Accounting Standard (AS) 28
(issued 2002)

Impairment of Assets

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APPENDIX

Accounting Standard (AS) 28

(issued 2002)

Impairment of Assets

*(This Accounting Standard includes paragraphs set in **bold italic** type and plain type, which have equal authority. Paragraphs in bold italic type indicate the main principles. This Accounting Standard should be read in the context of its objective and the Preface to the Statements of Accounting Standards[1].)*

Accounting Standard (AS) 28, 'Impairment of Assets', issued by the Council of the Institute of Chartered Accountants of India, comes into effect in respect of accounting periods commencing on or after 1-4-2004.

This Standard is mandatory in nature[2] in respect of accounting periods commencing on or after:

(a) 1-4-2004[3], for the enterprises, which fall in any one or more of the following categories, at any time during the accounting period:

(i) Enterprises whose equity or debt securities are listed whether in India or outside India.

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[1] Attention is specifically drawn to paragraph 4.3 of the Preface, according to which Accounting Standards are intended to apply only to items which are material.

[2] Reference may be made to the section titled 'Announcements of the council regarding status of various documents issued by the Institute of Chartered Accountants of India' appearing at the beginning of this compendium for a detailed discussion on the implications of the mandatory status of an accounting standard.

[3] It was originally decided to make AS 28 mandatory in respect of accounting periods commencing on or after 1-4-2004 for the following :

(i) Enterprises whose equity or debt securities are listed on a recognised stock exchange in India, and enterprises that are in the process of issuing equity or debt securities that will be listed on a recognised stock exchange in India as evidenced by the board of directors' resolution in this regard.

(ii) All other commercial, industrial and business reporting enterprises, whose turnover for the accounting period exceeds Rs. 50 crores.

In respect of all other enterprises, it was originally decided to make AS 28 mandatory in respect of accounting periods commencing on or after 1-4-2005.

(ii) Enterprises which are in the process of listing their equity or debt securities as evidenced by the board of directors' resolution in this regard.

(iii) Banks including co-operative banks.

(iv) Financial institutions.

(v) Enterprises carrying on insurance business.

(vi) All commercial, industrial and business reporting enterprises, whose turnover for the immediately preceding accounting period on the basis of audited financial statements exceeds Rs. 50 crore. Turnover does not include 'other income'.

(vii) All commercial, industrial and business reporting enterprises having borrowings including public deposits, in excess of Rs. 10 crore at any time during the accounting period.

(viii) Holding and subsidiary enterprises of any one of the above at any time during the accounting period.

(b) 1-4-2006[4], for the enterprises which do not fall in any of the categories in (a) above but fall in any one or more of the following categories:

(i) All commercial, industrial and business reporting enterprises,

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[4] It was originally decided to make AS 28 mandatory in respect of accounting periods commencing on or after 1-4-2004 for the following:

(i) Enterprises whose equity or debt securities are listed on a recognised stock exchange in India, and enterprises that are in the process of issuing equity or debt securities that will be listed on a recognised stock exchange in India as evidenced by the board of directors' resolution in this regard.

(ii) All other commercial, industrial and business reporting enterprises, whose turnover for the accounting period exceeds Rs. 50 crores.

In respect of all other enterprises, it was originally decided to make AS 28 mandatory in respect of accounting periods commencing on or after 1-4-2005.

The Institute, in November 2005, considering that detailed cash flow projections of enterprises covered under the categories (b) and (c) are often not readily available, has relaxed the measurement of the 'value in use' for such enterprises. See also footnote 8.

whose turnover for the immediately preceding accounting period on the basis of audited financial statements exceeds Rs. 40 lakhs but does not exceed Rs. 50 crore. Turnover does not include 'other income'.

(ii) All commercial, industrial and business reporting enterprises having borrowings, including public deposits, in excess Rs. 1 crore but not in excess of Rs. 10 crore at any time during the accounting period.

(iii) Holding and subsidiary enterprises of any one of the above at any time during the accounting period.

(c) 1-4-2008[5], for the enterprises, which do not fall in any of the categories in (a) and (b) above.

Earlier application of the Accounting Standard is encouraged.

The following is the text of the Accounting Standard.

Objective

The objective of this Statement is to prescribe the procedures that an enterprise 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 this Statement requires the enterprise to recognise an impairment loss. This Statement also specifies when an enterprise should reverse an impairment loss and it prescribes certain disclosures for impaired assets.

Scope

1. This Statement should be applied in accounting for the impairment of all assets, other than:

(a) inventories (see AS 2, Valuation of Inventories);

[5] *ibid.*

(b) assets arising from construction contracts (see AS 7, Accounting for Construction Contracts[6]);

(c) financial assets[7], including investments that are included in the scope of AS 13, Accounting for Investments; and

(d) deferred tax assets (see AS 22, Accounting for Taxes on Income).

2. This Statement does not apply to inventories, assets arising from construction contracts, deferred tax assets or investments because existing Accounting Standards applicable to these assets already contain specific requirements for recognising and measuring the impairment related to these assets.

3. This Statement applies to assets that are carried at cost. It also applies to assets that are carried at revalued amounts in accordance with other applicable Accounting Standards. However, identifying whether a revalued asset may be impaired depends on the basis used to determine the fair value of the asset:

(a) if the fair value of the asset is its market value, the only difference between the fair value of the asset and its net selling price 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 (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; and

(ii) if the disposal costs are not negligible, net selling price of the revalued asset is necessarily less than its fair value. Therefore, the revalued asset will be impaired if its value in

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[6] This Standard has been revised and titled as 'Construction Contracts'. The revised AS 7 is published elsewhere in this Compendium.

[7] A financial asset is any asset that is:

(a) cash;
(b) a contractual right to receive cash or another financial asset from another enterprise;
(c) a contractual right to exchange financial instruments with another enterprise under conditions that are potentially favourable; or
(d) an ownership interest in another enterprise.

use is less than its revalued amount (fair value). In this case, after the revaluation requirements have been applied, an enterprise applies this Statement to determine whether the asset may be impaired; and

(b) if the asset's fair value is determined on a basis other than its market value, its revalued amount (fair value) may be greater or lower than its recoverable amount. Hence, after the revaluation requirements have been applied, an enterprise applies this Statement to determine whether the asset may be impaired.

Definitions

4. The following terms are used in this Statement with the meanings specified:

Recoverable amount is the higher of an asset's net selling price and its value in use.

Value in use is the present value of estimated future cash flows expected to arise from the continuing use of an asset and from its disposal at the end of its useful life.[8]

[8] The Institute, in November 2005, considering that detailed cash flow projections of Small and Medium-sized Enterprises (SMEs) are often not readily available, has allowed such enterprises to measure the 'value in use' on the basis of reasonable estimate thereof instead of computing the value in use by present value technique. Therefore, the definition of the term 'value in use' in the context of SMEs would read as follows:

> ***"Value in use is the present value of estimated future cash flows expected to arise from the continuing use of an asset and from its disposal at the end of its useful life, or a reasonable estimate thereof".***

The above change in the definition of 'value in use' implies that instead of using the present value technique, a reasonable estimate of the 'value in use' can be made. Consequently, if an SME chooses to measure the 'value in use' by not using the present value technique, the relevant provisions of AS 28, such as discount rate etc., would not be applicable to such SME. Further, such SME need not disclose the information required by paragraph 121(g) of the Standard. Subject to this, the other provisions of AS 28 would be applicable to SMEs.

[For full text of the Announcement issued in this regard, reference may be made to the section titled 'Announcements of the Council regarding status of various documents issued by the Institute of Chartered Accountants of India' appearing at the beginning of this Compendium.]

