandon old titles before the end of their economic lives and replace them immediately with new titles for the same customer segment.

What is the cash-generating unit for an individual magazine title?

Part E—building half rented to others and half occupied for own use

M is a manufacturing company. It owns a headquarters building that used to be fully occupied for internal use. After down-sizing, half of the building is now used internally and the other half is rented to third parties. The lease agreement with the tenant is for five years.

What is the cash-generating unit of the building?

Module 27—Impairment of Assets

Answer to case study 1

Part A—retail store chain

In identifying X's cash-generating unit, an entity considers whether, for example:

(a) internal management reporting is organised to measure store-by-store performance; and
(b) the profits are calculated store by store or region by region.

All M's stores are in different neighbourhoods and probably have different customer bases. So, although X is managed at a corporate level, X generates cash inflows largely independent of those of M's other stores. It is likely, therefore, that X is a cash-generating unit.

Part B—plant for an intermediate step in a production process

Scenario 1—X could sell the products it sells to Y in an active market. Internal transfer prices are higher than market prices.

X could sell its products in an active market and, as a result, generate cash inflows that would be largely independent of the cash inflows from Y. It is likely, therefore, that X is a separate cash-generating unit, although part of its production is used by Y.

It is likely that Y is also a separate cash-generating unit. Y sells 80% of its products to customers outside of the entity. Consequently, its cash inflows can be regarded as largely independent.

Internal transfer prices do not reflect market prices for X's output. In determining value in use of both X and Y, the entity adjusts financial budgets and forecasts to reflect management's best estimate of future prices that could be achieved in arm's length transactions for X's products used internally.

Scenario 2— the products X sells to Y have no active market.

It is likely that the recoverable amount of each plant cannot be assessed independently of the recoverable amount of the other plant because:

(a) most of X's production is used internally and cannot be sold in an active market. So, cash inflows of X depend on demand for Y's products. Consequently, X cannot be considered to generate cash inflows largely independent of those of Y.
(b) the two plants are managed together.

Consequently, it is likely that X and Y together form the smallest group of assets that generates largely independent cash inflows.

Part C—single product entity

Scenario 1—A's products have an active market.

It is likely that A is a separate cash-generating unit because its products have an active market (see Case 1, Part B, Scenario 1).

Although the products assembled by B and C have an active market, cash inflows for B and C depend on the allocation of production across the two sites. It is unlikely that the future cash inflows for B and C can be determined individually. It is therefore likely that B and C together form the smallest identifiable group of assets that generates largely independent cash inflows.

In determining the value in use of A and B plus C, M adjusts financial budgets and forecasts to reflect its best estimate of future prices that could be achieved in arm's length transactions for A's products.

Scenario 2—A's products have no active market.

It is likely that the recoverable amount of each plant cannot be assessed independently because:

(a) A's products have no active market. Consequently, A's cash inflows depend on sales of the final product by B and C.

(b) although products assembled by B and C have an active market, cash inflows for both depend on the allocation of production across the two sites. It is unlikely that the future cash inflows for B and C can be determined individually.

Consequently, it is likely that A, B and C together (M as a whole) are the smallest identifiable group of assets that generates largely independent cash inflows.

Part D—magazine titles

It is likely that the recoverable amount of an individual magazine title can be assessed. Even though the level of advertising income for a title is influenced, to a certain extent, by the other titles in the customer segment, cash inflows from direct sales and advertising are identifiable for each title. In addition, although titles are managed by customer segments, decisions to abandon titles are made individually.

Consequently, it is likely that individual magazine titles generate largely independent cash inflows and that each magazine title is a separate cash-generating unit.

Part E—building half rented to others and half occupied for own use

The primary purpose of the building is to serve as a corporate asset, supporting M's manufacturing activities. Consequently, the whole building cannot be considered to generate cash inflows largely independent of the cash inflows from the whole entity. So, it is likely that the cash-generating unit for the building is M.

The building is not held as an investment. Consequently, it would not be appropriate to determine the value in use of the building through projections of future market related rents.

Case study 2

SME K holds inventory of two items, F and G. SME K assesses impairment of this inventory on an item by item and has the following information at the end of 20X1:

	Carrying amount	Sales price	Costs to complete	Selling costs
	CU	CU	CU	CU
Item F	6,000	5,400	200	100
Item G	14,000	16,000	300	150
Total	**20,000**	**21,400**	**500**	**250**

Part A
Determine the amount of impairment, if any, for SME K's inventory at the end of 20X1. Prepare the entry required to record the inventory impairment.

Part B
At the end of 20X2, Item F was unsold and SME K, in its assessment, finds that the impairment loss recognised in 20X1 has decreased. SME K decides that the accumulated impairment loss for Item F is now CU200.

