

International Financial Reporting Standards (IFRSsTM) 2004

including International Accounting Standards (IASsTM) and Interpretations as
at 31 March 2004

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International Accounting Standard 36

Impairment of Assets

This version includes amendments resulting from new and amended IFRSs issued up to 31 March 2004. The section “Changes in this Edition” at the front of this volume provides the application dates of these new and amended IFRSs and also identifies those current IFRSs that are not included in this volume.

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International Accounting Standard 36 *Impairment of Assets* (IAS 36) is set out in paragraphs 1-141 and Appendices A and B. All the paragraphs have equal authority but retain the IASC format of the Standard when it was adopted by the IASB. IAS 36 should be read in the context of its objective and the Basis for Conclusions, the *Preface to International Financial Reporting Standards* and the *Framework for the Preparation and Presentation of Financial Statements*. IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors* provides a basis for selecting and applying accounting policies in the absence of explicit guidance.

Introduction

- IN1. International Accounting Standard 36 *Impairment of Assets* (IAS 36) replaces IAS 36 *Impairment of Assets* (issued in 1998), and should be applied:
- (a) on acquisition to goodwill and intangible assets acquired in business combinations for which the agreement date is on or after 31 March 2004.
 - (b) to all other assets, for annual periods beginning on or after 31 March 2004.
- Earlier application is encouraged.

Reasons for revising IAS 36

- IN2. The International Accounting Standards Board developed this revised IAS 36 as part of its project on business combinations. The project's objective is to improve the quality of, and seek international convergence on, the accounting for business combinations and the subsequent accounting for goodwill and intangible assets acquired in business combinations.
- IN3. The project has two phases. The first phase resulted in the Board issuing simultaneously IFRS 3 *Business Combinations* and revised versions of IAS 36 and IAS 38 *Intangible Assets*. The Board's deliberations during the first phase of the project focused primarily on the following issues:
- (a) the method of accounting for business combinations;
 - (b) the initial measurement of the identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination;
 - (c) the recognition of provisions for terminating or reducing the activities of an acquiree;
 - (d) the treatment of any excess of the acquirer's interest in the fair values of identifiable net assets acquired in a business combination over the cost of the combination; and
 - (e) the accounting for goodwill and intangible assets acquired in a business combination.
- IN4. Therefore, the Board's intention while revising IAS 36 was to reflect only those changes related to its decisions in the Business Combinations project, and *not* to reconsider all of the requirements in IAS 36. The changes that have been made in the Standard are primarily concerned with the impairment test for goodwill.

Summary of main changes

Frequency of impairment testing

- IN5. The previous version of IAS 36 required the recoverable amount of an asset to be measured whenever there is an indication that the asset may be impaired. This requirement is included in the Standard. However, the Standard also requires:

- (a) the recoverable amount of an intangible asset with an indefinite useful life to be measured annually, irrespective of whether there is any indication that it may be impaired. The most recent detailed calculation of recoverable amount made in a preceding period may be used in the impairment test for that asset in the current period, provided specified criteria are met.
- (b) the recoverable amount of an intangible asset not yet available for use to be measured annually, irrespective of whether there is any indication that it may be impaired.
- (c) goodwill acquired in a business combination to be tested for impairment annually.

Measuring value in use

IN6. The Standard clarifies that the following elements should be reflected in the calculation of an asset's value in use:

- (a) an estimate of the future cash flows the entity expects to derive from the asset;
- (b) expectations about possible variations in the amount or timing of those future cash flows;
- (c) the time value of money, represented by the current market risk-free rate of interest;
- (d) the price for bearing the uncertainty inherent in the asset; and
- (e) other factors, such as illiquidity, that market participants would reflect in pricing the future cash flows the entity expects to derive from the asset.

The Standard also clarifies that the second, fourth and fifth of these elements can be reflected either as adjustments to the future cash flows or adjustments to the discount rate.

IN7. The Standard carries forward from the previous version of IAS 36 the requirement for the cash flow projections used to measure value in use to be based on reasonable and supportable assumptions that represent management's best estimate of the economic conditions that will exist over the remaining useful life of the asset. However, the Standard clarifies that management:

- (a) should assess the reasonableness of the assumptions on which its current cash flow projections are based by examining the causes of differences between past cash flow projections and actual cash flows.
- (b) should ensure that the assumptions on which its current cash flow projections are based are consistent with past actual outcomes, provided the effects of subsequent events or circumstances that did not exist when those actual cash flows were generated make this appropriate.

IN8. The previous version of IAS 36 required the cash flow projections used to measure value in use to be based on the most recent financial budgets/forecasts approved by management. The Standard carries forward this requirement, but clarifies that the cash flow projections exclude any estimated cash inflows or outflows expected to arise from:

- (a) future restructurings to which the entity is not yet committed; or
- (b) improving or enhancing the asset's performance.

IN9. Additional guidance on using present value techniques in measuring an asset's value in use is included in Appendix A of the Standard. In addition, the guidance in the previous version of IAS 36 on estimating the discount rate when an asset-specific rate is not directly available from the market has been relocated to Appendix A.

Identifying the cash-generating unit to which an asset belongs

IN10. The Standard carries forward from the previous version of IAS 36 the requirement that if an active market exists for the output produced by an asset or a group of assets, that asset or group of assets should be identified as a cash-generating unit, even if some or all of the output is used internally. However, the previous version of IAS 36 required that, in such circumstances, management's best estimate of future market prices for the output should be used in estimating the future cash flows used to determine the unit's value in use. It also required that when an entity was estimating future cash flows to determine the value in use of cash-generating units using the output, management's best estimate of future market prices for the output should be used. The Standard requires that if the cash inflows generated by *any* asset or cash-generating unit are affected by internal transfer pricing, an entity should use management's best estimate of future price(s) that could be achieved in arm's length transactions in estimating:

- (a) the future cash inflows used to determine the asset's or cash-generating unit's value in use; and
- (b) the future cash outflows used to determine the value in use of other assets or cash-generating units affected by the internal transfer pricing.

Allocating goodwill to cash-generating units

IN11. The previous version of IAS 36 required goodwill acquired in a business combination to be tested for impairment as part of impairment testing the cash-generating unit(s) to which it related. It employed a 'bottom-up/top-down' approach under which the goodwill was, in effect, tested for impairment by allocating its carrying amount to each cash-generating unit or smallest group of cash-generating units to which a portion of that carrying amount could be allocated on a reasonable and consistent basis. The Standard similarly requires goodwill acquired in a business combination to be tested for impairment as part of impairment testing the cash-generating unit(s) to which it relates. However, the Standard clarifies that:

- (a) the goodwill should, from the acquisition date, be allocated to each of the acquirer's cash-generating units, or groups of cash-generating units, that are expected to benefit from the synergies of the business combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units or groups of units.

- (b) each unit or group of units to which the goodwill is allocated should:
 - (i) represent the lowest level within the entity at which the goodwill is monitored for internal management purposes; and
 - (ii) not be larger than a segment based on either the entity's primary or the entity's secondary reporting format determined in accordance with IAS 14 *Segment Reporting*.

IN12. The Standard also clarifies the following:

- (a) if the initial allocation of goodwill acquired in a business combination cannot be completed before the end of the annual period in which the business combination occurs, that initial allocation should be completed before the end of the first annual period beginning after the acquisition date.
- (b) when an entity disposes of an operation within a cash-generating unit (group of units) to which goodwill has been allocated, the goodwill associated with that operation should be:
 - (i) included in the carrying amount of the operation when determining the gain or loss on disposal; and
 - (ii) measured on the basis of the relative values of the operation disposed of and the portion of the cash-generating unit (group of units) retained, unless the entity can demonstrate that some other method better reflects the goodwill associated with the operation disposed of.
- (c) when an entity reorganises its reporting structure in a manner that changes the composition of cash-generating units (groups of units) to which goodwill has been allocated, the goodwill should be reallocated to the units (groups of units) affected. This reallocation should be performed using a relative value approach similar to that used when an entity disposes of an operation within a cash-generating unit (group of units), unless the entity can demonstrate that some other method better reflects the goodwill associated with the reorganised units (groups of units).

Timing of impairment tests for goodwill

IN13. The Standard permits:

- (a) the annual impairment test for a cash-generating unit (group of units) to which goodwill has been allocated to be performed at any time during an annual reporting period, provided the test is performed at the same time every year.
- (b) different cash-generating units (groups of units) to be tested for impairment at different times.

However, if some of the goodwill allocated to a cash-generating unit (group of units) was acquired in a business combination during the current annual period, the Standard requires that unit (group of units) to be tested for impairment before the end of the current period.

IN14. The Standard permits the most recent detailed calculation made in a preceding period of the recoverable amount of a cash-generating unit (group of units) to which goodwill has been allocated to be used in the impairment test for that unit (group of units) in the current period, provided specified criteria are met.

Reversals of impairment losses for goodwill

IN15. The previous version of IAS 36 required an impairment loss recognised for goodwill in a previous period to be reversed when the impairment loss was caused by a specific external event of an exceptional nature that is not expected to recur and subsequent external events have occurred that reverse the effect of that event. The Standard prohibits the recognition of reversals of impairment losses for goodwill.

Disclosure

IN16. The Standard requires that if any portion of the goodwill acquired in a business combination during the period has not been allocated to a cash-generating unit at the reporting date, an entity should disclose the amount of the unallocated goodwill together with the reasons why that amount remains unallocated.

IN17. The Standard requires disclosure of information for each cash-generating unit (group of units) for which the carrying amount of goodwill or intangible assets with indefinite useful lives allocated to that unit (group of units) is significant in comparison with the entity's total carrying amount of goodwill or intangible assets with indefinite lives. That information is concerned primarily with the key assumptions used to measure the recoverable amounts of such units (groups of units).

IN18. The Standard also requires specified information to be disclosed if some or all of the carrying amount of goodwill or intangible assets with indefinite lives is allocated across multiple cash-generating units (groups of units), and the amount so allocated to each unit (group of units) is not significant in comparison with the total carrying amount of goodwill or intangible assets with indefinite lives. Further disclosures are required if, in such circumstances, the recoverable amounts of any of those units (groups of units) are based on the same key assumption(s) and the aggregate carrying amount of goodwill or intangible assets with indefinite lives allocated to them is significant in comparison with the entity's total carrying amount of goodwill or intangible assets with indefinite lives.

International Accounting Standard 36

Impairment of Assets

Objective

1. The objective of this Standard is to prescribe the procedures that an entity applies to ensure that its assets are carried at no more than their recoverable amount. An asset is carried at more than its recoverable amount if its carrying amount exceeds the amount to be recovered through use or sale of the asset. If this is the case, the asset is described as impaired and the Standard requires the entity to recognise an impairment loss. The Standard also specifies when an entity should reverse an impairment loss and prescribes disclosures.

Scope

2. *This Standard shall be applied in accounting for the impairment of all assets, other than:*
 - (a) *inventories (see IAS 2 Inventories);*
 - (b) *assets arising from construction contracts (see IAS 11 Construction Contracts);*
 - (c) *deferred tax assets (see IAS 12 Income Taxes);*
 - (d) *assets arising from employee benefits (see IAS 19 Employee Benefits);*
 - (e) *financial assets that are within the scope of IAS 39 Financial Instruments: Recognition and Measurement;*
 - (f) *investment property that is measured at fair value (see IAS 40 Investment Property);*
 - (g) *biological assets related to agricultural activity that are measured at fair value less estimated point-of-sale costs (see IAS 41 Agriculture);*
 - (h) *deferred acquisition costs, and intangible assets, arising from an insurer's contractual rights under insurance contracts within the scope of IFRS 4 Insurance Contracts; and*
 - (i) *non-current assets (or disposal groups) classified as held for sale in accordance with IFRS 5 Non-current Assets Held for Sale and Discontinued Operations.*
3. This Standard does not apply to inventories, assets arising from construction contracts, deferred tax assets, assets arising from employee benefits, or assets classified as held for sale (or included in a disposal group that is classified as held for sale) because existing Standards applicable to these assets contain requirements for recognising and measuring these assets.

4. This Standard applies to financial assets classified as:
- (a) subsidiaries, as defined in IAS 27 *Consolidated and Separate Financial Statements*;
 - (b) associates, as defined in IAS 28 *Investments in Associates*; and
 - (c) joint ventures, as defined in IAS 31 *Interests in Joint Ventures*.

For impairment of other financial assets, refer to IAS 39.

5. This Standard does not apply to financial assets within the scope of IAS 39, investment property measured at fair value in accordance with IAS 40, or biological assets related to agricultural activity measured at fair value less estimated point-of-sale costs in accordance with IAS 41. However, this Standard applies to assets that are carried at revalued amount (ie fair value) in accordance with other Standards, such as the revaluation model in IAS 16 *Property, Plant and Equipment*. Identifying whether a revalued asset may be impaired depends on the basis used to determine fair value:

- (a) if the asset's fair value is its market value, the only difference between the asset's fair value and its fair value less costs to sell is the direct incremental costs to dispose of the asset:
 - (i) if the disposal costs are negligible, the recoverable amount of the revalued asset is necessarily close to, or greater than, its revalued amount (ie fair value). In this case, after the revaluation requirements have been applied, it is unlikely that the revalued asset is impaired and recoverable amount need not be estimated.
 - (ii) if the disposal costs are not negligible, the fair value less costs to sell of the revalued asset is necessarily less than its fair value. Therefore, the revalued asset will be impaired if its value in use is less than its revalued amount (ie fair value). In this case, after the revaluation requirements have been applied, an entity applies this Standard to determine whether the asset may be impaired.
- (b) if the asset's fair value is determined on a basis other than its market value, its revalued amount (ie fair value) may be greater or lower than its recoverable amount. Hence, after the revaluation requirements have been applied, an entity applies this Standard to determine whether the asset may be impaired.

Definitions

6. *The following terms are used in this Standard with the meanings specified:*

*An **active market** is a market in which all the following conditions exist:*

- (a) *the items traded within the market are homogeneous;*
- (b) *willing buyers and sellers can normally be found at any time; and*
- (c) *prices are available to the public.*

The agreement date for a business combination is the date that a substantive agreement between the combining parties is reached and, in the case of publicly listed entities, announced to the public. In the case of a hostile takeover, the earliest date that a substantive agreement between the combining parties is reached is the date that a sufficient number of the acquiree's owners have accepted the acquirer's offer for the acquirer to obtain control of the acquiree.

Carrying amount is the amount at which an asset is recognised after deducting any accumulated depreciation (amortisation) and accumulated impairment losses thereon.

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 groups of assets.

Corporate assets are assets other than goodwill that contribute to the future cash flows of both the cash-generating unit under review and other cash-generating units.

Costs of disposal are incremental costs directly attributable to the disposal of an asset or cash-generating unit, excluding finance costs and income tax expense.

Depreciable amount is the cost of an asset, or other amount substituted for cost in the financial statements, less its residual value.

*Depreciation (Amortisation) is the systematic allocation of the depreciable amount of an asset over its useful life.**

Fair value less costs to sell is the amount obtainable from the sale of an asset or cash-generating unit in an arm's length transaction between knowledgeable, willing parties, less the costs of disposal.

An impairment loss is the amount by which the carrying amount of an asset or a cash-generating unit exceeds its recoverable amount.

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.

Useful life is either:

- (a) the period of time over which an asset is expected to be used by the entity; or*
- (b) the number of production or similar units expected to be obtained from the asset by the entity.*

Value in use is the present value of the future cash flows expected to be derived from an asset or cash-generating unit.

* In the case of an intangible asset, the term 'amortisation' is generally used instead of 'depreciation'. The two terms have the same meaning.

Identifying an Asset that may be Impaired

7. Paragraphs 8-17 specify when recoverable amount shall be determined. These requirements use the term ‘an asset’ but apply equally to an individual asset or a cash-generating unit. The remainder of this Standard is structured as follows:
 - (a) paragraphs 18-57 set out the requirements for measuring recoverable amount. These requirements also use the term ‘an asset’ but apply equally to an individual asset and a cash-generating unit.
 - (b) paragraphs 58-108 set out the requirements for recognising and measuring impairment losses. Recognition and measurement of impairment losses for individual assets other than goodwill are dealt with in paragraphs 58-64. Paragraphs 65-108 deal with the recognition and measurement of impairment losses for cash-generating units and goodwill.
 - (c) paragraphs 109-116 set out the requirements for reversing an impairment loss recognised in prior periods for an asset or a cash-generating unit. Again, these requirements use the term ‘an asset’ but apply equally to an individual asset or a cash-generating unit. Additional requirements for an individual asset are set out in paragraphs 117-121, for a cash-generating unit in paragraphs 122 and 123, and for goodwill in paragraphs 124 and 125.
 - (d) paragraphs 126-133 specify the information to be disclosed about impairment losses and reversals of impairment losses for assets and cash-generating units. Paragraphs 134-137 specify additional disclosure requirements for cash-generating units to which goodwill or intangible assets with indefinite useful lives have been allocated for impairment testing purposes.
8. An asset is impaired when its carrying amount exceeds its recoverable amount. Paragraphs 12-14 describe some indications that an impairment loss may have occurred. If any of those indications is present, an entity is required to make a formal estimate of recoverable amount. Except as described in paragraph 10, this Standard does not require an entity to make a formal estimate of recoverable amount if no indication of an impairment loss is present.
9. ***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.***
10. ***Irrespective of whether there is any indication of impairment, an entity shall also:***
 - (a) ***test an intangible asset with an indefinite useful life or an intangible asset not yet available for use for impairment annually by comparing its carrying amount with its recoverable amount. This impairment test may be performed at any time during an annual period, provided it is performed at the same time every year. Different intangible assets may be tested for impairment at different times. However, if such an intangible asset was initially recognised during the current annual period, that intangible asset shall be tested for impairment before the end of the current annual period.***

(b) test goodwill acquired in a business combination for impairment annually in accordance with paragraphs 80-99.

11. The ability of an intangible asset to generate sufficient future economic benefits to recover its carrying amount is usually subject to greater uncertainty before the asset is available for use than after it is available for use. Therefore, this Standard requires an entity to test for impairment, at least annually, the carrying amount of an intangible asset that is not yet available for use.
12. *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

- (a) 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.*
- (b) 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 the discount rate used in calculating an asset's value in use and decrease the asset's recoverable amount materially.*
- (d) the carrying amount of the net assets of the entity is more than its market capitalisation.*

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, plans to dispose of an asset before the previously expected date, and reassessing the useful life of an asset as finite rather than indefinite.**
- (g) evidence is available from internal reporting that indicates that the economic performance of an asset is, or will be, worse than expected.*
13. The list in paragraph 12 is not exhaustive. An entity may identify other indications that an asset may be impaired and these would also require the entity to determine the asset's recoverable amount or, in the case of goodwill, perform an impairment test in accordance with paragraphs 80-99.

* Once an asset meets the criteria to be classified as held for sale (or is included in a disposal group that is classified as held for sale), it is excluded from the scope of this Standard and is accounted for in accordance with IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*.

14. Evidence from internal reporting that indicates that an asset may be impaired includes the existence of:
 - (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;
 - (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 budgeted amounts for the future.
15. As indicated in paragraph 10, this Standard requires an intangible asset with an indefinite useful life or not yet available for use and goodwill to be tested for impairment, at least annually. Apart from when the requirements in paragraph 10 apply, the concept of materiality applies in identifying whether the recoverable amount of an asset needs to be estimated. For example, if previous calculations show that an asset's recoverable amount is significantly greater than its carrying amount, the entity need not re-estimate the asset's recoverable amount if no events have occurred that would eliminate that difference. Similarly, previous analysis may show that an asset's recoverable amount is not sensitive to one (or more) of the indications listed in paragraph 12.
16. As an illustration of paragraph 15, if market interest rates or other market rates of return on investments have increased during the period, an entity is not required to make a formal estimate of an asset's recoverable amount in the following cases:
 - (a) if the discount rate used in calculating the asset's value in use is unlikely to be affected by the increase in these market rates. For example, increases in short-term interest rates may not have a material effect on the discount rate used for an asset that has a long remaining useful life.
 - (b) if the discount rate used in calculating the asset's value in use is likely to be affected by the increase in these market rates but previous sensitivity analysis of recoverable amount shows that:
 - (i) it is unlikely that there will be a material decrease in recoverable amount because future cash flows are also likely to increase (eg in some cases, an entity may be able to demonstrate that it adjusts its revenues to compensate for any increase in market rates); or
 - (ii) the decrease in recoverable amount is unlikely to result in a material impairment loss.
17. If there is an indication that an asset may be impaired, this may indicate that the remaining useful life, the depreciation (amortisation) method or the residual value for the asset needs to be reviewed and adjusted in accordance with the Standard applicable to the asset, even if no impairment loss is recognised for the asset.

Measuring Recoverable Amount

18. This Standard defines recoverable amount as the higher of an asset's or cash-generating unit's fair value less costs to sell and its value in use. Paragraphs 19-57 set out the requirements for measuring recoverable amount. These requirements use the term 'an asset' but apply equally to an individual asset or a cash-generating unit.
19. 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.
20. It may be possible to determine fair value less costs to sell, even if an asset is not traded in an active market. However, sometimes it will not be possible to determine fair value less costs to sell because there is no basis for making a reliable estimate of the amount obtainable from the sale of the asset in an arm's length transaction between knowledgeable and willing parties. In this case, the entity may use the asset's value in use as its recoverable amount.
21. 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. This is because the value in use of an asset held for disposal will consist mainly of the net disposal proceeds, as the future cash flows from continuing use of the asset until its disposal are likely to be negligible.
22. Recoverable amount is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. If this is the case, recoverable amount is determined for the cash-generating unit to which the asset belongs (see paragraphs 65-103), unless either:
 - (a) the asset's fair value less costs to sell is higher than its carrying amount; or
 - (b) the asset's value in use can be estimated to be close to its fair value less costs to sell and fair value less costs to sell can be determined.
23. In some cases, estimates, averages and computational short cuts may provide reasonable approximations of the detailed computations illustrated in this Standard for determining fair value less costs to sell or value in use.

Measuring the Recoverable Amount of an Intangible Asset with an Indefinite Useful Life

24. Paragraph 10 requires an intangible asset with an indefinite useful life to be tested for impairment annually by comparing its carrying amount with its recoverable amount, irrespective of whether there is any indication that it may be impaired. However, the most recent detailed calculation of such an asset's recoverable amount made in a preceding period may be used in the impairment test for that asset in the current period, provided all of the following criteria are met:

- (a) if the intangible asset does not generate cash inflows from continuing use that are largely independent of those from other assets or groups of assets and is therefore tested for impairment as part of the cash-generating unit to which it belongs, the assets and liabilities making up that unit have not changed significantly since the most recent recoverable amount calculation;
- (b) the most recent recoverable amount calculation resulted in an amount that exceeded the asset's carrying amount by a substantial margin; and
- (c) based on an analysis of events that have occurred and circumstances that have changed since the most recent recoverable amount calculation, the likelihood that a current recoverable amount determination would be less than the asset's carrying amount is remote.

Fair Value less Costs to Sell

- 25. The best evidence of an asset's fair value less costs to sell is a price in a binding sale agreement in an arm's length transaction, adjusted for incremental costs that would be directly attributable to the disposal of the asset.
- 26. If there is no binding sale agreement but an asset is traded in an active market, fair value less costs to sell is the asset's market price less the costs of disposal. The appropriate market price is usually the current bid price. When current bid prices are unavailable, the price of the most recent transaction may provide a basis from which to estimate fair value less costs to sell, provided that there has not been a significant change in economic circumstances between the transaction date and the date as at which the estimate is made.
- 27. If there is no binding sale agreement or active market for an asset, fair value less costs to sell is based on the best information available to reflect the amount that an entity could obtain, at the balance sheet date, from the disposal of the asset in an arm's length transaction between knowledgeable, willing parties, after deducting the costs of disposal. In determining this amount, an entity considers the outcome of recent transactions for similar assets within the same industry. Fair value less costs to sell does not reflect a forced sale, unless management is compelled to sell immediately.
- 28. Costs of disposal, other than those that have been recognised as liabilities, are deducted in determining fair value less costs to sell. Examples of such costs are legal costs, stamp duty and similar transaction taxes, costs of removing the asset, and direct incremental costs to bring an asset into condition for its sale. However, termination benefits (as defined in IAS 19 *Employee Benefits*) and costs associated with reducing or reorganising a business following the disposal of an asset are not direct incremental costs to dispose of the asset.
- 29. Sometimes, the disposal of an asset would require the buyer to assume a liability and only a single fair value less costs to sell is available for both the asset and the liability. Paragraph 78 explains how to deal with such cases.

Value in Use

30. *The following elements shall be reflected in the calculation of an asset's value in use:*
- (a) *an estimate of the future cash flows the entity expects to derive from the asset;*
 - (b) *expectations about possible variations in the amount or timing of those future cash flows;*
 - (c) *the time value of money, represented by the current market risk-free rate of interest;*
 - (d) *the price for bearing the uncertainty inherent in the asset; and*
 - (e) *other factors, such as illiquidity, that market participants would reflect in pricing the future cash flows the entity expects to derive from the asset.*
31. Estimating the value in use of an asset 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.
32. The elements identified in paragraph 30(b), (d) and (e) can be reflected either as adjustments to the future cash flows or as adjustments to the discount rate. Whichever approach an entity adopts to reflect expectations about possible variations in the amount or timing of future cash flows, the result shall be to reflect the expected present value of the future cash flows, ie the weighted average of all possible outcomes. Appendix A provides additional guidance on the use of present value techniques in measuring an asset's value in use.

Basis for Estimates of Future Cash Flows

33. *In measuring value in use an entity shall:*
- (a) *base cash flow projections on reasonable and supportable assumptions that represent management's best estimate of the range of economic conditions that will exist over the remaining useful life of the asset. Greater weight shall be given to external evidence.*
 - (b) *base cash flow projections on the most recent financial budgets/forecasts approved by management, but shall exclude any estimated future cash inflows or outflows expected to arise from future restructurings or from improving or enhancing the asset's performance. Projections based on these budgets/forecasts shall cover a maximum period of five years, unless a longer period can be justified.*
 - (c) *estimate cash flow projections beyond the period covered by the most recent budgets/forecasts by extrapolating the projections based on the budgets/forecasts using a steady or declining growth rate for subsequent years, unless an increasing rate can be justified. This growth rate shall not exceed*

the long-term average growth rate for the products, industries, or country or countries in which the entity operates, or for the market in which the asset is used, unless a higher rate can be justified.

34. Management assesses the reasonableness of the assumptions on which its current cash flow projections are based by examining the causes of differences between past cash flow projections and actual cash flows. Management shall ensure that the assumptions on which its current cash flow projections are based are consistent with past actual outcomes, provided the effects of subsequent events or circumstances that did not exist when those actual cash flows were generated make this appropriate.
35. Detailed, explicit and reliable financial budgets/forecasts of future cash flows for periods longer than five years are generally not available. For this reason, management's estimates of future cash flows are based on the most recent budgets/forecasts for a maximum of five years. Management may use cash flow projections based on financial budgets/forecasts over a period longer than five years if it is confident that these projections are reliable and it can demonstrate its ability, based on past experience, to forecast cash flows accurately over that longer period.
36. Cash flow projections until the end of an asset's useful life are estimated by extrapolating the cash flow projections based on the financial budgets/forecasts using a growth rate for subsequent years. This rate is steady or declining, unless an increase in the rate matches objective information about patterns over a product or industry lifecycle. If appropriate, the growth rate is zero or negative.
37. When conditions are favourable, competitors are likely to enter the market and restrict growth. Therefore, entities will have difficulty in exceeding the average historical growth rate over the long term (say, twenty years) for the products, industries, or country or countries in which the entity operates, or for the market in which the asset is used.
38. In using information from financial budgets/forecasts, an entity considers whether the information reflects reasonable and supportable assumptions and represents management's best estimate of the set of economic conditions that will exist over the remaining useful life of the asset.

Composition of Estimates of Future Cash Flows

39. *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, to be received (or paid) for the disposal of the asset at the end of its useful life.*

40. Estimates of future cash flows and the discount rate reflect consistent assumptions about price increases attributable to general inflation. Therefore, if the discount rate includes the effect of price increases attributable to general inflation, future cash flows are estimated in nominal terms. If the discount rate excludes the effect of price increases attributable to general inflation, future cash flows are estimated in real terms (but include future specific price increases or decreases).
41. Projections of cash outflows include those for the day-to-day servicing of the asset as well as future overheads that can be attributed directly, or allocated on a reasonable and consistent basis, to the use of the asset.
42. When the carrying amount of an asset does not yet include all the cash outflows to be incurred before it is ready for use or sale, the estimate of future cash outflows includes an estimate of any further cash outflow that is expected to be incurred before the asset is ready for use or sale. For example, this is the case for a building under construction or for a development project that is not yet completed.
43. To avoid double-counting, estimates of future cash flows do not include:
- (a) cash inflows from assets that generate cash inflows that are largely independent of the cash inflows from the asset under review (for example, financial assets such as receivables); and
 - (b) cash outflows that relate to obligations that have been recognised as liabilities (for example, payables, pensions or provisions).
44. ***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) a future restructuring to which an entity is not yet committed; or***
 - (b) improving or enhancing the asset's performance.***
45. Because future cash flows are estimated for the asset in its current condition, value in use does not reflect:
- (a) future cash outflows or related cost savings (for example reductions in staff costs) or benefits that are expected to arise from a future restructuring to which an entity is not yet committed; or
 - (b) future cash outflows that will improve or enhance the asset's performance or the related cash inflows that are expected to arise from such outflows.
46. A restructuring is a programme that is planned and controlled by management and materially changes either the scope of the business undertaken by an entity or the manner in which the business is conducted. IAS 37 *Provisions, Contingent Liabilities and Contingent Assets* contains guidance clarifying when an entity is committed to a restructuring.

47. When an entity becomes committed to a restructuring, some assets are likely to be affected by this restructuring. Once the entity is committed to the restructuring:
- (a) its estimates of future cash inflows and cash outflows for the purpose of determining value in use reflect the cost savings and other benefits from the restructuring (based on the most recent financial budgets/forecasts approved by management); and
 - (b) its estimates of future cash outflows for the restructuring are included in a restructuring provision in accordance with IAS 37.

Illustrative Example 5 illustrates the effect of a future restructuring on a value in use calculation.

48. Until an entity incurs cash outflows that improve or enhance the asset's performance, estimates of future cash flows do not include the estimated future cash inflows that are expected to arise from the increase in economic benefits associated with the cash outflow (see Illustrative Example 6).
49. Estimates of future cash flows include future cash outflows necessary to maintain the level of economic benefits expected to arise from the asset in its current condition. When a cash-generating unit consists of assets with different estimated useful lives, all of which are essential to the ongoing operation of the unit, the replacement of assets with shorter lives is considered to be part of the day-to-day servicing of the unit when estimating the future cash flows associated with the unit. Similarly, when a single asset consists of components with different estimated useful lives, the replacement of components with shorter lives is considered to be part of the day-to-day servicing of the asset when estimating the future cash flows generated by the asset.
- 50. *Estimates of future cash flows shall not include:***
- (a) *cash inflows or outflows from financing activities; or***
 - (b) *income tax receipts or payments.***
51. Estimated future cash flows reflect assumptions that are consistent with the way the discount rate is determined. Otherwise, the effect of some assumptions will be counted twice or ignored. Because the time value of money is considered by discounting the estimated future cash flows, these cash flows exclude cash inflows or outflows from financing activities. Similarly, because the discount rate is determined on a pre-tax basis, future cash flows are also estimated on a pre-tax basis.
- 52. *The estimate of net cash flows to be received (or paid) for the disposal of an asset at the end of its useful life shall be the amount that an entity expects to obtain from the disposal of the asset in an arm's length transaction between knowledgeable, willing parties, after deducting the estimated costs of disposal.***
53. The estimate of net cash flows to be received (or paid) for the disposal of an asset at the end of its useful life is determined in a similar way to an asset's fair value less costs to sell, except that, in estimating those net cash flows:

- (a) an entity uses prices prevailing at the date of the estimate for similar assets that have reached the end of their useful life and have operated under conditions similar to those in which the asset will be used.
- (b) the entity adjusts those prices for the effect of both future price increases due to general inflation and specific future price increases or decreases. However, if estimates of future cash flows from the asset's continuing use and the discount rate exclude the effect of general inflation, the entity also excludes this effect from the estimate of net cash flows on disposal.

Foreign Currency Future Cash Flows

54. Future cash flows are estimated in the currency in which they will be generated and then discounted using a discount rate appropriate for that currency. An entity translates the present value using the spot exchange rate at the date of the value in use calculation.

Discount Rate

55. *The discount rate (rates) shall be a pre-tax rate (rates) that reflect(s) current market assessments of:*

- (a) *the time value of money; and*
- (b) *the risks specific to the asset for which the future cash flow estimates have not been adjusted.*

56. A rate that reflects current market assessments of the time value of money and the risks specific to the asset is the return that investors would require if they were to choose an investment that would generate cash flows of amounts, timing and risk profile equivalent to those that the entity expects to derive from the asset. This rate is estimated from the rate implicit in current market transactions for similar assets or from the weighted average cost of capital of a listed entity that has a single asset (or a portfolio of assets) similar in terms of service potential and risks to the asset under review. However, the discount rate(s) used to measure an asset's value in use shall not reflect risks for which the future cash flow estimates have been adjusted. Otherwise, the effect of some assumptions will be double-counted.
57. When an asset-specific rate is not directly available from the market, an entity uses surrogates to estimate the discount rate. Appendix A provides additional guidance on estimating the discount rate in such circumstances.

Recognising and Measuring an Impairment Loss

58. Paragraphs 59-64 set out the requirements for recognising and measuring impairment losses for an individual asset other than goodwill. Recognising and measuring impairment losses for cash-generating units and goodwill are dealt with in paragraphs 65-108.