Net selling price *is the amount obtainable from the sale of an asset in an arm's length transaction between knowledgeable, willing parties, less the costs of disposal.*

Costs of disposal *are incremental costs directly attributable to the disposal of an asset, excluding finance costs and income tax expense.*

An ***impairment loss*** *is the amount by which the carrying amount of an asset exceeds its recoverable amount.*

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

Depreciation (Amortisation) *is a systematic allocation of the depreciable amount of an asset over its useful life.*[9]

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

Useful life *is either:*

(a) the period of time over which an asset is expected to be used by the enterprise; or

(b) the number of production or similar units expected to be obtained from the asset by the enterprise.

A ***cash generating unit*** *is the smallest identifiable group of assets that generates cash inflows from continuing use 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.*

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

(a) the items traded within the market are homogeneous;

[9] In the case of an intangible asset or goodwill, the term 'amortisation' is generally used instead of 'depreciation'. Both terms have the same meaning.

(b) willing buyers and sellers can normally be found at any time; and

(c) prices are available to the public.

Identifying an Asset that may be Impaired

5. An asset is impaired when the carrying amount of the asset exceeds its recoverable amount. Paragraphs 6 to 13 specify when recoverable amount should be determined. These requirements use the term 'an asset' but apply equally to an individual asset or a cash-generating unit.

6. An enterprise should assess at each balance sheet date whether there is any indication that an asset may be impaired. If any such indication exists, the enterprise should estimate the recoverable amount of the asset.

7. Paragraphs 8 to 10 describe some indications that an impairment loss may have occurred: if any of those indications is present, an enterprise is required to make a formal estimate of recoverable amount. If no indication of a potential impairment loss is present, this Statement does not require an enterprise to make a formal estimate of recoverable amount.

8. In assessing whether there is any indication that an asset may be impaired, an enterprise should 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 enterprise 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 enterprise 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 reporting enterprise 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 enterprise 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 plans to discontinue or restructure the operation to which an asset belongs or to dispose of an asset before the previously expected date; and

(g) evidence is available from internal reporting that indicates that the economic performance of an asset is, or will be, worse than expected.

9. The list of paragraph 8 is not exhaustive. An enterprise may identify other indications that an asset may be impaired and these would also require the enterprise to determine the asset's recoverable amount.

10. 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 figures are aggregated with budgeted figures for the future.

11. 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 enterprise 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 8.

12. As an illustration of paragraph 11, if market interest rates or other market rates of return on investments have increased during the period, an enterprise 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; or

(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. For example, in some cases, an enterprise 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.

13. 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 need to be reviewed and adjusted under the Accounting Standard applicable to the asset, such as Accounting Standard (AS) 6, Depreciation Accounting[10], even if no impairment loss is recognised for the asset.

Measurement of Recoverable Amount

14. This Statement defines recoverable amount as the higher of an asset's net selling price and value in use. Paragraphs 15 to 55 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.

15. It is not always necessary to determine both an asset's net selling price and its value in use. For example, 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.

16. It may be possible to determine net selling price, even if an asset is not traded in an active market. However, sometimes it will not be possible to determine net selling price 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 recoverable amount of the asset may be taken to be its value in use.

17. If there is no reason to believe that an asset's value in use materially exceeds its net selling price, the asset's recoverable amount may be taken to be its net selling price. 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, since the future cash flows from continuing use of the asset until its disposal are likely to be negligible.

18. Recoverable amount is determined for an individual asset, unless the asset does not generate cash inflows from continuing use that are largely independent of those from other assets or groups of assets. If this is the

[10] From the date of Accounting Standard (AS) 26, 'Intangible Assets', becoming mandatory for the concerned enterprises, AS 6 stands withdrawn insofar as it relates to the amortisation (depreciation) of intangible assets (see AS 26).

case, recoverable amount is determined for the cash-generating unit to which the asset belongs (see paragraphs 63 to 86), unless either:

(a) the asset's net selling price is higher than its carrying amount; or

(b) the asset's value in use can be estimated to be close to its net selling price and net selling price can be determined.

19. In some cases, estimates, averages and simplified computations may provide a reasonable approximation of the detailed computations illustrated in this Statement for determining net selling price or value in use.

Net Selling Price

20. The best evidence of an asset's net selling price 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.

21. If there is no binding sale agreement but an asset is traded in an active market, net selling price 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 net selling price, provided that there has not been a significant change in economic circumstances between the transaction date and the date at which the estimate is made.

22. If there is no binding sale agreement or active market for an asset, net selling price is based on the best information available to reflect the amount that an enterprise could obtain, at the balance sheet date, for 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 enterprise considers the outcome of recent transactions for similar assets within the same industry. Net selling price does not reflect a forced sale, unless management is compelled to sell immediately.

23. Costs of disposal, other than those that have already been recognised as liabilities, are deducted in determining net selling price. Examples of such costs are legal costs, costs of removing the asset, and direct incremental costs to bring an asset into condition for its sale. However, termination 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.

24. Sometimes, the disposal of an asset would require the buyer to take over a liability and only a single net selling price is available for both the asset and the liability. Paragraph 76 explains how to deal with such cases.

Value in Use

25. Estimating the value in use of an asset involves the following steps:

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

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

Basis for Estimates of Future Cash Flows

26. In measuring value in use:

(a) cash flow projections should be based on 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. Greater weight should be given to external evidence;

(b) cash flow projections should be based on the most recent financial budgets/forecasts that have been approved by management. Projections based on these budgets/forecasts should cover a maximum period of five years, unless a longer period can be justified; and

(c) cash flow projections beyond the period covered by the most recent budgets/forecasts should be estimated 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 should not exceed the long-term average growth rate for the products, industries, or country or countries in which the enterprise operates, or for the market in which the asset is used, unless a higher rate can be justified.

27. 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 management 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.

28. 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.

29. Where conditions are very favourable, competitors are likely to enter the market and restrict growth. Therefore, enterprises 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 enterprise operates, or for the market in which the asset is used.

30. In using information from financial budgets/forecasts, an enterprise 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

31. Estimates of future cash flows should 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 that 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.

32. Estimates of future cash flows and the discount rate reflect consistent assumptions about price increases due to general inflation. Therefore, if the discount rate includes the effect of price increases due to general inflation, future cash flows are estimated in nominal terms. If the discount rate excludes the effect of price increases due to general inflation, future cash flows are
estimated in real terms but include future specific price increases or decreases.

33. Projections of cash outflows include future overheads that can be attributed directly, or allocated on a reasonable and consistent basis, to the use of the asset.

34. 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.

35. To avoid double counting, estimates of future cash flows do not include:

(a) cash inflows from assets that generate cash inflows from continuing use 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 already been recognised as liabilities (for example, payables, pensions or provisions).

36. Future cash flows should be estimated for the asset in its current condition. Estimates of future cash flows should not include 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 in excess of its originally assessed standard of performance.

37. 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 enterprise is not yet committed; or

(b) future capital expenditure that will improve or enhance the asset in excess of its originally assessed standard of performance or the related future benefits from this future expenditure.

38. A restructuring is a programme that is planned and controlled by management and that materially changes either the scope of the business undertaken by an enterprise or the manner in which the business is conducted.

39. When an enterprise becomes committed to a restructuring, some assets are likely to be affected by this restructuring. Once the enterprise is committed to the restructuring, in determining value in use, estimates of future cash inflows and cash outflows reflect the cost savings and other benefits from the restructuring (based on the most recent financial budgets/forecasts that have been approved by management).

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

40. Until an enterprise incurs capital expenditure that improves or enhances an asset in excess of its originally assessed standard of performance, estimates of future cash flows do not include the estimated future cash inflows that are expected to arise from this expenditure (see Example 6 given in the Appendix).