Prepare the entry needed to reflect this information in the accounts.

Part C
Assume the same facts as Part A. However, in Part C it, is impracticable for SME K to determine the item-by-item selling price less costs to complete and sell for inventories. Consequently, SME K conducts inventory impairment testing by creating a single group from Items F and G.

Determine the amount of impairment, if any, for SME K's inventory at the end of 20X1.

Answer to case study 2

Part A

Determination of any impairment loss on the inventory is indicated in the following table.

	Carrying amount	*Sales price*	*Costs to complete*	*Selling costs*	*Sales price less costs to complete and sell (SPLCCS)*	*Lower of carrying amount and SPLCCS*
	CU	*CU*	*CU*	*CU*	*CU*	*CU*
Item F	6,000	5,400	200	100	5,100	5,100
Item G	14,000	16,000	300	150	15,550	14,000
Total	**20,000**	**21,400**	**500**	**250**	**20,650**	**19,100**

As indicated, impairment is assessed item by item. The inventory of Item F is impaired; SME K records an impairment loss of CU900 (CU6,000 minus CU5,100), as follows (see paragraph 27.2):

Dr	Profit or Loss – impairment loss on inventory	CU900	
Cr	Inventory		CU900
To recognise the impairment loss on inventory.			

Part B

At the end of 20X2, SME K reduces the accumulated impairment loss on inventory to CU200. SME K recognises the reversal as follows:

Dr	Inventory	CU700	
Cr	Profit or Loss – reversal of impairment loss on inventory		CU700
To recognise reversal of impairment loss on inventory.			

The entry reduces the allowance to CU200 (CU900 minus CU700) to an amount so that inventories are reported at selling price less costs to complete and sell (see paragraph 27.4).

Part C

For the total inventory grouping F and G, no impairment is recognised. The cost of the group (CU20,000) is lower than the sales price less costs to complete and sell (CU20,650); consequently, SME K does not recognise an impairment loss in 20X1 (see paragraph 27.3).

Case study 3

On 1 January 20X1, SME J acquired an oil delivery truck and measured it under the cost model. Management estimated the useful life of the truck at nine years with zero residual value. SME J determined that straight-line depreciation is appropriate. At 31 December 20X1, the truck has a carrying amount of CU24,000 (original cost of CU27,000 minus accumulated depreciation of CU3,000).

In 20X2, because of a sharp downturn in demand for fuel oil, SME J dramatically decreased its use of this truck. Consequently, at 31 December 20X2, in addition to the indicators of impairment, management also considers other variables and re-estimates the truck's remaining useful life at five years, during which the truck is expected to provide the following net cash flows:

20X3 = CU6,000
20X4 = CU5,500
20X5 = CU5,000
20X6 = CU3,500
20X7 = CU1,500

The appropriate rate to discount these future cash flows to their risk-adjusted present value is 10% a year.

At 31 December 20X2, the market price for the truck is CU15,400. If the truck were sold, licence and title fees of CU400 would be paid.

Parts A–C
For ease of calculation, assume that all cash flows occur on the last day of each year (31 December) and ignore income tax.

Part A
Determine the amount of impairment loss, if any, for SME J's truck at 31 December 20X2.

Prepare the entry, if required, to record the impairment.

Part B
By 31 December 20X4, the market for fuel oil has recovered and demand improves for services provided by oil delivery trucks. Management also has considered other variables and estimates that the truck's remaining useful life is four years, through which the truck is expected to provide the following net cash flows:

20X5 = CU5,500
20X6 = CU4,000
20X7 = CU2,500
20X8 = CU1,000.

The appropriate rate for discounting these future cash flows to their risk-adjusted present value is 8% a year.

At 31 December 20X4 the market price for SME J's truck is CU11,300. If the truck was sold, licence and title fees of CU300 would be paid.

Prepare the journal entries, if any required in 20X4.

Part C
Assume the facts are the same as in part B. However, in Part C the market price of the truck is CU13,500.

Prepare the journal entries, if any required in 20X4.

Answer to case study 3

Part A

The change in market demand for oil delivered by the truck and the decline in use are indicators that the truck is impaired. The entity is required to review the asset's useful life, depreciation method and residual value (see paragraph 27.10). At 31 December 20X2 the useful life is estimated to be five years. Current and future years' estimation of depreciation expense is revised to reflect the new estimate of useful life (see paragraph 10.16(b)). Consequently, depreciation for the year ended 31 December 20X2 is calculated on the basis of a useful life of six years (the current year plus five years in the future).