59. *If, and only if, the recoverable amount of an asset is less than its carrying amount, the carrying amount of the asset shall be reduced to its recoverable amount. That reduction is an impairment loss.*
60. *An impairment loss shall be recognised immediately in profit or loss, unless the asset is carried at revalued amount in accordance with another Standard (for example, in accordance with the revaluation model in IAS 16 Property, Plant and Equipment). Any impairment loss of a revalued asset shall be treated as a revaluation decrease in accordance with that other Standard.*
61. An impairment loss on a non-revalued asset is recognised in profit or loss. However, an impairment loss on a revalued asset is recognised directly against any revaluation surplus for the asset to the extent that the impairment loss does not exceed the amount in the revaluation surplus for that same asset.
62. *When the amount estimated for an impairment loss is greater than the carrying amount of the asset to which it relates, an entity shall recognise a liability if, and only if, that is required by another Standard.*
63. *After the recognition of an impairment loss, the depreciation (amortisation) charge for the asset shall be adjusted 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.*
64. If an impairment loss is recognised, any related deferred tax assets or liabilities are determined in accordance with IAS 12 *Income Taxes* by comparing the revised carrying amount of the asset with its tax base (see Illustrative Example 3).

Cash-generating Units and Goodwill

65. Paragraphs 66-108 set out the requirements for identifying the cash-generating unit to which an asset belongs and determining the carrying amount of, and recognising impairment losses for, cash-generating units and goodwill.

Identifying the Cash-generating Unit to Which an Asset Belongs

66. *If there is any indication that an asset may be impaired, recoverable amount shall be estimated for the individual asset. If it is not possible to estimate the recoverable amount of the individual asset, an entity shall determine the recoverable amount of the cash-generating unit to which the asset belongs (the asset's cash-generating unit).*
67. The recoverable amount of an individual asset cannot be determined if:
- (a) the asset's value in use cannot be estimated to be close to its fair value less costs to sell (for example, when the future cash flows from continuing use of the asset cannot be estimated to be negligible); and
 - (b) the asset does not generate cash inflows that are largely independent of those from other assets.

In such cases, value in use and, therefore, recoverable amount, can be determined only for the asset's cash-generating unit.

Example

A mining entity owns a private railway to support its mining activities. The private railway could be sold only 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, ie the mine as a whole.

68. As defined in paragraph 6, an asset's cash-generating unit is the smallest 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. Identification of an asset's cash-generating unit involves judgement. If recoverable amount cannot be determined for an individual asset, an entity identifies the lowest aggregation of assets that generate largely independent cash inflows.

Example

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 is the cash inflows generated by the five routes together. The cash-generating unit for each route is the bus company as a whole.

69. Cash inflows are inflows of cash and cash equivalents received from parties external to the entity. In identifying whether cash inflows from an asset (or group of assets) are largely independent of the cash inflows from other assets (or groups of assets), an entity considers various factors including how management monitors the entity's operations (such as by product lines, businesses, individual locations, districts or regional areas) or how management makes decisions about continuing or disposing of the entity's assets and operations. Illustrative Example 1 gives examples of identification of a cash-generating unit.
70. ***If an active market exists for the output produced by an asset or group of assets, that asset or group of assets shall be identified as a cash-generating unit, even if some or all of the output is used internally. If the cash inflows generated by any asset or cash-generating unit are affected by internal transfer pricing, an entity shall use management's best estimate of future price(s) that could be achieved in arm's length transactions in estimating:***

- (a) *the future cash inflows used to determine the asset's or cash-generating unit's value in use; and*
- (b) *the future cash outflows used to determine the value in use of any other assets or cash-generating units that are affected by the internal transfer pricing.*

71. Even if part or all of the output produced by an asset or a group of assets is used by other units of the entity (for example, products at an intermediate stage of a production process), this asset or group of assets forms a separate cash-generating unit if the entity could sell the output on an active market. This is because the asset or group of assets could generate cash inflows that would be largely independent of the cash inflows from other assets or groups of assets. In using information based on financial budgets/forecasts that relates to such a cash-generating unit, or to any other asset or cash-generating unit affected by internal transfer pricing, an entity adjusts this information if internal transfer prices do not reflect management's best estimate of future prices that could be achieved in arm's length transactions.
72. ***Cash-generating units shall be identified consistently from period to period for the same asset or types of assets, unless a change is justified.***
73. If an entity determines that an asset belongs to a cash-generating unit different from that in previous periods, or that the types of assets aggregated for the asset's cash-generating unit have changed, paragraph 130 requires disclosures about the cash-generating unit, if an impairment loss is recognised or reversed for the cash-generating unit.

Recoverable Amount and Carrying Amount of a Cash-generating Unit

74. The recoverable amount of a cash-generating unit is the higher of the cash-generating unit's fair value less costs to sell and its value in use. For the purpose of determining the recoverable amount of a cash-generating unit, any reference in paragraphs 19-57 to 'an asset' is read as a reference to 'a cash-generating unit'.
75. ***The carrying amount of a cash-generating unit shall be determined on a basis consistent with the way the recoverable amount of the cash-generating unit is determined.***
76. The carrying amount of a cash-generating unit:
- (a) includes the carrying amount of only those assets that can be attributed directly, or allocated on a reasonable and consistent basis, to the cash-generating unit and will generate the future cash inflows used in determining the cash-generating unit's value in use; and
 - (b) does not include the carrying amount of any recognised liability, unless the recoverable amount of the cash-generating unit cannot be determined without consideration of this liability.

This is because fair value less costs to sell and value in use of a cash-generating unit are determined excluding cash flows that relate to assets that are not part of the cash-generating unit and liabilities that have been recognised (see paragraphs 28 and 43).

77. When assets are grouped for recoverability assessments, it is important to include in the cash-generating unit all assets that generate or are used to generate the relevant stream of cash inflows. Otherwise, the cash-generating unit may appear to be fully recoverable when in fact an impairment loss has occurred. In some cases, although some assets contribute to the estimated future cash flows of a cash-generating unit, they cannot be allocated to the cash-generating unit on a reasonable and consistent basis. This might be the case for goodwill or corporate assets such as head office assets. Paragraphs 80-103 explain how to deal with these assets in testing a cash-generating unit for impairment.
78. It may be necessary to consider some recognised liabilities to determine the recoverable amount of a cash-generating unit. This may occur if the disposal of a cash-generating unit would require the buyer to assume the liability. In this case, the fair value less costs to sell (or the estimated cash flow from ultimate disposal) of the cash-generating unit is the estimated selling price for the assets of the cash-generating unit and the liability together, less the costs of disposal. To perform a meaningful comparison between the carrying amount of the cash-generating unit and its recoverable amount, the carrying amount of the liability is deducted in determining both the cash-generating unit's value in use and its carrying amount.

Example

A company operates a mine in a country where legislation requires that the owner must restore the site on completion of its mining operations. The cost of restoration includes the replacement of the overburden, which must be removed before mining operations commence. A provision for the costs to replace the overburden was recognised as soon as the overburden was removed. The amount provided was recognised as part of the cost of the mine and is being depreciated over the mine's useful life. The carrying amount of the provision for restoration costs is CU500,* which is equal to the present value of the restoration costs.

The entity is testing the mine for impairment. The cash-generating unit for the mine is the mine as a whole. The entity has received various offers to buy the mine at a price of around CU800. This price reflects the fact that the buyer will assume the obligation to restore the overburden. Disposal costs for the mine are negligible. The value in use of the mine is approximately CU1,200, excluding restoration costs. The carrying amount of the mine is CU1,000.

The cash-generating unit's fair value less costs to sell is CU800. This amount considers restoration costs that have already been provided for. As a consequence, the value in use for the cash-generating unit is determined after consideration of the restoration costs and is estimated to be CU700 (CU1,200 less CU500). The carrying amount of the cash-generating unit is CU500, which is the carrying amount of the mine (CU1,000) less the carrying amount of the provision for restoration costs (CU500). Therefore, the recoverable amount of the cash-generating unit exceeds its carrying amount.

79. For practical reasons, the recoverable amount of a cash-generating unit is sometimes determined after consideration of assets that are not part of the cash-generating unit (for example, receivables or other financial assets) or liabilities that have been recognised (for example, payables, pensions and other provisions). In such cases, the carrying amount of the cash-generating unit is increased by the carrying amount of those assets and decreased by the carrying amount of those liabilities.

Goodwill**Allocating Goodwill to Cash-generating Units**

80. *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, or groups of cash-generating units, that are expected to benefit from the synergies of the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units or groups of units. Each unit or group of units to which the goodwill is so allocated shall:*

* In this Standard, monetary amounts are denominated in 'currency units' (CU).

- (a) *represent the lowest level within the entity at which the goodwill is monitored for internal management purposes; and*
- (b) *not be larger than a segment based on either the entity's primary or the entity's secondary reporting format determined in accordance with IAS 14 Segment Reporting.*

81. Goodwill acquired in a business combination represents a payment made by an acquirer in anticipation of future economic benefits from assets that are not capable of being individually identified and separately recognised. Goodwill does not generate cash flows independently of other assets or groups of assets, and often contributes to the cash flows of multiple cash-generating units. Goodwill sometimes cannot be allocated on a non-arbitrary basis to individual cash-generating units, but only to groups of cash-generating units. As a result, the lowest level within the entity at which the goodwill is monitored for internal management purposes sometimes comprises a number of cash-generating units to which the goodwill relates, but to which it cannot be allocated. References in paragraphs 83-99 to a cash-generating unit to which goodwill is allocated should be read as references also to a group of cash-generating units to which goodwill is allocated.
82. Applying the requirements in paragraph 80 results in goodwill being tested for impairment at a level that reflects the way an entity manages its operations and with which the goodwill would naturally be associated. Therefore, the development of additional reporting systems is typically not necessary.
83. A cash-generating unit to which goodwill is allocated for the purpose of impairment testing may not coincide with the level at which goodwill is allocated in accordance with IAS 21 *The Effects of Changes in Foreign Exchange Rates* for the purpose of measuring foreign currency gains and losses. For example, if an entity is required by IAS 21 to allocate goodwill to relatively low levels for the purpose of measuring foreign currency gains and losses, it is not required to test the goodwill for impairment at that same level unless it also monitors the goodwill at that level for internal management purposes.
- 84. *If the initial allocation of goodwill acquired in a business combination cannot be completed before the end of the annual period in which the business combination is effected, that initial allocation shall be completed before the end of the first annual period beginning after the acquisition date.***
85. In accordance with IFRS 3 *Business Combinations*, if the initial accounting for a business combination can be determined only provisionally by the end of the period in which the combination is effected, the acquirer:
- (a) accounts for the combination using those provisional values; and
 - (b) recognises any adjustments to those provisional values as a result of completing the initial accounting within twelve months of the acquisition date.

In such circumstances, it might also not be possible to complete the initial allocation of the goodwill acquired in the combination before the end of the annual period in which the combination is effected. When this is the case, the entity discloses the information required by paragraph 133.

- 86. *If goodwill has been allocated to a cash-generating unit and the entity disposes of an operation within that unit, the goodwill associated with the operation disposed of shall be:***
- (a) *included in the carrying amount of the operation when determining the gain or loss on disposal; and***
 - (b) *measured on the basis of the relative values of the operation disposed of and the portion of the cash-generating unit retained, unless the entity can demonstrate that some other method better reflects the goodwill associated with the operation disposed of.***

Example

An entity sells for CU100 an operation that was part of a cash-generating unit to which goodwill has been allocated. The goodwill allocated to the unit cannot be identified or associated with an asset group at a level lower than that unit, except arbitrarily. The recoverable amount of the portion of the cash-generating unit retained is CU300.

Because the goodwill allocated to the cash-generating unit cannot be non-arbitrarily identified or associated with an asset group at a level lower than that unit, the goodwill associated with the operation disposed of is measured on the basis of the relative values of the operation disposed of and the portion of the unit retained. Therefore, 25 per cent of the goodwill allocated to the cash-generating unit is included in the carrying amount of the operation that is sold.

- 87. *If an entity reorganises its reporting structure in a way that changes the composition of one or more cash-generating units to which goodwill has been allocated, the goodwill shall be reallocated to the units affected. This reallocation shall be performed using a relative value approach similar to that used when an entity disposes of an operation within a cash-generating unit, unless the entity can demonstrate that some other method better reflects the goodwill associated with the reorganised units.***

Example

Goodwill had previously been allocated to cash-generating unit A. The goodwill allocated to A cannot be identified or associated with an asset group at a level lower than A, except arbitrarily. A is to be divided and integrated into three other cash-generating units, B, C and D.

Because the goodwill allocated to A cannot be non-arbitrarily identified or associated with an asset group at a level lower than A, it is reallocated to units B, C and D on the basis of the relative values of the three portions of A before those portions are integrated with B, C and D.

Testing Cash-generating Units with Goodwill for Impairment

88. *When, as described in paragraph 81, goodwill relates to a cash-generating unit but has not been allocated to that unit, the unit shall be tested for impairment, whenever there is an indication that the unit may be impaired, by comparing the unit's carrying amount, excluding any goodwill, with its recoverable amount. Any impairment loss shall be recognised in accordance with paragraph 104.*
89. If a cash-generating unit described in paragraph 88 includes in its carrying amount an intangible asset that has an indefinite useful life or is not yet available for use and that asset can be tested for impairment only as part of the cash-generating unit, paragraph 10 requires the unit also to be tested for impairment annually.
90. *A cash-generating unit to which goodwill has been allocated shall be tested for impairment annually, and whenever there is an indication that the unit may be impaired, by comparing the carrying amount of the unit, including the goodwill, with the recoverable amount of the unit. If the recoverable amount of the unit exceeds the carrying amount of the unit, the unit and the goodwill allocated to that unit shall be regarded as not impaired. If the carrying amount of the unit exceeds the recoverable amount of the unit, the entity shall recognise the impairment loss in accordance with paragraph 104.*

Minority Interest

91. In accordance with IFRS 3, goodwill recognised in a business combination represents the goodwill acquired by a parent based on the parent's ownership interest, rather than the amount of goodwill controlled by the parent as a result of the business combination. Therefore, goodwill attributable to a minority interest is not recognised in the parent's consolidated financial statements. Accordingly, if there is a minority interest in a cash-generating unit to which goodwill has been allocated, the carrying amount of that unit comprises:
- (a) both the parent's interest and the minority interest in the identifiable net assets of the unit; and
 - (b) the parent's interest in goodwill.
- However, part of the recoverable amount of the cash-generating unit determined in accordance with this Standard is attributable to the minority interest in goodwill.
92. Consequently, 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. This is accomplished by grossing up the carrying amount of goodwill allocated to the unit to include the goodwill attributable to the minority 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. If it is, the entity allocates the impairment loss in accordance with paragraph 104 first to reduce the carrying amount of goodwill allocated to the unit.

93. However, because goodwill is recognised only to the extent of the parent's ownership interest, any impairment loss relating to the goodwill is apportioned between that attributable to the parent and that attributable to the minority interest, with only the former being recognised as a goodwill impairment loss.
94. If the total impairment loss relating to goodwill is less than the amount by which the notionally adjusted carrying amount of the cash-generating unit exceeds its recoverable amount, paragraph 104 requires the remaining excess to be allocated to the other assets of the unit pro rata on the basis of the carrying amount of each asset in the unit.
95. Illustrative Example 7 illustrates the impairment testing of a non-wholly-owned cash-generating unit with goodwill.

Timing of Impairment Tests

96. *The annual impairment test for a cash-generating unit to which goodwill has been allocated may be performed at any time during an annual period, provided the test is performed at the same time every year. Different cash-generating units may be tested for impairment at different times. However, if some or all of the goodwill allocated to a cash-generating unit was acquired in a business combination during the current annual period, that unit shall be tested for impairment before the end of the current annual period.*
97. *If the assets constituting the cash-generating unit to which goodwill has been allocated are tested for impairment at the same time as the unit containing the goodwill, they shall be tested for impairment before the unit containing the goodwill. Similarly, if the cash-generating units constituting a group of cash-generating units to which goodwill has been allocated are tested for impairment at the same time as the group of units containing the goodwill, the individual units shall be tested for impairment before the group of units containing the goodwill.*
98. At the time of impairment testing a cash-generating unit to which goodwill has been allocated, there may be an indication of an impairment of an asset within the unit containing the goodwill. In such circumstances, the entity tests the asset for impairment first, and recognises any impairment loss for that asset before testing for impairment the cash-generating unit containing the goodwill. Similarly, there may be an indication of an impairment of a cash-generating unit within a group of units containing the goodwill. In such circumstances, the entity tests the cash-generating unit for impairment first, and recognises any impairment loss for that unit, before testing for impairment the group of units to which the goodwill is allocated.
99. *The most recent detailed calculation made in a preceding period of the recoverable amount of a cash-generating unit to which goodwill has been allocated may be used in the impairment test of that unit in the current period provided all of the following criteria are met:*
- (a) *the assets and liabilities making up the unit have not changed significantly since the most recent recoverable amount calculation;*

- (b) *the most recent recoverable amount calculation resulted in an amount that exceeded the carrying amount of the unit by a substantial margin; and*
- (c) *based on an analysis of events that have occurred and circumstances that have changed since the most recent recoverable amount calculation, the likelihood that a current recoverable amount determination would be less than the current carrying amount of the unit is remote.*

Corporate Assets

100. Corporate assets include group or divisional assets such as the building of a headquarters or a division of the entity, EDP equipment or a research centre. The structure of an entity determines whether an asset meets this Standard's definition of corporate assets for a particular cash-generating unit. The distinctive characteristics of corporate assets are that they do not generate cash inflows independently of other assets or groups of assets and their carrying amount cannot be fully attributed to the cash-generating unit under review.
101. Because corporate assets do not generate separate cash inflows, the recoverable amount of an individual corporate asset cannot be determined unless management has decided to dispose of the asset. As a consequence, if there is an indication that a corporate asset may be impaired, recoverable amount is determined for the cash-generating unit or group of cash-generating units to which the corporate asset belongs, and is compared with the carrying amount of this cash-generating unit or group of cash-generating units. Any impairment loss is recognised in accordance with paragraph 104.
- 102. *In testing a cash-generating unit for impairment, an entity shall identify all the corporate assets that relate to the cash-generating unit under review. If a portion of the carrying amount of a corporate asset:***
- (a) *can be allocated on a reasonable and consistent basis to that unit, the entity shall compare the carrying amount of the unit, including the portion of the carrying amount of the corporate asset allocated to the unit, with its recoverable amount. Any impairment loss shall be recognised in accordance with paragraph 104.*
 - (b) *cannot be allocated on a reasonable and consistent basis to that unit, the entity shall:*
 - (i) *compare the carrying amount of the unit, excluding the corporate asset, with its recoverable amount and recognise any impairment loss in accordance with paragraph 104;*
 - (ii) *identify the smallest group of cash-generating units that includes the cash-generating unit under review and to which a portion of the carrying amount of the corporate asset can be allocated on a reasonable and consistent basis; and*

- (iii) *compare the carrying amount of that group of cash-generating units, including the portion of the carrying amount of the corporate asset allocated to that group of units, with the recoverable amount of the group of units. Any impairment loss shall be recognised in accordance with paragraph 104.*

103. Illustrative Example 8 illustrates the application of these requirements to corporate assets.

Impairment Loss for a Cash-generating Unit

104. *An impairment loss shall be recognised for a cash-generating unit (the smallest group of cash-generating units to which goodwill or a corporate asset has been allocated) if, and only if, the recoverable amount of the unit (group of units) is less than the carrying amount of the unit (group of units). The impairment loss shall be allocated to reduce the carrying amount of the assets of the unit (group of units) in the following order:*

- (a) *first, to reduce the carrying amount of any goodwill allocated to the cash-generating unit (group of units); and*
- (b) *then, to the other assets of the unit (group of units) pro rata on the basis of the carrying amount of each asset in the unit (group of units).*

These reductions in carrying amounts shall be treated as impairment losses on individual assets and recognised in accordance with paragraph 60.

105. *In allocating an impairment loss in accordance with paragraph 104, an entity shall not reduce the carrying amount of an asset below the highest of:*

- (a) *its fair value less costs to sell (if determinable);*
- (b) *its value in use (if determinable); and*
- (c) *zero.*

The amount of the impairment loss that would otherwise have been allocated to the asset shall be allocated pro rata to the other assets of the unit (group of units).

106. If it is not practicable to estimate the recoverable amount of each individual asset of a cash-generating unit, this Standard requires an arbitrary allocation of an impairment loss between the assets of that unit, other than goodwill, because all assets of a cash-generating unit work together.

107. If the recoverable amount of an individual asset cannot be determined (see paragraph 67):

- (a) an impairment loss is recognised for the asset if its carrying amount is greater than the higher of its fair value less costs to sell and the results of the allocation procedures described in paragraphs 104 and 105; and
- (b) no impairment loss is recognised for the asset if the related cash-generating unit is not impaired. This applies even if the asset's fair value less costs to sell is less than its carrying amount.

Example

A machine has suffered physical damage but is still working, although not as well as before it was damaged. The machine's fair value less costs to sell is less than its carrying amount. The machine does not generate independent cash inflows. The smallest identifiable group of assets that includes the machine and generates cash inflows that are largely independent of the cash inflows from other assets is the production line to which the machine belongs. The recoverable amount of the production line shows that the production line taken as a whole is not impaired.

Assumption 1: budgets/forecasts approved by management reflect no commitment of management to replace the machine.

The recoverable amount of the machine alone cannot be estimated because the machine's value in use:

- (a) *may differ from its fair value less costs to sell; and*
- (b) *can be determined only for the cash-generating unit to which the machine belongs (the production line).*

The production line is not impaired. Therefore, no impairment loss is recognised for the machine. Nevertheless, the entity may need to reassess the depreciation period or the depreciation method for the machine. Perhaps a shorter depreciation period or a faster depreciation method is required to reflect the expected remaining useful life of the machine or the pattern in which economic benefits are expected to be consumed by the entity.

Assumption 2: budgets/forecasts approved by management reflect a commitment of management to replace the machine and sell it in the near future. Cash flows from continuing use of the machine until its disposal are estimated to be negligible.

The machine's value in use can be estimated to be close to its fair value less costs to sell. Therefore, the recoverable amount of the machine can be determined and no consideration is given to the cash-generating unit to which the machine belongs (ie the production line). Because the machine's fair value less costs to sell is less than its carrying amount, an impairment loss is recognised for the machine.

- 108.** *After the requirements in paragraphs 104 and 105 have been applied, a liability shall be recognised for any remaining amount of an impairment loss for a cash-generating unit if, and only if, that is required by another Standard.*

Reversing an Impairment Loss

109. Paragraphs 110-116 set out the requirements for reversing an impairment loss recognised for an asset or a cash-generating unit in prior periods. These requirements use the term 'an asset' but apply equally to an individual asset or a cash-generating unit. Additional requirements for an individual asset are set out in paragraphs 117-121, for a cash-generating unit in paragraphs 122 and 123 and for goodwill in paragraphs 124 and 125.

110. *An entity shall assess at each reporting date whether there is any indication that an impairment loss recognised in prior periods for an asset other than goodwill may no longer exist or may have decreased. If any such indication exists, the entity shall estimate the recoverable amount of that asset.*

111. *In assessing whether there is any indication that an impairment loss recognised in prior periods for an asset other than goodwill may no longer exist or may have decreased, an entity shall consider, as a minimum, the following indications:*

External sources of information

- (a) the asset's market value has increased significantly during the period.*
- (b) significant changes with a favourable 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 the asset is dedicated.*
- (c) market interest rates or other market rates of return on investments have decreased during the period, and those decreases are likely to affect the discount rate used in calculating the asset's value in use and increase the asset's recoverable amount materially.*

Internal sources of information

- (d) significant changes with a favourable 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, the asset is used or is expected to be used. These changes include costs incurred during the period to improve or enhance the asset's performance or restructure the operation to which the asset belongs.*
- (e) evidence is available from internal reporting that indicates that the economic performance of the asset is, or will be, better than expected.*

112. Indications of a potential decrease in an impairment loss in paragraph 111 mainly mirror the indications of a potential impairment loss in paragraph 12.

113. If there is an indication that an impairment loss recognised for an asset other than goodwill may no longer exist or may have decreased, this may indicate that the remaining useful life, the depreciation (amortisation) method or the residual value may need to be reviewed and adjusted in accordance with the Standard applicable to the asset, even if no impairment loss is reversed for the asset.

114. *An impairment loss recognised in prior periods for an asset other than goodwill shall be reversed if, and only if, there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognised. If this is the case, the carrying amount of the asset shall, except as described in paragraph 117, be increased to its recoverable amount. That increase is a reversal of an impairment loss.*

115. A reversal of an impairment loss reflects an increase in the estimated service potential of an asset, either from use or from sale, since the date when an entity last recognised an impairment loss for that asset. Paragraph 130 requires an entity to identify the change in estimates that causes the increase in estimated service potential. Examples of changes in estimates include:
- (a) a change in the basis for recoverable amount (ie whether recoverable amount is based on fair value less costs to sell or value in use);
 - (b) if recoverable amount was based on value in use, a change in the amount or timing of estimated future cash flows or in the discount rate; or
 - (c) if recoverable amount was based on fair value less costs to sell, a change in estimate of the components of fair value less costs to sell.
116. An asset's value in use may become greater than the asset's carrying amount simply because the present value of future cash inflows increases as they become closer. However, the service potential of the asset has not increased. Therefore, an impairment loss is not reversed just because of the passage of time (sometimes called the 'unwinding' of the discount), even if the recoverable amount of the asset becomes higher than its carrying amount.

Reversing an Impairment Loss for an Individual Asset

- 117. *The increased carrying amount of an asset other than goodwill attributable to a reversal of an impairment loss shall not exceed 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.***
118. Any increase in the carrying amount of an asset other than goodwill 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 is a revaluation. In accounting for such a revaluation, an entity applies the Standard applicable to the asset.
- 119. *A reversal of an impairment loss for an asset other than goodwill shall be recognised immediately in profit or loss, unless the asset is carried at revalued amount in accordance with another Standard (for example, the revaluation model in IAS 16 Property, Plant and Equipment). Any reversal of an impairment loss of a revalued asset shall be treated as a revaluation increase in accordance with that other Standard.***
120. A reversal of an impairment loss on a revalued asset is credited directly to equity under the heading revaluation surplus. However, to the extent that an impairment loss on the same revalued asset was previously recognised in profit or loss, a reversal of that impairment loss is also recognised in profit or loss.
- 121. *After a reversal of an impairment loss is recognised, the depreciation (amortisation) charge for the asset shall be adjusted 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.***

Reversing an Impairment Loss for a Cash-generating Unit

122. *A reversal of an impairment loss for a cash-generating unit shall be allocated to the assets of the unit, except for goodwill, pro rata with the carrying amounts of those assets. These increases in carrying amounts shall be treated as reversals of impairment losses for individual assets and recognised in accordance with paragraph 119.*

123. *In allocating a reversal of an impairment loss for a cash-generating unit in accordance with paragraph 122, the carrying amount of an asset shall not be increased above the lower of:*

- (a) its recoverable amount (if determinable); and*
- (b) 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.*

The amount of the reversal of the impairment loss that would otherwise have been allocated to the asset shall be allocated pro rata to the other assets of the unit, except for goodwill.

Reversing an Impairment Loss for Goodwill

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

125. IAS 38 *Intangible Assets* prohibits the recognition of internally generated goodwill. Any increase in the recoverable amount of goodwill in the periods following the recognition of an impairment loss for that goodwill is likely to be an increase in internally generated goodwill, rather than a reversal of the impairment loss recognised for the acquired goodwill.

Disclosure

126. *An entity shall disclose the following for each class of assets:*

- (a) the amount of impairment losses recognised in profit or loss during the period and the line item(s) of the income statement in which those impairment losses are included.*
- (b) the amount of reversals of impairment losses recognised in profit or loss during the period and the line item(s) of the income statement in which those impairment losses are reversed.*
- (c) the amount of impairment losses on revalued assets recognised directly in equity during the period.*
- (d) the amount of reversals of impairment losses on revalued assets recognised directly in equity during the period.*

127. A class of assets is a grouping of assets of similar nature and use in an entity's operations.

128. The information required in paragraph 126 may be presented with other information disclosed for the class of assets. For example, this information may be included in a reconciliation of the carrying amount of property, plant and equipment, at the beginning and end of the period, as required by IAS 16 *Property, Plant and Equipment*.
129. **An entity that reports segment information in accordance with IAS 14 Segment Reporting shall disclose the following for each reportable segment based on an entity's primary reporting format:**
- (a) *the amount of impairment losses recognised in profit or loss and directly in equity during the period.*
 - (b) *the amount of reversals of impairment losses recognised in profit or loss and directly in equity during the period.*
130. **An entity shall disclose the following for each material impairment loss recognised or reversed during the period for an individual asset, including goodwill, or a cash-generating unit:**
- (a) *the events and circumstances that led to the recognition or reversal of the impairment loss.*
 - (b) *the amount of the impairment loss recognised or reversed.*
 - (c) *for an individual asset:*
 - (i) *the nature of the asset; and*
 - (ii) *if the entity reports segment information in accordance with IAS 14, the reportable segment to which the asset belongs, based on the entity's primary reporting format.*
 - (d) *for a cash-generating unit:*
 - (i) *a description of the cash-generating unit (such as whether it is a product line, a plant, a business operation, a geographical area, or a reportable segment as defined in IAS 14);*
 - (ii) *the amount of the impairment loss recognised or reversed by class of assets and, if the entity reports segment information in accordance with IAS 14, by reportable segment based on the entity's primary reporting format; and*
 - (iii) *if the aggregation of assets for identifying the cash-generating unit has changed since the previous estimate of the cash-generating unit's recoverable amount (if any), a description of the current and former way of aggregating assets and the reasons for changing the way the cash-generating unit is identified.*
 - (e) *whether the recoverable amount of the asset (cash-generating unit) is its fair value less costs to sell or its value in use.*
 - (f) *if recoverable amount is fair value less costs to sell, the basis used to determine fair value less costs to sell (such as whether fair value was determined by reference to an active market).*

- (g) *if recoverable amount is value in use, the discount rate(s) used in the current estimate and previous estimate (if any) of value in use.*
131. *An entity shall disclose the following information for the aggregate impairment losses and the aggregate reversals of impairment losses recognised during the period for which no information is disclosed in accordance with paragraph 130:*
- (a) *the main classes of assets affected by impairment losses and the main classes of assets affected by reversals of impairment losses.*
- (b) *the main events and circumstances that led to the recognition of these impairment losses and reversals of impairment losses.*
132. An entity is encouraged to disclose assumptions used to determine the recoverable amount of assets (cash-generating units) during the period. However, paragraph 134 requires an entity to disclose information about the estimates used to measure the recoverable amount of a cash-generating unit when goodwill or an intangible asset with an indefinite useful life is included in the carrying amount of that unit.
133. *If, in accordance with paragraph 84, any portion of the goodwill acquired in a business combination during the period has not been allocated to a cash-generating unit (group of units) at the reporting date, the amount of the unallocated goodwill shall be disclosed together with the reasons why that amount remains unallocated.*

Estimates used to Measure Recoverable Amounts of Cash-generating Units Containing Goodwill or Intangible Assets with Indefinite Useful Lives

134. *An entity shall disclose the information required by (a)-(f) for each cash-generating unit (group of units) for which the carrying amount of goodwill or intangible assets with indefinite useful lives allocated to that unit (group of units) is significant in comparison with the entity's total carrying amount of goodwill or intangible assets with indefinite useful lives:*
- (a) *the carrying amount of goodwill allocated to the unit (group of units).*
- (b) *the carrying amount of intangible assets with indefinite useful lives allocated to the unit (group of units).*
- (c) *the basis on which the unit's (group of units') recoverable amount has been determined (ie value in use or fair value less costs to sell).*
- (d) *if the unit's (group of units') recoverable amount is based on value in use:*
- (i) *a description of each key assumption on which management has based its cash flow projections for the period covered by the most recent budgets/forecasts. Key assumptions are those to which the unit's (group of units') recoverable amount is most sensitive.*

- (ii) *a description of management's approach to determining the value(s) assigned to each key assumption, whether those value(s) reflect past experience or, if appropriate, are consistent with external sources of information, and, if not, how and why they differ from past experience or external sources of information.*
 - (iii) *the period over which management has projected cash flows based on financial budgets/forecasts approved by management and, when a period greater than five years is used for a cash-generating unit (group of units), an explanation of why that longer period is justified.*
 - (iv) *the growth rate used to extrapolate cash flow projections beyond the period covered by the most recent budgets/forecasts, and the justification for using any growth rate that exceeds the long-term average growth rate for the products, industries, or country or countries in which the entity operates, or for the market to which the unit (group of units) is dedicated.*
 - (v) *the discount rate(s) applied to the cash flow projections.*
- (e) *if the unit's (group of units') recoverable amount is based on fair value less costs to sell, the methodology used to determine fair value less costs to sell. If fair value less costs to sell is not determined using an observable market price for the unit (group of units), the following information shall also be disclosed:*
 - (i) *a description of each key assumption on which management has based its determination of fair value less costs to sell. Key assumptions are those to which the unit's (group of units') recoverable amount is most sensitive.*
 - (ii) *a description of management's approach to determining the value(s) assigned to each key assumption, whether those value(s) reflect past experience or, if appropriate, are consistent with external sources of information, and, if not, how and why they differ from past experience or external sources of information.*
- (f) *if a reasonably possible change in a key assumption on which management has based its determination of the unit's (group of units') recoverable amount would cause the unit's (group of units') carrying amount to exceed its recoverable amount:*
 - (i) *the amount by which the unit's (group of units') recoverable amount exceeds its carrying amount.*
 - (ii) *the value assigned to the key assumption.*
 - (iii) *the amount by which the value assigned to the key assumption must change, after incorporating any consequential effects of that change on the other variables used to measure recoverable amount, in order for the unit's (group of units') recoverable amount to be equal to its carrying amount.*

135. *If some or all of the carrying amount of goodwill or intangible assets with indefinite useful lives is allocated across multiple cash-generating units (groups of units), and the amount so allocated to each unit (group of units) is not significant in comparison with the entity's total carrying amount of goodwill or intangible assets with indefinite useful lives, that fact shall be disclosed, together with the aggregate carrying amount of goodwill or intangible assets with indefinite useful lives allocated to those units (groups of units). In addition, if the recoverable amounts of any of those units (groups of units) are based on the same key assumption(s) and the aggregate carrying amount of goodwill or intangible assets with indefinite useful lives allocated to them is significant in comparison with the entity's total carrying amount of goodwill or intangible assets with indefinite useful lives, an entity shall disclose that fact, together with:*
- (a) the aggregate carrying amount of goodwill allocated to those units (groups of units).*
 - (b) the aggregate carrying amount of intangible assets with indefinite useful lives allocated to those units (groups of units).*
 - (c) a description of the key assumption(s).*
 - (d) a description of management's approach to determining the value(s) assigned to the key assumption(s), whether those value(s) reflect past experience or, if appropriate, are consistent with external sources of information, and, if not, how and why they differ from past experience or external sources of information.*
 - (e) if a reasonably possible change in the key assumption(s) would cause the aggregate of the units' (groups of units') carrying amounts to exceed the aggregate of their recoverable amounts:*
 - (i) the amount by which the aggregate of the units' (groups of units') recoverable amounts exceeds the aggregate of their carrying amounts.*
 - (ii) the value(s) assigned to the key assumption(s).*
 - (iii) the amount by which the value(s) assigned to the key assumption(s) must change, after incorporating any consequential effects of the change on the other variables used to measure recoverable amount, in order for the aggregate of the units' (groups of units') recoverable amounts to be equal to the aggregate of their carrying amounts.*
136. The most recent detailed calculation made in a preceding period of the recoverable amount of a cash-generating unit (group of units) may, in accordance with paragraph 24 or 99, be carried forward and used in the impairment test for that unit (group of units) in the current period provided specified criteria are met. When this is the case, the information for that unit (group of units) that is incorporated into the disclosures required by paragraphs 134 and 135 relate to the carried forward calculation of recoverable amount.
137. Illustrative Example 9 illustrates the disclosures required by paragraphs 134 and 135.