41. Estimates of future cash flows include future capital expenditure necessary to maintain or sustain an asset at its originally assessed standard of performance.

42. Estimates of future cash flows should not include:

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

(b) income tax receipts or payments.

43. 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, since the discount rate is determined on a pre-tax basis, future cash flows are also estimated on a pre-tax basis.

44. The estimate of net cash flows to be received (or paid) for the disposal of an asset at the end of its useful life should be the amount that an enterprise 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.

45. 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 net selling price, except that, in estimating those net cash flows:

(a) an enterprise uses prices prevailing at the date of the estimate for similar assets that have reached the end of their useful life and that have operated under conditions similar to those in which the asset will be used; and

(b) those prices are adjusted for the effect of both future price increases due to general inflation and specific future price increases (decreases). However, if estimates of future cash flows from the asset's continuing use and the discount rate exclude the effect of general inflation, this effect is also excluded from the estimate of net cash flows on disposal.

Foreign Currency Future Cash Flows

46. 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 enterprise translates the present value obtained using the exchange rate at the balance sheet date (described in Accounting Standard
(AS) 11, Accounting for the Effects of Changes in Foreign Exchange Rates[11], as the closing rate).

[11] AS 11 has been revised in 2003, and titled as 'The Effects of Changes in Foreign Exchange Rates'. The revised Standard is published elsewhere in this Compendium.

Discount Rate

47. The discount rate(s) should be a pre tax rate(s) that reflect(s) current market assessments of the time value of money and the risks specific to the asset. The discount rate(s) should not reflect risks for which future cash flow estimates have been adjusted.

48. 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 enterprise 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 enterprise that has a single asset (or a portfolio of assets) similar in terms of service potential and risks to the asset under review.

49. When an asset-specific rate is not directly available from the market, an enterprise uses other bases 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) the risks that the future cash flows will differ in amount or timing from estimates.

50. As a starting point, the enterprise may take into account the following rates:

(a) the enterprise's weighted average cost of capital determined using techniques such as the Capital Asset Pricing Model;

(b) the enterprise's incremental borrowing rate; and

(c) other market borrowing rates.

51. These rates are adjusted:

(a) to reflect the way that the market would assess the specific risks associated with the projected cash flows; and

(b) to exclude risks that are not relevant to the projected cash flows.

Consideration is given to risks such as country risk, currency risk, price risk and cash flow risk.

52. To avoid double counting, the discount rate does not reflect risks for which future cash flow estimates have been adjusted.

53. The discount rate is independent of the enterprise's capital structure and the way the enterprise 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 enterprise financed the purchase of the asset.

54. When the basis for the rate is post-tax, that basis is adjusted to reflect a pre-tax rate.

55. An enterprise normally uses a single discount rate for the estimate of an asset's value in use. However, an enterprise 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.

Recognition and Measurement of an Impairment Loss

56. Paragraphs 57 to 62 set out the requirements for recognising and measuring impairment losses for an individual asset. Recognition and measurement of impairment losses for a cash-generating unit are dealt with in paragraphs 87 to 92.

57. If the recoverable amount of an asset is less than its carrying amount, the carrying amount of the asset should be reduced to its recoverable amount. That reduction is an impairment loss.

58. An impairment loss should be recognised as an expense in the statement of profit and loss immediately, unless the asset is carried at revalued amount in accordance with another Accounting Standard (see Accounting Standard (AS) 10, Accounting for Fixed Assets), in which case any impairment loss of a revalued asset should be treated as a revaluation decrease under that Accounting Standard.

59. An impairment loss on a revalued asset is recognised as an expense in the statement of profit and 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 held in the revaluation surplus for that same asset.

60. When the amount estimated for an impairment loss is greater than the carrying amount of the asset to which it relates, an enterprise should recognise a liability if, and only if, that is required by another Accounting Standard.

61. After the recognition of an impairment loss, the depreciation (amortisation) charge for the asset should 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.

62. If an impairment loss is recognised, any related deferred tax assets or liabilities are determined under Accounting Standard (AS) 22, Accounting for Taxes on Income (see Example 3 given in the Appendix).

Cash-Generating Units

63. Paragraphs 64 to 92 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.

Identification of the Cash-Generating Unit to Which an Asset Belongs

64. If there is any indication that an asset may be impaired, the recoverable amount should be estimated for the individual asset. If it is not possible to estimate the recoverable amount of the individual asset, an enterprise should determine the recoverable amount of the cash-generating unit to which the asset belongs (the asset's cash-generating unit).

65. 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 net selling price (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 from continuing use 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 enterprise owns a private railway to support its mining activities. The private railway could be sold only for scrap value and the private railway does not generate cash inflows from continuing use 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 the value in use of the private railway cannot be determined and it is probably different from scrap value. Therefore, the enterprise estimates the recoverable amount of the cash-generating unit to which the private railway belongs, that is, the mine as a whole.

66. As defined in paragraph 4, an asset's cash-generating unit is the smallest group of assets that includes the asset and that generates cash inflows from continuing use 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 enterprise identifies the lowest aggregation of assets that generate largely independent cash inflows from continuing use.

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 enterprise does not have the option to curtail any one bus route, the lowest level of identifiable cash inflows from continuing use 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.

67. Cash inflows from continuing use are inflows of cash and cash equivalents received from parties outside the reporting enterprise. 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 enterprise considers various factors including how management monitors the enterprise's operations (such as by product lines, businesses, individual locations, districts or regional areas or in some other way) or how management makes decisions about continuing or disposing of the enterprise's assets and operations. Example 1 in the Appendix gives examples of identification of a cash-generating unit.

68. If an active market exists for the output produced by an asset or a group of assets, this asset or group of assets should be identified as a separate cash-generating unit, even if some or all of the output is used internally. If this is the case, management's best estimate of future market prices for the output should be used:

(a) in determining the value in use of this cash-generating unit, when estimating the future cash inflows that relate to the internal use of the output; and

(b) in determining the value in use of other cash-generating units of the reporting enterprise, when estimating the future cash outflows that relate to the internal use of the output.

69. Even if part or all of the output produced by an asset or a group of assets is used by other units of the reporting enterprise (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 enterprise could sell this output in an active market. This is because this asset or group of assets could generate cash inflows from continuing use 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, an enterprise adjusts this information if internal transfer prices do not reflect management's best estimate of future market prices for the cash-generating unit's output.

70. Cash-generating units should be identified consistently from period to period for the same asset or types of assets, unless a change is justified.

71. If an enterprise determines that an asset belongs to a different cash-generating unit than in previous periods, or that the types of assets aggregated for the asset's cash-generating unit have changed, paragraph 121 requires certain disclosures about the cash-generating unit, if an impairment loss is recognised or reversed for the cash-generating unit and is material to the financial statements of the reporting enterprise as a whole.

Recoverable Amount and Carrying Amount of a Cash-Generating Unit

72. The recoverable amount of a cash-generating unit is the higher of the cash-generating unit's net selling price and value in use. For the purpose of determining the recoverable amount of a cash-generating unit, any reference in paragraphs 15 to 55 to 'an asset' is read as a reference to 'a cash-generating unit'.

73. The carrying amount of a cash-generating unit should be determined consistently with the way the recoverable amount of the cash-generating unit is determined.

74. 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 that will generate the future cash inflows estimated 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 net selling price 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 already been recognised in the financial statements, as set out in paragraphs 23 and 35.

75. Where assets are grouped for recoverability assessments, it is important to include in the cash-generating unit all assets that generate the relevant stream of cash inflows from continuing use. Otherwise, the cash-generating

unit may appear to be fully recoverable when in fact an impairment loss has occurred. In some cases, although certain 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 78 to 86 explain how to deal with these assets in testing a cash-generating unit for impairment.