Table 1

		Carrying amount		*Notional carrying amount (ignoring impairment)*
		CU		*CU*
01/01/20X1		27,000		27,000
Depreciation	CU27,000 ÷ 9 years	(3,000)	CU27,000 ÷ 9 years	(3,000)
31/12/20X1		**24,000**		**24,000**
Depreciation	CU24,000 ÷ 6 years	(4,000)	CU24,000 ÷ 6 years	(4,000)
		20,000		**20,000**
Impairment	CU17,079 recoverable amount (Table 2) minus CU20,000 carrying amount	(2,921)		
31/12/20X2	see Table 2	**17,079**		**20,000**

At 31 December 20X2 the recoverable amount is CU17,078.50—the higher of the value in use (CU17,078.50, as calculated in table 2) and the fair value less costs to sell (CU15,000 (CU15,400 market price less CU400 costs to sell)).

Table 2

Period	*Predicted future cash flows* *CU*	*Present value future cash flow* [(a)] *CU*
20X3	6,000	5,454.54
20X4	5,500	4,545.45
20X5	5,000	3,756.57
20X6	3,500	2,390.54
20X7[(b)]	1,500	931.38
Value in use		**17,078.50**

(a) The present value equals the future value ÷ $(1 + i)^n$. Management estimated 10% as the appropriate risk-adjusted discount rate for those future cash flows, so i = 10% a year.

(b) The year 20X7 corresponds to the fifth cash flow counted from 20X3. So, for 20X7, the present value is calculated as follows: CU1,500 ÷ $(1 + 0.1)^5$ = CU1,500 ÷ $(1.1)^5$ = CU1,500 ÷ 1.61051 = CU931.38.

Because the carrying amount of the truck (before impairment testing) at 31 December 20X2 (CU20,000, see Table 1) is higher than its recoverable amount (CU17,078.5, see Table 2), at 31 December 20X2 the entity recognises an impairment loss of CU2,921 (CU20,000 carrying amount at 31 December 20X2 (before recognising the impairment loss) minus CU17,079 recoverable amount), as follows:

Dr	Profit or Loss (impairment loss)	CU2,921	
	Cr Accumulated impairment loss (property, plant and equipment)		CU2,921
	To recognise the impairment loss of the truck.		

After recognising the impairment loss, the carrying amount of the truck at 31 December 20X2 is CU17,079.

Note: in the following years, if relevant variables remain the same as at 31 December 20X2, SME J will recognise depreciation at CU3,416 a year (CU17,079 depreciable amount ÷ 5 years remaining useful life).

Part B

At 31 December 20X3 the carrying amount of the truck is CU13,663 (CU17,079 carrying amount at 31 December 20X2 minus CU3,416 depreciation for 20X3). There are indications that the impairment loss of prior periods may have decreased. As in Part A, the existence of indicators of reversal of impairment means that the entity is required to once again review the asset's useful life, depreciation method and residual value (see paragraph 27.10). At 31 December 20X4 the useful life is estimated to be three years. Current and future years' estimation of depreciation expense is revised to reflect the new estimate of useful life (paragraph 10.16(b)). Consequently, depreciation for 20X4 is calculated on the basis of a useful life of five years (the current year plus four years in the future) as shown in Table 3.

Table 3 (Table 1 extended for 20X3 and 20X4)

		Carrying amount		*Notional carrying amount (ignoring impairment)*
		CU		*CU*
01/01/20X1		27,000		27,000
Depreciation	CU27,000 ÷ 9 years	(3,000)	CU27,000 ÷ 9 years	(3,000)
31/12/20X1		**24,000**		**24,000**
Depreciation	CU24,000 ÷ 6 years	(4,000)	CU24,000 ÷ 6 years	(4,000)
		20,000		
Impairment	Part A	(2,921)		
31/12/20X2		**17,079**		**20,000**
Depreciation	CU17,079 ÷ 5 years	(3,416)	CU20,000 ÷ 5 years	(4,000)
31/12/20X3		**13,663**		**16,000**
Depreciation	CU13,663 ÷ 5 years	(2,733)	CU16,000 ÷ 5 years	(3,200)
		10,930		**12,800**
Impairment reversal	CU11,242 recoverable amount minus CU10,930	312		
31/12/20X4		**11,242**		**12,800**

At 31 December 20X4 the recoverable amount of the truck is CU11,242—the higher of its value in use (CU11,242, as calculated in Table 4) and its fair value less costs to sell (CU11,000—CU11,300 market price less CU300 costs to sell).