Transitional Provisions and Effective Date

- 138.** *If an entity elects in accordance with paragraph 85 of IFRS 3 Business Combinations to apply IFRS 3 from any date before the effective dates set out in paragraphs 78-84 of IFRS 3, it also shall apply this Standard prospectively from that same date.*
- 139.** *Otherwise, an entity shall apply this Standard:*
- (a) to goodwill and intangible assets acquired in business combinations for which the agreement date is on or after 31 March 2004; and*
 - (b) to all other assets prospectively from the beginning of the first annual period beginning on or after 31 March 2004.*
- 140.** *Entities to which paragraph 139 applies are encouraged to apply the requirements of this Standard before the effective dates specified in paragraph 139. However, if an entity applies this Standard before those effective dates, it also shall apply IFRS 3 and IAS 38 Intangible Assets (as revised in 2004) at the same time.*

Withdrawal of IAS 36 (issued 1998)

- 141.** This Standard supersedes IAS 36 *Impairment of Assets* (issued in 1998).

Appendix A

Using Present Value Techniques to Measure Value in Use

This appendix is an integral part of the Standard. It provides guidance on the use of present value techniques in measuring value in use. Although the guidance uses the term 'asset', it equally applies to a group of assets forming a cash-generating unit.

The Components of a Present Value Measurement

- A1. The following elements together capture the economic differences between assets:
- (a) an estimate of the future cash flow, or in more complex cases, series of future cash flows the entity expects to derive from the asset;
 - (b) expectations about possible variations in the amount or timing of those cash flows;
 - (c) the time value of money, represented by the current market risk-free rate of interest;
 - (d) the price for bearing the uncertainty inherent in the asset; and
 - (e) other, sometimes unidentifiable, factors (such as illiquidity) that market participants would reflect in pricing the future cash flows the entity expects to derive from the asset.
- A2. This appendix contrasts two approaches to computing present value, either of which may be used to estimate the value in use of an asset, depending on the circumstances. Under the 'traditional' approach, adjustments for factors (b)-(e) described in paragraph A1 are embedded in the discount rate. Under the 'expected cash flow' approach, factors (b), (d) and (e) cause adjustments in arriving at risk-adjusted expected cash flows. Whichever approach an entity adopts to reflect expectations about possible variations in the amount or timing of future cash flows, the result should be to reflect the expected present value of the future cash flows, ie the weighted average of all possible outcomes.

General Principles

- A3. The techniques used to estimate future cash flows and interest rates will vary from one situation to another depending on the circumstances surrounding the asset in question. However, the following general principles govern any application of present value techniques in measuring assets:
- (a) interest rates used to discount cash flows should reflect assumptions that are consistent with those inherent in the estimated cash flows. Otherwise, the effect of some assumptions will be double-counted or ignored. For example, a discount rate of 12 per cent might be applied to contractual cash flows of a loan receivable. That rate reflects expectations about future defaults from loans

with particular characteristics. That same 12 per cent rate should not be used to discount expected cash flows because those cash flows already reflect assumptions about future defaults.

- (b) estimated cash flows and discount rates should be free from both bias and factors unrelated to the asset in question. For example, deliberately understating estimated net cash flows to enhance the apparent future profitability of an asset introduces a bias into the measurement.
- (c) estimated cash flows or discount rates should reflect the range of possible outcomes rather than a single most likely, minimum or maximum possible amount.

Traditional and Expected Cash Flow Approaches to Present Value

Traditional Approach

- A4. Accounting applications of present value have traditionally used a single set of estimated cash flows and a single discount rate, often described as ‘the rate commensurate with the risk’. In effect, the traditional approach assumes that a single discount rate convention can incorporate all the expectations about the future cash flows and the appropriate risk premium. Therefore, the traditional approach places most of the emphasis on selection of the discount rate.
- A5. In some circumstances, such as those in which comparable assets can be observed in the marketplace, a traditional approach is relatively easy to apply. For assets with contractual cash flows, it is consistent with the manner in which marketplace participants describe assets, as in ‘a 12 per cent bond’.
- A6. However, the traditional approach may not appropriately address some complex measurement problems, such as the measurement of non-financial assets for which no market for the item or a comparable item exists. A proper search for ‘the rate commensurate with the risk’ requires analysis of at least two items—an asset that exists in the marketplace and has an observed interest rate and the asset being measured. The appropriate discount rate for the cash flows being measured must be inferred from the observable rate of interest in that other asset. To draw that inference, the characteristics of the other asset’s cash flows must be similar to those of the asset being measured. Therefore, the measurer must do the following:
 - (a) identify the set of cash flows that will be discounted;
 - (b) identify another asset in the marketplace that appears to have similar cash flow characteristics;
 - (c) compare the cash flow sets from the two items to ensure that they are similar (for example, are both sets contractual cash flows, or is one contractual and the other an estimated cash flow?);
 - (d) evaluate whether there is an element in one item that is not present in the other (for example, is one less liquid than the other?); and
 - (e) evaluate whether both sets of cash flows are likely to behave (ie vary) in a similar fashion in changing economic conditions.

Expected Cash Flow Approach

- A7. The expected cash flow approach is, in some situations, a more effective measurement tool than the traditional approach. In developing a measurement, the expected cash flow approach uses all expectations about possible cash flows instead of the single most likely cash flow. For example, a cash flow might be CU100, CU200 or CU300 with probabilities of 10 per cent, 60 per cent and 30 per cent, respectively. The expected cash flow is CU220. The expected cash flow approach thus differs from the traditional approach by focusing on direct analysis of the cash flows in question and on more explicit statements of the assumptions used in the measurement.
- A8. The expected cash flow approach also allows use of present value techniques when the timing of cash flows is uncertain. For example, a cash flow of CU1,000 may be received in one year, two years or three years with probabilities of 10 per cent, 60 per cent and 30 per cent, respectively. The example below shows the computation of expected present value in that situation.

Present value of CU1,000 in 1 year at 5%	CU952.38	
Probability	10.00%	CU95.24
		<hr/>
Present value of CU1,000 in 2 years at 5.25%	CU902.73	
Probability	60.00%	CU541.64
		<hr/>
Present value of CU1,000 in 3 years at 5.50%	CU851.61	
Probability	30.00%	CU255.48
		<hr/>
Expected present value		<u>CU892.36</u>

- A9. The expected present value of CU892.36 differs from the traditional notion of a best estimate of CU902.73 (the 60 per cent probability). A traditional present value computation applied to this example requires a decision about which of the possible timings of cash flows to use and, accordingly, would not reflect the probabilities of other timings. This is because the discount rate in a traditional present value computation cannot reflect uncertainties in timing.
- A10. The use of probabilities is an essential element of the expected cash flow approach. Some question whether assigning probabilities to highly subjective estimates suggests greater precision than, in fact, exists. However, the proper application of the traditional approach (as described in paragraph A6) requires the same estimates and subjectivity without providing the computational transparency of the expected cash flow approach.

A11. Many estimates developed in current practice already incorporate the elements of expected cash flows informally. In addition, accountants often face the need to measure an asset using limited information about the probabilities of possible cash flows. For example, an accountant might be confronted with the following situations:

- (a) the estimated amount falls somewhere between CU50 and CU250, but no amount in the range is more likely than any other amount. Based on that limited information, the estimated expected cash flow is CU150 $[(50 + 250)/2]$.
- (b) the estimated amount falls somewhere between CU50 and CU250, and the most likely amount is CU100. However, the probabilities attached to each amount are unknown. Based on that limited information, the estimated expected cash flow is CU133.33 $[(50 + 100 + 250)/3]$.
- (c) the estimated amount will be CU50 (10 per cent probability), CU250 (30 per cent probability), or CU100 (60 per cent probability). Based on that limited information, the estimated expected cash flow is CU140 $[(50 \times 0.10) + (250 \times 0.30) + (100 \times 0.60)]$.

In each case, the estimated expected cash flow is likely to provide a better estimate of value in use than the minimum, most likely or maximum amount taken alone.

A12. The application of an expected cash flow approach is subject to a cost-benefit constraint. In some cases, an entity may have access to extensive data and may be able to develop many cash flow scenarios. In other cases, an entity may not be able to develop more than general statements about the variability of cash flows without incurring substantial cost. The entity needs to balance the cost of obtaining additional information against the additional reliability that information will bring to the measurement.

A13. Some maintain that expected cash flow techniques are inappropriate for measuring a single item or an item with a limited number of possible outcomes. They offer an example of an asset with two possible outcomes: a 90 per cent probability that the cash flow will be CU10 and a 10 per cent probability that the cash flow will be CU1,000. They observe that the expected cash flow in that example is CU109 and criticise that result as not representing either of the amounts that may ultimately be paid.

A14. Assertions like the one just outlined reflect underlying disagreement with the measurement objective. If the objective is accumulation of costs to be incurred, expected cash flows may not produce a representationally faithful estimate of the expected cost. However, this Standard is concerned with measuring the recoverable amount of an asset. The recoverable amount of the asset in this example is not likely to be CU10, even though that is the most likely cash flow. This is because a measurement of CU10 does not incorporate the uncertainty of the cash flow in the measurement of the asset. Instead, the uncertain cash flow is presented as if it were a certain cash flow. No rational entity would sell an asset with these characteristics for CU10.

Discount Rate

- A15. Whichever approach an entity adopts for measuring the value in use of an asset, interest rates used to discount cash flows should not reflect risks for which the estimated cash flows have been adjusted. Otherwise, the effect of some assumptions will be double-counted.
- A16. When an asset-specific rate is not directly available from the market, an entity uses surrogates to estimate the discount rate. The purpose is to estimate, as far as possible, a market assessment of:
- (a) the time value of money for the periods until the end of the asset's useful life; and
 - (b) factors (b), (d) and (e) described in paragraph A1, to the extent those factors have not caused adjustments in arriving at estimated cash flows.
- A17. As a starting point in making such an estimate, the entity might take into account the following rates:
- (a) the entity's weighted average cost of capital determined using techniques such as the Capital Asset Pricing Model;
 - (b) the entity's incremental borrowing rate; and
 - (c) other market borrowing rates.
- A18. However, these rates must be adjusted:
- (a) to reflect the way that the market would assess the specific risks associated with the asset's estimated cash flows; and
 - (b) to exclude risks that are not relevant to the asset's estimated cash flows or for which the estimated cash flows have been adjusted.
- Consideration should be given to risks such as country risk, currency risk and price risk.
- A19. The discount rate is independent of the entity's capital structure and the way the entity financed the purchase of the asset, because the future cash flows expected to arise from an asset do not depend on the way in which the entity financed the purchase of the asset.
- A20. Paragraph 55 requires the discount rate used to be a pre-tax rate. Therefore, when the basis used to estimate the discount rate is post-tax, that basis is adjusted to reflect a pre-tax rate.
- A21. An entity normally uses a single discount rate for the estimate of an asset's value in use. However, an entity uses separate discount rates for different future periods where value in use is sensitive to a difference in risks for different periods or to the term structure of interest rates.

Appendix B

Amendment to IAS 16

The amendment in this appendix shall be applied when an entity applies IAS 16 Property, Plant and Equipment (as revised in 2003). It is superseded when IAS 36 Impairment of Assets (as revised in 2004) becomes effective. This appendix replaces the consequential amendments made by IAS 16 (as revised in 2003) to IAS 36 Impairment of Assets (issued in 1998). IAS 36 (as revised in 2004) incorporates the requirements of the paragraphs in this appendix. Consequently, the amendments from IAS 16 (as revised in 2003) are not necessary once an entity is subject to IAS 36 (as revised in 2004). Accordingly, this appendix is applicable only to entities that elect to apply IAS 16 (as revised in 2003) before its effective date.

* * * * *

The text of this appendix has been omitted from this volume.

Approval of IAS 36 by the Board

International Accounting Standard 36 *Impairment of Assets* was approved for issue by eleven of the fourteen members of the International Accounting Standards Board. Messrs Cope and Leisenring and Professor Whittington dissented. Their dissenting opinions are set out after the Basis for Conclusions on IAS 36.

Sir David Tweedie

Chairman

Thomas E Jones

Vice-Chairman

Mary E Barth

Hans-Georg Bruns

Anthony T Cope

Robert P Garnett

Gilbert Gélard

James J Leisenring

Warren J McGregor

Patricia L O'Malley

Harry K Schmid

John T Smith

Geoffrey Whittington

Tatsumi Yamada

Basis for Conclusions on IAS 36 Impairment of Assets

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* In IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*, issued by the IASB in 2004, the term, 'net selling price' was replaced in IAS 36 by 'fair value less costs to sell'.

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Basis for Conclusions on IAS 36 Impairment of Assets

The International Accounting Standards Board revised IAS 36 as part of its project on business combinations. It was not the Board's intention to reconsider as part of that project all of the requirements in IAS 36.

The previous version of IAS 36 was accompanied by a Basis for Conclusions summarising the former International Accounting Standards Committee's considerations in reaching some of its conclusions in that Standard. For convenience the Board has incorporated into its own Basis for Conclusions material from the previous Basis for Conclusions that discusses (a) matters the Board did not reconsider and (b) the history of the development of a standard on impairment of assets. That material is contained in paragraphs denoted by numbers with the prefix BCZ. Paragraphs describing the Board's considerations in reaching its own conclusions are numbered with the prefix BC.

Introduction

- BC1. This Basis for Conclusions summarises the International Accounting Standards Board's considerations in reaching the conclusions in IAS 36 *Impairment of Assets*. Individual Board members gave greater weight to some factors than to others.
- BC2. The International Accounting Standards Committee (IASC) issued the previous version of IAS 36 in 1998. It has been revised by the Board as part of its project on business combinations. That project has two phases. The first has resulted in the Board issuing simultaneously IFRS 3 *Business Combinations* and revised versions of IAS 36 and IAS 38 *Intangible Assets*. Therefore, the Board's intention in revising IAS 36 as part of the first phase of the project was not to reconsider all of the requirements in IAS 36. The changes to IAS 36 are primarily concerned with the impairment tests for intangible assets with indefinite useful lives (hereafter referred to as 'indefinite-lived intangibles') and goodwill. The Board has not deliberated the other requirements in IAS 36. Those other requirements will be considered by the Board as part of a future project on impairment of assets.
- BC3. The previous version of IAS 36 was accompanied by a Basis for Conclusions summarising IASC's considerations in reaching some of its conclusions in that Standard. For convenience, the Board has incorporated into this Basis for Conclusions material from the previous Basis for Conclusions that discusses matters the Board did not consider. That material is contained in paragraphs denoted by numbers with the prefix BCZ. The views expressed in paragraphs denoted by numbers with the prefix BCZ are those of IASC.

Scope (paragraph 2)

- BCZ4. IAS 2 *Inventories* requires an enterprise to measure the recoverable amount of inventory at its net realisable value. IASC believed that there was no need to revise this requirement because it was well accepted as an appropriate test for recoverability of inventories. No major difference exists between IAS 2 and the requirements included in IAS 36 (see paragraphs BCZ37-BCZ39).
- BCZ5. IAS 11 *Construction Contracts* and IAS 12 *Income Taxes* already deal with the impairment of assets arising from construction contracts and deferred tax assets respectively. Under both IAS 11 and IAS 12, recoverable amount is, in effect, determined on an undiscounted basis. IASC acknowledged that this was inconsistent with the requirements of IAS 36. However, IASC believed that it was not possible to eliminate that inconsistency without fundamental changes to IAS 11 and IAS 12. IASC had no plans to revise IAS 11 or IAS 12.
- BCZ6. IAS 19 *Employee Benefits* contains an upper limit on the amount at which an enterprise should recognise an asset arising from employee benefits. Therefore, IAS 36 does not deal with such assets. The limit in IAS 19 is determined on a discounted basis that is broadly compatible with the requirements of IAS 36. The limit does not override the deferred recognition of certain actuarial losses and certain past service costs.
- BCZ7. IAS 39 *Financial Instruments: Recognition and Measurement* sets out the requirements for impairment of financial assets.
- BCZ8. IAS 36 is applicable to all assets, unless specifically excluded, regardless of their classification as current or non-current. Before IAS 36 was issued, there was no International Accounting Standard on accounting for the impairment of current assets other than inventories.

Measuring recoverable amount (paragraphs 18-57)

- BCZ9. In determining the principles that should govern the measurement of recoverable amount, IASC considered, as a first step, what an enterprise will do if it discovers that an asset is impaired. IASC concluded that, in such cases, an enterprise will either keep the asset or dispose of it. For example, if an enterprise discovers that the service potential of an asset has decreased:
- (a) the enterprise may decide to sell the asset if the net proceeds from the sale would provide a higher return on investment than continuing use in operations; or
 - (b) the enterprise may decide to keep the asset and use it, even if its service potential is lower than originally expected. Some reasons may be that:
 - (i) the asset cannot be sold or disposed of immediately;
 - (ii) the asset can be sold only at a low price;
 - (iii) the asset's service potential can still be recovered but only with additional efforts or expenditure; or

- (iv) the asset could still be profitable although not to the same extent as expected originally.

IASC concluded that the resulting decision from a rational enterprise is, in substance, an investment decision based on estimated net future cash flows expected from the asset.

BCZ10. IASC then considered which of the following four alternatives for determining the recoverable amount of an asset would best reflect this conclusion:

- (a) recoverable amount should be the sum of undiscounted future cash flows.
- (b) recoverable amount should be the asset's fair value: more specifically, recoverable amount should be derived primarily from the asset's market value. If market value cannot be determined, then recoverable amount should be based on the asset's value in use as a proxy for market value.
- (c) recoverable amount should be the asset's value in use.
- (d) recoverable amount should be the higher of the asset's net selling price and value in use.*

Each of these alternatives is discussed below.

BCZ11. It should be noted that fair value, net selling price and value in use all reflect a present value calculation (implicit or explicit) of estimated net future cash flows expected from an asset:

- (a) fair value reflects the market's expectation of the present value of the future cash flows to be derived from the asset;
- (b) net selling price reflects the market's expectation of the present value of the future cash flows to be derived from the asset, less the direct incremental costs to dispose of the asset; and
- (c) value in use is the enterprise's estimate of the present value of the future cash flows to be derived from continuing use and disposal of the asset.

These bases all consider the time value of money and the risks that the amount and timing of the actual cash flows to be received from an asset might differ from estimates. Fair value and net selling price may differ from value in use because the market may not use the same assumptions as an individual enterprise.

Recoverable amount based on the sum of undiscounted cash flows

BCZ12. Some argue that recoverable amount should be measured as the sum of undiscounted future cash flows from an asset. They argue that:

- (a) historical cost accounting is not concerned with measuring the economic value of assets. Therefore, the time value of money should not be considered in estimating the amount that will be recovered from an asset.

* In IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*, issued by the IASB in 2004, the term, 'net selling price' was replaced in IAS 36 by 'fair value less costs to sell'.

(b) it is premature to use discounting techniques without further research and debates on:

- (i) the role of discounting in the financial statements; and
- (ii) how assets should be measured generally.

If financial statements include assets that are carried on a variety of different bases (historical cost, discounted amounts or other bases), this will be confusing for users.

- (c) identifying an appropriate discount rate will often be difficult and subjective.
- (d) discounting will increase the number of impairment losses recognised. This, coupled with the requirement for reversals of impairment losses, introduces a volatile element into the income statement. It will make it harder for users to understand the performance of an enterprise.

A minority of commentators on E55 *Impairment of Assets* supported this view.

BCZ13. IASC rejected measurement of recoverable amount based on the sum of undiscounted cash flows because:

- (a) the objective of the measurement of recoverable amount is to reflect an investment decision. Money has a time value, even when prices are stable. If future cash flows were not discounted, two assets giving rise to cash flows of the same amount but with different timings would show the same recoverable amount. However, their current market values would be different because all rational economic transactions take account of the time value of money.
- (b) measurements that take into consideration the time value of money are more relevant to investors, other external users of financial statements and management for resource allocation decisions, regardless of the general measurement basis adopted in the financial statements.
- (c) many enterprises were already familiar with the use of discounting techniques, particularly for supporting investment decisions.
- (d) discounting was already required for other areas of financial statements that are based on expectations of future cash flows, such as long-term provisions and employee benefit obligations.
- (e) users are better served if they are aware on a timely basis of assets that will not generate sufficient returns to cover, at least, the time value of money.

Recoverable amount based on fair value

BCZ14. IAS 32 *Financial Instruments: Disclosure and Presentation* and a number of other International Accounting Standards define fair value as:

“... the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm’s length transaction...”

BCZ15. International Accounting Standards include the following requirements or guidance for measuring fair value:

- (a) for the purpose of revaluation of an item of property, plant or equipment to its fair value, IAS 16 *Property, Plant and Equipment* indicates that fair value is usually an asset's market value, normally determined by appraisal undertaken by professionally qualified valuers and, if no market exists, fair value is based on the asset's depreciated replacement cost.
- (b) for the purpose of revaluation of an intangible asset to its fair value, IASC proposed in E60 *Intangible Assets* that fair value be determined by reference to market values obtained from an active market. E60 proposed a definition of an active market.*
- (c) IASC proposed revisions to IAS 22 (see E61 *Business Combinations*) so that fair value would be determined without consideration of the acquirer's intentions for the future use of an asset.†
- (d) IAS 39§ indicates that if an active market exists, the fair value of a financial instrument is based on a quoted market price. If there is no active market, fair value is determined by using estimation techniques such as market values of similar types of financial instruments, discounted cash flow analysis and option pricing models.

BCZ16. Some argue that the only appropriate measurement for the recoverable amount of an asset is fair value (based on observable market prices or, if no observable market prices exist, estimated considering prices for similar assets and the results of discounted future cash flow calculations). Proponents of fair value argue that:

- (a) the purpose of measuring recoverable amount is to estimate a market value, not an enterprise-specific value. An enterprise's estimate of the present value of future cash flows is subjective and in some cases may be abused. Observable market prices that reflect the judgement of the market place are a more reliable measurement of the amounts that will be recovered from an asset. They reduce the use of management's judgement.
- (b) if an asset is expected to generate greater net cash inflows for the enterprise than for other participants, the superior returns are almost always generated by internally generated goodwill stemming from the synergy of the business and its management team. For consistency with IASC's proposals in E60 that internally generated goodwill should not be recognised as an asset, these above-market cash flows should be excluded from assessments of an asset's recoverable amount.

* IASC approved an International Accounting Standard on intangible assets in 1998.

† IASC approved revisions to IAS 22 *Business Combinations* in 1998.

§ The IASB's project to revise IAS 32 and IAS 39 in 2003 resulted in the relocation of the requirements on fair value measurement from IAS 32 to IAS 39.

- (c) determining recoverable amount as the higher of net selling price and value in use is tantamount to determining two diverging measures whilst there should be only one measure to estimate recoverable amount.

A minority of commentators on E55 supported measuring recoverable amount at fair value (based on observable market prices or, if no observable market prices exist, estimated considering prices for similar assets and the results of discounted future cash flow calculations).

BCZ17. IASC rejected the proposal that an asset's recoverable amount should be determined by reference to its fair value (based on observable market prices or, if no observable market prices exist, estimated considering prices for similar assets and the results of discounted future cash flow calculations). The reasons are the following:

- (a) IASC believed that no preference should be given to the market's expectation of the recoverable amount of an asset (basis for fair value when market values are available and for net selling price) over a reasonable estimate performed by the individual enterprise that owns the asset (basis for fair value when market values are not available and for value in use). For example, an enterprise may have information about future cash flows that is superior to the information available in the market place. Also, an enterprise may plan to use an asset in a manner different from the market's view of the best use.
- (b) market values are a way to estimate fair value but only if they reflect the fact that both parties, the acquirer and the seller, are willing to enter a transaction. If an enterprise can generate greater cash flows by using an asset than by selling it, it would be misleading to base recoverable amount on the market price of the asset because a rational enterprise would not be willing to sell the asset. Therefore, recoverable amount should not refer only to a transaction between two parties (which is unlikely to happen) but should also consider an asset's service potential from its use by the enterprise.
- (c) IASC believed that in assessing the recoverable amount of an asset, it is the amount that an enterprise can expect to recover from that asset, including the effect of synergy with other assets, that is relevant.

The following two examples illustrate the proposal (rejected by IASC) that an enterprise should measure an asset's recoverable amount at its fair value (primarily based on observable market values if these values are available).

Example 1

10 years ago, an enterprise bought its headquarters building for 2,000. Since then, the real estate market has collapsed and the building's market value at balance sheet date is estimated to be 1,000. Disposal costs of the building would be negligible. The building's carrying amount at the balance sheet date is 1,500 and its remaining useful life is 30 years. The building meets all the enterprise's expectations and it is likely that these expectations will be met for the foreseeable future. As a consequence, the enterprise has no plans to move from its current headquarters. The value in use of the building cannot be determined because the building does not generate independent cash inflows. Therefore, the enterprise assesses the recoverable amount of the building's cash-generating unit, that is, the enterprise as a whole. That calculation shows that the building's cash-generating unit is not impaired.

Proponents of fair value (primarily based on observable market values if these values are available) would measure the recoverable amount of the building at its market value (1,000) and, hence, would recognise an impairment loss of 500 (1,500 less 1,000), even though calculations show that the building's cash-generating unit is not impaired.

IASC did not support this approach and believed that the building was not impaired. IASC believed that, in the situation described, the enterprise would not be willing to sell the building for 1,000 and that the assumption of a sale was not relevant.

Example 2

At the end of 20X0, an enterprise purchased a computer for 100 for general use in its operations. The computer is depreciated over 4 years on a straight-line basis. Residual value is estimated to be nil. At the end of 20X2, the carrying amount of the computer is 50. There is an active market for second-hand computers of this type. The market value of the computer is 30. The enterprise does not intend to replace the computer before the end of its useful life. The computer's cash-generating unit is not impaired.

Proponents of fair value (primarily based on observable market values if these values are available) would measure the recoverable amount of the computer at its market value (30) and, therefore, would recognise an impairment loss of 20 (50 less 30) even though the computer's cash-generating unit is not impaired.

IASC did not support this approach and believed that the computer was not impaired as long as:

- (a) the enterprise was not committed to dispose of the computer before the end of its expected useful life; and*
- (b) the computer's cash-generating unit was not impaired.*

- BCZ18. If no deep and liquid market exists for an asset, IASC considered that value in use would be a reasonable estimate of fair value. This is likely to happen for many assets within the scope of IAS 36: observable market prices are unlikely to exist for goodwill, most intangible assets and many items of property, plant and equipment. Therefore, it is likely that the recoverable amount of these assets, determined in accordance with IAS 36, will be similar to the recoverable amount based on the fair value of these assets.
- BCZ19. For some assets within the scope of IAS 36, observable market prices exist or consideration of prices for similar assets is possible. In such cases, the asset's net selling price will differ from the asset's fair value only by the direct incremental costs of disposal. IASC acknowledged that recoverable amount as the higher of net selling price and value in use would sometimes differ from fair value primarily based on market prices (even if the disposal costs are negligible). This is because, as explained in paragraph BCZ17(a), the market may not use the same assumptions about future cash flows as an individual enterprise.
- BCZ20. IASC believed that IAS 36 included sufficient requirements to prevent an enterprise from using assumptions different from the market place that are unjustified. For example, an enterprise is required to determine value in use using:
- (a) cash flow projections based on reasonable and supportable assumptions and giving greater weight to external evidence; and
 - (b) a discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

Recoverable amount based on value in use

- BCZ21. Some argue that value in use is the only appropriate measurement for the recoverable amount of an asset because:
- (a) financial statements are prepared under a going concern assumption. Therefore, no consideration should be given to an alternative measurement that reflects a disposal, unless this reflects the enterprise's intentions.
 - (b) assets should not be carried at amounts higher than their service potential from use by the enterprise. Unlike value in use, a market value does not necessarily reflect the service potential of an asset.
- Few commentators on E55 supported this view.
- BCZ22. IASC rejected this proposal because:
- (a) if an asset's net selling price is higher than its value in use, a rational enterprise will dispose of the asset. In this situation, it is logical to base recoverable amount on the asset's net selling price to avoid recognising an impairment loss that is unrelated to economic reality.

- (b) if an asset's net selling price is greater than its value in use, but management decides to keep the asset, the extra loss (the difference between net selling price and value in use) properly falls in later periods because it results from management's decision in these later periods to keep the asset.

Recoverable amount based on the higher of net selling price and value in use*

BCZ23. The requirement that recoverable amount should be the higher of net selling price and value in use stems from the decision that measurement of the recoverable amount of an asset should reflect the likely behaviour of a rational management. Furthermore, no preference should be given to the market's expectation of the recoverable amount of an asset (basis for net selling price) over a reasonable estimate performed by the individual enterprise which owns the asset (basis for value in use) or vice versa (see paragraphs BCZ17-BCZ20 and BCZ22). It is uncertain whether the assumptions of the market or the enterprise are more likely to be true. Currently, perfect markets do not exist for many of the assets within the scope of IAS 36 and it is unlikely that predictions of the future will be entirely accurate, regardless of who makes them.

BCZ24. IASC acknowledged that an enterprise would use judgement in determining whether an impairment loss needed to be recognised. For this reason, IAS 36 included some safeguards to limit the risk that an enterprise may make an over-optimistic (pessimistic) estimate of recoverable amount:

- (a) IAS 36 requires a formal estimate of recoverable amount whenever there is an indication that:
- (i) an asset may be impaired; or
 - (ii) an impairment loss may no longer exist or may have decreased.

For this purpose, IAS 36 includes a relatively detailed (although not exhaustive) list of indicators that an asset may be impaired (see paragraphs 12 and 111 of IAS 36).

- (b) IAS 36 provides guidelines for the basis of management's projections of future cash flows to be used to estimate value in use (see paragraph 33 of IAS 36).

BCZ25. IASC considered the cost of requiring an enterprise to determine both net selling price and value in use, if the amount determined first is below an asset's carrying amount. IASC concluded that the benefits of such a requirement outweigh the costs.

BCZ26. The majority of the commentators on E55 supported IASC's view that recoverable amount should be measured at the higher of net selling price and value in use.

* In IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*, issued by the IASB in 2004, the term, 'net selling price' was replaced in IAS 36 by 'fair value less costs to sell'.

Assets held for disposal

BCZ27. IASC considered whether the recoverable amount of an asset held for disposal should be measured only at the asset's net selling price. When an enterprise expects to dispose of an asset within the near future, the net selling price of the asset is normally close to its value in use. Indeed, the value in use usually consists mostly of the net proceeds to be received for the asset, since future cash flows from continuing use are usually close to nil. Therefore, IASC believed that the definition of recoverable amount as included in IAS 36 is appropriate for assets held for disposal without a need for further requirements or guidance.

Other refinements to the measurement of recoverable amount

Replacement cost as a ceiling

BCZ28. Some argue that the replacement cost of an asset should be adopted as a ceiling for its recoverable amount. They argue that the value of an asset to the business would not exceed the amount that the enterprise would be willing to pay for the asset at the balance sheet date.

BCZ29. IASC believed that replacement cost techniques are not appropriate to measuring the recoverable amount of an asset. This is because replacement cost measures the cost of an asset and not the future economic benefits recoverable from its use and/or disposal.

Appraisal values

BCZ30. In some cases, an enterprise might seek external appraisal of recoverable amount. External appraisal is not a separate technique in its own right. IASC believed that if appraisal values are used, an enterprise should verify that the external appraisal follows the requirements of IAS 36.

Net selling price (paragraphs 25-29)*

BCZ31. IAS 36 defines net selling price as the amount obtainable from the sale of an asset in an arm's length transaction between knowledgeable, willing parties, less the incremental costs directly attributable to the disposal of the asset.

BCZ32. In other words, net selling price reflects the market's expectations of the future cash flows for an asset after the market's consideration of the time value of money and the risks inherent in receiving those cash flows, less the disposal costs.

BCZ33. Some argue that direct incremental costs of disposal should not be deducted from the amount obtainable from the sale of an asset because, unless management has decided to dispose of the asset, the going concern assumption should apply.

* In IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*, issued by the IASB in 2004, the term, 'net selling price' was replaced in IAS 36 by 'fair value less costs to sell'.

- BCZ34. IASC believed that it is appropriate to deduct direct incremental costs of disposal in determining net selling price because the purpose of the exercise is to determine the net amount that an enterprise could recover from the sale of an asset at the date of the measurement and to compare it with the alternative of keeping the asset and using it.
- BCZ35. IAS 36 indicates that termination benefits (as defined in IAS 19 *Employee Benefits*) and costs associated with reducing or reorganising a business following the disposal of an asset are not direct incremental costs to dispose of the asset. IASC considered these costs as incidental to (rather than a direct consequence of) the disposal of an asset. In addition, this guidance is consistent with the direction of the project on provisions.*
- BCZ36. Although the definition of ‘net selling price’ would be similar to a definition of ‘net fair value’, IASC decided to use the term ‘net selling price’ instead of ‘net fair value’. IASC believed that the term ‘net selling price’ better describes the amount that an enterprise should determine and that will be compared with an asset’s value in use.