76. It may be necessary to consider certain recognised liabilities in order 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 take over a liability. In this case, the net selling price (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. In order 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 Rs. 50,00,000, which is equal to the present value of the restoration costs.

The enterprise is testing the mine for impairment. The cash-generating unit for the mine is the mine as a whole. The enterprise has received various offers to buy the mine at a price of around Rs. 80,00,000; this price encompasses the fact that the buyer will take over the obligation to restore the overburden. Disposal costs for the mine are negligible. The value in use of the mine is approximately Rs. 1,20,00,000 excluding restoration costs. The carrying amount of the mine is Rs. 1,00,00,000.

The net selling price for the cash-generating unit is Rs. 80,00,000. 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 Rs. 70,00,000 (Rs. 1,20,00,000 less Rs. 50,00,000). The carrying amount of the cash-generating unit is Rs. 50,00,000, which is the carrying amount of the mine (Rs. 1,00,00,000) less the carrying amount of the provision for restoration costs (Rs. 50,00,000).

77. 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 already been recognised in the financial statements (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

78. In testing a cash-generating unit for impairment, an enterprise should identify whether goodwill that relates to this cash-generating unit is recognised in the financial statements. If this is the case, an enterprise should:

(a) perform a 'bottom-up' test, that is, the enterprise should:

(i) identify whether the carrying amount of goodwill can be allocated on a reasonable and consistent basis to the cash-generating unit under review; and

(ii) then, compare the recoverable amount of the cash-generating unit under review to its carrying amount (including the carrying amount of allocated goodwill, if any) and recognise any impairment loss in accordance with paragraph 87.

The enterprise should perform the step at (ii) above even if none of the carrying amount of goodwill can be allocated on a reasonable and consistent basis to the cash-generating unit under review; and

(b) if, in performing the 'bottom-up' test, the enterprise could not allocate the carrying amount of goodwill on a reasonable and consistent basis to the cash-generating unit under review, the enterprise should also perform a 'top-down' test, that is, the enterprise should:

(i) identify the smallest cash-generating unit that includes the cash-generating unit under review and to which the carrying amount of goodwill can be allocated on a reasonable and consistent basis (the 'larger' cash-generating unit); and

(ii) then, compare the recoverable amount of the larger cash-generating unit to its carrying amount (including the carrying amount of allocated goodwill) and recognise any impairment loss in accordance with paragraph 87.

79. Goodwill arising on acquisition represents a payment made by an acquirer in anticipation of future economic benefits. The future economic benefits may result from synergy between the identifiable assets acquired or from assets that individually do not qualify for recognition in the financial statements. Goodwill does not generate cash flows independently from other assets or groups of assets and, therefore, the recoverable amount of goodwill as an individual asset cannot be determined. As a consequence, if there is an indication that goodwill may be impaired, recoverable amount is determined for the cash-generating unit to which goodwill belongs. This amount is then compared to the carrying amount of this cash-generating unit and any impairment loss is recognised in accordance with paragraph 87.

80. Whenever a cash-generating unit is tested for impairment, an enterprise considers any goodwill that is associated with the future cash flows to be generated by the cash-generating unit. If goodwill can be allocated on a reasonable and consistent basis, an enterprise applies the 'bottom-up' test only. If it is not possible to allocate goodwill on a reasonable and consistent basis, an enterprise applies both the 'bottom-up' test and 'top-down' test (see Example 7 given in the Appendix).

81. The 'bottom-up' test ensures that an enterprise recognises any impairment loss that exists for a cash-generating unit, including for goodwill that can be allocated on a reasonable and consistent basis. Whenever it is impracticable to allocate goodwill on a reasonable and consistent basis in the 'bottom-up' test, the combination of the 'bottom-up' and the 'top-down' test ensures that an enterprise recognises:

(a) first, any impairment loss that exists for the cash-generating unit excluding any consideration of goodwill; and

(b) then, any impairment loss that exists for goodwill. Because an enterprise applies the 'bottom-up' test first to all assets that may be impaired, any impairment loss identified for the larger cash-generating unit in the 'top-down' test relates only to goodwill allocated to the larger unit.

82. If the 'top-down' test is applied, an enterprise formally determines the recoverable amount of the larger cash-generating unit, unless there is persuasive evidence that there is no risk that the larger cash-generating unit is impaired.

Corporate Assets

83. Corporate assets include group or divisional assets such as the building of a headquarters or a division of the enterprise, EDP equipment or a research centre. The structure of an enterprise determines whether an asset meets the definition of corporate assets (see paragraph 4) for a particular cash- generating unit. Key characteristics of corporate assets are that they do not generate cash inflows independently from other assets or groups of assets and their carrying amount cannot be fully attributed to the cash-generating unit under review.

84. 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 to which the corporate asset belongs, compared to the carrying amount of this cash-generating unit and any impairment loss is recognised in accordance with paragraph 87.

85. In testing a cash-generating unit for impairment, an enterprise

should identify all the corporate assets that relate to the cash-generating unit under review. For each identified corporate asset, an enterprise should then apply paragraph 78, that is:

(a) if the carrying amount of the corporate asset can be allocated on a reasonable and consistent basis to the cash-generating unit under review, an enterprise should apply the 'bottom-up' test only; and

(b) if the carrying amount of the corporate asset cannot be allocated on a reasonable and consistent basis to the cash-generating unit under review, an enterprise should apply both the 'bottom-up' and 'top-down' tests.

86. An example of how to deal with corporate assets is given as Example 8 in the Appendix.

Impairment Loss for a Cash-Generating Unit

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

(a) first, to goodwill allocated to the cash-generating unit (if any); and

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

These reductions in carrying amounts should be treated as impairment losses on individual assets and recognised in accordance with paragraph 58.

88. In allocating an impairment loss under paragraph 87, the carrying amount of an asset should not be reduced below the highest of:

(a) its net selling price (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 should be allocated to the other assets of the unit on a pro-rata basis.

89. The goodwill allocated to a cash-generating unit is reduced before reducing the carrying amount of the other assets of the unit because of its nature.

90. If there is no practical way to estimate the recoverable amount of each individual asset of a cash-generating unit, this Statement requires the allocation of the impairment loss between the assets of that unit other than goodwill on a pro-rata basis, because all assets of a cash-generating unit work together.

91. If the recoverable amount of an individual asset cannot be determined (see paragraph 65):

(a) an impairment loss is recognised for the asset if its carrying amount is greater than the higher of its net selling price and the results of the allocation procedures described in paragraphs 87 and 88; 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 net selling price is less than its carrying amount.

Example

A machine has suffered physical damage but is still working, although not as well as it used to. The net selling price of the machine is less than its carrying amount. The machine does not generate independent cash inflows from continuing use. The smallest identifiable group of assets that includes the machine and generates cash inflows from continuing use 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 since the machine's value in use:

(a) may differ from its net selling price; 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 enterprise 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 consumed by the enterprise.

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 net selling price. 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 (the production line). Since the machine's net selling price is less than its carrying amount, an impairment loss is recognised for the machine.

92. After the requirements in paragraphs 87 and 88 have been applied, a liability should be recognised for any remaining amount of an impairment loss for a cash-generating unit if that is required by another Accounting Standard.

Reversal of an Impairment Loss

93. Paragraphs 94 to 100 set out the requirements for reversing an impairment loss recognised for an asset or a cash-generating unit in prior accounting periods. These requirements use the term 'an asset' but apply equally to an individual asset or a cash-generating unit. Additional requirements

are set out for an individual asset in paragraphs 101 to 105, for a cash-generating unit in paragraphs 106 to 107 and for goodwill in paragraphs 108 to 111.