Table 4	*Predicted future cash flows*	*Present value future cash flow* [(c)]
Period	*CU*	*CU*
20X5	5,500	5,092.59
20X6	4,000	3,429.35
20X7	2,500	1,984.58
20X8[(d)]	1,000	735.03
Value in use		**11,241.56**

(c) At 31/12/20X4 management estimated 8% as the appropriate discount rate for those future cash flows, so *i* = 8% a year.

(d) The year 20X8 corresponds to the fourth cash flow counted from 20X5. So, for 20X8, the present value is calculated as follows: CU1,000 ÷ $(1 + 0.08)^4$ = CU1,000 ÷ 1.36048896 = CU735.03.

Because at 31 December 20X4 the carrying amount of the truck is less than its recoverable amount the entity recognises CU312 income in profit and loss for 20X4 (CU10,930 carrying amount at 31 December 20X4 before recognising the reversal of the impairment loss minus CU11,242 recoverable amount) to reverse part of the impairment loss recognised in prior periods, as follows:

Dr	Accumulated impairment loss (property, plant and equipment)	CU312	
Cr	Profit or Loss (reversal of impairment loss)		CU312

To recognise the reversal of impairment loss of the truck recognised in prior periods.

After reversing the impairment loss, the carrying amount of the truck at 31 December 20X4 is CU11,242.

Note: in the subsequent years, if relevant variables remain the same as at 31 December 20X4, SME J will recognise annual depreciation at CU2,810 (CU11,242 depreciable amount ÷ 4 years remaining useful life).

Part C

The only difference between Part B and Part C is the market price of the truck at 31 December 20X4—in Part C it is CU13,500, so the truck's fair value less costs to sell is CU13,200 (CU13,500 fair value less CU300 costs to sell). In Part 3 the truck's recoverable amount at 31 December 20X4 is CU13,200 (the higher of CU11,242 value in use and CU13,200 fair value less costs to sell).

Table 5 (Table 1 extended for 20X3 and 20X4)

		Carrying amount		*Notional carrying amount (ignoring impairment)*
		CU		*CU*
01/01/20X1		27,000		27,000
Depreciation	CU27,000 ÷ 9 years	(3,000)	CU27,000 ÷ 9 years	(3,000)
31/12/20X1		**24,000**		**24,000**
Depreciation	CU24,000 ÷ 6 years	(4,000)	CU24,000 ÷ 6 years	(4,000)
		20,000		
Impairment	Part A	(2,921)		
31/12/20X2		**17,079**		**20,000**
Depreciation	CU17,079 ÷ 5 years	(3,416)	CU20,000 ÷ 5 years	(4,000)
31/12/20X3		**13,663**		**16,000**
Depreciation	CU13,663 ÷ 5 years	(2,733)	CU16,000 ÷ 5 years	(3,200)
		10,930		**12,800**
Impairment reversal	Refer to explanation after this table	1,870		
31/12/20X4		**12,800**		**12,800**

If the impairment reversal was calculated as the difference between the carrying amount before the impairment reversal (CU10,930, see Table 5) and the recoverable amount (CU13,200), the entity would account for a reversal at CU2,270, and would increase the carrying amount of the truck to CU13,200 (CU10,930 + CU2,270). However, CU13,200 is greater than the carrying amount that would have been determined had no impairment loss been recognised for the truck in prior years (CU12,800, see Table 5).

Considering the limitation presented in paragraph 27.30(c), the reversal of an impairment loss cannot result in a carrying amount greater than CU12,800. Consequently, the impairment reversal is CU1,870 (the carrying amount at 31/12/20X4 before the impairment reversal, CU10,930 minus CU12,800 notional carrying amount at 31/12/20X4—based on the second revision to useful life—that would have been determined had no impairment loss been recognised for the truck in prior years), as follows:

Dr	Accumulated impairment loss (property, plant and equipment)	CU1,870	
Cr	Profit or Loss (reversal of impairment loss)		CU1,870

To recognise the reversal of the impairment loss of the truck recognised in prior periods.

After the impairment loss recognition, the carrying amount of the truck is CU12,800.

Note: in the subsequent years, if relevant variables remain the same as at 31 December 20X4, SME J will recognise annual depreciation at CU3,200 (CU12,800 depreciable amount ÷ 4 years remaining useful life).

Case study 4

At 31 December 20X0 SME Q acquires cash-generating unit R.

The carrying amounts of cash-generating unit R's assets at 31 December 20X7 (before impairment testing) are:

Goodwill	Identifiable asset R1	Identifiable asset R2	Total cash-generating unit
CU2,000	CU5,000	CU9,000	CU16,000

In 20X7, cash-generating unit R's competitive environment deteriorates. Consequently, at 31 December 20X7 SME Q tests cash-generating unit R for impairment.