Net realisable value

- BCZ37. IAS 2 *Inventories* defines net realisable value as:
- “... the estimated selling price in the ordinary course of business ... less the estimated costs necessary to make the sale...”
- BCZ38. For the purpose of determining recoverable amount, IASC decided not to use the term ‘net realisable value’ as defined in IAS 2 because:
- (a) IAS 2’s definition of net realisable value does not refer explicitly to transactions carried out on an arm’s length basis.
 - (b) net realisable value refers to an estimated selling price in the ordinary course of business. In certain cases, net selling price will reflect a forced sale, if management is compelled to sell immediately.
 - (c) it is important that net selling price uses, as a starting point, a selling price agreed between knowledgeable, willing buyers and sellers. This is not explicitly mentioned in the definition of net realisable value.
- BCZ39. In most cases, net selling price and net realisable value will be similar. However, IASC did not believe that it was necessary to change the definition of net realisable value used in IAS 2 because, for inventories, the definition of net realisable value is well understood and seems to work satisfactorily.

* IASC approved an International Accounting Standard on provisions, contingent liabilities and contingent assets in 1998.

Value in use (paragraphs 30-57 and the Appendix)

BCZ40. IAS 36 defines value in use as the present value of the future cash flows expected to be derived from an asset.

Expected value approach

BCZ41. Some argue that, to better reflect uncertainties in timing and amounts inherent in estimated future cash flows, expected future cash flows should be used in determining value in use. An expected value approach considers all expectations about possible future cash flows instead of the single, most likely, future cash flows.

Example

An enterprise estimates that there are two scenarios for future cash flows: a first possibility of future cash flows amounts to 120 with a 40 per cent probability and a second possibility amounts to 80 with a 60 per cent probability.

The most likely future cash flows would be 80 and the expected future cash flows would be 96 ($80 \times 60\% + 120 \times 40\%$).

BCZ42. In most cases, it is likely that budgets/forecasts that are the basis for cash flow projections will reflect a single estimate of future cash flows only. For this reason, IASC decided that an expected value approach should be permitted but not required.

Future cash flows from internally generated goodwill and synergy with other assets

BCZ43. IASC rejected a proposal that estimates of future cash inflows should reflect only future cash inflows relating to the asset that was initially recognised (or the remaining portion of that asset if part of it has already been consumed or sold). The purpose of such a requirement would be to avoid including in an asset's value in use future cash inflows from internally generated goodwill or from synergy with other assets. This would be consistent with IASC's proposal in E60 *Intangible Assets* to prohibit the recognition of internally generated goodwill as an asset.*

BCZ44. In many cases, it will not be possible in practice to distinguish future cash inflows from the asset initially recognised from the future cash inflows from internally generated goodwill or a modification of the asset. This is particularly true when businesses are merged or once an asset has been enhanced by subsequent expenditure. IASC concluded that it is more important to focus on whether the carrying amount of an asset will be recovered rather than on whether the recovery stems partly from internally generated goodwill.

* IASC approved an International Accounting Standard on intangible assets in 1998.

BCZ45. The proposal—that future cash inflows should reflect only future cash inflows relating to the asset that was initially recognised—would also conflict with the requirement under IAS 36 that cash flow projections should reflect reasonable and supportable assumptions that represent management’s best estimate of the set of economic conditions that will exist over the remaining useful life of the asset (see paragraph 33 of IAS 36). Therefore, the Standard requires that future cash inflows should be estimated for an asset in its current condition, whether or not these future cash inflows are from the asset that was initially recognised or from its subsequent enhancement or modification.

Example

Several years ago, an enterprise purchased a customer list with 10,000 addresses that it recognised as an intangible asset. The enterprise uses this list for direct marketing of its products. Since initial recognition, about 2,000 customer addresses have been deleted from the list and 3,000 new customer addresses added to it. The enterprise is determining the value in use of the customer list.

Under the proposal (rejected by IASC) that an enterprise should reflect only future cash inflows relating to the asset that was initially recognised, the enterprise would consider only those future cash inflows generated by the remaining 8,000 (10,000 less 2,000) customers from the list acquired.

Under IAS 36, an enterprise considers the future cash inflows generated by the customer list in its current condition, ie by all 11,000 customers (8,000 plus 3,000).

Value in use estimated in a foreign currency (paragraph 54)

BCZ46. In response to comments from field test participants, paragraph 54 of IAS 36 includes guidance on calculating the value in use of an asset that generates future cash flows in a foreign currency. IAS 36 indicates that value in use in a foreign currency is translated into the reporting currency* using the spot exchange rate at the balance sheet date.

BCZ47. If a currency is freely convertible and traded in an active market, the spot rate reflects the market’s best estimate of future events that will affect that currency. Therefore, the only available unbiased estimate of a future exchange rate is the current spot rate, adjusted by the difference in expected future rates of general inflation in the two countries to which the currencies belong.

BCZ48. A value in use calculation already deals with the effect of general inflation since it is calculated either by:

- (a) estimating future cash flows in nominal terms (ie including the effect of general inflation and specific price changes) and discounting them at a rate that includes the effects of general inflation; or

* In IAS 21 *The Effects of Changes in Foreign Exchange Rates*, as revised by the IASB in 2003, the term ‘reporting currency’ was replaced by ‘functional currency’.

- (b) estimating future cash flows in real terms (ie excluding the effect of general inflation but including the effect of specific price changes) and discounting them at a rate that excludes the effect of general inflation.
- BCZ49. To use a forward rate to translate value in use expressed in a foreign currency would be inappropriate. This is because a forward rate reflects the market's adjustment for the differential in interest rates. Using such a rate would result in double-counting the time value of money (first in the discount rate and then in the forward rate).
- BCZ50. Even if a currency is not freely convertible or is not traded in an active market—with the consequence that it can no longer be assumed that the spot exchange rate reflects the market's best estimate of future events that will affect that currency—IAS 36 indicates that an enterprise uses the spot exchange rate at the balance sheet date to translate value in use estimated in a foreign currency. This is because IASB believed that it is unlikely that an enterprise can make a more reliable estimate of future exchange rates than the current spot exchange rate.
- BCZ51. An alternative to estimating the future cash flows in the currency in which they are generated would be to estimate them in another currency as a proxy and discount them at a rate appropriate for this other currency. This solution may be simpler, particularly where cash flows are generated in the currency of a hyperinflationary economy (in such cases, some would prefer using a hard currency as a proxy) or in a currency other than the reporting currency. However, this solution may be misleading if the exchange rate varies for reasons other than changes in the differential between the general inflation rates in the two countries to which the currencies belong. In addition, this solution is inconsistent with the approach under IAS 29 *Financial Reporting in Hyperinflationary Economies*, which does not allow, if the reporting currency* is the currency of a hyperinflationary economy, translation into a hard currency as a proxy for restatement in terms of the measuring unit current at the balance sheet date.

Discount rate (paragraphs 55-57 and A15-A21)

- BCZ52. The purpose of discounting future cash flows is to reflect the time value of money and the uncertainties attached to those cash flows:
- (a) assets that generate cash flows soon are worth more than those generating the same cash flows later. All rational economic transactions will take account of the time value of money. The cost of not receiving a cash inflow until some date in the future is an opportunity cost that can be measured by considering what income has been lost by not investing that money for the period. The time value of money, before consideration of risk, is given by the rate of return on a risk-free investment, such as government bonds of the same duration.

* In IAS 21 *The Effects of Changes in Foreign Exchange Rates*, as revised by the IASB in 2003, the term 'reporting currency' was replaced by 'functional currency'.

- (b) the value of the future cash flows is affected by the variability (ie the risks) associated with the cash flows. Therefore, all rational economic transactions will take risk into account.

BCZ53 As a consequence IASC decided:

- (a) to reject a discount rate based on a historical rate—ie the effective rate implicit when an asset was acquired. A subsequent estimate of recoverable amount has to be based on prevailing interest rates because management's decisions about whether to keep the asset are based on prevailing economic conditions. Historical rates do not reflect prevailing economic conditions.
- (b) to reject a discount rate based on a risk-free rate, unless the future cash flows have been adjusted for all the risks specific to the asset.
- (c) to require that the discount rate should be a rate that reflects current market assessments of the time value of money and the risks specific to the asset. This rate is the return that investors would require if they were to choose an investment that would generate cash flows of amounts, timing and risk profile equivalent to those that the enterprise expects to derive from the asset.

BCZ54. In principle, value in use should be an enterprise-specific measure determined in accordance with the enterprise's own view of the best use of that asset. Logically, the discount rate should be based on the enterprise's own assessment both of the time value of money and of the risks specific to the future cash flows from the asset. However, IASC believed that such a rate could not be verified objectively. Therefore, IAS 36 requires that the enterprise should make its own estimate of future cash flows but that the discount rate should reflect, as far as possible, the market's assessment of the time value of money. Similarly, the discount rate should reflect the premium that the market would require from uncertain future cash flows based on the distribution estimated by the enterprise.

BCZ55. IASC acknowledged that a current asset-specific market-determined rate would rarely exist for the assets covered by IAS 36. Therefore, an enterprise uses current market-determined rates for other assets (as similar as possible to the asset under review) as a starting point and adjusts these rates to reflect the risks specific to the asset for which the cash flow projections have not been adjusted.

Additional guidance included in the Standard in 2004

Elements reflected in value in use (paragraphs 30-32)

- BC56. The Exposure Draft of Proposed Amendments to IAS 36 proposed, and the revised Standard includes, additional guidance to clarify:
- (a) the elements that are reflected in an asset's value in use; and
 - (b) that some of those elements (ie expectations about possible variations in the amount or timing of future cash flows, the price for bearing the uncertainty inherent in the asset, and other factors that market participants would reflect

in pricing the future cash flows the entity expects to derive from the asset) can be reflected either as adjustments to the future cash flows or as adjustments to the discount rate.

The Board decided to include this additional guidance in the Exposure Draft in response to a number of requests from its constituents for clarification of the requirements in the previous version of IAS 36 on measuring value in use.

BC57. Respondents to the Exposure Draft generally agreed with the proposals. Those that disagreed varied widely in their views, arguing that:

- (a) IAS 36 should be amended to permit entities to measure value in use using methods other than discounting of future cash flows.
- (b) when measuring the value in use of an intangible asset, entities should be required to reflect the price for bearing the uncertainty inherent in the asset as adjustments to the future cash flows.
- (c) it is inconsistent with the definition of value in use to reflect in that measure the other factors that market participants would reflect in pricing the future cash flows the entity expects to derive from the asset—this element refers to market pricing of an asset rather than to the value to the entity of the asset. Other factors should be reflected in value in use only to the extent that they affect the cash flows the entity can achieve from the asset.

BC58. In considering (a) above, the Board observed that the measure of recoverable amount in IAS 36 (ie higher of value in use and fair value less costs to sell) stems from IASC's decision that an asset's recoverable amount should reflect the likely behaviour of a rational management, with no preference given to the market's expectation of the recoverable amount of an asset (ie fair value less costs to sell) over a reasonable estimate performed by the entity that controls the asset (ie value in use) or vice versa (see paragraph BCZ23). In developing the Exposure Draft and revising IAS 36, the Board concluded that it would be inappropriate to modify the measurement basis adopted in the previous version of IAS 36 for determining recoverable amount until the Board considers and resolves the broader question of the appropriate measurement objective(s) in accounting. Moreover, IAS 36 does not preclude the use of other valuation techniques in estimating fair value less costs to sell. For example, paragraph 27 of the Standard states that "If there is no binding sale agreement or active market for an asset, fair value less costs to sell is based on the best information available to reflect the amount that an entity could obtain, at the balance sheet date, from the disposal of the asset in an arm's length transaction between knowledgeable, willing parties, after deducting the costs of disposal."

BC59. In considering (b) above, the Board observed that the previous version of IAS 36 permitted risk adjustments to be reflected either in the cash flows or in the discount rate, without indicating a preference. The Board could see no justification for amending this approach to require risk adjustments for uncertainty to be factored into the cash flows, particularly given the Board's inclination to avoid modifying the requirements in the previous version of IAS 36

for determining recoverable amount until it considers and resolves the broader question of measurement in accounting. Additionally, the Board as part of its consultative process conducted field visits and round-table discussions during the comment period for the Exposure Draft.* Many field visit participants indicated a preference for reflecting such risk adjustments in the discount rate.

BC60. In considering (c) above, the Board observed that the measure of value in use adopted in IAS 36 is not a pure ‘entity-specific’ measure. Although the cash flows used as the starting point in the calculation represent entity-specific cash flows (ie they are derived from the most recent financial budgets/forecasts approved by management and represent management’s best estimate of the set of economic conditions that will exist over the remaining useful life of the asset), their present value is required to be determined using a discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. Paragraph 56 of the Standard (paragraph 49 of the previous version of IAS 36) clarifies that “A rate that reflects current market assessments of the time value of money and the risks specific to the asset is the return that investors would require if they were to choose an investment that would generate cash flows of amounts, timing and risk profile equivalent to those that the entity expects to derive from the asset.” In other words, an asset’s value in use reflects how the market would price the cash flows that management expects to derive from that asset.

BC61. Therefore, the Board concluded that:

- (a) it is consistent with the measure of value in use adopted in IAS 36 to include in the list of elements the other factors that market participants would reflect in pricing the future cash flows the entity expects to derive from the asset.
- (b) all of the elements proposed in the Exposure Draft (and listed in paragraph 30 of the revised Standard) should be reflected in the calculation of an asset’s value in use.

Estimates of future cash flows (paragraphs 33, 34 and 44)

BC62. The Exposure Draft proposed requiring cash flow projections used in measuring value in use to be based on reasonable and supportable assumptions that take into account both past actual cash flows and management’s past ability to forecast cash flows accurately.

* The field visits were conducted from early December 2002 to early April 2003, and involved IASB members and staff in meetings with 41 companies in Australia, France, Germany, Japan, South Africa, Switzerland and the United Kingdom. IASB members and staff also took part in a series of round-table discussions with auditors, preparers, accounting standard-setters and regulators in Canada and the United States on implementation issues encountered by North American companies during first-time application of US Statements of Financial Accounting Standards 141 *Business Combinations* and 142 *Goodwill and Other Intangible Assets*, and the equivalent Canadian Handbook Sections, which were issued in June 2001.

- BC63. Many respondents to the Exposure Draft disagreed with this proposal, arguing that:
- (a) the reasons for past cash flow forecasts differing from actual cash flows may be irrelevant to the current projections. For example, if there has been a major change in management, management's past ability to forecast cash flows might not be relevant to the current projections. Additionally, a poor record of forecasting cash flows accurately might be the result of factors outside of management's control (such as the events of September 11, 2001), rather than indicative of management bias.
 - (b) it is unclear how, in practice, the assumptions on which the cash flow projections are based could take into account past differences between management's forecasts and actual cash flows.
 - (c) the proposal is inconsistent with the requirement to base cash flow projections on the most recent financial budgets/forecasts approved by management.
- BC64. The Board observed that, as worded, the proposal would have *required* the assumptions on which the cash flow forecasts are based to be adjusted for past actual cash flows and management's past ability to forecast cash flows accurately. The Board agreed with respondents that it is not clear how, in practice, this might be achieved, and that in some circumstances past actual cash flows and management's past ability to forecast cash flows accurately might not be relevant to the development of current forecasts. However, the Board remained of the view that in developing the assumptions on which the cash flow forecasts are based, management should remain mindful of, and when appropriate make the necessary adjustments for, an entity's actual past performance or previous history of management consistently overstating or understating cash flow forecasts.
- BC65. Therefore, the Board decided not to proceed with the proposal, but instead to include in paragraph 34 of the Standard guidance clarifying that management:
- (a) should assess the reasonableness of the assumptions on which its current cash flow projections are based by examining the causes of differences between past cash flow projections and actual cash flows; and
 - (b) should ensure that the assumptions on which its current cash flow projections are based are consistent with past actual outcomes, provided the effects of subsequent events or circumstances that did not exist when those actual cash flows were generated make this appropriate.
- BC66. In finalising the Standard the Board also considered two issues identified by respondents to the Exposure Draft and referred to the Board by the International Financial Reporting Interpretations Committee. Both issues related to the application of paragraphs 27(b) and 37 of the previous version of IAS 36 (now paragraphs 33(b) and 44). The Board did not reconsider those paragraphs when developing the Exposure Draft.

BC67. Paragraph 27(b) required the cash flow projections used to measure value in use to be based on the most recent financial budgets/forecasts that have been approved by management. Paragraph 37, however, required the future cash flows to be estimated for the asset [or cash-generating unit] in its current condition and excluded estimated future cash inflows or outflows that are expected to arise from: (a) a future restructuring to which an enterprise is not yet committed; or (b) future capital expenditure that will improve or enhance the asset [or cash-generating unit] in excess of its originally assessed standard of performance.*

BC68. The first issue the Board considered related to the acquisition of a cash-generating unit when:

- (a) the price paid for the unit was based on projections that included a major restructuring expected to result in a substantial increase in the net cash inflows derived from the unit; and
- (b) there is no observable market from which to estimate the unit's fair value less costs to sell.

Respondents expressed concern that if the net cash inflows arising from the restructuring were not reflected in the unit's value in use, comparison of the unit's recoverable amount and carrying amount immediately after the acquisition would result in the recognition of an impairment loss.

BC69. The Board agreed with respondents that, all else being equal, the value in use of a newly acquired unit would, in accordance with IAS 36, be less than the price paid for the unit to the extent that the price includes the net benefits of a future restructuring to which the entity is not yet committed. However, this does not mean that a comparison of the unit's recoverable amount with its carrying amount immediately after the acquisition will result in the recognition of an impairment loss. The Board observed that:

- (a) recoverable amount is measured in accordance with IAS 36 as the higher of value in use and fair value less costs to sell. Fair value less costs to sell is defined in the Standard as "the amount obtainable from the sale of an asset or cash-generating unit in an arm's length transaction between knowledgeable, willing parties, less the costs of disposal."
- (b) paragraphs 25-27 of the Standard provide guidance on estimating fair value less costs to sell. In accordance with that guidance, the best evidence of a recently acquired unit's fair value less costs to sell is likely to be the arm's length price the entity paid to acquire the unit, adjusted for disposal costs and for any changes in economic circumstances between the transaction date and the date at which the estimate is made.

* The requirement to exclude future capital expenditure that will improve or enhance the asset in excess of its originally assessed standard of performance was amended in 2003 as a consequential amendment arising from the revision of IAS 16 *Property, Plant and Equipment*. Paragraph 44 of IAS 36 now requires estimates of future cash flows to exclude future cash inflows or outflows that are expected to arise from improving or enhancing the asset's performance.

- (c) if the unit's fair value less costs to sell were to be otherwise estimated, it would also reflect the market's assessment of the expected net benefits any acquirer would be able to derive from restructuring the unit or from future capital expenditure on the unit.
- BC70. Therefore, all else being equal, the unit's recoverable amount would be its fair value less costs to sell, rather than its value in use. As such, the net benefits of the restructuring would be reflected in the unit's recoverable amount, meaning that an impairment loss would arise only to the extent of any material disposal costs.
- BC71. The Board acknowledged that treating the newly acquired unit's fair value less costs to sell as its recoverable amount seems inconsistent with the reason underpinning a "higher of fair value less costs to sell and value in use" recoverable amount measurement objective. Measuring recoverable amount as the higher of fair value less costs to sell and value in use is intended to reflect the economic decisions that are made when an asset becomes impaired: is it better to sell or keep using the asset?
- BC72. Nevertheless, the Board concluded that:
- (a) amending IAS 36 to include in value in use calculations the costs and benefits of future restructurings to which the entity is not yet committed would be a significant change to the concept of value in use adopted in the previous version of IAS 36. That concept is 'value in use for the asset in its current condition'.
 - (b) the concept of value in use in IAS 36 should not be modified as part of the Business Combinations project, but should be reconsidered only once the Board considers and resolves the broader question of the appropriate measurement objectives in accounting.
- BC73. The second issue the Board considered related to what some respondents suggested was a conflict between the requirements in paragraphs 27(b) and 37 of the previous version of IAS 36 (now paragraphs 33(b) and 44). Paragraph 27(b) required value in use to be based on the most recent forecasts approved by management—which would be likely to reflect management's intentions in relation to future restructurings and future capital expenditure—whereas paragraph 37 required value in use to exclude the effects of a future restructuring to which the enterprise is not yet committed and future capital expenditure that will improve or enhance the asset in excess of its originally assessed standard of performance.*

* The requirement to exclude future capital expenditure that will improve or enhance the asset in excess of its originally assessed standard of performance was amended in 2003 as a consequential amendment arising from the revision of IAS 16 *Property, Plant and Equipment*. Paragraph 44 of IAS 36 now requires estimates of future cash flows to exclude future cash inflows or outflows that are expected to arise from improving or enhancing the asset's performance.

- BC74. The Board concluded that it is clear from the Basis for Conclusions on the previous version of IAS 36 that IASC's intention was that value in use should be calculated using estimates of future cash inflows for an asset in its current condition. The Board nevertheless agreed with respondents that the requirement for value in use to be based on the most recent forecasts approved by management could be viewed as inconsistent with paragraph 37 of the previous version of IAS 36 when those forecasts include either future restructurings to which the entity is not yet committed or future cash flows associated with improving or enhancing the asset's performance.
- BC75. Therefore, the Board decided to clarify, in what is now paragraph 33(b) of the revised Standard, that cash flow projections should be based on the most recent financial budgets/forecasts that have been approved by management, but should exclude any estimated future cash inflows or outflows expected to arise from future restructurings or from improving or enhancing the asset's performance. The Board also decided to clarify that when a cash-generating unit contains assets with different estimated useful lives (or, similarly, when an asset comprises components with different estimated useful lives), the replacement of assets (components) with shorter lives is considered to be part of the day-to-day servicing of the unit (asset) when estimating the future cash flows associated with the unit (asset).

**Using present value techniques to measure value in use
(paragraphs A1-A14)**

- BC76. The Exposure Draft proposed additional application guidance on using present value techniques in measuring value in use. The Board decided to include this additional guidance in the Exposure Draft in response to requests for clarification of the requirements in the previous version of IAS 36 on measuring value in use.
- BC77. Respondents to the Exposure Draft were generally supportive of the additional guidance. Those that were not varied in their views, suggesting that:
- (a) limiting the guidance to a brief appendix to IAS 36 is insufficient.
 - (b) although the guidance is useful, it detracts from the main purpose of IAS 36, which is to establish accounting principles for impairment testing assets. Therefore, the guidance should be omitted from the Standard.
 - (c) entities should be required to use an expected cash flow approach to measure value in use.
 - (d) an expected cash flow approach is not consistent with how transactions are priced by management and should be prohibited.
- BC78. In considering (a) and (b) above, the Board noted that the respondents that commented on the additional guidance generally agreed that it is useful and sufficient.

- BC79. In considering (c) and (d) above, the Board observed that the previous version of IAS 36 did not require value in use to be calculated using an expected cash flow approach, nor did it prohibit such an approach. The Board could see no justification for requiring or prohibiting the use of an expected cash flow approach, particularly given the Board's inclination to avoid modifying the requirements in the previous version of IAS 36 for determining recoverable amount until it considers and resolves the broader measurement issues in accounting. Additionally, in relation to (d), some field visit participants said that they routinely undertake sensitivity and statistical analysis as the basis for using an expected value approach to budgeting/forecasting and strategic decision-making.
- BC80. Therefore, the Board decided to include in the revised Standard the application guidance on using present value techniques that was proposed in the Exposure Draft.

Income taxes

Consideration of future tax cash flows

- BCZ81. Future income tax cash flows may affect recoverable amount. It is convenient to analyse future tax cash flows into two components:
- (a) the future tax cash flows that would result from any difference between the tax base of an asset (the amount attributed to it for tax purposes) and its carrying amount, after recognition of any impairment loss. Such differences are described in IAS 12 *Income Taxes* as 'temporary differences'.
 - (b) the future tax cash flows that would result if the tax base of the asset were equal to its recoverable amount.
- BCZ82. For most assets, an enterprise recognises the tax consequences of temporary differences as a deferred tax liability or deferred tax asset in accordance with IAS 12. Therefore, to avoid double-counting, the future tax consequences of those temporary differences—the first component referred to in paragraph BCZ81—are not considered in determining recoverable amount (see further discussion in paragraphs BCZ86-BCZ89).
- BCZ83. The tax base of an asset on initial recognition is normally equal to its cost. Therefore, net selling price* implicitly reflects market participants' assessment of the future tax cash flows that would result if the tax base of the asset were equal to its recoverable amount. Therefore, no adjustment is required to net selling price to reflect the second component referred to in paragraph BCZ81.

* In IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*, issued by the IASB in 2004, the term, 'net selling price' was replaced in IAS 36 by 'fair value less costs to sell'.

BCZ84. In principle, value in use should include the present value of the future tax cash flows that would result if the tax base of the asset were equal to its value in use—the second component referred to in paragraph BCZ81. Nevertheless it may be burdensome to estimate the effect of that component. This is because:

- (a) to avoid double-counting, it is necessary to exclude the effect of temporary differences; and
- (b) value in use would need to be determined by an iterative and possibly complex computation so that value in use itself reflects a tax base equal to that value in use.

For these reasons, IASC decided to require an enterprise to determine value in use by using pre-tax future cash flows and, hence, a pre-tax discount rate.

Determining a pre-tax discount rate

BCZ85. 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.

Example

This example illustrates that a post-tax discount rate grossed-up by a standard rate of tax is not always an appropriate pre-tax discount rate.

At the end of 20X0, the carrying amount of an asset is 1,757 and its remaining useful life is 5 years. The tax base in 20X0 is the cost of the asset. The cost is fully deductible at the end of 20X1. The tax rate is 20%. The discount rate for the asset can be determined only on a post-tax basis and is estimated to be 10%. At the end of 20X0, cash flow projections determined on a pre-tax basis are as follows:

	20X1	20X2	20X3	20X4	20X5
(1) Pre-tax cash flows (CF)	800	600	500	200	100

Value in use determined using post-tax cash flows and a post-tax discount rate

End of 20X0	20X1	20X2	20X3	20X4	20X5
(2) Deduction of the cost of the asset	(1,757)	-	-	-	-
(3) Tax CF $[(1)-(2)] \times 20\%$	(191)	120	100	40	20
(4) Post-tax CF $[(1)-(3)]$	991	480	400	160	80
(5) Post-tax CF discounted at 10%	901	396	301	109	50

Value in use $[\Sigma(5)] =$ 1,757

Value in use determined using pre-tax cash flows and a pre-tax discount rate (determined by grossing-up the post-tax discount rate)

Pre-tax discount rate (grossed-up) $[10\% / (100\% - 20\%)]$ 12.5%

End of 20X0	20X1	20X2	20X3	20X4	20X5
(6) Pre-tax CF discounted at 12.5%	711	475	351	125	55

Value in use $[\Sigma(6)] =$ 1,717

Determination of the 'real' pre-tax discount rate

A pre-tax discount rate can be determined by an iterative computation so that value in use determined using pre-tax cash flows and a pre-tax discount rate equals value in use determined using post-tax cash flows and a post-tax discount rate. In the example, the pre-tax discount rate would be 11.2%.

End of 20X0	20X1	20X2	20X3	20X4	20X5
(7) Pre-tax CF discounted at 11.2%	718	485	364	131	59

Value in use $[\Sigma(7)] =$ 1,757

continued...

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. Note that the tax base of the asset in this example has been set equal to its cost at the end of 20X0. Therefore, there is no deferred tax to consider in the balance sheet.

Interaction with IAS 12

- BCZ86. IAS 36 requires that recoverable amount should be based on present value calculations, whereas under IAS 12 an enterprise determines deferred tax assets and liabilities by comparing the carrying amount of an asset (a present value if the carrying amount is based on recoverable amount) with its tax base (an undiscounted amount).
- BCZ87. One way to eliminate this inconsistency would be to measure deferred tax assets and liabilities on a discounted basis. In developing the revised version of IAS 12 (approved in 1996), there was not enough support to require that deferred tax assets and liabilities should be measured on a discounted basis. IASC believed there was still not consensus to support such a change in existing practice. Therefore, IAS 36 requires an enterprise to measure the tax effects of temporary differences using the principles set out in IAS 12.
- BCZ88. IAS 12 does not permit an enterprise to recognise certain deferred tax liabilities and assets. In such cases, some believe that the value in use of an asset, or a cash-generating unit, should be adjusted to reflect the tax consequences of recovering its pre-tax value in use. For example, if the tax rate is 25 per cent, an enterprise must receive pre-tax cash flows with a present value of 400 in order to recover a carrying amount of 300.
- BCZ89. IASC acknowledged the conceptual merit of such adjustments but concluded that they would add unnecessary complexity. Therefore, IAS 36 neither requires nor permits such adjustments.

Comments by field visit participants and respondents to the December 2002 Exposure Draft

- BC90. In revising IAS 36, the Board considered the requirement in the previous version of IAS 36 for:
- (a) income tax receipts and payments to be excluded from the estimates of future cash flows used to measure value in use; and
 - (b) the discount rate used to measure value in use to be a pre-tax rate that reflects 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.

- BC91. The Board had not considered these requirements when developing the Exposure Draft. However, some field visit participants and respondents to the Exposure Draft stated that using pre-tax cash flows and pre-tax discount rates would be a significant implementation issue for entities. This is because typically an entity's accounting and strategic decision-making systems are fully integrated and use post-tax cash flows and post-tax discount rates to arrive at present value measures.
- BC92. In considering this issue, the Board observed that the definition of value in use in the previous version of IAS 36 and the associated requirements on measuring value in use were not sufficiently precise to give a definitive answer to the question of what tax attribute an entity should reflect in value in use. For example, although IAS 36 specified discounting pre-tax cash flows at a pre-tax discount rate—with the pre-tax discount rate being the post-tax discount rate adjusted to reflect the specific amount and timing of the future tax cash flows—it did not specify *which* tax effects the pre-tax rate should include. Arguments could be mounted for various approaches.
- BC93. The Board decided that any decision to amend the requirement in the previous version of IAS 36 for pre-tax cash flows to be discounted at a pre-tax discount rate should be made only after the Board has resolved the issue of what tax attribute should be reflected in value in use. The Board decided that it should not try to resolve this latter issue as part of the Business Combinations project—decisions on the treatment of tax in value in use calculations should be made only as part of its conceptual project on measurement. Therefore, the Board concluded it should not amend as part of the current revision of IAS 36 the requirement to use pre-tax cash flows and pre-tax discount rates when measuring value in use.
- BC94. However, the Board observed that, conceptually, 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 generally not the post-tax discount rate grossed up by a standard rate of tax.

Recognition of an impairment loss (paragraphs 58-64)

- BCZ95. IAS 36 requires that an impairment loss should be recognised whenever the recoverable amount of an asset is below its carrying amount. IASC considered various criteria for recognising an impairment loss in the financial statements:
- (a) recognition if it is considered that the impairment loss is permanent ('permanent criterion');
 - (b) recognition if it is considered probable that an asset is impaired, ie if it is probable that an enterprise will not recover the carrying amount of the asset ('probability criterion'); and
 - (c) immediate recognition whenever recoverable amount is below the carrying amount ('economic criterion').

Recognition based on a ‘permanent’ criterion

BCZ96. Supporters of the ‘permanent’ criterion argue that:

- (a) this criterion avoids the recognition of temporary decreases in the recoverable amount of an asset.
- (b) the recognition of an impairment loss refers to future operations; it is contrary to the historical cost system to account for future events. Also, depreciation (amortisation) will reflect these future losses over the expected remaining useful life of the asset.

This view was supported by only a few commentators on E55 *Impairment of Assets*.

BCZ97. IASC decided to reject the ‘permanent’ criterion because:

- (a) it is difficult to identify whether an impairment loss is permanent. There is a risk that, by using this criterion, recognition of an impairment loss may be delayed.
- (b) this criterion is at odds with the basic concept that an asset is a resource that will generate future economic benefits. Cost-based accrual accounting cannot reflect events without reference to future expectations. If the events that led to a decrease in recoverable amount have already taken place, the carrying amount should be reduced accordingly.

Recognition based on a ‘probability’ criterion

BCZ98. Some argue that an impairment loss should be recognised only if it is considered probable that the carrying amount of an asset cannot be fully recovered. Proponents of a ‘probability’ criterion are divided between:

- (a) those who support the use of a recognition trigger based on the sum of the future cash flows (undiscounted and without allocation of interest costs) as a practical approach to implementing the ‘probability’ criterion; and
- (b) those who support reflecting the requirements in IAS 10 (reformatted 1994) *Contingencies and Events Occurring After the Balance Sheet Date*.*

Sum of undiscounted future cash flows (without interest costs)

BCZ99. Some national standard-setters use the ‘probability’ criterion as a basis for recognition of an impairment loss and require, as a practical approach to implementing that criterion, that an impairment loss should be recognised only if the sum of the future cash flows from an asset (undiscounted and without allocation of interest costs) is less than the carrying amount of the asset. An impairment loss, when recognised, is measured as the difference between the carrying amount of the asset and its recoverable amount measured at fair value

* The requirements relating to contingencies in the 1994 version of IAS 10 were replaced in 1998 with the requirements in IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*.

(based on quoted market prices or, if no quoted market prices exist, estimated considering prices for similar assets and the results of valuation techniques, such as the sum of cash flows discounted to their present value, option-pricing models, matrix pricing, option-adjusted spread models and fundamental analysis).

BCZ100. One of the characteristics of this approach is that the bases for recognition and measurement of an impairment loss are different. For example, even if the fair value of an asset is lower than its carrying amount, no impairment loss will be recognised if the sum of undiscounted cash flows (without allocation of interest costs) is greater than the asset's carrying amount. This might occur, especially if an asset has a long useful life.

BCZ101. Those who support using the sum of undiscounted future cash flows (without allocation of interest costs) as a recognition trigger argue that:

- (a) using a recognition trigger based on undiscounted amounts is consistent with the historical cost framework.
- (b) it avoids recognising temporary impairment losses and creating potentially volatile earnings that may mislead users of financial statements.
- (c) net selling price* and value in use are difficult to substantiate—a price for the disposal of an asset or an appropriate discount rate is difficult to estimate.
- (d) it is a higher threshold for recognising impairment losses. It should be relatively easy to conclude that the sum of undiscounted future cash flows will equal or exceed the carrying amount of an asset without incurring the cost of allocating projected cash flows to specific future periods.

This view was supported by a minority of commentators on E55 *Impairment of Assets*.