94. An enterprise should assess at each balance sheet date whether there is any indication that an impairment loss recognised for an asset in prior accounting periods may no longer exist or may have decreased. If any such indication exists, the enterprise should estimate the recoverable amount of that asset.

95. In assessing whether there is any indication that an impairment loss recognised for an asset in prior accounting periods may no longer exist or may have decreased, an enterprise should 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 enterprise 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 enterprise 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 enterprise 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 capital expenditure that has been incurred during the period to improve or enhance an asset in excess of its originally assessed standard

of performance or a commitment to discontinue or restructure the operation to which the asset belongs; and

(e) evidence is available from internal reporting that indicates that the economic performance of the asset is, or will be, better than expected.

96. Indications of a potential decrease in an impairment loss in paragraph 95 mainly mirror the indications of a potential impairment loss in paragraph 8. The concept of materiality applies in identifying whether an impairment loss recognised for an asset in prior accounting periods may need to be reversed and the recoverable amount of the asset determined.

97. If there is an indication that an impairment loss recognised for an asset 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 Accounting Standard applicable to the asset, even if no impairment loss is reversed for the asset.

98. An impairment loss recognised for an asset in prior accounting periods should be reversed if there has been a change in the estimates of cash inflows, cash outflows or discount rates 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 should be increased to its recoverable amount. That increase is a reversal of an impairment loss.

99. A reversal of an impairment loss reflects an increase in the estimated service potential of an asset, either from use or sale, since the date when an enterprise last recognised an impairment loss for that asset. An enterprise is required 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 (i.e., whether recoverable amount is based on net selling price 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 net selling price: a change in estimate of the components of net selling price.

100. 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.

Reversal of an Impairment Loss for an Individual Asset

101. The increased carrying amount of an asset due to a reversal of an impairment loss should 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 accounting periods.

102. Any increase in the carrying amount of an asset above the carrying amount that would have been determined (net of amortisation or depreciation) had no impairment loss been recognised for the asset in prior accounting periods is a revaluation. In accounting for such a revaluation, an enterprise applies the Accounting Standard applicable to the asset.

103. A reversal of an impairment loss for an asset should be recognised as income immediately in the statement of profit and loss, unless the asset is carried at revalued amount in accordance with another Accounting Standard (see Accounting Standard (AS) 10, Accounting for Fixed Assets) in which case any reversal of an impairment loss on a revalued asset should be treated as a revaluation increase under that Accounting Standard.

104. 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 as an expense in the statement of profit and loss, a reversal of that impairment loss is recognised as income in the statement of profit and loss.

105. After a reversal of an impairment loss is recognised, the depreciation (amortisation) charge for the asset should 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.

Reversal of an Impairment Loss for a Cash-Generating Unit

106. A reversal of an impairment loss for a cash-generating unit should be allocated to increase the carrying amount of the assets of the unit in the following order:

(a) first, assets other than goodwill on a pro-rata basis based on the carrying amount of each asset in the unit; and

(b) then, to goodwill allocated to the cash-generating unit (if any), if the requirements in paragraph 108 are met.

These increases in carrying amounts should be treated as reversals of impairment losses for individual assets and recognised in accordance with paragraph 103.

107. In allocating a reversal of an impairment loss for a cash-generating unit under paragraph 106, the carrying amount of an asset should 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 accounting periods.

The amount of the reversal of the impairment loss that would otherwise have been allocated to the asset should be allocated to the other assets of the unit on a pro-rata basis.

Reversal of an Impairment Loss for Goodwill

108. As an exception to the requirement in paragraph 98, an impairment loss recognised for goodwill should not be reversed in a subsequent period unless:

(a) the impairment loss was caused by a specific external event of an exceptional nature that is not expected to recur; and

(b) subsequent external events have occurred that reverse the effect of that event.

109. Accounting Standard (AS) 26, Intangible Assets, prohibits the recognition of internally generated goodwill. Any subsequent increase in the recoverable amount of goodwill is likely to be an increase in internally generated goodwill, unless the increase relates clearly to the reversal of the effect of a specific external event of an exceptional nature.

110. This Statement does not permit an impairment loss to be reversed for goodwill because of a change in estimates (for example, a change in the discount rate or in the amount and timing of future cash flows of the cash-generating unit to which goodwill relates).

111. A specific external event is an event that is outside of the control of the enterprise. Examples of external events of an exceptional nature include new regulations that significantly curtail the operating activities, or decrease the profitability, of the business to which the goodwill relates.

Impairment in case of Discontinuing Operations

112. The approval and announcement of a plan for discontinuance[12] is an indication that the assets attributable to the discontinuing operation may be impaired or that an impairment loss previously recognised for those assets should be increased or reversed. Therefore, in accordance with this Statement, an enterprise estimates the recoverable amount of each asset of the discontinuing operation and recognises an impairment loss or reversal of a prior impairment loss, if any.

113. In applying this Statement to a discontinuing operation, an enterprise determines whether the recoverable amount of an asset of a discontinuing operation is assessed for the individual asset or for the asset's cash-generating unit. For example:

(a) if the enterprise sells the discontinuing operation substantially in its entirety, none of the assets of the discontinuing operation generate cash inflows independently from other assets within the discontinuing operation. Therefore, recoverable amount is determined for the discontinuing operation as a whole and an impairment loss, if any, is allocated among the assets of the discontinuing operation in accordance with this Statement;

[12] See Accounting Standard (AS) 24 'Discontinuing Operations'.

(b) if the enterprise disposes of the discontinuing operation in other ways such as piecemeal sales, the recoverable amount is determined for individual assets, unless the assets are sold in groups; and

(c) if the enterprise abandons the discontinuing operation, the recoverable amount is determined for individual assets as set out in this Statement.

114. After announcement of a plan, negotiations with potential purchasers of the discontinuing operation or actual binding sale agreements may indicate that the assets of the discontinuing operation may be further impaired or that impairment losses recognised for these assets in prior periods may have decreased. As a consequence, when such events occur, an enterprise re- estimates the recoverable amount of the assets of the discontinuing operation and recognises resulting impairment losses or reversals of impairment losses
in accordance with this Statement.

115. A price in a binding sale agreement is the best evidence of an asset's (cash-generating unit's) net selling price or of the estimated cash inflow from ultimate disposal in determining the asset's (cash-generating unit's) value in use.

116. The carrying amount (recoverable amount) of a discontinuing operation includes the carrying amount (recoverable amount) of any goodwill that can be allocated on a reasonable and consistent basis to that discontinuing operation.

Disclosure

117. For each class of assets, the financial statements should disclose:

(a) the amount of impairment losses recognised in the statement of profit and loss during the period and the line item(s) of the statement of profit and loss in which those impairment losses are included;

(b) the amount of reversals of impairment losses recognised in the statement of profit and loss during the period and the line item(s) of the statement of profit and loss in which those impairment losses are reversed;

(c) the amount of impairment losses recognised directly against revaluation surplus during the period; and

(d) the amount of reversals of impairment losses recognised directly in revaluation surplus during the period.

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

119. The information required in paragraph 117 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 fixed assets, at the beginning and end of the period, as required under AS 10, Accounting for Fixed Assets.

120. An enterprise that applies AS 17, Segment Reporting, should disclose the following for each reportable segment based on an enterprise's primary format (as defined in AS 17):

(a) the amount of impairment losses recognised in the statement of profit and loss and directly against revaluation surplus during the period; and

(b) the amount of reversals of impairment losses recognised in the statement of profit and loss and directly in revaluation surplus during the period.