Cash-generating unit R's cash flow forecasts for the next five years (20X8–20Y2) are:

- 20X8: CU4,200 cash inflow;
- 20X9: CU3,350 cash inflow;
- 20Y0: CU2,240 cash inflow;
- 20Y1: CU1,200 cash inflow; and
- 20Y2: CU6,500 cash inflow

At 31 December 20X7, the appropriate risk-adjusted pre-tax discount rate for calculating the value in use of cash-generating unit R is 11% a year.

At 31 December 20X7, the fair values of identifiable assets R1 and R2 is CU3,000 and CU8,600, respectively, and their costs to sell are CU200 and CU300, respectively. SME Q has no reason to believe that the fair value less costs to sell of cash-generating unit R exceeds its value in use.

Prepare the journal entries (if any) to record the impairment of cash-generating unit R at 31 December 20X7.

Answer to case study 4

Because SME Q has no reason to believe that the fair value less costs to sell of cash-generating unit R exceeds its value in use, its recoverable amount is its value in use.

The recoverable amount of cash-generating unit R is calculated at its value in use, as follows:

Year	Future cash flows	Discount factor [a]	Discounted cash flows [b]
	CU	11%	CU
20X8	4,200	0.900901	3,784
20X9	3,350	0.811622	2,719
20Y0	2,240	0.731191	1,638
20Y1	1,200	0.658731	790
20Y2[c]	6,500	0.593451	3,857
		Value in use	**12,788**

[a] At the beginning of 20X8 management decided 11% was the appropriate discount rate for those future cash flows, so i = 11% a year.
The discount factor, k, is equal to $1 \div (1 + i)^n$.

[b] The present value is calculated as the sum of the future cash flows multiplied by the applicable discount factors (k).

[c] The year 20Y2 corresponds to the fifth cash flow counted from 20X8. So, for 20Y2, the discount factor is $1 \div (1 + 0.11)^5 = 1 \div (1.11)^5 = 1 \div 1.6850581551 = 0.593451$. The present value of the cash flow of year 20Y2 is therefore calculated as follows: CU6,500 × 0.593451 = CU3,857.43.

Because the carrying amount of the cash-generating unit R (CU16,000) exceeds its recoverable amount (CU12,788), the entity recognises an impairment loss measured at CU3,212.

Applying paragraph 27.21, the entity allocates the impairment loss first to the goodwill and then to other assets of the unit pro rata according to the carrying amount of each asset in the cash-generating unit. Consequently, the entity will allocate CU2,000 to goodwill and then allocate CU1,212 (CU3,212 total impairment loss minus CU2,000 allocated to goodwill) on a pro-rata basis to assets R1 and R2.

Asset R1 is 35.71% of the carrying amount of identifiable assets (CU5,000 carrying amount of asset R1 ÷ (the carrying amount of asset R1, CU5,000 + CU9,000, the carrying amount of asset R2)) and asset R2 is 64.29% (1 minus 35.71%). If the remaining impairment loss of CU1,212 were allocated to R1 and R2 based on these proportions, the carrying amount of R1 would be CU4,567 (the carrying amount before the impairment loss, CU5,000 minus 35.71% × CU1,212) and the carrying amount of R2 would be CU8,221 (CU9,000 carrying amount before the impairment loss recognition minus 64.29% × CU1,212).

However, applying paragraph 27.22(a), when allocating the impairment loss, the carrying amount of an asset (in this case R1 and R2 individually) cannot be reduced below its fair value less costs to sell. The fair value less costs to sell of the cash-generating unit's identifiable assets are:

- R1—CU2,800 (CU3,000 fair value less CU200 costs to sell); and
- R2—CU8,300 (CU8,600 fair value less CU300 costs to sell).

Consequently, the impairment allocated to R2 is limited to CU700 (the carrying amount before the impairment loss recognition, CU9,000 minus CU8,300 fair value less costs to sell) and the excess is allocated to asset R1. The impairment loss allocated to R1 is CU512 (CU3,212 total impairment loss minus CU2,000 allocated to goodwill minus CU700 allocated to asset R2).

SME Q uses the following entries to record the impairment of cash-generating unit R:

Dr Profit or Loss (impairment loss)	CU3,212	
Cr Goodwill		CU2,000
Cr Accumulated impairment loss (asset R1)		CU512
Cr Accumulated impairment loss (asset R2)		CU700
To recognise the impairment loss of the cash-generating unit R.		

Note: after recognising the impairment loss SME Q would carry cash-generating unit R's assets at the following amounts:

Goodwill	Identifiable asset R1	Identifiable asset R2	Unit R
–	CU4,488	CU8,300	CU12,788