BCZ102. IASC considered the arguments listed above but rejected this approach because:

- (a) when it identifies that an asset may be impaired, a rational enterprise will make an investment decision. Therefore, it is relevant to consider the time value of money and the risks specific to an asset in determining whether an asset is impaired. This is particularly true if an asset has a long useful life.
- (b) IAS 36 does not require an enterprise to estimate the recoverable amount of each [depreciable] asset every year but only if there is an indication that an asset may be materially impaired. An asset that is depreciated (amortised) in an appropriate manner is unlikely to become materially impaired unless events or changes in circumstances cause a sudden reduction in the estimate of recoverable amount.
- (c) probability factors are already encompassed in the determination of value in use, in projecting future cash flows and in requiring that recoverable amount should be the higher of net selling price and value in use.

* In IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*, issued by the IASB in 2004, the term, 'net selling price' was replaced in IAS 36 by 'fair value less costs to sell'.

- (d) if there is an unfavourable change in the assumptions used to determine recoverable amount, users are better served if they are informed about this change in assumptions on a timely basis.

Probability criterion based on IAS 10 (reformatted 1994)

BCZ103. IAS 10 required the amount of a contingent loss to be recognised as an expense and a liability if:

- (a) it was probable that future events will confirm that, after taking into account any related probable recovery, an asset had been impaired or a liability incurred at the balance sheet date; and
- (b) a reasonable estimate of the amount of the resulting loss could be made.

BCZ104. IASC rejected the view that an impairment loss should be recognised based on the requirements in IAS 10 because:

- (a) the requirements in IAS 10 were not sufficiently detailed and would have made a ‘probability’ criterion difficult to apply.
- (b) those requirements would have introduced another unnecessary layer of probability. Indeed, as mentioned above, probability factors are already encompassed in estimates of value in use and in requiring that recoverable amount should be the higher of net selling price and value in use.

Recognition based on an ‘economic’ criterion

BCZ105. IAS 36 relies on an ‘economic’ criterion for the recognition of an impairment loss—an impairment loss is recognised whenever the recoverable amount of an asset is below its carrying amount. This criterion was already used in many International Accounting Standards before IAS 36, such as IAS 9 *Research and Development Costs*, IAS 22 *Business Combinations*, and IAS 16 *Property, Plant and Equipment*.

BCZ106. IASC considered that an ‘economic’ criterion is the best criterion to give information which is useful to users in assessing future cash flows to be generated by the enterprise as a whole. In estimating the time value of money and the risks specific to an asset in determining whether the asset is impaired, factors, such as the probability or permanence of the impairment loss, are subsumed in the measurement.

BCZ107. The majority of commentators on E55 supported IASC’s view that an impairment loss should be recognised based on an ‘economic’ criterion.

Revalued assets: recognition in the income statement versus directly in equity

BCZ108. IAS 36 requires that an impairment loss on a revalued asset should be recognised as an expense in the income statement immediately, except that it should be recognised directly in equity to the extent that it reverses a previous revaluation on the same asset.

BCZ109. Some argue that, when there is a clear reduction in the service potential (for example, physical damage) of a revalued asset, the impairment loss should be recognised in the income statement.

BCZ110. Others argue that an impairment loss should always be recognised as an expense in the income statement. The logic of this argument is that an impairment loss arises only where there is a reduction in the estimated future cash flows that form part of the business's operating activities. Indeed, according to IAS 16, whether or not an asset is revalued, the depreciation charge is always recognised in the income statement. Supporters of this view question why the treatment of an impairment loss on a revalued asset should be different to depreciation.

BCZ111. IASC believed that it would be difficult to identify whether an impairment loss is a downward revaluation or a reduction in service potential. Therefore, IASC decided to retain the treatment used in IAS 16 and to treat an impairment loss of a revalued asset as a revaluation decrease (and similarly, a reversal of an impairment loss as a subsequent revaluation increase).

BCZ112. For a revalued asset, the distinction between an 'impairment loss' ('reversal of an impairment loss') and another 'revaluation decrease' ('revaluation increase') is important for disclosure purposes. If an impairment loss that is material to the enterprise as a whole has been recognised or reversed, more information on how this impairment loss is measured is required by IAS 36 than for the recognition of a revaluation in accordance with IAS 16.

Cash-generating units (paragraphs 66-73)

BCZ113. Some support the principle of determining recoverable amount on an individual asset basis only. This view was expressed by a few commentators on E55. They argued that:

- (a) it would be difficult to identify cash-generating units at a level other than the business as a whole and, therefore, impairment losses would never be recognised for individual assets; and
- (b) it should be possible to recognise an impairment loss, regardless of whether an asset generates cash inflows that are independent from those of other assets or groups of assets. Commentators quoted examples of assets that have become under-utilised or obsolete but that are still in use.

BCZ114. IASC acknowledged that identifying the lowest level of independent cash inflows for a group of assets would involve judgement. However, IASC believed that the concept of cash-generating units is a matter of fact: assets work together to generate cash flows.

BCZ115. In response to requests from commentators on E55, IAS 36 includes additional guidance and examples for identifying cash-generating units and for determining the carrying amount of cash-generating units. IAS 36 emphasises that cash-generating units should be identified for the lowest level of aggregation of assets possible.

Internal transfer pricing (paragraph 70)

- BC116. The previous version of IAS 36 required that if an active market exists for the output produced by an asset or a group of assets:
- (a) that asset or group of assets should be identified as a cash-generating unit, even if some or all of the output is used internally; and
 - (b) management's best estimate of the future market prices for the output should be used in estimating:
 - (i) the future cash inflows that relate to the internal use of the output when determining the value in use of this cash-generating unit; and
 - (ii) the future cash outflows that relate to the internal use of the output when determining the value in use of the entity's other cash-generating units.
- BC117. The requirement in (a) above has been carried forward in the revised Standard. However, some respondents to the Exposure Draft asked for additional guidance to clarify the role of internal transfer pricing versus prices in an arm's length transaction when developing cash flow forecasts. The Board decided to address this issue by amending the requirement in (b) above to deal more broadly with cash-generating units whose cash flows are affected by internal transfer pricing, rather than just cash-generating units whose internally consumed output could be sold on an active market.
- BC118. Therefore, the Standard clarifies that if the cash inflows generated by *any* asset or cash-generating unit are affected by internal transfer pricing, an entity should use management's best estimate of future prices that could be achieved in arm's length transactions in estimating:
- (a) the future cash inflows used to determine the asset's or cash-generating unit's value in use; and
 - (b) the future cash outflows used to determine the value in use of other assets or cash-generating units affected by the internal transfer pricing.

Testing indefinite-lived intangibles for impairment

- BC119. As part of the first phase of its Business Combinations project, the Board concluded that:
- (a) an intangible asset should be regarded as having an indefinite useful life when, based on an analysis of all relevant factors (eg legal, regulatory, contractual, competitive and economic), there is no foreseeable limit on the period over which the asset is expected to generate net cash inflows for the entity; and
 - (b) an indefinite-lived intangible should not be amortised, but should be tested regularly for impairment.

An outline of the Board's deliberations on each of these issues is provided in the Basis for Conclusions on IAS 38 *Intangible Assets*.

BC120. Having reached these conclusions, the Board then considered the form that the impairment test for indefinite-lived intangibles should take. The Board concluded that:

- (a) an indefinite-lived intangible should be tested for impairment annually, or more frequently if there is any indication that it may be impaired; and
- (b) the recoverable amounts of such assets should be measured, and impairment losses (and reversals of impairment losses) in respect of those assets should be accounted for, in accordance with the requirements in IAS 36 for assets other than goodwill.

Paragraphs BC121-BC126 outline the Board's deliberations in reaching its conclusion about the frequency and timing of impairment testing indefinite-lived intangibles. Paragraphs BC129 and BC130 outline the Board's deliberations in reaching its conclusions about measuring the recoverable amount of such assets and accounting for impairment losses and reversals of impairment losses.

Frequency and timing of impairment testing (paragraphs 9 and 10(a))

BC121. In developing the Exposure Draft, the Board observed that requiring assets to be remeasured when they are impaired is a valuation concept rather than one of cost allocation. This concept, which some have termed 'the recoverable cost concept', focuses on the benefits to be derived from the asset in the future, rather than on the process by which the cost or other carrying amount of the asset should be allocated to particular accounting periods. Therefore, the purpose of an impairment test is to assess whether the carrying amount of an asset will be recovered through use or sale of the asset. Nevertheless, allocating the depreciable amount of an asset with a limited useful life on a systematic basis over that life provides some assurance against the asset's carrying amount exceeding its recoverable amount. The Board acknowledged that non-amortisation of an intangible asset increases the reliance that must be placed on impairment reviews of that asset to ensure that its carrying amount does not exceed its recoverable amount.

BC122. Accordingly, the Exposure Draft proposed that indefinite-lived intangibles should be tested for impairment at the end of each annual reporting period. The Board concluded, however, that testing such assets annually for impairment is not a substitute for management being aware of events occurring or circumstances changing between annual tests that indicate a possible impairment. Therefore, the Exposure Draft also proposed that an entity should be required to test such assets for impairment whenever there is an indication of possible impairment, and not wait until the next annual test.

BC123. The respondents to the Exposure Draft generally supported the proposal to test indefinite-lived intangibles for impairment annually and whenever there is an indication of possible impairment. Those that disagreed argued that requiring an annual impairment test would be excessively burdensome, and recommended requiring an impairment test only when there is an indication that an indefinite-lived intangible might be impaired. After considering these comments the Board:

- (a) reaffirmed its view that non-amortisation of an intangible asset increases the reliance that must be placed on impairment reviews of that asset to ensure that its carrying amount does not exceed its recoverable amount.
- (b) concluded that IAS 36 should require indefinite-lived intangibles to be tested for impairment annually and whenever there is an indication of possible impairment.

BC124. However, as noted in paragraph BC122, the Exposure Draft proposed that the annual impairment tests for indefinite-lived intangibles should be performed at the end of each annual period. Many respondents to the Exposure Draft disagreed that IAS 36 should mandate the timing of the annual impairment tests. They argued that:

- (a) it would be inconsistent with the proposal (now a requirement) that the annual impairment test for a cash-generating unit to which goodwill has been allocated may be performed at any time during an annual period, provided the test is performed at the same time every year. There is no justification for providing less flexibility in the timing of the annual impairment test for indefinite-lived intangibles.
- (b) if the impairment test for an indefinite-lived intangible is linked to the impairment test for goodwill (ie if the indefinite-lived intangible is assessed for impairment at the same cash-generating unit level as goodwill, rather than individually or as part of a smaller cash-generating unit), the requirement to measure its recoverable amount at the end of the annual period could result in the cash-generating unit to which it (and the goodwill) belongs being tested for impairment at least twice each annual period, which is too burdensome. For example, assume a cash-generating unit contains goodwill and an indefinite-lived intangible, and that the indefinite-lived intangible is assessed for impairment at the same cash-generating unit level as goodwill. Assume also that the entity reports quarterly, has a December year-end, and decides to test goodwill for impairment at the end of the third quarter to coincide with the completion of its annual strategic planning/budgeting process. The proposal that the annual impairment test for an indefinite-lived intangible should be performed at the end of each annual period would mean that the entity would be required:
 - (i) to calculate at the end of each September the recoverable amount of the cash-generating unit, compare it with its carrying amount, and, if the carrying amount exceeds the recoverable amount, recognise an impairment loss for

the unit by reducing the carrying amount of goodwill and allocating any remaining impairment loss to the other assets in the unit, including the indefinite-lived intangible.

- (ii) to perform the same steps again each December to test the indefinite-lived intangible for impairment.
- (iii) to perform the same steps again at any other time throughout the annual period if there is an indication that the cash-generating unit, the goodwill or the indefinite-lived intangible may be impaired.

BC125. In considering these comments, the Board indicated a preference for requiring entities to perform the recoverable amount calculations for both goodwill and indefinite-lived intangibles at the end of the annual period. However, the Board acknowledged that, as outlined in paragraph BC124(b), impairment tests for indefinite-lived intangibles will sometimes be linked to impairment tests for goodwill, and that many entities would find it difficult to perform all those tests at the end of the annual period.

BC126. Therefore, consistently with the annual impairment test for goodwill, the Standard permits the annual impairment test for an indefinite-lived intangible to be performed at any time during an annual period, provided it is performed at the same time every year.

Carrying forward a recoverable amount calculation (paragraph 24)

BC127. The Standard permits the most recent detailed calculation of the recoverable amount of an indefinite-lived intangible to be carried forward from a preceding period for use in the current period's impairment test, provided all of the criteria in paragraph 24 of the Standard are met.

BC128. Integral to the Board's decision that indefinite-lived intangibles should be tested for impairment annually was the view that many entities should be able to conclude that the recoverable amount of such an asset is greater than its carrying amount without actually recomputing recoverable amount. However, the Board concluded that this would be the case only if the last recoverable amount determination exceeded the carrying amount by a substantial margin, and nothing had happened since then to make the likelihood of an impairment loss other than remote. The Board concluded that, in such circumstances, permitting a detailed calculation of the recoverable amount of an indefinite-lived intangible to be carried forward from the preceding period for use in the current period's impairment test would significantly reduce the costs of applying the impairment test, without compromising its integrity.

Measuring recoverable amount and accounting for impairment losses and reversals of impairment losses

- BC129. The Board could see no compelling reason why the measurement basis adopted for determining recoverable amount and the treatment of impairment losses and reversals of impairment losses for one group of identifiable assets should differ from those applying to other identifiable assets. Adopting different methods would impair the usefulness of the information provided to users about an entity's identifiable assets, because both comparability and reliability, which rest on the notion that similar transactions are accounted for in the same way, would be diminished. Therefore, the Board concluded that the recoverable amounts of indefinite-lived intangibles should be measured, and impairment losses and reversals of impairment losses in respect of those assets should be accounted for, consistently with other identifiable assets covered by the Standard.
- BC130. The Board expressed some concern over the measurement basis adopted in the previous version of IAS 36 for determining recoverable amount (ie higher of value in use and net selling price) and its treatment of impairment losses and reversals of impairment losses for assets other than goodwill. However, the Board's intention in revising IAS 36 was *not* to reconsider the general approach to impairment testing. Accordingly, the Board decided that it should address concerns over that general approach as part of its future re-examination of IAS 36 in its entirety, rather than as part of its Business Combinations project.

Testing goodwill for impairment (paragraphs 80-99)

- BC131. The Board concluded that if a rigorous and operational impairment test could be devised, more useful information would be provided to users of an entity's financial statements under an approach in which goodwill is not amortised, but is instead tested for impairment annually or more frequently if events or changes in circumstances indicate that the goodwill might be impaired. An outline of the Board's deliberations in reaching this conclusion is provided in the Basis for Conclusions on IFRS 3 *Business Combinations*.
- BC132. Paragraphs BC133-BC177 outline the Board's deliberations on the form that the impairment test for goodwill should take:
- (a) paragraphs BC137-BC159 discuss the requirements relating to the allocation of goodwill to cash-generating units and the level at which goodwill is tested for impairment.
 - (b) paragraphs BC160-BC170 discuss the requirements relating to the recognition and measurement of impairment losses for goodwill, including the frequency of impairment testing.
 - (c) paragraphs BC171-BC177 discuss the requirements relating to the timing of goodwill impairment tests.

- BC133. As a first step in its deliberations, the Board considered the objective of the goodwill impairment test and the measure of recoverable amount that should be adopted for such a test. The Board observed that recent North American standards use fair value as the basis for impairment testing goodwill, whereas the previous version of IAS 36 and the United Kingdom standard are based on an approach under which recoverable amount is measured as the higher of value in use and net selling price.
- BC134. The Board also observed that goodwill acquired in a business combination represents a payment made by an acquirer in anticipation of future economic benefits from assets that are not capable of being individually identified and separately recognised. Goodwill does not generate cash flows independently of other assets or groups of assets and therefore cannot be measured directly. Instead, it is measured as a residual amount, being the excess of the cost of a business combination over the acquirer's interest in the net fair value of the acquiree's identifiable assets, liabilities and contingent liabilities. Moreover, goodwill acquired in a business combination and goodwill generated after that business combination cannot be separately identified, because they contribute jointly to the same cash flows.
- BC135. The Board concluded that because it is not possible to measure separately goodwill generated internally after a business combination and to factor that measure into the impairment test for acquired goodwill, the carrying amount of goodwill will always be shielded from impairment by that internally generated goodwill. Therefore, the Board took the view that the objective of the goodwill impairment test could at best be to ensure that the carrying amount of goodwill is recoverable from future cash flows expected to be generated by both acquired goodwill and goodwill generated internally after the business combination.
- BC136. The Board noted that because goodwill is measured as a residual amount, the starting point in any goodwill impairment test would have to be the recoverable amount of the operation or unit to which the goodwill relates, regardless of the measurement basis adopted for determining recoverable amount. The Board decided that until it considers and resolves the broader question of the appropriate measurement objective(s) in accounting, identifying the appropriate measure of recoverable amount for that unit would be problematic. Therefore, although the Board expressed concern over the measurement basis adopted in IAS 36 for determining recoverable amount, it decided that it should not depart from that basis when measuring the recoverable amount of a unit whose carrying amount includes acquired goodwill. The Board noted that this would have the added advantage of allowing the impairment test for goodwill to be integrated with the impairment test in IAS 36 for other assets and cash-generating units that include goodwill.

Allocating goodwill to cash-generating units (paragraphs 80-87)

BC137. The previous version of IAS 36 required goodwill to be tested for impairment as part of impairment testing the cash-generating units to which it relates. It employed a ‘bottom-up/top-down’ approach under which the goodwill was in effect tested for impairment by allocating its carrying amount to each of the smallest cash-generating units to which a portion of that carrying amount could be allocated on a reasonable and consistent basis.

BC138. Consistently with the previous version of IAS 36, the Exposure Draft proposed that:

- (a) goodwill should be tested for impairment as part of impairment testing the cash-generating units to which it relates; and
- (b) the carrying amount of goodwill should be allocated to each of the smallest cash-generating units to which a portion of that carrying amount can be allocated on a reasonable and consistent basis.

However, the Exposure Draft proposed additional guidance clarifying that a portion of the carrying amount of goodwill should be regarded as capable of being allocated to a cash-generating unit on a reasonable and consistent basis only when that unit represents the lowest level at which management monitors the return on investment in assets that include the goodwill. That cash-generating unit could not, however, be larger than a segment based on the entity’s primary reporting format determined in accordance with IAS 14 *Segment Reporting*.

BC139. In developing this proposal, the Board noted that because acquired goodwill does not generate cash flows independently of other assets or groups of assets, it can be tested for impairment only as part of impairment testing the cash-generating units to which it relates. However, the Board was concerned that in the absence of any guidance on the precise meaning of ‘allocated on a reasonable and consistent basis’, some might conclude that when a business combination enhances the value of all of the acquirer’s pre-existing cash-generating units, any goodwill acquired in that business combination should be tested for impairment only at the level of the entity itself. The Board concluded that this should not be the case. Rather, there should be a link between the level at which goodwill is tested for impairment and the level of internal reporting that reflects the way an entity manages its operations and with which the goodwill naturally would be associated. Therefore, it was important to the Board that goodwill should be tested for impairment at a level at which information about the operations of an entity and the assets that support them is provided for internal reporting purposes.

BC140. In redeliberating this issue, the Board noted that respondents’ and field visit participants’ comments indicated that the Board’s intention relating to the allocation of goodwill had been widely misunderstood, with many concluding that goodwill would need to be allocated to a much lower level than that intended by the Board. For example, some respondents and field visit participants were concerned that the proposal to allocate goodwill to such a low level would force entities to allocate goodwill arbitrarily to cash-generating units, and therefore to

develop new or additional reporting systems to perform the test. The Board confirmed that its intention was that there should be a link between the level at which goodwill is tested for impairment and the level of internal reporting that reflects the way an entity manages its operations. Therefore, except for entities that do not monitor goodwill at or below the segment level, the proposals relating to the level of the goodwill impairment test should *not* cause entities to allocate goodwill arbitrarily to cash-generating units. Nor should they create the need for entities to develop new or additional reporting systems.

- BC141. The Board observed from its discussions with field visit participants that much of the confusion stemmed from the definition of a ‘cash-generating unit’, when coupled with the proposal in paragraph 73 of the Exposure Draft for goodwill to be allocated to each “smallest cash-generating unit to which a portion of the carrying amount of the goodwill can be allocated on a reasonable and consistent basis”. Additionally, field visit participants and respondents were unclear about the reference in paragraph 74 of the Exposure Draft to “the lowest level at which management monitors the return on investments in assets that include goodwill”, the most frequent question being “what level of management?” (eg board of directors, chief executive officer, or segment management).
- BC142. The Board noted that once its intention on this issue was clarified for field visit participants, they all, with the exception of one company that believes goodwill should be tested for impairment at the entity level, supported the level at which the Board believes goodwill should be tested for impairment.
- BC143. The Board also noted the comment from a number of respondents and field visit participants that for some organisations, particularly those managed on a matrix basis, the proposal for cash-generating units to which the goodwill is allocated to be no larger than a segment based on the entity’s *primary* reporting format could result in an outcome that is inconsistent with the Board’s intention, ie that there should be a link between the level at which goodwill is tested for impairment and the level of internal reporting that reflects the way an entity manages its operations. The following example illustrates this point:

A company managed on a matrix basis is organised primarily on a geographical basis, with product groups providing the secondary basis of segmentation. Goodwill is acquired as part of an acquisition of a product group that is present in several geographical regions, and is then monitored on an ongoing basis for internal reporting purposes as part of the product group/secondary segment. It is feasible that the secondary segment might, depending on the definition of ‘larger’, be ‘larger’ than a primary segment.

- BC144. Therefore, the Board decided:
- (a) that the Standard should require each unit or group of units to which goodwill is allocated to represent the lowest level within the entity at which the goodwill is monitored for internal management purposes.

- (b) to clarify in the Standard that acquired goodwill should, from the acquisition date, be allocated to each of the acquirer's cash-generating units, or groups of cash-generating units, that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units or groups of units.
- (c) to replace the proposal for cash-generating units or groups of units to which goodwill is allocated to be no larger than a segment based on the entity's *primary* reporting format, with the requirement that they be no larger than a segment based on either the entity's primary or the entity's secondary reporting format. The Board concluded that this amendment is necessary to ensure that entities managed on a matrix basis are able to test goodwill for impairment at the level of internal reporting that reflects the way they manage their operations.

BC145. Some respondents to the Exposure Draft raised the following additional concerns on the allocation of goodwill for impairment testing purposes:

- (a) mandating that goodwill should be allocated to at least the segment level is inappropriate—it will often result in arbitrary allocations, and entities would need to develop new or additional reporting systems.
- (b) for convergence reasons, the level of the goodwill impairment test should be the same as the level in US Financial Accounting Standards Board Statement of Financial Accounting Standards No. 142 *Goodwill and Other Intangible Assets* (SFAS 142) (ie the reporting unit level).
- (c) cash-generating units that constitute businesses with similar characteristics should, as is required by SFAS 142, be aggregated and treated as single units, notwithstanding that they may be monitored independently for internal purposes.

BC146. In relation to (a), the Board reaffirmed the conclusion it reached when developing the Exposure Draft that requiring goodwill to be allocated to at least the segment level is necessary to avoid entities erroneously concluding that, when a business combination enhances the value of all of the acquirer's pre-existing cash-generating units, any goodwill acquired in that combination could be tested for impairment only at the level of the entity itself.

BC147. In relation to (b), the Board noted that SFAS 142 requires goodwill to be tested for impairment at a level of reporting referred to as a 'reporting unit'. A reporting unit is an operating segment (as defined in SFAS 131 *Disclosures about Segments of an Enterprise and Related Information*^{*}) or one level below an operating

* The basis for identifying 'operating segments' under SFAS 131 differs from the basis for identifying segments based on the entity's primary reporting format under IAS 14. SFAS 131 defines an operating segment as a component of an enterprise (a) that engages in business activities from which it may earn revenues and incur expenses, including revenues and expenses relating to transactions with other components of the enterprise; (b) whose operating results are regularly reviewed by the enterprise's chief operating decision maker to make decisions about resources to be allocated to the segment and assess its performance; and (c) for which discrete financial information is available.

segment (referred to as a component). A component of an operating segment is a reporting unit if the component constitutes a business for which discrete financial information is available and segment management regularly reviews the operating results of that component. However, two or more components of an operating segment must be aggregated and deemed a single reporting unit if the components have similar economic characteristics. An operating segment is deemed to be a reporting unit if all of its components are similar, if none of its components is a reporting unit, or if it comprises only a single component.

BC148. Therefore, unlike IAS 36, SFAS 142 places a limit on how far goodwill can be 'pushed down' for impairment testing (ie one level below an operating segment).

BC149. In deciding not to converge with SFAS 142 on the level of the goodwill impairment test, the Board noted the following findings from the field visits and North American round-table discussions:

(a) most of the US registrant field visit participants stated that the Board's proposals on the level of the goodwill impairment test would result, in practice, in goodwill being tested for impairment at the same level at which it is tested in accordance with SFAS 142. However, several stated that under the Board's proposals, goodwill would be tested for impairment at a lower level than under SFAS 142. Nevertheless, they believe that the Board's approach provides users and management with more useful information.

(b) several round-table participants stated that they (or, in the case of audit firm participants, their clients) manage and have available information about their investments in goodwill at a lower level than the level of the SFAS 142 impairment test. They expressed a high level of dissatisfaction at being prevented by SFAS 142 from recognising goodwill impairments that they knew existed at these lower levels, but which 'disappeared' once the lower level units were aggregated with other units containing sufficient 'cushions' to offset the impairment loss.

BC150. In considering suggestion (c) in paragraph BC145, the Board observed that aggregating units that constitute businesses with similar characteristics could result in the disappearance of an impairment loss that management *knows* exists in a cash-generating unit because the units with which it is aggregated contain sufficient cushions to offset the impairment loss. In the Board's view, if, because of the way an entity is managed, information about goodwill impairment losses is available to management at a particular level, that information should also be available to the users of the entity's financial statements.

Completing the initial allocation of goodwill (paragraphs 84 and 85)

BC151. If the initial allocation of goodwill acquired in a business combination cannot be completed before the end of the annual period in which the business combination is effected, the Exposure Draft proposed, and the revised Standard requires, that the initial allocation should be completed before the end of the first annual period

beginning after the acquisition date. In contrast, ED 3 proposed, and IFRS 3 requires, that if the initial accounting for a business combination can be determined only provisionally by the end of the period in which the combination is effected, the acquirer should:

- (a) account for the combination using those provisional values; and
- (b) recognise any adjustments to those provisional values as a result of completing the initial accounting within twelve months of the acquisition date.

BC152. Some respondents to the Exposure Draft questioned why the period to complete the initial allocation of goodwill should differ from the period to complete the initial accounting for a business combination. The Board's view is that acquirers should be allowed a longer period to complete the goodwill allocation, because that allocation often might not be able to be performed until after the initial accounting for the combination is complete. This is because the cost of the combination or the fair values at the acquisition date of the acquiree's identifiable assets, liabilities or contingent liabilities, and therefore the amount of goodwill acquired in the combination, would not be finalised until the initial accounting for the combination in accordance with IFRS 3 is complete.

Disposal of a portion of a cash-generating unit containing goodwill (paragraph 86)

BC153. The Exposure Draft proposed that when an entity disposes of an operation within a cash-generating unit to which goodwill has been allocated, the goodwill associated with that operation should be:

- (a) included in the carrying amount of the operation when determining the gain or loss on disposal; and
- (b) measured on the basis of the relative values of the operation disposed of and the portion of the cash-generating unit retained.

BC154. This proposal has been carried forward in the Standard with one modification. The Standard requires the goodwill associated with the operation disposed of to be measured on the basis of the relative values of the operation disposed of and the portion of the cash-generating unit retained, unless the entity can demonstrate that some other method better reflects the goodwill associated with the operation disposed of.

BC155. In developing the Exposure Draft, the Board concluded that the proposed level of the impairment test would mean that goodwill could not be identified or associated with an asset group at a level lower than the cash-generating unit to which the goodwill is allocated, except arbitrarily. However, the Board also concluded that when an operation within that cash-generating unit is being disposed of, it is appropriate to presume that some amount of goodwill is associated with that operation. Thus, an allocation of the goodwill should be required when the part of the cash-generating unit being disposed of constitutes an operation.

BC156. Some respondents to the Exposure Draft suggested that although in most circumstances goodwill could not be identified or associated with an asset group at a level lower than the cash-generating unit or group of cash-generating units to which it is allocated for impairment testing, there may be some instances when this is not so. For example, assume an acquiree is integrated with one of the acquirer's pre-existing cash-generating units that did not include any goodwill in its carrying amount. Assume also that almost immediately after the business combination the acquirer disposes of a loss-making operation within the cash-generating unit. The Board agreed with respondents that in such circumstances, it might reasonably be concluded that no part of the carrying amount of goodwill has been disposed of, and therefore no part of its carrying amount should be derecognised by being included in the determination of the gain or loss on disposal.

Reorganisation of reporting structure (paragraph 87)

BC157. The Exposure Draft proposed that when an entity reorganises its reporting structure in a way that changes the composition of cash-generating units to which goodwill has been allocated, the goodwill should be reallocated to the units affected using a relative value approach similar to that used when an entity disposes of an operation within a cash-generating unit.

BC158. In developing the Exposure Draft, the Board concluded that a reorganisation that changes the composition of a cash-generating unit to which goodwill has been allocated gives rise to the same allocation problem as disposing of an operation within that unit. Therefore, the same allocation methodology should be used in both cases.

BC159. As a result, and consistently with the Board's decision to modify its proposal on allocating goodwill when an entity disposes of an operation, the revised Standard requires an entity that reorganises its reporting structure in a way that changes the composition of one or more cash-generating units to which goodwill has been allocated:

- (a) to reallocate the goodwill to the units affected; and
- (b) to perform this reallocation using a relative value approach similar to that used when an entity disposes of an operation within a cash-generating unit (group of cash-generating units), unless the entity can demonstrate that some other method better reflects the goodwill associated with the reorganised units (groups of units).

Recognition and measurement of impairment losses (paragraphs 88-99 and 104)

Background to the proposals in the Exposure Draft

- BC160. The Exposure Draft proposed a two-step approach for impairment testing goodwill. The first step involved using a screening mechanism for identifying potential goodwill impairments, whereby goodwill allocated to a cash-generating unit would be identified as potentially impaired only when the carrying amount of the unit exceeded its recoverable amount. If an entity identified the goodwill allocated to a cash-generating unit as potentially impaired, an entity would then determine whether the goodwill allocated to the unit was impaired by comparing its recoverable amount, measured as the 'implied value' of the goodwill, with its carrying amount. The implied value of goodwill would be measured as a residual, being the excess of:
- (a) the recoverable amount of the cash-generating unit to which the goodwill has been allocated, over
 - (b) the net fair value of the identifiable assets, liabilities and contingent liabilities the entity would recognise if it acquired the cash-generating unit in a business combination on the date of the impairment test (excluding any identifiable asset that was acquired in a business combination but not recognised separately from goodwill at the acquisition date).
- BC161. In developing the Exposure Draft, the Board's discussion focused first on how the recoverable amount of goodwill allocated to a cash-generating unit could be separated from the recoverable amount of the unit as a whole, given that goodwill generated internally after a business combination could not be measured separately. The Board concluded that a method similar to the method an acquirer uses to allocate the cost of a business combination to the net assets acquired could be used to measure the recoverable amount of goodwill after its initial recognition. Thus, the Board decided that some measure of the net assets of a cash-generating unit to which goodwill has been allocated should be subtracted from the recoverable amount of that unit to determine a current implied value for the goodwill. The Board concluded that the measure of the net assets of a cash-generating unit described in paragraph BC160(b) would result in the best estimate of the current implied value of the goodwill, given that goodwill generated internally after a business combination could not be measured separately.
- BC162. Having decided on the most appropriate measure of the recoverable amount of goodwill, the Board then considered how often an entity should be required to test goodwill for impairment. Consistently with its conclusions about indefinite-lived intangibles, the Board concluded that non-amortisation of goodwill increases the reliance that must be placed on impairment tests to ensure that the carrying amount of goodwill does not exceed its recoverable amount. Accordingly, the Board decided that goodwill should be tested for impairment annually. However, the Board also concluded that the annual test is not a substitute for management

being aware of events occurring or circumstances changing between annual tests indicating a possible impairment of goodwill. Therefore, the Board decided that an entity should also be required to test goodwill for impairment whenever there is an indication of possible impairment.

- BC163. After the Board decided on the frequency of impairment testing, it expressed some concern that the proposed test would not be cost-effective. This concern related primarily to the requirement to determine the fair value of each identifiable asset, liability and contingent liability within a cash-generating unit that would be recognised by the entity if it had acquired the cash-generating unit in a business combination on the date of the impairment test (to estimate the implied value of goodwill).
- BC164. Therefore, the Board decided to propose as a first step in the impairment test for goodwill a screening mechanism similar to that in SFAS 142. Under SFAS 142, goodwill is tested for impairment by first comparing the fair value of the reporting unit to which the goodwill has been allocated for impairment testing purposes with the carrying amount of that unit. If the fair value of the unit exceeds its carrying amount, the goodwill is regarded as not impaired. An entity need estimate the implied fair value of goodwill (using an approach consistent with that described in paragraph BC160) only if the fair value of the unit is less than its carrying amount.

The Board's redeliberations

- BC165. Many respondents disagreed with the proposal to adopt a two-step approach to impairment testing goodwill. In particular, the second step of the proposed impairment test and the method for measuring any impairment loss for the goodwill caused considerable concern. Respondents provided the following conceptual arguments against the proposed approach:
- (a) by drawing on only some aspects of the SFAS 142 two-step approach, the result is a hybrid between fair values and value in use. More particularly, not measuring goodwill's implied value as the difference between the unit's fair value and the net fair value of the identifiable net assets in the unit, but instead measuring it as the difference between the unit's recoverable amount (ie higher of value in use and fair value less costs to sell) and the net fair value of the identifiable net assets in the unit, results in a measure of goodwill that conceptually is neither fair value nor recoverable amount. This raises questions about the conceptual validity of measuring goodwill impairment losses as the difference between goodwill's implied value and carrying amount.
 - (b) it seems inconsistent to consider goodwill separately for impairment testing when other assets within a unit are not considered separately but are instead considered as part of the unit as a whole, particularly given that goodwill, unlike many other assets, cannot generate cash inflows independently of other assets. The previous version of IAS 36 is premised on the notion that if a series of independent cash flows can be generated only by a group of assets

operating together, impairment losses should be considered only for that group of assets as a whole—individual assets within the group should not be considered separately.