121. If an impairment loss for an individual asset or a cash-generating unit is recognised or reversed during the period and is material to the financial statements of the reporting enterprise as a whole, an enterprise should disclose:

(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) the reportable segment to which the asset belongs, based on the enterprise's primary format (as defined in AS 17, Segment Reporting);

(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, a reportable segment as defined in AS 17 or other);

(ii) the amount of the impairment loss recognised or reversed by class of assets and by reportable segment based on the enterprise's primary format (as defined in AS 17); 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), the enterprise should describe 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 net selling price or its value in use;

(f) if recoverable amount is net selling price, the basis used to determine net selling price (such as whether selling price was determined by reference to an active market or in some other way); and

(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.[13]

122. If impairment losses recognised (reversed) during the period are material in aggregate to the financial statements of the reporting enterprise as a whole, an enterprise should disclose a brief description of the following:

[13] See also footnote 8.

(a) the main classes of assets affected by impairment losses (reversals of impairment losses) for which no information is disclosed under paragraph 121; and

(b) the main events and circumstances that led to the recognition (reversal) of these impairment losses for which no information is disclosed under paragraph 121.

123. An enterprise is encouraged to disclose key assumptions used to determine the recoverable amount of assets (cash-generating units) during the period.

Transitional Provisions

124. On the date of this Statement becoming mandatory, an enterprise should assess whether there is any indication that an asset may be impaired (see paragraphs 5-13). If any such indication exists, the enterprise should determine impairment loss, if any, in accordance with this Statement. The impairment loss, so determined, should be adjusted against opening balance of revenue reserves being the accumulated impairment loss relating to periods prior to this Statement becoming mandatory unless the impairment loss is on a revalued asset. An impairment loss on a revalued asset should be recognised directly against any revaluation surplus for the asset to the extent that the impairment loss does not exceed the amount held in the revaluation surplus for that same asset. If the impairment loss exceeds the amount held in the revaluation surplus for that same asset, the excess should be adjusted against opening balance of revenue reserves.

125. Any impairment loss arising after the date of this Statement becoming mandatory should be recognised in accordance with this Statement (i.e., in the statement of profit and loss unless an asset is carried at revalued amount. An impairment loss on a revalued asset should be treated as a revaluation decrease).

Appendix

Illustrative Examples

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Continued../..

EXAMPLE 7– APPLICATION OF THE 'BOTTOM-UP' AND 'TOP-DOWN' TESTS TO GOODWILL **A58– A67**

A – Goodwill Can Be Allocated on a Reasonable and Consistent Basis A60–A62

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EXAMPLE 8– ALLOCATION OF CORPORATE ASSETS **A68– A79**

Appendix

Illustrative Examples

The appendix is illustrative only and does not form part of the Accounting Standard. The purpose of the appendix is to illustrate the application of the Accounting Standard to assist in clarifying its meaning.

All the examples in this appendix assume the enterprises concerned have no transactions other than those described.

Example 1 - Identification of Cash-Generating Units

The purpose of this example is:

(a) to give an indication of how cash-generating units are identified in various situations; and

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

A - Retail Store Chain

Background

Al. 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 salesmen) are decided by M. M also owns 5 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 4 other stores were purchased 4 years ago and goodwill was recognised.

What is the cash-generating unit for X (X's cash-generating unit)?

Analysis

A2. In identifying X's cash-generating unit, an enterprise 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 region/city basis.

A3. 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 from those of M's other stores. Therefore, it is likely that X is a cash-generating unit.

A4. If the carrying amount of the goodwill can be allocated on a reasonable and consistent basis to X's cash-generating unit, M applies the 'bottom-up' test described in paragraph 78 of this Statement. If the carrying amount of the goodwill cannot be allocated on a reasonable and consistent basis to X's cash-generating unit, M applies the 'bottom-up' and 'top-down' tests.

B - Plant for an Intermediate Step in a Production Process

Background

A5. A significant raw material used for plant Y's final production is an intermediate product bought from plant X of the same enterprise. X's products are sold to Y at a transfer price that passes all margins to X. 80% of Y's final production is sold to customers outside of the reporting enterprise. 60% of X's final production is sold to Y and the remaining 40% is sold to customers outside of the reporting enterprise.

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

A6. X could sell its products on an active market and, so, generate cash inflows from continuing use 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 68 of this Statement).

A7. It is likely that Y is also a separate cash-generating unit. Y sells 80% of its products to customers outside of the reporting enterprise. Therefore, its cash inflows from continuing use can be considered to be largely independent.

A8. Internal transfer prices do not reflect market prices for X's output. Therefore, in determining value in use of both X and Y, the enterprise adjusts financial budgets/forecasts to reflect management's best estimate of future market prices for those of X's products that are used internally (see paragraph 68 of this Statement).

Case 2

A9. It is likely that the recoverable amount of each plant cannot be assessed independently from 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 from those of Y; and

(b) the two plants are managed together.

A10. As a consequence, it is likely that X and Y together is the smallest group of assets that generates cash inflows from continuing use that are largely independent.

C - Single Product Enterprise

Background

A11. Enterprise 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 world-wide 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

A12. 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).

A13. 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 is the smallest identifiable group of assets that generates cash inflows from continuing use that are largely independent.

A14. In determining the value in use of A and B plus C, M adjusts financial budgets/forecasts to reflect its best estimate of future market prices for A's products (see paragraph 68 of this Statement).

Case 2

A15. 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; and

(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.

A16. As a consequence, it is likely that A, B and C together (i.e., M as a whole) is the smallest identifiable group of assets that generates cash inflows from continuing use that are largely independent.

D - Magazine Titles

Background

A17. 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

A18. 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.

A19. Therefore, it is likely that individual magazine titles generate cash inflows that are largely independent one from another and that each magazine title is a separate cash-generating unit.

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

Background

A20. M is a manufacturing company. It owns a headquarter 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

A21. 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 enterprise as a whole. So, it is likely that the cash-generating unit for the building is M as a whole.

A22. 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

A23. At the end of 20X0, enterprise T acquires enterprise M for Rs. 10,000 lakhs. M has manufacturing plants in 3 countries. The anticipated useful life of the resulting merged activities is 15 years.

Schedule 1. Data at the end of 20X0 (Amount in Rs. lakhs)

End of 20X0	*Allocation of purchase price*	*Fair value of identifiable assets*	*Goodwill*[(1)]
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	10,000	7,000	3,000

[(1)] Activities in each country are the smallest cash-generating units to which goodwill can be allocated on a reasonable and consistent basis (allocation based on the purchase price of the activities in each country, as specified in the purchase agreement).

A24. T uses straight-line depreciation over a 15-year life for the Country A assets and no residual value is anticipated. In respect of goodwill, T uses straight-line amortisation over a 5 year life.

A25. In 20X4, 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 will be cut by 40%.

A26. The significant export restriction and the resulting production decrease require T to estimate the recoverable amount of the goodwill and net assets of the Country A operations. The cash-generating unit for the goodwill and the identifiable assets of the Country A operations is the Country A operations, since no independent cash inflows can be identified for individual assets.

A27. The net selling price of the Country A cash-generating unit is not determinable, as it is unlikely that a ready buyer exists for all the assets of that unit.

A28. 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 20X5-20X9) approved by management;

(b) estimates subsequent cash flows (years 20X10-20X15) based on declining growth rates. The growth rate for 20X10 is estimated to be 3%. This rate is lower than the average long-term growth rate for the market in Country A; and

(c) selects a 15% 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

A29. The recoverable amount of the Country A cash-generating unit is 1,360 lakhs: the higher of the net selling price of the Country A cash-generating unit (not determinable) and its value in use (Rs. 1,360 lakhs).

A30. T compares the recoverable amount of the Country A cash-generating unit to its carrying amount (see Schedule 3).

A31. T recognises an impairment loss of Rs. 307 lakhs immediately in the statement of profit and loss. The carrying amount of the goodwill that relates to the Country A operations is eliminated before reducing the carrying amount of other identifiable assets within the Country A cash-generating unit (see paragraph 87 of this Statement).

A32. Tax effects are accounted for separately in accordance with AS 22, Accounting for Taxes on Income.

Schedule 2. Calculation of the value in use of the Country A cash-generating unit at the end of 20X4 (Amount in Rs. lakhs)

Year	*Long-term growth rates*	*Future cash flows*	*Present value factor at 15% discount rate*[3]	*Discounted future cash flows*
20X5 (n=1)		230[1]	0.86957	200
20X6		253[1]	0.75614	191
20X7		273[1]	0.65752	180
20X8		290[1]	0.57175	166
20X9		304[1]	0.49718	151
20X10	3%	313[2]	0.43233	135
20X11	–2%	307[2]	0.37594	115
20X12	–6%	289[2]	0.32690	94
20X13	–15%	245[2]	0.28426	70
20X14	–25%	184[2]	0.24719	45
20X15	–67%	61[2]	0.21494	13
Value in use				1,360

[1] Based on management's best estimate of net cash flow projections (after the 40% cut).
[2] Based on an extrapolation from preceding year cash flow using declining growth rates.
[3] 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 end of 20X4 (Amount in Rs. lakhs)

End of 20X4	*Goodwill*	*Identifiable assets*	*Total*
Historical cost	1,000	2,000	3,000
Accumulated depreciation/ amortisation (20X1-20X4)	(800)	(533)	(1,333)
Carrying amount	200	1,467	1,667
Impairment Loss	(200)	(107)	(307)
Carrying amount after impairment loss	0	1,360	1,360

Example 3 - Deferred Tax Effects

A33. An enterprise has an asset with a carrying amount of Rs. 1,000 lakhs. Its recoverable amount is Rs. 650 lakhs. The tax rate is 30% and the carrying amount of the asset for tax purposes is Rs. 800 lakhs. Impairment losses are not allowable as deduction for tax purposes. The effect of the impairment loss is as follows:

	Amount in Rs. lakhs
Impairment Loss recognised in the statement of profit and loss	350
Impairment Loss allowed for tax purposes	—
Timing Difference	350
Tax Effect of the above timing difference at 30% (deferred tax asset)	105
Less: Deferred tax liability due to difference in depreciation for accounting purposes and tax purposes [(1,000 – 800) x 30%]	60
Deferred tax asset	45

A34. In accordance with AS 22, Accounting for Taxes on Income, the enterprise recognises the deferred tax asset subject to the consideration of prudence as set out in AS 22.

Example 4 - Reversal of an Impairment Loss

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

Background

A35. In 20X6, 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%. This favourable change requires T to re-estimate the recoverable amount of the net assets of the Country A operations (see paragraphs 94-95 of this Statement). The cash-generating unit for the net assets of the Country A operations is still the Country A operations.

A36. Calculations similar to those in Example 2 show that the recoverable amount of the Country A cash-generating unit is now Rs. 1,710 lakhs.

Reversal of Impairment Loss

A37. 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 20X6 (Amount in Rs. lakhs)

	Goodwill	*Identifiable assets*	*Total*
End of 20X4 (Example 2)			
Historical cost	1,000	2,000	3,000
Accumulated depreciation/ amortisation (4 years)	(800)	(533)	(1,333)
Impairment loss	(200)	(107)	(307)
Carrying amount after impairment loss	0	1,360	1,360
End of 20X6			
Additional depreciation (2 years)[1]	–	(247)	(247)
Carrying amount	0	1,113	1,113
Recoverable amount			1,710
Excess of recoverable amount over carrying amount			597

[1]After recognition of the impairment loss at the end of 20X4, T revised the depreciation charge for the Country A identifiable assets (from Rs. 133.3 lakhs per year to Rs. 123.7 lakhs per year), based on the revised carrying amount and remaining useful life (11 years).

A38. 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 98 of this Statement, T recognises a reversal of the impairment loss recognised in 20X4.

A39. In accordance with paragraphs 106 and 107 of this Statement, T increases the carrying amount of the Country A identifiable assets by Rs. 87 lakhs (see Schedule 3), i.e., up to the lower of recoverable amount (Rs.
1,710 lakhs) and the identifiable assets' depreciated historical cost (Rs. 1,200 lakhs) (see Schedule 2). This increase is recognised in the statement of profit and loss immediately.

Schedule 2. Determination of the depreciated historical cost of the Country A identifiable assets at the end of 20X6 (Amount in Rs. lakhs)

End of 20X6	*Identifiable assets*
Historical cost	2,000
Accumulated depreciation (133.3 * 6 years)	(800)
Depreciated historical cost	1,200
Carrying amount (Schedule 1)	1,113
Difference	87

Schedule 3. Carrying amount of the Country A assets at the end of 20X6 (Amount in Rs. lakhs)

End of 20X6	*Goodwill*	*Identifiable assets*	*Total*
Gross carrying amount	1,000	2,000	3,000
Accumulated depreciation/ amortisation	(800)	(780)	(1,580)
Accumulated impairment loss	(200)	(107)	(307)
Carrying amount	0	1,113	1,113
Reversal of impairment loss	0	87	87
Carrying amount after reversal of impairment loss	0	1,200	1,200

Example 5 - Treatment of a Future Restructuring

In this example, tax effects are ignored.

Background

A40. At the end of 20X0, enterprise 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 Rs. 3,000 lakhs and a remaining useful life of 10 years.

A41. The plant is so specialised that it is not possible to determine its net selling price. Therefore, the plant's recoverable amount is its value in use. Value in use is calculated using a pre-tax discount rate of 14%.

A42. Management approved budgets reflect that:

(a) at the end of 20X3, the plant will be restructured at an estimated cost of Rs. 100 lakhs. Since K is not yet committed to the restructuring, a provision has not been recognised for the future restructuring costs; and

(b) there will be future benefits from this restructuring in the form of reduced future cash outflows.

A43. At the end of 20X2, K becomes committed to the restructuring. The costs are still estimated to be Rs. 100 lakhs 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 A47 and a current discount rate is the same as at the end of 20X0.

A44. At the end of 20X3, restructuring costs of Rs. 100 lakhs are 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 (Amount in Rs. lakhs)

Year	*Future cash flows*	*Discounted at 14%*
20X1	300	263
20X2	280	215
20X3	420[(1)]	283
20X4	520[(2)]	308
20X5	350[(2)]	182
20X6	420[(2)]	191
20X7	480[(2)]	192
20X8	480[(2)]	168
20X9	460[(2)]	141
20X10	400[(2)]	108
Value in use		2,051

[(1)] Excludes estimated restructuring costs reflected in management budgets.
[(2)] Excludes estimated benefits expected from the restructuring reflected in management budgets.

A45. The plant's recoverable amount (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 (Amount in Rs. lakhs)

	Plant
Carrying amount before impairment loss	3,000
Recoverable amount (Schedule 1)	2,051
Impairment loss	(949)
Carrying amount after impairment loss	2,051

At the End of 20X1

A46. 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

A47. The enterprise 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 94-95 of this Statement, 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 (Amount in Rs. lakhs)

Year	*Future cash flows*	*Discounted at 14%*
20X3	420[(1)]	368
20X4	570[(2)]	439
20X5	380[(2)]	256
20X6	450[(2)]	266
20X7	510[(2)]	265
20X8	510[(2)]	232
20X9	480[(2)]	192
20X10	410[(2)]	144
Value in use		2,162

[(1)] Excludes estimated restructuring costs because a liability has already been recognised.
[(2)] Includes estimated benefits expected from the restructuring reflected in management budgets.