- (c) concluding that the recoverable amount of goodwill—which cannot generate cash inflows independently of other assets—should be measured separately for measuring impairment losses makes it difficult to understand how the Board could in the future reasonably conclude that such an approach to measuring impairment losses is also not appropriate for other assets. In other words, if it adopts the proposed two-step approach for goodwill, the Board could in effect be committing itself to an ‘individual asset/fair value’ approach for measuring impairments of all other assets. A decision on this issue should be made only as part of a broad reconsideration of the appropriate measurement objective for impairment testing generally.
- (d) if goodwill is considered separately for impairment testing using an implied value calculation when other assets within a unit are considered only as part of the unit as a whole, there will be asymmetry: unrecognised goodwill will shield the carrying value of other assets from impairment, but the unrecognised value of other assets will not shield the carrying amount of goodwill from impairment. This seems unreasonable given that the unrecognised value of those other assets cannot then be recognised. Additionally, the carrying amount of a unit will be less than its recoverable amount whenever an impairment loss for goodwill exceeds the unrecognised value of the other assets in the unit.

BC166. Additionally, respondents, field visit participants and North American round-table participants raised the following concerns about the practicability and costs of applying the proposed two-step approach:

- (a) many companies would be required regularly to perform the second step of the impairment test, and therefore would need to determine the fair values of each identifiable asset, liability and contingent liability within the impaired unit(s) that the entity would recognise if it acquired the unit(s) in a business combination on the date of the impairment test. Although determining these fair values would not, for some companies, pose significant practical challenges (because, for example, fair value information for their significant assets is readily available), most would need to engage, on a fairly wide scale and at significant cost, independent valuers for some or all of the unit’s assets. This is particularly the case for identifying and measuring the fair values of unrecognised internally generated intangible assets.
- (b) determining the fair values of each identifiable asset, liability and contingent liability within an impaired unit is likely to be impracticable for multi-segmented manufacturers that operate multi-product facilities servicing more than one cash-generating unit. For example, assume an entity’s primary basis of segmentation is geographical (eg Europe, North America, South America, Asia, Oceania and Africa) and that its secondary

basis of segmentation is based on product groups (vaccinations, over-the-counter medicines, prescription medicines and vitamins/dietary supplements). Assume also that:

- (i) the lowest level within the entity at which the goodwill is monitored for internal management purposes is one level below primary segment (eg the vitamins business in North America), and that goodwill is therefore tested for impairment at this level;
- (ii) the plants and distribution facilities in each geographical region manufacture and distribute for all product groups; and
- (iii) to determine the carrying amount of each cash-generating unit containing goodwill, the carrying amount of each plant and distribution facility has been allocated between each product group it services.

If, for example, the recoverable amount of the North American vitamins unit were less than its carrying amount, measuring the implied value of goodwill in that unit would require a valuation exercise to be undertaken for *all* North American assets so that a portion of each asset's fair value can then be allocated to the North American vitamins unit. These valuations are likely to be extremely costly and virtually impossible to complete within a reasonable time period (field visit participants' estimates ranged from six to twelve months). The degree of impracticability will be even greater for those entities that monitor, and therefore test, goodwill at the segment level.

BC167. In considering the above comments, the Board noted that:

- (a) all of the US registrant field visit participants and North American round-table participants that have had to perform the second step of the SFAS 142 impairment test were compelled to engage, at significant cost, independent valuers.
- (b) the impairment model proposed in the Exposure Draft, although based on the two-step approach in SFAS 142, differed from the SFAS 142 test and would be unlikely to result in convergence for the following reasons:
 - (i) the recoverable amount of a unit to which goodwill is allocated in accordance with IAS 36 would be the higher of the unit's value in use and fair value less costs to sell, rather than fair value. Many of the US registrant field visit participants stated that the measure of recoverable amount they would use under IAS 36 would differ from the fair value measure they would be required to use under SFAS 142.
 - (ii) the level at which goodwill is tested for impairment in accordance with SFAS 142 will often be higher than the level at which it would be tested under IAS 36. Many of the US registrant field visit participants stated that goodwill would be tested for impairment in accordance with IAS 36 at a lower level than under SFAS 142 because of either: (1) the limit SFAS 142 places on how far goodwill can be 'pushed down' for impairment testing (ie one level below an operating segment); or (2) the requirement in SFAS 142 to aggregate components with similar economic characteristics. Nevertheless, these participants unanimously agreed that the IAS 36 approach provides users and management with more useful information.

The Board also noted that many of the North American round-table participants stated that they (or, in the case of audit firm participants, their clients) manage and have available information about their investments in goodwill at a level lower than a reporting unit as defined in SFAS 142. Many of these participants expressed a high level of dissatisfaction at being prevented by SFAS 142 from recognising goodwill impairments that they knew existed at these lower levels, but ‘disappeared’ once the lower level units were aggregated with other units containing sufficient ‘cushions’ to offset the impairment loss.

- BC168. The Board also noted that, unlike SFAS 142, it had as its starting point an impairment model in IAS 36 that integrates the impairment testing of *all* assets within a cash-generating unit, including goodwill. Unlike US generally accepted accounting principles (GAAP), which use an undiscounted cash flow screening mechanism for impairment testing long-lived assets other than goodwill, IAS 36 requires the recoverable amount of an asset or cash-generating unit to be measured whenever there is an indication of possible impairment. Therefore, if at the time of impairment testing a ‘larger’ unit to which goodwill has been allocated there is an indication of a possible impairment in an asset or ‘smaller’ cash-generating unit included in that larger unit, an entity is required to test that asset or smaller unit for impairment first. Consequently, the Board concluded that it would be reasonable in an IAS 36 context to presume that an impairment loss for the larger unit would, after all other assets and smaller units are assessed for impairment, be likely to relate to the goodwill in the unit. Such a presumption would not be reasonable if an entity were following US GAAP.
- BC169. The Board considered converging fully with the SFAS 142 approach. However, although supporting convergence, the Board was concerned that the SFAS 142 approach would not provide better information than an approach under which goodwill is tested for impairment at a lower level (thereby removing many of the ‘cushions’ protecting the goodwill from impairment) but with the amount of any impairment loss for goodwill measured in accordance with the one-step approach in the previous version of IAS 36.
- BC170. The Board concluded that the complexity and costs of applying the two-step approach proposed in the Exposure Draft would outweigh the benefits of that approach. Therefore, the Board decided to retain the approach to measuring impairments of goodwill included in the previous version of IAS 36. Thus, the Standard requires any excess of the carrying amount of a cash-generating unit (group of units) to which goodwill has been allocated over its recoverable amount to be recognised first as an impairment loss for goodwill. Any excess remaining after the carrying amount of goodwill has been reduced to zero is then recognised by being allocated to the other assets of the unit pro rata with their carrying amounts.

Timing of impairment tests (paragraphs 96-99)

- BC171. To reduce the costs of applying the test, and consistently with the proposals in the Exposure Draft, the Standard permits the annual impairment test for a cash-generating unit (group of units) to which goodwill has been allocated to be performed at any time during an annual period, provided the test is performed at the same time every year. Different cash-generating units (groups of units) may be tested for impairment at different times. However, if some or all of the goodwill allocated to a unit (group of units) was acquired in a business combination during the current annual period, that unit (group of units) must be tested for impairment before the end of the current annual period.
- BC172. The Board observed that acquirers can sometimes ‘overpay’ for an acquiree, resulting in the amount initially recognised for the business combination and the resulting goodwill exceeding the recoverable amount of the investment. The Board concluded that the users of an entity’s financial statements are provided with representationally faithful, and therefore useful, information about a business combination if such an impairment loss is recognised by the acquirer in the annual period in which the business combination occurs.
- BC173. The Board was concerned that it might be possible for entities to delay recognising such an impairment loss until the annual period after the business combination if the Standard included only a requirement to impairment test cash-generating units (groups of units) to which goodwill has been allocated on an annual basis at any time during a period. Therefore, the Board decided to include in the Standard the added requirement that if some or all of the goodwill allocated to a unit (group of units) was acquired in a business combination during the current annual period, the unit (group of units) should be tested for impairment before the end of that period.

Sequence of impairment tests (paragraph 97)

- BC174. The Standard requires that if the assets (cash-generating units) constituting the cash-generating unit (group of units) to which goodwill has been allocated are tested for impairment at the same time as the unit (group of units) containing the goodwill, those other assets (units) should be tested for impairment before the unit (group of units) containing the goodwill.
- BC175. The Board observed that assets or cash-generating units making up a unit or group of units to which goodwill has been allocated might need to be tested for impairment at the same time as the unit or group of units containing the goodwill when there is an indication of a possible impairment of the asset or smaller unit. The Board concluded that to assess whether the unit or group of units containing the goodwill, and therefore whether the goodwill, is impaired, the carrying amount of the unit or group of units containing the goodwill would need first to be adjusted by recognising any impairment losses relating to the assets or smaller units within that unit or group of units.

Carrying forward a recoverable amount calculation (paragraph 99)

- BC176. Consistently with the impairment test for indefinite-lived intangibles, the Standard permits the most recent detailed calculation of the recoverable amount of a cash-generating unit (group of units) to which goodwill has been allocated to be carried forward from a preceding period for use in the current period's impairment test, provided all of the criteria in paragraph 99 are met.
- BC177. Integral to the Board's decision that goodwill should be tested for impairment annually was the view that many entities should be able to conclude that the recoverable amount of a cash-generating unit (group of units) to which goodwill has been allocated is greater than its carrying amount without actually recomputing recoverable amount. However, again consistently with its conclusions about indefinite-lived intangibles, the Board concluded that this would be the case only if the last recoverable amount determination exceeded the carrying amount of the unit (group of units) by a substantial margin, and nothing had happened since that last determination to make the likelihood of an impairment loss other than remote. The Board concluded that in such circumstances, permitting a detailed calculation of the recoverable amount of a cash-generating unit (group of units) to which goodwill has been allocated to be carried forward from the preceding period for use in the current period's impairment test would significantly reduce the costs of applying the impairment test, without compromising its integrity.

Allocating an impairment loss between the assets of a cash-generating unit (paragraphs 104-107)

- BCZ178. IAS 36 includes requirements for the allocation of an impairment loss for a cash-generating unit that differ from the proposals in E55. In particular, E55 proposed that an impairment loss should be allocated:
- (a) first, to goodwill;
 - (b) secondly, to intangible assets for which no active market exists;
 - (c) thirdly, to assets whose net selling price* is less than their carrying amount; and
 - (d) then, to the other assets of the unit on a pro-rata basis based on the carrying amount of each asset in the unit.
- BCZ179. The underlying reasons for making this proposal were that:
- (a) an impairment loss for a cash-generating unit should be allocated, in priority, to assets with the most subjective values. Goodwill and intangible assets for which there is no active market were considered to be in that category.

* In IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*, issued by the IASB in 2004, the term, 'net selling price' was replaced in IAS 36 by 'fair value less costs to sell'.

Intangible assets for which there is no active market were considered to be similar to goodwill (IASB was thinking of brand names, publishing titles etc).

- (b) if the net selling price of an asset is less than its carrying amount, this was considered a reasonable basis for allocating part of the impairment loss to that asset rather than to other assets.

BCZ180. Many commentators on E55 objected to the proposal on the grounds that:

- (a) not all intangible assets for which no active market exists are similar to goodwill (for example, licences and franchise rights). They disagreed that the value of intangible assets is always more subjective than the value of tangible assets (for example, specialised plant and equipment).
- (b) the concept of cash-generating units implies a global approach for the assets of the units and not an asset-by-asset approach.

In response to these comments, IASB decided to withdraw E55's proposal for the allocation of an impairment loss to intangible assets and assets whose net selling price is less than their carrying amount.

BCZ181. IASB rejected a proposal that an impairment loss for a cash-generating unit should be allocated first to any obviously impaired asset. IASB believed that if the recoverable amount of an obviously impaired asset can be determined for the individual asset, there is no need to estimate the recoverable amount of the asset's cash-generating unit. If the recoverable amount of an individual asset cannot be determined, it cannot be said that the asset is obviously impaired because an impairment loss for a cash-generating unit relates to all of the assets of that unit.

Reversing impairment losses for assets other than goodwill (paragraphs 110-123)

BCZ182. IAS 36 requires that an impairment loss for an asset other than goodwill should be reversed if, and only if, there has been a change in the estimates used to determine an asset's recoverable amount since the last impairment loss was recognised.

BCZ183. Opponents of reversals of impairment losses argue that:

- (a) reversals of impairment losses are contrary to the historical cost accounting system. When the carrying amount is reduced, recoverable amount becomes the new cost basis for an asset. Consequently, reversing an impairment loss is no different from revaluing an asset upward. Indeed, in many cases, recoverable amount is similar to the measurement basis used for the revaluation of an asset. Hence, reversals of impairment losses should be either prohibited or recognised directly in equity as a revaluation.
- (b) reversals of impairment losses introduce volatility in reported earnings. Periodic, short-term income measurements should not be affected by unrealised changes in the measurement of a long-lived asset.

- (c) the result of reversals of impairment losses would not be useful to users of financial statements since the amount of a reversal under IAS 36 is limited to an amount that does not increase the carrying amount of an asset above its depreciated historical cost. Neither the amount reversed nor the revised carrying amount have any information content.
- (d) in many cases, reversals of impairment losses will result in the implicit recognition of internally generated goodwill.
- (e) reversals of impairment losses open the door to abuse and income ‘smoothing’ in practice.
- (f) follow-up to verify whether an impairment loss needs to be reversed is costly.

BCZ184. IASC’s reasons for requiring reversals of impairment losses were the following:

- (a) it is consistent with the *Framework* and the view that future economic benefits that were not previously expected to flow from an asset have been reassessed as probable.
- (b) a reversal of an impairment loss is not a revaluation and is consistent with the historical cost accounting system as long as the reversal does not result in the carrying amount of an asset exceeding its original cost less amortisation/depreciation, had the impairment loss not been recognised. Accordingly, the reversal of an impairment loss should be recognised in the income statement and any amount in excess of the depreciated historical cost should be accounted for as a revaluation.
- (c) impairment losses are recognised and measured based on estimates. Any change in the measurement of an impairment loss is similar to a change in estimate. IAS 8 *Net Profit or Loss for the Period, Fundamental Errors and Changes in Accounting Policies** requires that a change in accounting estimate should be included in the determination of the net profit or loss in (a) the period of the change, if the change affects the period only, or (b) the period of the change and future periods, if the change affects both.
- (d) reversals of impairment losses provide users with a more useful indication of the potential for future benefits of an asset or group of assets.
- (e) results of operations will be more fairly stated in the current period and in future periods because depreciation or amortisation will not reflect a previous impairment loss that is no longer relevant. Prohibition of reversals of impairment losses may lead to abuses such as recording a significant loss one year with the resulting lower amortisation/depreciation charge and higher profits in subsequent years.

BCZ185. The majority of commentators on E55 supported IASC’s proposals for reversals of impairment losses.

* IAS 8 *Net Profit or Loss for the Period, Fundamental Errors and Changes in Accounting Policies* was superseded in 2003 by IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors*.

BCZ186. IAS 36 does not permit an enterprise to recognise a reversal of an impairment loss just because of the unwinding of the discount. IASC supported this requirement for practical reasons only. Otherwise, if an impairment loss is recognised and recoverable amount is based on value in use, a reversal of the impairment loss would be recognised in each subsequent year for the unwinding of the discount. This is because, in most cases, the pattern of depreciation of an asset is different from the pattern of value in use. IASC believed that, when there is no change in the assumptions used to estimate recoverable amount, the benefits from recognising the unwinding of the discount each year after an impairment loss has been recognised do not justify the costs involved. However, if a reversal is recognised because assumptions have changed, the discount unwinding effect is included in the amount of the reversal recognised.

Reversing goodwill impairment losses (paragraph 124)

BC187. Consistently with the proposal in the Exposure Draft, the Standard prohibits the recognition of reversals of impairment losses for goodwill. The previous version of IAS 36 required an impairment loss for goodwill recognised in a previous period to be reversed when the impairment loss was caused by a specific external event of an exceptional nature that was not expected to recur, and subsequent external events had occurred that reversed the effect of that event.

BC188. Most respondents to the Exposure Draft agreed that reversals of impairment losses for goodwill should be prohibited. Those that disagreed argued that reversals of impairment losses for goodwill should be treated in the same way as reversals of impairment losses for other assets, but limited to circumstances in which the impairment loss was caused by specific events beyond the entity's control.

BC189. In revising IAS 36, the Board noted that IAS 38 *Intangible Assets* prohibits the recognition of internally generated goodwill. Therefore, if reversals of impairment losses for goodwill were permitted, an entity would need to establish the extent to which a subsequent increase in the recoverable amount of goodwill is attributable to the recovery of the acquired goodwill within a cash-generating unit, rather than an increase in the internally generated goodwill within the unit. The Board concluded that this will seldom, if ever, be possible. Because the acquired goodwill and internally generated goodwill contribute jointly to the same cash flows, any subsequent increase in the recoverable amount of the acquired goodwill is indistinguishable from an increase in the internally generated goodwill. Even if the specific external event that caused the recognition of the impairment loss is reversed, it will seldom, if ever, be possible to determine that the effect of that reversal is a corresponding increase in the recoverable amount of the acquired goodwill. Therefore, the Board concluded that reversals of impairment losses for goodwill should be prohibited.

- BC190. The Board expressed some concern that prohibiting the recognition of reversals of impairment losses for goodwill so as to avoid recognising internally generated goodwill might be viewed by some as inconsistent with the impairment test for goodwill. This is because the impairment test results in the carrying amount of goodwill being shielded from impairment by internally generated goodwill. This has been described by some as ‘backdoor’ capitalisation of internally generated goodwill.
- BC191. However, the Board was not as concerned about goodwill being shielded from the recognition of impairment losses by internally generated goodwill as it was about the direct recognition of internally generated goodwill that might occur if reversals of impairment losses for goodwill were permitted. As discussed in paragraph BC135, the Board is of the view that it is not possible to devise an impairment test for acquired goodwill that removes the cushion against the recognition of impairment losses provided by goodwill generated internally after a business combination.

Disclosures for cash-generating units containing goodwill or indefinite-lived intangibles (paragraphs 134 and 135)

Background to the proposals in the Exposure Draft

- BC192. The Exposure Draft proposed requiring an entity to disclose a range of information about cash-generating units whose carrying amounts included goodwill or indefinite-lived intangibles. That information included:
- (a) the carrying amount of goodwill and the carrying amount of indefinite-lived intangibles.
 - (b) the basis on which the unit’s recoverable amount had been determined (ie value in use or net selling price).
 - (c) the amount by which the unit’s recoverable amount exceeded its carrying amount.
 - (d) the key assumptions and estimates used to measure the unit’s recoverable amount and information about the sensitivity of that recoverable amount to changes in the key assumptions and estimates.
- BC193. If an entity reports segment information in accordance with IAS 14 *Segment Reporting*, the Exposure Draft proposed that this information should be disclosed in aggregate for each segment based on the entity’s primary reporting format. However, the Exposure Draft also proposed that the information would be disclosed separately for a cash-generating unit when:
- (a) the carrying amount of the goodwill or indefinite-lived intangibles allocated to the unit was significant in relation to the total carrying amount of goodwill or indefinite-lived intangibles; or

- (b) the basis for determining the unit's recoverable amount differed from the basis used for the other units within the segment whose carrying amounts include goodwill or indefinite-lived intangibles; or
- (c) the nature of, or value assigned to the key assumptions or growth rate on which management based its determination of the unit's recoverable amount differed significantly from that used for the other units within the segment whose carrying amounts include goodwill or indefinite-lived intangibles.

BC194. In deciding to propose these disclosure requirements in the Exposure Draft, the Board observed that non-amortisation of goodwill and indefinite-lived intangibles increases the reliance that must be placed on impairment tests of those assets to ensure that their carrying amounts do not exceed their recoverable amounts. However, the nature of impairment tests means that the carrying amounts of such assets and the related assertion that those carrying amounts are recoverable will normally be supported only by management's projections. Therefore, the Board decided to examine ways in which the reliability of the impairment tests for goodwill and indefinite-lived intangibles could be improved. As a first step, the Board considered including a subsequent cash flow test in the revised Standard, similar to that included in UK Financial Reporting Standard 11 *Impairment of Fixed Assets and Goodwill* (FRS 11).

Subsequent cash flow test

BC195. FRS 11 requires an entity to perform a subsequent cash flow test to confirm, ex post, the cash flow projections used to measure a unit's value in use when testing goodwill for impairment. Under FRS 11, for five years following each impairment test for goodwill in which recoverable amount has been based on value in use, the actual cash flows achieved must be compared with those forecast. If the actual cash flows are so much less than those forecast that use of the actual cash flows in the value in use calculation could have required recognition of an impairment in previous periods, the original impairment calculations must be re-performed using the actual cash flows, but without revising any other cash flows or assumptions (except those that change as a direct consequence of the occurrence of the actual cash flows, for example where a major cash inflow has been delayed for a year). Any impairment identified must then be recognised in the current period, unless the impairment has reversed and the reversal of the loss satisfies the criteria in FRS 11 regarding reversals of impairment losses for goodwill.

BC196. The Board noted the following arguments in support of including a similar test in the revised Standard:

- (a) it would enhance the reliability of the goodwill impairment test by preventing the possibility of entities avoiding the recognition of impairment losses by using over-optimistic cash flow projections in the value in use calculations.
- (b) it would provide useful information to users of an entity's financial statements because a record of actual cash flows continually less than forecast cash flows tends to cast doubt on the reliability of current estimates.

BC197. However, the subsequent cash flow test is designed only to prevent entities from avoiding goodwill write-downs. The Board observed that, given current trends in ‘big bath’ restructuring charges, the greater risk to the quality of financial reporting might be from entities trying to write off goodwill without adequate justification in an attempt to ‘manage’ the balance sheet. The Board also observed that:

- (a) the focus of the test on cash flows ignores other elements in the measurement of value in use. As a result, it does not produce representationally faithful results in a present value measurement system. The Board considered incorporating into the recalculation performed under the test corrections of estimates of other elements in the measurement of value in use. However, the Board concluded that specifying which elements to include would be problematic. Moreover, adding corrections of estimates of those other elements to the test would, in effect, transform the test into a requirement to perform a comprehensive recalculation of value in use for each of the five annual reporting periods following an impairment test.
- (b) the amount recognised as an impairment loss under the test is the amount of the impairment that would have been recognised, provided changes in estimates of remaining cash flows and changes in discount and growth rates are ignored. Therefore, it is a hypothetical amount that does not provide decision-useful information—it is neither an estimate of a current amount nor a prediction of ultimate cash flows.
- (c) the requirement to perform the test for each of the five annual reporting periods following an impairment test could result in an entity having to maintain as many as five sets of 5-year computations for each cash-generating unit to which goodwill has been allocated. Therefore, the test is likely to be extremely burdensome, particularly if an entity has a large number of such units, without producing understandable or decision-useful information.

BC198. Therefore, the Board decided not to propose a subsequent cash flow test in the Exposure Draft. However, the Board remained committed to finding some way of improving the reliability of the impairment tests for goodwill and indefinite-lived intangibles, and decided to explore improving that reliability through disclosure requirements.

Including disclosure requirements in the revised Standard

BC199. In developing the Exposure Draft, the Board observed that the *Framework* identifies reliability as one of the key qualitative characteristics that information must possess to be useful to users in making economic decisions. To be reliable, information must be free from material error and bias and be able to be depended upon to represent faithfully that which it purports to represent. The *Framework*

identifies relevance as another key qualitative characteristic that information must possess to be useful to users in making economic decisions. To be relevant, information must help users to evaluate past, present or future events, or confirm or correct their past evaluations.

- BC200. The Board observed that information that assists users in evaluating the reliability of other information included in the financial statements is itself relevant, increasing in relevance as the reliability of that other information decreases. For example, information that assists users in evaluating the reliability of the amount recognised for a provision is relevant because it helps users to evaluate the effect of both a past event (ie the economic consequences of the past event giving rise to the present obligation) and a future event (ie the amount of the expected future outflow of economic benefits required to settle the obligation). Accordingly, IAS 37 *Provisions, Contingent Liabilities and Contingent Assets* requires an entity to disclose, for each class of provision, information about the uncertainties surrounding the amount and timing of expected outflows of economic benefits, and the major assumptions concerning future events that may affect the amount required to settle the obligation and have been reflected in the amount of the provision.
- BC201. The Board concluded that because information that assists users in evaluating the reliability of other information is itself relevant, an entity should disclose information that assists users in evaluating the reliability of the estimates used by management to support the carrying amounts of goodwill and indefinite-lived intangibles.
- BC202. The Board also concluded that such disclosures would provide users with more useful information for evaluating the reliability of the impairment tests for goodwill and indefinite-lived intangibles than the information that would be provided by a subsequent cash flow test.
- BC203. The Board then considered how some balance might be achieved between the objective of providing users with useful information for evaluating the reliability of the estimates used by management to support the carrying amounts of goodwill and indefinite-lived intangibles, and the potential magnitude of those disclosures.
- BC204. The Board decided that a reasonable balance might be achieved between the objective of the disclosures and their potential magnitude by requiring:
- (a) information to be disclosed on an aggregate basis for each segment based on the entity's primary reporting format that includes in its carrying amount goodwill or indefinite-lived intangibles; but
 - (b) information for a particular cash-generating unit within that segment to be excluded from the aggregate information and disclosed separately when either:
 - (i) the basis (ie net selling price or value in use), methodology or key assumptions used to measure its recoverable amount differ from those used to measure the recoverable amounts of the other units in the segment; or

- (ii) the carrying amount of the goodwill or indefinite-lived intangibles in the unit is significant in relation to the total carrying amount of goodwill or indefinite-lived intangibles.

The Board's redeliberations

- BC205. After considering respondents' and field visit participants' comments, the Board confirmed its previous conclusion that information that assists users in evaluating the reliability of other information is itself relevant, increasing in relevance as the reliability of that other information decreases. Therefore, entities should be required to disclose information that assists users in evaluating the reliability of the estimates used by management to support the carrying amounts of goodwill and indefinite-lived intangibles. The Board noted that almost all field visit participants and many respondents expressed explicit support of its conclusion that, because non-amortisation of goodwill and indefinite-lived intangibles increases the reliance that must be placed on impairment tests of those assets, some additional disclosure is necessary to provide users with information for evaluating the reliability of those impairment tests.
- BC206. However, it was clear from field visit participants' responses that the proposed disclosures could not be meaningfully aggregated at the segment level to the extent the Board had hoped might be the case. As a result, the proposal to require the information to be disclosed on an aggregate basis for each segment, but with disaggregated disclosures for cash-generating units in the circumstances set out in paragraph BC193 would not result in a reasonable balance between the objective of the disclosures and their potential magnitude.
- BC207. The Board was also sympathetic to field visit participants' and respondents' concerns that the proposed disclosures went beyond their intended objective of providing users with relevant information for evaluating the reliability of the impairment tests for goodwill and indefinite-lived intangibles. For example, field visit participants and respondents argued that:
- (a) it would be extremely difficult to distil the recoverable amount calculations into concise but meaningful disclosures because those calculations typically are complex and do not normally result in a single point estimate of recoverable amount—a single value for recoverable amount would normally be determined only when the bottom-end of the recoverable amount range is less than a cash-generating unit's carrying amount. These difficulties make it doubtful that the information, particularly the sensitivity analyses, could be produced on a timely basis.
 - (b) disclosing the proposed information, particularly the values assigned to, and the sensitivity of, each key assumption on which recoverable amount calculations are based, could cause significant commercial harm to an entity. Users of financial statements might, for example, use the quantitative disclosures as the basis for initiating litigation against the entity, its board of directors or management in the highly likely event that those assumptions prove less than accurate. The increased litigation risk would either encourage

management to use super-conservative assumptions, thereby resulting in improper asset write-downs, or compel management to engage independent experts to develop all key assumptions and perform the recoverable amount calculations. Additionally, many of the field visit participants expressed concern over the possible impact that disclosing such information might have on their ability to defend themselves in various legal proceedings.

BC208. Therefore, the Board considered the following two interrelated issues:

- (a) if the proposed disclosures went beyond their intended objective, what information *should* be disclosed so that users have sufficient information for evaluating the reliability of impairment tests for goodwill and indefinite-lived intangibles?
- (b) how should this information be presented so that there is an appropriate balance between providing users with information for evaluating the reliability of the impairment tests, and the potential magnitude of those disclosures?

BC209. As a result of its redeliberations, the Board decided:

- (a) not to proceed with the proposal to require information for evaluating the reliability of the impairment tests for goodwill and indefinite-lived intangibles to be disclosed in aggregate for each segment and separately for cash-generating units within a segment in specified circumstances. Instead, the Standard requires this information to be disclosed only for each cash-generating unit (group of units) for which the carrying amount of goodwill or indefinite-lived intangibles allocated to that unit (group of units) is significant in comparison with the entity's total carrying amount of goodwill or indefinite-lived intangibles.
- (b) not to proceed with the proposal to require an entity to disclose the amount by which the recoverable amount of a cash-generating unit exceeds its carrying amount. Instead, the Standard requires an entity to disclose this information only if a reasonably possible change in a key assumption on which management has based its determination of the unit's (group of units') recoverable amount would cause the unit's (group of units') carrying amount to exceed its recoverable amount.
- (c) not to proceed with the proposal to require an entity to disclose the value assigned to each key assumption on which management based its recoverable amount determination, and the amount by which that value must change, after incorporating any consequential effects of that change on the other variables used to measure recoverable amount, in order for the unit's recoverable amount to be equal to its carrying amount. Instead, the Standard requires an entity to disclose a description of each key assumption on which management has based its recoverable amount determination, management's approach to determining the value(s) assigned to each key assumption, whether those value(s) reflect past experience or, if appropriate, are consistent with external sources of information, and, if not, how and why

they differ from past experience or external sources of information. However, if a reasonably possible change in a key assumption would cause the unit's (group of units') carrying amount to exceed its recoverable amount, the entity is also required to disclose the value assigned to the key assumption, and the amount by which that value must change, after incorporating any consequential effects of that change on the other variables used to measure recoverable amount, in order for the unit's (group of units') recoverable amount to be equal to its carrying amount.

- (d) to require information about key assumptions to be disclosed also for any key assumption that is relevant to the recoverable amount determination of multiple cash-generating units (groups of units) that individually contain insignificant amounts of goodwill or indefinite-lived intangibles, but contain, in aggregate, significant amounts of goodwill or indefinite-lived intangibles.

Transitional provisions (paragraphs 138-140)

BC210. If an entity elects to apply IFRS 3 from any date before the effective dates outlined in IFRS 3, it is also required to apply IAS 36 from that same date. Paragraphs BC181-BC184 of the Basis for Conclusions on IFRS 3 outline the Board's deliberations on this issue.

BC211. Otherwise, IAS 36 is applied:

- (a) to goodwill and intangible assets acquired in business combinations for which the agreement date is on or after 31 March 2004; and
- (b) to all other assets prospectively from the beginning of the first annual period beginning on or after 31 March 2004.

BC212. In developing the requirements set out in paragraph BC211, the Board considered whether entities should be required:

- (a) to apply retrospectively the revised impairment test for goodwill; and
- (b) to apply retrospectively the requirement prohibiting reversals of impairment losses for goodwill and therefore eliminate any reversals recognised before the date the revised Standard was issued.

BC213. The Board concluded that retrospective application of the revised impairment test for goodwill would be problematic for the following reasons:

- (a) it was likely to be impossible in many cases because the information needed may not exist or may no longer be obtainable.
- (b) it would require the determination of estimates that would have been made at a prior date, and therefore would raise the problem of how the effect of hindsight could be separated from the factors existing at the date of the impairment test.

BC214. The Board also noted that the requirement for goodwill to be tested for impairment annually, irrespective of whether there is any indication that it may be impaired, will ensure that by the end of the first period in which the Standard is effective, all recognised goodwill acquired before its effective date would be tested for impairment.

BC215. In the case of reversals of impairment losses for goodwill, the Board acknowledged that requiring the elimination of reversals recognised before the revised Standard's effective date might seem appropriate, particularly given the Board's reasons for prohibiting reversals of impairment losses for goodwill (see paragraphs BC187-BC191). The Board concluded, however, that the previous amortisation of that goodwill, combined with the requirement for goodwill to be tested for impairment at least annually, ensures that the carrying amount of the goodwill does not exceed its recoverable amount at the end of the reporting period in which the Standard is effective. Therefore, the Board concluded that the Standard should apply on a prospective basis.

Transitional impairment test for goodwill

BC216. Given that one of the objectives of the first phase of the Business Combinations project was to seek international convergence on the accounting for goodwill, the Board considered whether IAS 36 should include a transitional goodwill impairment test similar to that included in SFAS 142. SFAS 142 requires goodwill to be tested for impairment annually, and between annual tests if an event occurs or circumstances change and would be more likely than not to reduce the fair value of a reporting unit below its carrying amount. The transitional provisions in SFAS 142 require the impairment test for goodwill to be applied prospectively. However, a transitional goodwill impairment test must be performed as of the *beginning* of the fiscal year in which SFAS 142 is applied in its entirety. An impairment loss recognised as a result of a transitional test is recognised as the effect of a change in accounting principle, rather than as an impairment loss. In addition to the transitional test, SFAS 142 requires an entity to perform the required annual goodwill impairment test in the year that SFAS 142 is initially applied in its entirety. In other words, the transitional goodwill impairment test may not be regarded as the initial year's annual test unless an entity designates the beginning of its fiscal year as the date for its annual goodwill impairment test.

BC217. The FASB concluded that goodwill that was not regarded as impaired under US GAAP before SFAS 142 was issued could be determined to be impaired if the SFAS 142 impairment test was applied to that goodwill at the date an entity initially applied SFAS 142. This is because, under previous US GAAP, entities typically tested goodwill for impairment using undiscounted estimates of future cash flows. The FASB further concluded that:

- (a) the preponderance of any transitional impairment losses was likely to result from the change in methods and treating those losses as stemming from changes in accounting principles would therefore be more representationally faithful.
- (b) given that a transitional impairment loss should be reported as a change in accounting principle, the transitional goodwill impairment test should ideally apply as of the date SFAS 142 is initially applied.

BC218. The Board observed that under the previous version of IAS 36, goodwill that was amortised over a period exceeding 20 years was required to be tested for impairment at least at each financial year-end. Goodwill that was amortised over a period not exceeding 20 years was required to be tested for impairment at the balance sheet date if there was an indication that it might be impaired. The revised Standard requires goodwill to be tested for impairment annually or more frequently if there is an indication the goodwill might be impaired. It also carries forward from the previous version of IAS 36 (a) the indicators of impairment, (b) the measure of recoverable amount (ie higher of value in use and fair value less costs to sell), and (c) the requirement for an impairment loss for a cash-generating unit to be allocated first to reduce the carrying amount of any goodwill allocated to the unit.

BC219. Therefore, goodwill tested for impairment in accordance with the previous version of the revised Standard immediately before the beginning of the reporting period in which the revised Standard becomes effective (because it was being amortised over a period exceeding 20 years or because there was an indicator of impairment) could not be identified as impaired under IAS 36 at the beginning of the period in which it becomes effective. This is because application of the Standard results in a goodwill impairment loss being identified only if the carrying amount of the cash-generating unit (group of units) to which the goodwill has been allocated exceeds its recoverable amount, and the impairment test in the previous version of IAS 36 ensures that this will not be the case.

BC220. The Board concluded that there would be only one possible situation in which a transitional impairment test might give rise to the recognition of an impairment loss for goodwill. This would be when goodwill being amortised over a period not exceeding 20 years was, immediately before the beginning of the period in which the revised Standard becomes effective, impaired in the absence of any indicator of impairment that ought reasonably to have been considered by the entity. The Board concluded that this is likely to be a rare occurrence.

BC221. The Board observed that any such impairment loss would nonetheless be recognised as a consequence of applying the requirement in IAS 36 to test goodwill for impairment at least annually. Therefore, the only benefit of applying a transitional impairment test would be, in those rare cases, to separate the impairment loss arising before the period in which the revised Standard is effective from any impairment loss arising after the beginning of that period.

BC222. The Board concluded that given the rare circumstances in which this issue would arise, the benefit of applying a transitional goodwill impairment test would be outweighed by the added costs of the test. Therefore, the Board decided that the revised Standard should not require a transitional goodwill impairment test.

Transitional impairment test for indefinite-lived intangibles

BC223. SFAS 142 also requires a transitional impairment test to be applied, as of the beginning of the fiscal year in which that Standard is initially applied, to intangible assets recognised before the effective date of SFAS 142 that are reassessed as having indefinite useful lives. An impairment loss arising from that transitional impairment test is recognised as the effect of a change in accounting principle rather than as an impairment loss. As with goodwill:

- (a) intangible assets that cease being amortised upon initial application of SFAS 142 are tested for impairment in accordance with SFAS 142 using a different method from what had previously applied to those assets. Therefore, it is possible that such an intangible asset not previously regarded as impaired might be determined to be impaired under SFAS 142.
- (b) the FASB concluded that the preponderance of any transitional impairment losses would be likely to result from the change in impairment testing methods. Treating those losses as stemming from changes in accounting principles is therefore more representationally faithful.

BC224. The Board considered whether IAS 36 should include a transitional impairment test for indefinite-lived intangibles similar to that in SFAS 142.

BC225. The Board observed that the previous version of IAS 38 *Intangible Assets* required an intangible asset being amortised over a period exceeding 20 years to be tested for impairment at least at each financial year-end in accordance with the previous version of IAS 36. An intangible asset being amortised over a period not exceeding 20 years was required, under the previous version of IAS 36, to be tested for impairment at the balance sheet date only if there was an indication the asset might be impaired. The revised Standard requires an indefinite-lived intangible to be tested for impairment at least annually. However, it also requires that the recoverable amount of such an asset should continue to be measured as the higher of the asset's value in use and fair value less costs to sell.

BC226. As with goodwill, the Board concluded that the revised Standard should not require a transitional impairment test for indefinite-lived intangibles because:

- (a) the only circumstance in which a transitional impairment test might give rise to the recognition of an impairment loss would be when an indefinite-lived intangible previously being amortised over a period not exceeding 20 years was, immediately before the beginning of the period in which the revised Standard is effective, impaired in the absence of any indicator of impairment that ought reasonably to have been considered by the entity.

- (b) any such impairment loss would nonetheless be recognised as a consequence of applying the requirement in the Standard to test such assets for impairment at least annually. Therefore, the only benefit of such a test would be to separate the impairment loss arising before the period in which the revised Standard is effective from any impairment loss arising after the beginning of that period.
- (c) given the extremely rare circumstances in which this issue is likely to arise, the benefit of applying a transitional impairment test is outweighed by the added costs of the test.

Early application (paragraph 140)

BC227. The Board noted that the issue of any Standard demonstrates its opinion that application of the Standard will result in more useful information being provided to users about an entity's financial position, performance or cash flows. On that basis, a case exists for permitting, and indeed encouraging, entities to apply IAS 36 before its effective date. However, the Board also considered that permitting a revised Standard to be applied before its effective date potentially diminishes comparability between entities in the period(s) leading up to that effective date, and has the effect of providing entities with an option.

BC228. The Board concluded that the benefit of providing users with more useful information about an entity's financial position, performance and cash flows by permitting early application of IAS 36 outweighs the disadvantages of potentially diminished comparability. Therefore, entities are encouraged to apply the requirements of IAS 36 before its effective date. However, given that the revision of IAS 36 is part of an integrated package, IAS 36 requires IFRS 3 and IAS 38 (as revised in 2004) to be applied at the same time.

Summary of main changes from the Exposure Draft

BC229. The following are the main changes from the Exposure Draft:

- (a) the Exposure Draft proposed that an intangible asset with an indefinite useful life should be tested for impairment at the end of each annual period by comparing its carrying amount with its recoverable amount. The Standard requires such an intangible asset to be tested for impairment annually by comparing its carrying amount with its recoverable amount. The impairment test may be performed at any time during an annual period, provided it is performed at the same time every year, and different intangible assets may be tested for impairment at different times. However, if such an intangible asset was initially recognised during the current annual period, the Standard requires that intangible asset to be tested for impairment before the end of the current annual period.
- (b) the Exposure Draft proposed that the cash flow projections used to measure value in use should be based on reasonable and supportable assumptions that take into account both past actual cash flows and management's past ability

to forecast cash flows accurately. This proposal has not been included in the Standard. Instead, the Standard includes guidance clarifying that management:

- (i) should assess the reasonableness of the assumptions on which its current cash flow projections are based by examining the causes of differences between past cash flow projections and actual cash flows; and
 - (ii) should ensure that the assumptions on which its current cash flow projections are based are consistent with past actual outcomes, provided the effects of subsequent events or circumstances that did not exist when those actual cash flows were generated make this appropriate.
- (c) the Exposure Draft proposed that if an active market exists for the output produced by an asset or a group of assets, that asset or group of assets should be identified as a cash-generating unit, even if some or all of the output is used internally. In such circumstances, management's best estimate of future market prices for the output should be used in estimating the future cash flows used to determine the unit's value in use. The Exposure Draft also proposed that when estimating future cash flows to determine the value in use of cash-generating units using the output, management's best estimate of future market prices for the output should be used.

The Standard similarly requires that if an active market exists for the output produced by an asset or a group of assets, that asset or group of assets should be identified as a cash-generating unit, even if some or all of the output is used internally. However, the Standard clarifies that if the cash inflows generated by *any* asset or cash-generating unit are affected by internal transfer pricing, an entity should use management's best estimate of future price(s) that could be achieved in arm's length transactions in estimating:

- (i) the future cash inflows used to determine the asset's or cash-generating unit's value in use; and
 - (ii) the future cash outflows used to determine the value in use of other assets or cash-generating units affected by the internal transfer pricing.
- (d) the Exposure Draft proposed that goodwill acquired in a business combination should be allocated to one or more cash-generating units, with each of those units representing the smallest cash-generating unit to which a portion of the carrying amount of the goodwill could be allocated on a reasonable and consistent basis. The Exposure Draft also proposed that:
- (i) a portion of the carrying amount of goodwill should be regarded as capable of being allocated to a cash-generating unit on a reasonable and consistent basis only when that unit represents the lowest level at which management monitors the return on investment in assets that include the goodwill.
 - (ii) each cash-generating unit should not be larger than a segment based on the entity's primary reporting format determined in accordance with IAS 14 *Segment Reporting*.

The Standard requires goodwill acquired in a business combination to be allocated to each of the acquirer's cash-generating units, or groups of cash-generating units, that are expected to benefit from the synergies of the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units or groups of units. The Standard also requires each unit or group of units to which the goodwill is so allocated: (1) to represent the lowest level within the entity at which the goodwill is monitored for internal management purposes; and (2) to be not larger than a segment based on either the entity's primary or the entity's secondary reporting format determined in accordance with IAS 14.

- (e) the Exposure Draft proposed that when an entity disposes of an operation within a cash-generating unit to which goodwill has been allocated, the goodwill associated with that operation should be:
 - (i) included in the carrying amount of the operation when determining the gain or loss on disposal; and
 - (ii) measured on the basis of the relative values of the operation disposed of and the portion of the cash-generating unit retained.

This proposal has been included in the Standard with one modification. The Standard requires the goodwill associated with the operation disposed of to be measured on the basis of the relative values of the operation disposed of and the portion of the cash-generating unit retained, unless the entity can demonstrate that some other method better reflects the goodwill associated with the operation disposed of.

- (f) the Exposure Draft proposed that when an entity reorganises its reporting structure in a way that changes the composition of cash-generating units to which goodwill has been allocated, the goodwill should be reallocated to the units affected using a relative value approach similar to that used when an entity disposes of an operation within a cash-generating unit. The Standard similarly requires an entity that reorganises its reporting structure in a way that changes the composition of one or more cash-generating units to which goodwill has been allocated to reallocate the goodwill to the units (groups of units) affected. However, the Standard requires this reallocation to be performed using a relative value approach similar to that used when an entity disposes of an operation within a cash-generating unit, unless the entity can demonstrate that some other method better reflects the goodwill associated with the reorganised units (groups of units).
- (g) the Exposure Draft proposed a two-step approach for impairment testing goodwill. The first step involved using a screening mechanism for identifying potential goodwill impairments, whereby goodwill allocated to a cash-generating unit would be identified as potentially impaired only when the carrying amount of the unit exceeded its recoverable amount. If an entity identified the goodwill allocated to a cash-generating unit as potentially impaired, an entity would then determine whether the goodwill allocated to the unit was impaired by comparing its recoverable amount, measured as the

implied value of the goodwill, with its carrying amount. The implied value of goodwill would be measured as a residual, being the excess of the recoverable amount of the cash-generating unit to which the goodwill has been allocated, over the net fair value of the identifiable assets, liabilities and contingent liabilities the entity would recognise if it acquired the cash-generating unit in a business combination on the date of the impairment test. The Standard requires any excess of the carrying amount of a cash-generating unit (group of units) to which goodwill has been allocated over its recoverable amount to be recognised first as an impairment loss for goodwill. Any excess remaining after the carrying amount of goodwill has been reduced to zero is then recognised by being allocated to the other assets of the unit pro rata with their carrying amounts.

- (h) the Exposure Draft proposed requiring an entity to disclose information about cash-generating units whose carrying amounts included goodwill or indefinite-lived intangibles. That information included the carrying amount of goodwill and the carrying amount of indefinite-lived intangibles, the basis on which the unit's recoverable amount had been determined (ie value in use or net selling price), the amount by which the unit's recoverable amount exceeded its carrying amount, the key assumptions and estimates used to measure the unit's recoverable amount and information about the sensitivity of that recoverable amount to changes in the key assumptions and estimates. If an entity reports segment information in accordance with IAS 14, the Exposure Draft proposed that this information should be disclosed in aggregate for each segment based on the entity's primary reporting format. However, the Exposure Draft also proposed that the information would be disclosed separately for a cash-generating unit if specified criteria were met. The Standard:
- (i) does not require information for evaluating the reliability of the impairment tests for goodwill and indefinite-lived intangibles to be disclosed in aggregate for each segment and separately for cash-generating units within a segment when specified criteria are met. Instead, the Standard requires this information to be disclosed for each cash-generating unit (group of units) for which the carrying amount of goodwill or indefinite-lived intangibles allocated to that unit (group of units) is significant in comparison with the entity's total carrying amount of goodwill or indefinite-lived intangibles.
 - (ii) does not require an entity to disclose the amount by which the recoverable amount of a cash-generating unit exceeds its carrying amount. Instead, the Standard requires an entity to disclose this information only if a reasonably possible change in a key assumption on which management has based its determination of the unit's (group of units') recoverable amount would cause the unit's (group of units') carrying amount to exceed its recoverable amount.
 - (iii) does not require an entity to disclose the value assigned to each key assumption on which management has based its recoverable amount determination, and the amount by which that value must change, after incorporating any consequential effects of that change on the other variables

used to measure recoverable amount, in order for the unit's recoverable amount to be equal to its carrying amount. Instead, the Standard requires an entity to disclose a description of each key assumption on which management has based its recoverable amount determination, management's approach to determining the value(s) assigned to each key assumption, whether those value(s) reflect past experience or, if appropriate, are consistent with external sources of information, and, if not, how and why they differ from past experience or external sources of information. However, if a reasonably possible change in a key assumption would cause the unit's (group of units') carrying amount to exceed its recoverable amount, the entity is also required to disclose the value assigned to the key assumption, and the amount by which that value must change, after incorporating any consequential effects of that change on the other variables used to measure recoverable amount, in order for the unit's (group of units') recoverable amount to be equal to its carrying amount.

- (iv) requires information about key assumptions to be disclosed for any key assumption that is relevant to the recoverable amount determination of multiple cash-generating units (groups of units) that individually contain insignificant amounts of goodwill or indefinite-lived intangibles, but which contain, in aggregate, significant amounts of goodwill or indefinite-lived intangibles.

History of the development of a standard on impairment of assets

BCZ230. In June 1996, IASC decided to prepare an International Accounting Standard on Impairment of Assets. The reasons for developing a Standard on impairment of assets were:

- (a) to combine the requirements for identifying, measuring, recognising and reversing an impairment loss in one Standard to ensure that those requirements are consistent;
- (b) the previous requirements and guidance in International Accounting Standards were not detailed enough to ensure that enterprises identified, recognised and measured impairment losses in a similar way, eg there was a need to eliminate certain alternatives for measuring an impairment loss, such as the former option not to use discounting; and
- (c) IASC decided in March 1996 to explore whether the amortisation period of intangible assets and goodwill could, in certain rare circumstances, exceed 20 years if those assets were subject to detailed and reliable annual impairment tests.

BCZ231. In April 1997, IASC approved Exposure Draft E55 *Impairment of Assets*. IASC received more than 90 comment letters from over 20 countries. IASC also performed a field test of E55's proposals. More than 20 companies from various business sectors and from 10 different countries participated in the field test. About half of the field test participants prepared their financial statements using

International Accounting Standards and the other half reported using other Standards. Field test participants completed a detailed questionnaire and most of them were visited by IASC staff to discuss the results of the application of E55's proposals to some of their assets. A brief summary of the comment letters received on E55 and the results of the field test was published in IASC *Insight* in December 1997.

BCZ232. In October 1997, IASC, together with the Accounting Standards Boards in Australia, Canada, New Zealand, the United Kingdom and the United States, published a discussion paper entitled *International Review of Accounting Standards Specifying the Recoverable Amount Test for Long-Lived Assets* (Jim Paul, from the staff of the Australian Accounting Research Foundation, was the principal author). This discussion paper resulted from the discussions of a 'working group' consisting of some Board members and senior staff members from the standard-setting bodies listed above and IASC. The paper:

- (a) noted the key features of the working group members' existing or proposed accounting standards that require an impairment test, and compared those standards; and
- (b) proposed the views of the working group on the major issues.

BCZ233. In April 1998, after considering the comments received on E55 and the results of the field test, IASC approved IAS 36 *Impairment of Assets*.

Dissenting Opinions

Dissent of Anthony T Cope, James J Leisenring and Geoffrey Whittington

- DO1. Messrs Cope and Leisenring and Professor Whittington dissent from the issue of IAS 36.
- DO2. Messrs Cope and Leisenring and Professor Whittington dissent because they object to the impairment test that the Standard requires for goodwill.
- DO3. Messrs Cope and Leisenring agree with the prohibition, in paragraph 54 of IFRS 3 *Business Combinations*, of amortisation of goodwill. Research and experience have demonstrated that the amortisation of goodwill produces data that is meaningless, and perhaps even misleading. However, if goodwill is not amortised, its special nature mandates that it should be accounted for with caution. The Basis for Conclusions on IAS 36 (paragraph BC131) states that “if a rigorous and operational impairment test [for goodwill] could be devised, more useful information would be provided to users of an entity’s financial statements under an approach in which goodwill is not amortised, but instead tested for impairment annually or more frequently if events or changes in circumstances indicate that the goodwill might be impaired.” Messrs Cope and Leisenring agree with that statement. However, they believe that the impairment test to which a majority of the Board has agreed lacks the rigour to satisfy that condition.
- DO4. Messrs Cope and Leisenring share the reservations of some Board members, as noted in paragraph BC130 of the Basis for Conclusions on IAS 36, about an impairment test based on measuring the recoverable amount of an asset, and particularly an asset with an indefinite life, as the higher of fair value less costs to sell or value in use. Messrs Cope and Leisenring are content, however, for the time being to defer consideration of that general measurement issue, pending more research and debate on measurement principles. (They note that the use of fair value would achieve significant convergence with US GAAP.) But a much more rigorous effort must be made to determine the recoverable amount of goodwill, however measured, than the Board’s revised impairment test. The ‘two-step’ method originally proposed by the Board in the Exposure Draft of Proposed Amendments to IAS 36 and IAS 38 was a more useful approach to determining the ‘implied value’ of goodwill. That test should have been retained.
- DO5. Messrs Cope and Leisenring recognise that some constituents raised objections to the complexity and potential cost of the requirements proposed in the Exposure Draft. However, they believe that many commentators misunderstood the level at which the Board intended impairment testing to be undertaken. This was demonstrated during the field-testing of the Exposure Draft. Furthermore, the provisions of paragraph 99 of IAS 36, specifying when impairment testing need not be undertaken, provide generous relief from the necessity of making frequent

calculations. They would have preferred to meet those objections by specifying that the goodwill impairment test should be at the level set out in US Financial Accounting Standards Board's Statement of Financial Accounting Standards No. 142 *Goodwill and Other Intangible Assets*.

- DO6. Professor Whittington believes that there are two aspects of the proposed impairment test that are particularly unsatisfactory. First, the failure to eliminate the shield from impairment provided by the internally generated goodwill of the acquiring entity at acquisition. This is discussed in paragraph DO7. Second, the lack of a subsequent cash flow test. This is discussed in paragraphs DO8-DO10. The inability to eliminate the shield from impairment provided by internally generated goodwill accruing after the acquisition date is also a problem. However, there is no obvious practical way of dealing with this problem within the framework of conventional impairment tests.
- DO7. When an acquired business is merged with an acquirer's existing operations, the impairment test in IAS 36 does not take account of the acquirer's pre-existing internally generated goodwill. Thus, the pre-existing internally generated goodwill of the acquirer provides a shield against impairment additional to that provided by subsequent internally generated goodwill. Professor Whittington believes that the impairment test would be more rigorous if it included a requirement similar to that in UK Financial Reporting Standard 11 *Impairment of Fixed Assets and Goodwill*, which recognises, for purposes of impairment testing, the implied value of the acquirer's goodwill existing at the time of acquisition.
- DO8. The subsequent cash flow test is discussed in paragraphs BC195-BC198 of the Basis for Conclusions on IAS 36. A subsequent cash flow test substitutes in past impairment tests the cash flows that actually occurred for those that were estimated at the time of the impairment tests, and requires a write-down if the revised estimates would have created an impairment loss for goodwill. It is thus a correction of an estimate. Such a test is incorporated in FRS 11.
- DO9. The Board's reasons for rejecting the subsequent cash flow test are given in paragraph BC197(a)-(c). The preamble to paragraph BC197 claims that the subsequent cash flow test is misdirected because excessive write-downs of goodwill may be a problem that should be prevented. However, the subsequent cash flow test requires only realistic write-downs (based on actual outcomes), not excessive ones. If the statement in paragraph BC197 is correct, this may point to another deficiency in the impairment testing process that requires a different remedy.
- DO10. Paragraph BC197(a) asserts that "it does not produce representationally faithful results" because it ignores other elements in the measurement of value in use. As explained above, it merely substitutes the outcome cash flow for the estimate, which should have a clear meaning and provides a safeguard against over-optimism in the estimation of cash flows. If corrections of estimates of other elements, such as variations that have occurred in interest rates, were considered important in this context, they could be incorporated in the calculation.

Paragraph BC197(b) seems to raise the same point as paragraph BC197(a), as to the meaning of the impairment loss under the test. Paragraph BC197(c) complains about the excessive burden that a subsequent cash flow test might impose. Professor Whittington notes that the extent of the burden depends, of course, upon the frequency with which the test is applied. He also notes that the extensive disclosure requirements currently associated with the impairment test might be reduced if the subsequent cash flow test were in place.

IAS 36 Impairment of Assets

Illustrative Examples

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Illustrative Examples

These examples accompany, but are not part of, IAS 36. All the examples assume that the entities concerned have no transactions other than those described. In the examples monetary amounts are denominated in 'currency units' (CU).

Example 1 - Identification of Cash-generating Units

The purpose of this example 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.*

A - Retail Store Chain

Background

IE1. 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 the cash-generating unit for X (X's cash-generating unit)?

Analysis

- IE2. In identifying X's cash-generating unit, an entity considers whether, for example:
- (a) internal management reporting is organised to measure performance on a store-by-store basis; and
 - (b) the business is run on a store-by-store profit basis or on a region/city basis.
- IE3. 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 that are largely independent of those of M's other stores. Therefore, it is likely that X is a cash-generating unit.
- IE4. If X's cash-generating unit represents the lowest level within M at which the goodwill is monitored for internal management purposes, M applies to that cash-generating unit the impairment test described in paragraph 90 of IAS 36. If information about the carrying amount of goodwill is not available and monitored for internal management purposes at the level of X's cash-generating unit, M applies to that cash-generating unit the impairment test described in paragraph 88 of IAS 36.

B - Plant for an Intermediate Step in a Production Process

Background

IE5. 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 per cent is sold to customers outside of the entity.

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

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

Case 2: There is no active market for the products X sells to Y.

Analysis

Case 1

IE6. X could sell its products in an active market and, so, generate cash inflows that would be largely independent of the cash inflows from Y. Therefore, it is likely that X is a separate cash-generating unit, although part of its production is used by Y (see paragraph 70 of IAS 36).

IE7. It is likely that Y is also a separate cash-generating unit. Y sells 80 per cent of its products to customers outside of the entity. Therefore, its cash inflows can be regarded as largely independent.

IE8. Internal transfer prices do not reflect market prices for X's output. Therefore, in determining value in use of both X and Y, the entity adjusts financial budgets/forecasts to reflect management's best estimate of future prices that could be achieved in arm's length transactions for those of X's products that are used internally (see paragraph 70 of IAS 36).

Case 2

IE9. It is likely that the recoverable amount of each plant cannot be assessed independently of the recoverable amount of the other plant because:

(a) the majority of X's production is used internally and could not be sold in an active market. So, cash inflows of X depend on demand for Y's products. Therefore, X cannot be considered to generate cash inflows that are largely independent of those of Y.

(b) the two plants are managed together.

IE10. As a consequence, it is likely that X and Y together are the smallest group of assets that generates cash inflows that are largely independent.

C - Single Product Entity

Background

IE11. Entity M produces a single product and owns plants A, B and C. Each plant is located in a different continent. A produces a component that is 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 production 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.

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

Case 1: There is an active market for A's products.

Case 2: There is no active market for A's products.

Analysis

Case 1

IE12. It is likely that A is a separate cash-generating unit because there is an active market for its products (see Example B - Plant for an Intermediate Step in a Production Process, Case 1).

IE13. Although there is an active market for the products assembled by B and C, 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. Therefore, it is likely that B and C together are the smallest identifiable group of assets that generates cash inflows that are largely independent.

IE14. In determining the value in use of A and B plus C, M adjusts financial budgets/forecasts to reflect its best estimate of future prices that could be achieved in arm's length transactions for A's products (see paragraph 70 of IAS 36).

Case 2

IE15. It is likely that the recoverable amount of each plant cannot be assessed independently because:

- (a) there is no active market for A's products. Therefore, A's cash inflows depend on sales of the final product by B and C.
- (b) although there is an active market for the products assembled by B and C, 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.

IE16. As a consequence, it is likely that A, B and C together (ie M as a whole) are the smallest identifiable group of assets that generates cash inflows that are largely independent.

D - Magazine Titles

Background

IE17. 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?

Analysis

IE18. 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 on an individual title basis.

IE19. Therefore, it is likely that individual magazine titles generate cash inflows that are largely independent of each other and that each magazine title is a separate cash-generating unit.

E - Building Half-Rented to Others and Half-Occupied for Own Use

Background

IE20. 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 half rented to third parties. The lease agreement with the tenant is for five years.

What is the cash-generating unit of the building?

Analysis

IE21. The primary purpose of the building is to serve as a corporate asset, supporting M's manufacturing activities. Therefore, the building as a whole cannot be considered to generate cash inflows that are largely independent of the cash inflows from the entity as a whole. So, it is likely that the cash-generating unit for the building is M as a whole.

IE22. The building is not held as an investment. Therefore, it would not be appropriate to determine the value in use of the building based on projections of future market related rents.

Example 2 - Calculation of Value in Use and Recognition of an Impairment Loss

In this example, tax effects are ignored.

Background and Calculation of Value in Use

IE23. At the end of 20X0, entity T acquires entity M for CU10,000. M has manufacturing plants in three countries.

Schedule 1. Data at the end of 20X0

<i>End of 20X0</i>	<i>Allocation of purchase price CU</i>	<i>Fair value of identifiable assets CU</i>	<i>Goodwill CU*</i>
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
Total	<u>10,000</u>	<u>7,000</u>	<u>3,000</u>

* Activities in each country represent the lowest level at which the goodwill is monitored for internal management purposes (determined as the difference between the purchase price of the activities in each country, as specified in the purchase agreement, and the fair value of the identifiable assets).

IE23A. Because goodwill has been allocated to the activities in each country, each of those activities must be tested for impairment annually or more frequently if there is any indication that it may be impaired (see paragraph 90 of IAS 36).

IAS 36 IE

- IE24. The recoverable amounts (ie higher of value in use and fair value less costs to sell) of the cash-generating units are determined on the basis of value in use calculations. At the end of 20X0 and 20X1, the value in use of each cash-generating unit exceeds its carrying amount. Therefore the activities in each country and the goodwill allocated to those activities are regarded as not impaired.
- IE25. At the beginning of 20X2, a new government is elected in Country A. It passes legislation significantly restricting exports of T's main product. As a result, and for the foreseeable future, T's production in Country A will be cut by 40 per cent.
- IE26. The significant export restriction and the resulting production decrease require T also to estimate the recoverable amount of the Country A operations at the beginning of 20X2.
- IE27. T uses straight-line depreciation over a 12-year life for the Country A identifiable assets and anticipates no residual value.
- IE28. To determine the value in use for the Country A cash-generating unit (see Schedule 2), T:
- (a) prepares cash flow forecasts derived from the most recent financial budgets/forecasts for the next five years (years 20X2-20X6) approved by management.
 - (b) estimates subsequent cash flows (years 20X7-20Y2) based on declining growth rates. The growth rate for 20X7 is estimated to be 3 per cent. This rate is lower than the average long-term growth rate for the market in Country A.
 - (c) selects a 15 per cent discount rate, which represents a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the Country A cash-generating unit.

Recognition and Measurement of Impairment Loss

- IE29. The recoverable amount of the Country A cash-generating unit is CU1,360.
- IE30. T compares the recoverable amount of the Country A cash-generating unit with its carrying amount (see Schedule 3).
- IE31. Because the carrying amount exceeds the recoverable amount by CU1,473, T recognises an impairment loss of CU1,473 immediately in profit or loss. The carrying amount of the goodwill that relates to the Country A operations is reduced to zero before reducing the carrying amount of other identifiable assets within the Country A cash-generating unit (see paragraph 104 of IAS 36).
- IE32. Tax effects are accounted for separately in accordance with IAS 12 *Income Taxes* (see Illustrative Example 3A).

Schedule 2. Calculation of the value in use of the Country A cash-generating unit at the beginning of 20X2

<i>Year</i>	<i>Long-term growth rates</i>	<i>Future cash flows</i> CU	<i>Present value factor at 15% discount rate</i> [§]	<i>Discounted future cash flows</i> CU
20X2 (n=1)		230 *	0.86957	200
20X3		253 *	0.75614	191
20X4		273 *	0.65752	180
20X5		290 *	0.57175	166
20X6		304 *	0.49718	151
20X7	3%	313 †	0.43233	135
20X8	-2%	307 †	0.37594	115
20X9	-6%	289 †	0.32690	94
20Y0	-15%	245 †	0.28426	70
20Y1	-25%	184 †	0.24719	45
20Y2	-67%	61 †	0.21494	13
Value in use				1,360

* Based on management's best estimate of net cash flow projections (after the 40% cut).

† Based on an extrapolation from preceding year cash flow using declining growth rates.

§ The present value factor is calculated as $k = 1/(1+a)^n$, where a = discount rate and n = period of discount.

Schedule 3. Calculation and allocation of the impairment loss for the Country A cash-generating unit at the beginning of 20X2

<i>Beginning of 20X2</i>	<i>Goodwill</i> CU	<i>Identifiable assets</i> CU	<i>Total</i> CU
Historical cost	1,000	2,000	3,000
Accumulated depreciation (20X1)	-	(167)	(167)
Carrying amount	1,000	1,833	2,833
Impairment loss	(1,000)	(473)	(1,473)
Carrying amount after impairment loss	-	1,360	1,360

Example 3 - Deferred Tax Effects

A - Deferred Tax Effects of the Recognition of an Impairment Loss

Use the data for entity T as presented in Example 2, with supplementary information as provided in this example.

- IE33. At the beginning of 20X2, the tax base of the identifiable assets of the Country A cash-generating unit is CU900. Impairment losses are not deductible for tax purposes. The tax rate is 40 per cent.
- IE34. The recognition of an impairment loss on the assets of the Country A cash-generating unit reduces the taxable temporary difference related to those assets. The deferred tax liability is reduced accordingly.

<i>Beginning of 20X2</i>	<i>Identifiable assets before impairment loss CU</i>	<i>Impairment loss CU</i>	<i>Identifiable assets after impairment loss CU</i>
Carrying amount (Example 2)	1,833	(473)	1,360
Tax base	900	-	900
Taxable temporary difference	933	(473)	460
Deferred tax liability at 40%	373	(189)	184

- IE35. In accordance with IAS 12 *Income Taxes*, no deferred tax relating to the goodwill was recognised initially. Therefore, the impairment loss relating to the goodwill does not give rise to a deferred tax adjustment.

B - Recognition of an Impairment Loss Creates a Deferred Tax Asset

- IE36. An entity has an identifiable asset with a carrying amount of CU1,000. Its recoverable amount is CU650. The tax rate is 30 per cent and the tax base of the asset is CU800. Impairment losses are not deductible for tax purposes. The effect of the impairment loss is as follows:

	<i>Before impairment</i>	<i>Effect of impairment</i>	<i>After impairment</i>
	CU	CU	CU
Carrying amount	1,000	(350)	650
Tax base	800	-	800
Taxable (deductible) temporary difference	<u>200</u>	<u>(350)</u>	<u>(150)</u>
Deferred tax liability (asset) at 30%	<u>60</u>	<u>(105)</u>	<u>(45)</u>

- IE37. In accordance with IAS 12, the entity recognises the deferred tax asset to the extent that it is probable that taxable profit will be available against which the deductible temporary difference can be utilised.

Example 4 - Reversal of an Impairment Loss

Use the data for entity T as presented in Example 2, with supplementary information as provided in this example. In this example, tax effects are ignored.

Background

- IE38. In 20X3, the government is still in office in Country A, but the business situation is improving. The effects of the export laws on T's production are proving to be less drastic than initially expected by management. As a result, management estimates that production will increase by 30 per cent. This favourable change requires T to re-estimate the recoverable amount of the net assets of the Country A operations (see paragraphs 110 and 111 of IAS 36). The cash-generating unit for the net assets of the Country A operations is still the Country A operations.
- IE39. Calculations similar to those in Example 2 show that the recoverable amount of the Country A cash-generating unit is now CU1,910.

Reversal of Impairment Loss

- IE40. T compares the recoverable amount and the net carrying amount of the Country A cash-generating unit.

Schedule 1. Calculation of the carrying amount of the Country A cash-generating unit at the end of 20X3

	<i>Goodwill</i> CU	<i>Identifiable assets</i> CU	<i>Total</i> CU
<i>Beginning of 20X2 (Example 2)</i>			
Historical cost	1,000	2,000	3,000
Accumulated depreciation	-	(167)	(167)
Impairment loss	(1,000)	(473)	(1,473)
Carrying amount after impairment loss	-	1,360	1,360
<i>End of 20X3</i>			
Additional depreciation (2 years)*	-	(247)	(247)
Carrying amount	-	1,113	1,113
Recoverable amount			1,910
Excess of recoverable amount over carrying amount			797

* After recognition of the impairment loss at the beginning of 20X2, T revised the depreciation charge for the Country A identifiable assets (from CU166.7 per year to CU123.6 per year), based on the revised carrying amount and remaining useful life (11 years).

- IE41. There has been a favourable change in the estimates used to determine the recoverable amount of the Country A net assets since the last impairment loss was recognised. Therefore, in accordance with paragraph 114 of IAS 36, T recognises a reversal of the impairment loss recognised in 20X2.
- IE42. In accordance with paragraphs 122 and 123 of IAS 36, T increases the carrying amount of the Country A identifiable assets by CU387 (see Schedule 3), ie up to the lower of recoverable amount (CU1,910) and the identifiable assets' depreciated historical cost (CU1,500) (see Schedule 2). This increase is recognised immediately in profit or loss.
- IE43. In accordance with paragraph 124 of IAS 36, the impairment loss on goodwill is not reversed.

Schedule 2. Determination of the depreciated historical cost of the Country A identifiable assets at the end of 20X3

<i>End of 20X3</i>	<i>Identifiable assets CU</i>
Historical cost	2,000
Accumulated depreciation ($166.7 \times 3 \text{ years}$)	<u>(500)</u>
Depreciated historical cost	<u>1,500</u>
Carrying amount (Schedule 1)	<u>1,113</u>
Difference	<u>387</u>

Schedule 3. Carrying amount of the Country A assets at the end of 20X3

<i>End of 20X3</i>	<i>Goodwill CU</i>	<i>Identifiable assets CU</i>	<i>Total CU</i>
Gross carrying amount	1,000	2,000	3,000
Accumulated amortisation	-	(414)	(414)
Accumulated impairment loss	<u>(1,000)</u>	<u>(473)</u>	<u>(1,473)</u>
Carrying amount	<u>-</u>	<u>1,113</u>	<u>1,113</u>
Reversal of impairment loss	<u>0</u>	<u>387</u>	<u>387</u>
Carrying amount after reversal of impairment loss	<u>-</u>	<u>1,500</u>	<u>1,500</u>

Example 5 - Treatment of a Future Restructuring

In this example, tax effects are ignored.

Background

- IE44. At the end of 20X0, entity K tests a plant for impairment. The plant is a cash-generating unit. The plant's assets are carried at depreciated historical cost. The plant has a carrying amount of CU3,000 and a remaining useful life of 10 years.
- IE45. The plant's recoverable amount (ie higher of value in use and fair value less costs to sell) is determined on the basis of a value in use calculation. Value in use is calculated using a pre-tax discount rate of 14 per cent.
- IE46. Management approved budgets reflect that:
- (a) at the end of 20X3, the plant will be restructured at an estimated cost of CU100. Since K is not yet committed to the restructuring, a provision has not been recognised for the future restructuring costs.
 - (b) there will be future benefits from this restructuring in the form of reduced future cash outflows.
- IE47. At the end of 20X2, K becomes committed to the restructuring. The costs are still estimated to be CU100 and a provision is recognised accordingly. The plant's estimated future cash flows reflected in the most recent management approved budgets are given in paragraph IE51 and a current discount rate is the same as at the end of 20X0.
- IE48. At the end of 20X3, actual restructuring costs of CU100 are incurred and paid. Again, the plant's estimated future cash flows reflected in the most recent management approved budgets and a current discount rate are the same as those estimated at the end of 20X2.

At the End of 20X0

Schedule 1. Calculation of the plant's value in use at the end of 20X0

<i>Year</i>	<i>Future cash flows</i> CU	<i>Discounted at 14%</i> CU
20X1	300	263
20X2	280	215
20X3	420 [*]	283
20X4	520 [†]	308
20X5	350 [†]	182
20X6	420 [†]	191
20X7	480 [†]	192
20X8	480 [†]	168
20X9	460 [†]	141
20X10	400 [†]	108
Value in use		<u>2,051</u>

* Excludes estimated restructuring costs reflected in management budgets.

† Excludes estimated benefits expected from the restructuring reflected in management budgets.

IE49. The plant's recoverable amount (ie value in use) is less than its carrying amount. Therefore, K recognises an impairment loss for the plant.

Schedule 2. Calculation of the impairment loss at the end of 20X0

	<i>Plant</i> CU
Carrying amount before impairment loss	3,000
Recoverable amount (Schedule 1)	<u>2,051</u>
Impairment loss	<u>(949)</u>
Carrying amount after impairment loss	<u>2,051</u>

At the End of 20X1

IE50. No event occurs that requires the plant's recoverable amount to be re-estimated. Therefore, no calculation of the recoverable amount is required to be performed.

At the End of 20X2

IE51. The entity is now committed to the restructuring. Therefore, in determining the plant's value in use, the benefits expected from the restructuring are considered in forecasting cash flows. This results in an increase in the estimated future cash flows used to determine value in use at the end of 20X0. In accordance with paragraphs 110 and 111 of IAS 36, the recoverable amount of the plant is re-determined at the end of 20X2.

Schedule 3. Calculation of the plant's value in use at the end of 20X2

<i>Year</i>	<i>Future cash flows</i>	<i>Discounted at 14%</i>
	CU	CU
20X3	420*	368
20X4	570 [†]	439
20X5	380 [†]	256
20X6	450 [†]	266
20X7	510 [†]	265
20X8	510 [†]	232
20X9	480 [†]	192
20X10	410 [†]	144
Value in use		<u>2,162</u>

* Excludes estimated restructuring costs because a liability has already been recognised.

[†] Includes estimated benefits expected from the restructuring reflected in management budgets.

IE52. The plant's recoverable amount (value in use) is higher than its carrying amount (see Schedule 4). Therefore, K reverses the impairment loss recognised for the plant at the end of 20X0.

Schedule 4. Calculation of the reversal of the impairment loss at the end of 20X2

	<i>Plant</i>
	CU
Carrying amount at the end of 20X0 (Schedule 2)	2,051
<i>End of 20X2</i>	
Depreciation charge (for 20X1 and 20X2–Schedule 5)	(410)
Carrying amount before reversal	<u>1,641</u>
Recoverable amount (Schedule 3)	<u>2,162</u>
Reversal of the impairment loss	<u>521</u>
Carrying amount after reversal	<u>2,162</u>
Carrying amount: depreciated historical cost (Schedule 5)	2,400*

* The reversal does not result in the carrying amount of the plant exceeding what its carrying amount would have been at depreciated historical cost. Therefore, the full reversal of the impairment loss is recognised.

At the End of 20X3

IE53. There is a cash outflow of CU100 when the restructuring costs are paid. Even though a cash outflow has taken place, there is no change in the estimated future cash flows used to determine value in use at the end of 20X2. Therefore, the plant's recoverable amount is not calculated at the end of 20X3.

Schedule 5. Summary of the carrying amount of the plant

<i>End of year</i>	<i>Depreciated historical cost</i>	<i>Recoverable amount</i>	<i>Adjusted depreciation charge</i>	<i>Impairment loss</i>	<i>Carrying amount after impairment</i>
	CU	CU	CU	CU	CU
20X0	3,000	2,051	0	(949)	2,051
20X1	2,700	nc	(205)	0	1,846
20X2	2,400	2,162	(205)	521	2,162
20X3	2,100	nc	(270)	0	1,892

nc = not calculated as there is no indication that the impairment loss may have increased/decreased.

Example 6 - Treatment of Future Costs

In this example, tax effects are ignored.

Background

- IE54. At the end of 20X0, entity F tests a machine for impairment. The machine is a cash-generating unit. It is carried at depreciated historical cost and its carrying amount is CU150,000. It has an estimated remaining useful life of 10 years.
- IE55. The machine's recoverable amount (ie higher of value in use and fair value less costs to sell) is determined on the basis of a value in use calculation. Value in use is calculated using a pre-tax discount rate of 14 per cent.
- IE56. Management approved budgets reflect:
- (a) estimated costs necessary to maintain the level of economic benefit expected to arise from the machine in its current condition; and
 - (b) that in 20X4, costs of CU25,000 will be incurred to enhance the machine's performance by increasing its productive capacity.
- IE57. At the end of 20X4, costs to enhance the machine's performance are incurred. The machine's estimated future cash flows reflected in the most recent management approved budgets are given in paragraph IE60 and a current discount rate is the same as at the end of 20X0.

At the End of 20X0

Schedule 1. Calculation of the machine's value in use at the end of 20X0

<i>Year</i>	<i>Future cash flows CU</i>	<i>Discounted at 14% CU</i>
20X1	22,165 [*]	19,443
20X2	21,450 [*]	16,505
20X3	20,550 [*]	13,871
20X4	24,725 ^{*†}	14,639
20X5	25,325 ^{*§}	13,153
20X6	24,825 ^{*§}	11,310
20X7	24,123 ^{*§}	9,640
20X8	25,533 ^{*§}	8,951
20X9	24,234 ^{*§}	7,452
20X10	22,850 ^{*§}	6,164
Value in use		<u><u>121,128</u></u>

* Includes estimated costs necessary to maintain the level of economic benefit expected to arise from the machine in its current condition.

† Excludes estimated costs to enhance the machine's performance reflected in management budgets.

§ Excludes estimated benefits expected from enhancing the machine's performance reflected in management budgets.

IE58. The machine's recoverable amount (value in use) is less than its carrying amount. Therefore, F recognises an impairment loss for the machine.

Schedule 2. Calculation of the impairment loss at the end of 20X0

	<i>Machine CU</i>
Carrying amount before impairment loss	150,000
Recoverable amount (Schedule 1)	<u>121,128</u>
Impairment loss	<u>(28,872)</u>
Carrying amount after impairment loss	<u><u>121,128</u></u>

Years 20X1 - 20X3

IE59. No event occurs that requires the machine's recoverable amount to be re-estimated. Therefore, no calculation of recoverable amount is required to be performed.

At the End of 20X4

IE60. The costs to enhance the machine's performance are incurred. Therefore, in determining the machine's value in use, the future benefits expected from enhancing the machine's performance are considered in forecasting cash flows. This results in an increase in the estimated future cash flows used to determine value in use at the end of 20X0. As a consequence, in accordance with paragraphs 110 and 111 of IAS 36, the recoverable amount of the machine is recalculated at the end of 20X4.

Schedule 3. Calculation of the machine's value in use at the end of 20X4

<i>Year</i>	<i>Future cash flows*</i> <i>CU</i>	<i>Discounted at 14%</i> <i>CU</i>
20X5	30,321	26,597
20X6	32,750	25,200
20X7	31,721	21,411
20X8	31,950	18,917
20X9	33,100	17,191
20X10	27,999	12,756
Value in use		<u>122,072</u>

* Includes estimated benefits expected from enhancing the machine's performance reflected in management budgets.

IE61. The machine's recoverable amount (ie value in use) is higher than the machine's carrying amount and depreciated historical cost (see Schedule 4). Therefore, K reverses the impairment loss recognised for the machine at the end of 20X0 so that the machine is carried at depreciated historical cost.

Schedule 4. Calculation of the reversal of the impairment loss at the end of 20X4

	<i>Machine</i> CU
Carrying amount at the end of 20X0 (Schedule 2)	121,128
<i>End of 20X4</i>	
Depreciation charge (20X1 to 20X4 – Schedule 5)	(48,452)
Costs to enhance the asset's performance	25,000
Carrying amount before reversal	<u>97,676</u>
Recoverable amount (Schedule 3)	<u>122,072</u>
Reversal of the impairment loss	<u>17,324</u>
Carrying amount after reversal	<u>115,000</u>
Carrying amount: depreciated historical cost (Schedule 5)	115,000 [*]

* The value in use of the machine exceeds what its carrying amount would have been at depreciated historical cost. Therefore, the reversal is limited to an amount that does not result in the carrying amount of the machine exceeding depreciated historical cost.

Schedule 5. Summary of the carrying amount of the machine

<i>Year</i>	<i>Depreciated historical cost</i> CU	<i>Recoverable amount</i> CU	<i>Adjusted depreciation charge</i> CU	<i>Impairment loss</i> CU	<i>Carrying amount after impairment</i> CU
20X0	150,000	121,128	0	(28,872)	121,128
20X1	135,000	nc	(12,113)	0	109,015
20X2	120,000	nc	(12,113)	0	96,902
20X3	105,000	nc	(12,113)	0	84,789
20X4	90,000		(12,113)		
enhancement	25,000		-		
	<u>115,000</u>	122,072	<u>(12,113)</u>	17,324	115,000
20X5	95,833	nc	(19,167)	0	95,833

nc = not calculated as there is no indication that the impairment loss may have increased/decreased.

Example 7 – Impairment Testing Cash-generating Units with Goodwill and Minority Interests

In this example, tax effects are ignored.

Background

- IE62. Entity X acquires an 80 per cent ownership interest in Entity Y for CU1,600 on 1 January 20X3. At that date, Y's identifiable net assets have a fair value of CU1,500. Y has no contingent liabilities. Therefore, X recognises in its consolidated financial statements:
- (a) goodwill of CU400, being the difference between the cost of the business combination of CU1,600 and X's 80 per cent interest in Y's identifiable net assets;
 - (b) Y's identifiable net assets at their fair value of CU1,500; and
 - (c) a minority interest of CU300, being the 20 per cent interest in Y's identifiable net assets held by parties outside X.
- IE63. The assets of Y together are the smallest group of assets that generate cash inflows that are largely independent of the cash inflows from other assets or groups of assets. Therefore Y is a cash-generating unit. Because this cash-generating unit includes goodwill within its carrying amount, it must be tested for impairment annually, or more frequently if there is an indication that it may be impaired (see paragraph 90 of IAS 36).
- IE64. At the end of 20X3, X determines that the recoverable amount of cash-generating unit Y is CU1,000. X uses straight-line depreciation over a 10-year life for Y's identifiable assets and anticipates no residual value.

Testing Y for Impairment

- IE65. A portion of Y's recoverable amount of CU1,000 is attributable to the unrecognised minority interest in goodwill. Therefore, in accordance with paragraph 92 of IAS 36, the carrying amount of Y must be notionally adjusted to include goodwill attributable to the minority interest, before being compared with the recoverable amount of CU1,000.

Schedule 1. Testing Y for impairment at the end of 20X3

<i>End of 20X3</i>	<i>Goodwill</i>	<i>Identifiable</i>	<i>Total</i>
	<i>CU</i>	<i>net assets</i>	<i>CU</i>
	<i>CU</i>	<i>CU</i>	<i>CU</i>
Gross carrying amount	400	1,500	1,900
Accumulated depreciation	-	(150)	(150)
Carrying amount	400	1,350	1,750
Unrecognised minority interest	100*	-	100
Notionally adjusted carrying amount	500	1,350	1,850
Recoverable amount			1,000
Impairment loss			850

* Goodwill attributable to X's 80% interest in Y at the acquisition date is CU400. Therefore, goodwill notionally attributable to the 20% minority interest in Y at the acquisition date is CU100.

- IE66. In accordance with paragraph 104 of IAS 36, the impairment loss of CU850 is allocated to the assets in the unit by first reducing the carrying amount of goodwill to zero.
- IE67. Therefore, CU500 of the CU850 impairment loss for the unit is allocated to the goodwill. However, because the goodwill is recognised only to the extent of X's 80 per cent ownership interest in Y, X recognises only 80 per cent of that goodwill impairment loss (ie CU400).
- IE68. The remaining impairment loss of CU350 is recognised by reducing the carrying amounts of Y's identifiable assets (see Schedule 2).

Schedule 2. Allocation of the impairment loss for Y at the end of 20X3

<i>End of 20X3</i>	<i>Goodwill</i>	<i>Identifiable</i>	<i>Total</i>
	<i>CU</i>	<i>net assets</i>	<i>CU</i>
	<i>CU</i>	<i>CU</i>	<i>CU</i>
Gross carrying amount	400	1,500	1,900
Accumulated depreciation	-	(150)	(150)
Carrying amount	400	1,350	1,750
Impairment loss	(400)	(350)	(750)
Carrying amount after impairment loss	-	1,000	1,000

Example 8 - Allocation of Corporate Assets

In this example, tax effects are ignored.

Background

- IE69. Entity M has three cash-generating units: A, B and C. The carrying amounts of those units do not include goodwill. There are adverse changes in the technological environment in which M operates. Therefore, M conducts impairment tests of each of its cash-generating units. At the end of 20X0, the carrying amounts of A, B and C are CU100, CU150 and CU200 respectively.
- IE70. The operations are conducted from a headquarters. The carrying amount of the headquarters is CU200: a headquarters building of CU150 and a research centre of CU50. The relative carrying amounts of the cash-generating units are a reasonable indication of the proportion of the headquarters building devoted to each cash-generating unit. The carrying amount of the research centre cannot be allocated on a reasonable basis to the individual cash-generating units.
- IE71. The remaining estimated useful life of cash-generating unit A is 10 years. The remaining useful lives of B, C and the headquarters are 20 years. The headquarters is depreciated on a straight-line basis.
- IE72. The recoverable amount (ie higher of value in use and fair value less costs to sell) of each cash-generating unit is based on its value in use. Value in use is calculated using a pre-tax discount rate of 15 per cent.

Identification of Corporate Assets

- IE73. In accordance with paragraph 102 of IAS 36, M first identifies all the corporate assets that relate to the individual cash-generating units under review. The corporate assets are the headquarters building and the research centre.
- IE74. M then decides how to deal with each of the corporate assets:
- (a) the carrying amount of the headquarters building can be allocated on a reasonable and consistent basis to the cash-generating units under review; and
 - (b) the carrying amount of the research centre cannot be allocated on a reasonable and consistent basis to the individual cash-generating units under review.

Allocation of Corporate Assets

- IE75. The carrying amount of the headquarters building is allocated to the carrying amount of each individual cash-generating unit. A weighted allocation basis is used because the estimated remaining useful life of A's cash-generating unit is 10 years, whereas the estimated remaining useful lives of B and C's cash-generating units are 20 years.

Schedule 1. Calculation of a weighted allocation of the carrying amount of the headquarters building

<i>End of 20X0</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>Total</i>
	CU	CU	CU	CU
Carrying amount	100	150	200	450
Useful life	10 years	20 years	20 years	
Weighting based on useful life	1	2	2	
Carrying amount after weighting	100	300	400	800
Pro-rata allocation of the building	12% (100/800)	38% (300/800)	50% (400/800)	100%
Allocation of the carrying amount of the building (based on pro-rata above)	<u>19</u>	<u>56</u>	<u>75</u>	<u>150</u>
Carrying amount (after allocation of the building)	<u>119</u>	<u>206</u>	<u>275</u>	<u>600</u>

Determination of Recoverable Amount and Calculation of Impairment Losses

IE76. Paragraph 102 of IAS 36 requires first that the recoverable amount of each individual cash-generating unit be compared with its carrying amount, including the portion of the carrying amount of the headquarters building allocated to the unit, and any resulting impairment loss recognised. Paragraph 102 of IAS 36 then requires the recoverable amount of M as a whole (ie the smallest group of cash-generating units that includes the research centre) to be compared with its carrying amount, including both the headquarters building and the research centre.

Schedule 2. Calculation of A, B, C and M's value in use at the end of 20X0

Year	A		B		C		M	
	<i>Future cash flows</i>	<i>Discount at 15%</i>	<i>Future cash flows</i>	<i>Discount at 15%</i>	<i>Future cash flows</i>	<i>Discount at 15%</i>	<i>Future cash flows</i>	<i>Discount at 15%</i>
	CU	CU	CU	CU	CU	CU	CU	CU
1	18	16	9	8	10	9	39	34
2	31	23	16	12	20	15	72	54
3	37	24	24	16	34	22	105	69
4	42	24	29	17	44	25	128	73
5	47	24	32	16	51	25	143	71
6	52	22	33	14	56	24	155	67
7	55	21	34	13	60	22	162	61
8	55	18	35	11	63	21	166	54
9	53	15	35	10	65	18	167	48
10	48	12	35	9	66	16	169	42
11			36	8	66	14	132	28
12			35	7	66	12	131	25
13			35	6	66	11	131	21
14			33	5	65	9	128	18
15			30	4	62	8	122	15
16			26	3	60	6	115	12
17			22	2	57	5	108	10
18			18	1	51	4	97	8
19			14	1	43	3	85	6
20			10	1	35	2	71	4
Value in use		<u>199</u>		<u>164</u>		<u>271</u>		<u>720*</u>

* It is assumed that the research centre generates additional future cash flows for the entity as a whole. Therefore, the sum of the value in use of each individual cash-generating unit is less than the value in use of the business as a whole. The additional cash flows are not attributable to the headquarters building.

Schedule 3. Impairment testing A, B and C

<i>End of 20X0</i>	A	B	C
	CU	CU	CU
Carrying amount (after allocation of the building) (Schedule 1)	119	206	275
Recoverable amount (Schedule 2)	<u>199</u>	<u>164</u>	<u>271</u>
Impairment loss	<u>0</u>	<u>(42)</u>	<u>(4)</u>

- IE77. The next step is to allocate the impairment losses between the assets of the cash-generating units and the headquarters building.

Schedule 4. Allocation of the impairment losses for cash-generating units B and C

<i>Cash-generating unit</i>	B	C
	CU	CU
To headquarters building	(12) $(42 \times 56/206)$	(1) $(4 \times 75/275)$
To assets in cash-generating unit	<u>(30)</u> $(42 \times 150/206)$	<u>(3)</u> $(4 \times 200/275)$
	<u>(42)</u>	<u>(4)</u>

- IE78. Because the research centre could not be allocated on a reasonable and consistent basis to A, B and C's cash-generating units, M compares the carrying amount of the smallest group of cash-generating units to which the carrying amount of the research centre can be allocated (ie M as a whole) to its recoverable amount.

Schedule 5. Impairment testing the smallest group of cash-generating units to which the carrying amount of the research centre can be allocated (ie M as a whole)

<i>End of 20X0</i>	A	B	C	Building	Research centre	M
	CU	CU	CU	CU	CU	CU
Carrying amount	100	150	200	150	50	650
Impairment loss arising from the first step of the test	-	(30)	(3)	(13)	-	(46)
Carrying amount after the first step of the test	<u>100</u>	<u>120</u>	<u>197</u>	<u>137</u>	<u>50</u>	<u>604</u>
Recoverable amount (Schedule 2)						<u>720</u>
Impairment loss for the 'larger' cash-generating unit						<u>0</u>

- IE79. Therefore, no additional impairment loss results from the application of the impairment test to M as a whole. Only an impairment loss of CU46 is recognised as a result of the application of the first step of the test to A, B and C.

Example 9 – Disclosures about Cash-generating Units with Goodwill or Intangible Assets with Indefinite Useful Lives

The purpose of this example is to illustrate the disclosures required by paragraphs 134 and 135 of IAS 36.

Background

- IE80. Entity M is a multinational manufacturing firm that uses geographical segments as its primary format for reporting segment information. M's three reportable segments based on that format are Europe, North America and Asia. Goodwill has been allocated for impairment testing purposes to three individual cash-generating units—two in Europe (units A and B) and one in North America (unit C)—and to one group of cash-generating units (comprising operation XYZ) in Asia. Units A, B and C and operation XYZ each represent the lowest level within M at which the goodwill is monitored for internal management purposes.
- IE81. M acquired unit C, a manufacturing operation in North America, in December 20X2. Unlike M's other North American operations, C operates in an industry with high margins and high growth rates, and with the benefit of a 10-year patent on its primary product. The patent was granted to C just before M's acquisition of C. As part of accounting for the acquisition of C, M recognised, in addition to the patent, goodwill of CU3,000 and a brand name of CU1,000. M's management has determined that the brand name has an indefinite useful life. M has no other intangible assets with indefinite useful lives.
- IE82. The carrying amounts of goodwill and intangible assets with indefinite useful lives allocated to units A, B and C and to operation XYZ are as follows:

	<i>Goodwill</i>	<i>Intangible assets with indefinite useful lives</i>
	CU	CU
A	350	
B	450	
C	3,000	1,000
XYZ	1,200	
Total	<u>5,000</u>	<u>1,000</u>

- IE83. During the year ending 31 December 20X3, M determines that there is no impairment of any of its cash-generating units or group of cash-generating units containing goodwill or intangible assets with indefinite useful lives. The recoverable amounts (ie higher of value in use and fair value less costs to sell) of those units and group of units are determined on the basis of value in use calculations. M has determined that the recoverable amount calculations are most sensitive to changes in the following assumptions:

<i>Units A and B</i>	<i>Unit C</i>	<i>Operation XYZ</i>
Gross margin during the budget period (budget period is 4 years)	5-year US government bond rate during the budget period (budget period is 5 years)	Gross margin during the budget period (budget period is 5 years)
Raw materials price inflation during the budget period	Raw materials price inflation during the budget period	Japanese yen/US dollar exchange rate during the budget period
Market share during the budget period	Market share during the budget period	Market share during the budget period
Growth rate used to extrapolate cash flows beyond the budget period	Growth rate used to extrapolate cash flows beyond the budget period	Growth rate used to extrapolate cash flows beyond the budget period

- IE84. Gross margins during the budget period for A, B and XYZ are estimated by M based on average gross margins achieved in the period immediately before the start of the budget period, increased by 5 per cent per year for anticipated efficiency improvements. A and B produce complementary products and are operated by M to achieve the same gross margins.
- IE85. Market shares during the budget period are estimated by M based on average market shares achieved in the period immediately before the start of the budget period, adjusted each year for any anticipated growth or decline in market shares. M anticipates that:
- market shares for A and B will differ, but will each grow during the budget period by 3 per cent per year as a result of ongoing improvements in product quality.
 - C's market share will grow during the budget period by 6 per cent per year as a result of increased advertising expenditure and the benefits from the protection of the 10-year patent on its primary product.
 - XYZ's market share will remain unchanged during the budget period as a result of the combination of ongoing improvements in product quality and an anticipated increase in competition.
- IE86. A and B purchase raw materials from the same European suppliers, whereas C's raw materials are purchased from various North American suppliers. Raw materials price inflation during the budget period is estimated by M to be consistent with forecast consumer price indices published by government agencies in the relevant European and North American countries.
- IE87. The 5-year US government bond rate during the budget period is estimated by M to be consistent with the yield on such bonds at the beginning of the budget period. The Japanese yen/US dollar exchange rate is estimated by M to be consistent with the average market forward exchange rate over the budget period.

- IE88. M uses steady growth rates to extrapolate beyond the budget period cash flows for A, B, C and XYZ. The growth rates for A, B and XYZ are estimated by M to be consistent with publicly available information about the long-term average growth rates for the markets in which A, B and XYZ operate. However, the growth rate for C exceeds the long-term average growth rate for the market in which C operates. M's management is of the opinion that this is reasonable in the light of the protection of the 10-year patent on C's primary product.
- IE89. M includes the following disclosure in the notes to its financial statements for the year ending 31 December 20X3.

Impairment Tests for Goodwill and Intangible Assets with Indefinite Lives

Goodwill has been allocated for impairment testing purposes to three individual cash-generating units—two in Europe (units A and B) and one in North America (unit C)—and to one group of cash-generating units (comprising operation XYZ) in Asia. The carrying amount of goodwill allocated to unit C and operation XYZ is significant in comparison with the total carrying amount of goodwill, but the carrying amount of goodwill allocated to each of units A and B is not. Nevertheless, the recoverable amounts of units A and B are based on some of the same key assumptions, and the aggregate carrying amount of goodwill allocated to those units is significant.

Operation XYZ

The recoverable amount of operation XYZ has been determined based on a value in use calculation. That calculation uses cash flow projections based on financial budgets approved by management covering a five-year period, and a discount rate of 8.4 per cent. Cash flows beyond that five-year period have been extrapolated using a steady 6.3 per cent growth rate. This growth rate does not exceed the long-term average growth rate for the market in which XYZ operates. Management believes that any reasonably possible change in the key assumptions on which XYZ's recoverable amount is based would *not* cause XYZ's carrying amount to exceed its recoverable amount.

Unit C

The recoverable amount of unit C has also been determined based on a value in use calculation. That calculation uses cash flow projections based on financial budgets approved by management covering a five-year period, and a discount rate of 9.2 per cent. C's cash flows beyond the five-year period are extrapolated using a steady 12 per cent growth rate. This growth rate exceeds by 4 percentage points the long-term average growth rate for the market in which C operates. However, C benefits from the protection of a 10-year patent on its primary product, granted in December 20X2. Management believes that a 12 per cent growth rate is reasonable in the light of that patent. Management also believes that any reasonably possible change in the key assumptions on which C's recoverable amount is based would *not* cause C's carrying amount to exceed its recoverable amount.

Units A and B

The recoverable amounts of units A and B have been determined on the basis of value in use calculations. Those units produce complementary products, and their recoverable amounts are based on some of the same key assumptions. Both value in use calculations use cash flow projections based on financial budgets approved by management covering a four-year period, and a discount rate of 7.9 per cent. Both sets of cash flows beyond the four-year period are extrapolated using a steady 5 per cent growth rate. This growth rate does not exceed the long-term average growth rate for the market in which A and B operate. Cash flow projections during the budget period for both A and B are also based on the same expected gross margins during the budget period and the same raw materials price inflation during the budget period. Management believes that any reasonably possible change in any of these key assumptions would *not* cause the aggregate carrying amount of A and B to exceed the aggregate recoverable amount of those units.

	<i>Operation XYZ</i>	<i>Unit C</i>	<i>Units A and B (in aggregate)</i>
Carrying amount of goodwill	CU1,200	CU3,000	CU800
Carrying amount of brand name with indefinite useful life	-	CU1,000	-
Key assumptions used in value in use calculations *			
<ul style="list-style-type: none"> • Key assumption • Basis for determining value(s) assigned to key assumption 	<ul style="list-style-type: none"> • Budgeted gross margins achieved in period immediately before the budget period, increased for expected efficiency improvements. • Values assigned to key assumption reflect past experience, except for efficiency improvements. Management believes improvements of 5% per year are reasonably achievable. 	<ul style="list-style-type: none"> • 5-year US government bond rate • Yield on 5-year US government bonds at the beginning of the budget period. • Value assigned to key assumption is consistent with external sources of information. 	<ul style="list-style-type: none"> • Budgeted gross margins achieved in period immediately before the budget period, increased for expected efficiency improvements. • Values assigned to key assumption reflect past experience, except for efficiency improvements. Management believes improvements of 5% per year are reasonably achievable.

* The key assumptions shown in this table for units A and B are only those that are used in the recoverable amount calculations for both units.

<ul style="list-style-type: none"> • Key assumption • Basis for determining value(s) assigned to key assumption 	<ul style="list-style-type: none"> • Japanese yen/US dollar exchange rate during the budget period • Average market forward exchange rate over the budget period. • Value assigned to key assumption is consistent with external sources of information. 	<ul style="list-style-type: none"> • Raw materials price inflation • Forecast consumer price indices during the budget period for North American countries from which raw materials are purchased. • Value assigned to key assumption is consistent with external sources of information. 	<ul style="list-style-type: none"> • Raw materials price inflation • Forecast consumer price indices during the budget period for European countries from which raw materials are purchased. • Value assigned to key assumption is consistent with external sources of information.
<ul style="list-style-type: none"> • Key assumption • Basis for determining value(s) assigned to key assumption 	<ul style="list-style-type: none"> • Budgeted market share • Average market share in period immediately before the budget period. • Value assigned to key assumption reflects past experience. No change in market share expected as a result of ongoing product quality improvements coupled with anticipated increase in competition. 	<ul style="list-style-type: none"> • Budgeted market share • Average market share in period immediately before the budget period, increased each year for anticipated growth in market share. • Management believes market share growth of 6% per year is reasonably achievable due to increased advertising expenditure, the benefits from the protection of the 10-year patent on C's primary product, and the expected synergies to be achieved from operating C as part of M's North American segment. 	

Table of Concordance

This table shows how the contents of the superseded version of IAS 36 and the current version of IAS 36 correspond. Paragraphs are treated as corresponding if they broadly address the same matter even though their guidance may differ.

Superseded paragraph	Current paragraph	Superseded paragraph	Current paragraph	Superseded paragraph	Current paragraph
Objective	1	30	37	60	61
1	2	31	38	61	62
2	3	32	39	62	63
3	4	33	40	63	64
4	5	34	41	64	65
5	6	35	42	65	66
6	7	36	43	66	67
7	8	37	44	67	68
8	9	38	45	68	69
9	12	39	46	69	70
10	13	40	47	70	71
11	14	41	48	71	72
12	15	42	49	72	73
13	16	43	50	73	74
14	17	44	51	74	75
15	18	45	52	75	76
16	19	46	53	76	77
17	20	47	54	77	78
18	21	48	55	78	79
19	22	49	56	79	81
20	23	50	57, A16	80-82	80, 82, 88, 90
21	25	51	A17	83	None
22	26	52	A18	84	100
23	27	53	A15	85	101
24	28	54	A19	86	102
25	29	55	A20	87	103
26	31	56	A21	88	104
27	33	57	58	89	105
28	35	58	59	90	None
29	36	59	60	91	106

Superseded paragraph	Current paragraph
92	107
93	108
94	109
95	110
96	111
97	112
98	113
99	114
100	115
101	116
102	117
103	118
104	119
105	120
106	121
107	122
108	123
109	124
110	125
111	124
112	None
113	126
114	127
115	128
116	129
117	130
118	131
119	132
120	138, 139
121	None
122	139
A1	IE1
A2	IE2
A3	IE3

Superseded paragraph	Current paragraph
A4	IE4
A5	IE5
A6	IE6
A7	IE7
A8	IE8
A9	IE9
A10	IE10
A11	IE11
A12	IE12
A13	IE13
A14	IE14
A15	IE15
A16	IE16
A17	IE17
A18	IE18
A19	IE19
A20	IE20
A21	IE21
A22	IE22
A23	IE23
A24	IE27
A25	IE25
A26	IE23A, IE24, IE26
A27	None
A28	IE28
A29	IE29
A30	IE30
A31	IE31
A32	IE32
A33	IE33
A34	IE34
A35	IE35
A36	IE36

Superseded paragraph	Current paragraph
A37	IE37
A38	IE38
A39	IE39
A40	IE40
A41	IE41
A42	IE42
A43	IE43
A44	IE44
A45	IE45
A46	IE46
A47	IE47
A48	IE48
A49	IE48
A50	IE50
A51	IE51
A52	IE52
A53	IE53
A54	IE54
A55	IE55
A56	IE56
A57	IE57
A58	IE58
A59	IE59
A60	IE60
A61	IE61
A62	None
A63	None
A64	None
A65	None
A66	None
A67	None
A68	None
A69	None
A70	None

Superseded paragraph	Current paragraph
A71	None
A72	IE69
A73	IE70
A74	IE71
A75	IE72
A76	IE73
A77	IE74
A78	IE75
A79	IE76

Superseded paragraph	Current paragraph
A80	IE76
A81	IE77
A82	IE78
A83	IE79
None	10, 11
None	24
None	30
None	32
None	34

Superseded paragraph	Current paragraph
None	83-87
None	89
None	91-99
None	133-137
None	140, 141
None	A1-A14
None	IE62-IE68
None	IE80-IE89