A48. 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 (Amount in Rs. lakhs)

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

[(1)] 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

A49. There is a cash outflow of Rs. 100 lakhs 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 (Amount in Rs. lakhs)

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

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

Example 6 - Treatment of Future Capital Expenditure

In this example, tax effects are ignored.

Background

A50. At the end of 20X0, enterprise F tests a plane for impairment. The plane is a cash-generating unit. It is carried at depreciated historical cost and its carrying amount is Rs. 1,500 lakhs. It has an estimated remaining useful life of 10 years.

A51. For the purpose of this example, it is assumed that the plane's net selling price is not determinable. Therefore, the plane's recoverable amount is its value in use. Value in use is calculated using a pre-tax discount rate of 14%.

A52. Management approved budgets reflect that:

(a) in 20X4, capital expenditure of Rs. 250 lakhs will be incurred to renew the engine of the plane; and

(b) this capital expenditure will improve the performance of the plane by decreasing fuel consumption.

A53. At the end of 20X4, renewal costs are incurred. The plane's estimated future cash flows reflected in the most recent management approved budgets are given in paragraph A56 and a current discount rate is the same as at the end of 20X0.

At the End of 20X0

Schedule 1. Calculation of the plane's value in use at the end of 20X0 (Amount in Rs. lakhs)

Year	*Future cash flows*	*Discounted at 14%*
20X1	221.65	194.43
20X2	214.50	165.05
20X3	205.50	138.71
20X4	247.25[(1)]	146.39
20X5	253.25[(2)]	131.53
20X6	248.25[(2)]	113.10
20X7	241.23[(2)]	96.40
20X8	255.33[(2)]	89.51
20X9	242.34[(2)]	74.52
20X10	228.50[(2)]	61.64
Value in use		1,211.28

[(1)] Excludes estimated renewal costs reflected in management budgets.
[(2)] Excludes estimated benefits expected from the renewal of the engine reflected in management budgets.

A54. The plane's carrying amount is less than its recoverable amount (value in use). Therefore, F recognises an impairment loss for the plane.

Schedule 2. Calculation of the impairment loss at the end of 20X0 (Amount in Rs. lakhs)

	Plane
Carrying amount before impairment loss	1,500.00
Recoverable amount (Schedule 1)	1,211.28
Impairment loss	(288.72)
Carrying amount after impairment loss	1,211.28

Years 20X1-20X3

A55. No event occurs that requires the plane's recoverable amount to be re-estimated. Therefore, no calculation of recoverable amount is required to be performed.

At the End of 20X4

A56. The capital expenditure is incurred. Therefore, in determining the plane's value in use, the future benefits expected from the renewal of the engine 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 94-95 of this Statement, the recoverable amount of the plane is recalculated at the end of 20X4.

Schedule 3. Calculation of the plane's value in use at the end of 20X4 (Amount in Rs. lakhs)

Year	*Future cash flows*[1]	*Discounted at 14%*
20X5	303.21	265.97
20X6	327.50	252.00
20X7	317.21	214.11
20X8	319.50	189.17
20X9	331.00	171.91
20X10	279.99	127.56
Value in use		1,220.72

[1] Includes estimated benefits expected from the renewal of the engine reflected in management budgets.

A57. The plane's recoverable amount (value in use) is higher than the plane's carrying amount and depreciated historical cost (see Schedule 4). Therefore, K reverses the impairment loss recognised for the plane at the end of 20X0 so that the plane is carried at depreciated historical cost.

Schedule 4. Calculation of the reversal of the impairment loss at the end of 20X4 (Amount in Rs. lakhs)

	Plane
Carrying amount at the end of 20X0 (Schedule 2)	1,211.28
End of 20X4	
Depreciation charge (20X1 to 20X4-Schedule 5)	(484.52)
Renewal expenditure	250.00
Carrying amount before reversal	976.76
Recoverable amount (Schedule 3)	1,220.72
Reversal of the impairment loss	173.24
Carrying amount after reversal	1,150.00
Carrying amount: depreciated historical cost (Schedule 5)	1,150.00[1]

[1] The value in use of the plane 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 plane exceeding depreciated historical cost.

Schedule 5. Summary of the carrying amount of the plane (Amount in Rs. lakhs)

Year	*Depreciated historical cost*	*Recoverable amount*	*Adjusted depreciation charge*	*Impairment loss*	*Carrying amount after impairment*
20X0	1,500.00	1,211.28	0	(288.72)	1,211.28
20X1	1,350.00	n.c.	(121.13)	0	1,090.15
20X2	1,200.00	n.c.	(121.13)	0	969.02
20X3	1,050.00	n.c.	(121.13)	0	847.89
20X4	900.00		(121.13)		
renewal	250.00		–		
	1,150.00	1,220.72	(121.13)	173.24	1,150.00
20X5	958.33	n.c.	(191.67)	0	958.33

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

Example 7 - Application of the 'Bottom-Up' and 'Top-Down' Tests to Goodwill

In this example, tax effects are ignored.

A58. At the end of 20X0, enterprise M acquired 100% of enterprise Z for Rs. 3,000 lakhs. Z has 3 cash-generating units A, B and C with net fair values of Rs. 1,200 lakhs, Rs. 800 lakhs and Rs. 400 lakhs respectively. M recognises goodwill of Rs. 600 lakhs (Rs. 3,000 lakhs less Rs. 2,400 lakhs) that relates to Z.

A59. At the end of 20X4, A makes significant losses. Its recoverable amount is estimated to be Rs. 1,350 lakhs. Carrying amounts are detailed below.

Schedule 1. Carrying amounts at the end of 20X4 (Amount in Rs. lakhs)

End of 20X4	*A*	*B*	*C*	*Goodwill*	*Total*
Net carrying amount	1,300	1,200	800	120	3,420

A - Goodwill Can be Allocated on a Reasonable and Consistent Basis

A60. At the date of acquisition of Z, the net fair values of A, B and C are considered a reasonable basis for a pro-rata allocation of the goodwill to A, B and C.

Schedule 2. Allocation of goodwill at the end of 20X4

	A	B	C	Total
End of 20X0				
Net fair values	1,200	800	400	2,400
Pro-rata	50%	33%	17%	100%
End of 20X4				
Net carrying amount	1,300	1,200	800	3,300
Allocation of goodwill (using the pro-rata above)	60	40	20	120
Net carrying amount (after allocation of goodwill)	1,360	1,240	820	3,420

A61. In accordance with the 'bottom-up' test in paragraph 78(a) of this Statement, M compares A's recoverable amount to its carrying amount after the allocation of the carrying amount of goodwill.

Schedule 3. Application of 'bottom-up' test (Amount in Rs. lakhs)

End of 20X4	*A*
Carrying amount after allocation of goodwill (Schedule 2)	1,360
Recoverable amount	1,350
Impairment loss	10

A62. M recognises an impairment loss of Rs. 10 lakhs for A. The impairment loss is fully allocated to the goodwill in accordance with paragraph 87 of this Statement.

B - Goodwill Cannot Be Allocated on a Reasonable and Consistent Basis

A63. There is no reasonable way to allocate the goodwill that arose on the acquisition of Z to A, B and C. At the end of 20X4, Z's recoverable amount is estimated to be Rs. 3,400 lakhs.

A64. At the end of 20X4, M first applies the 'bottom-up' test in accordance with paragraph 78(a) of this Statement. It compares A's recoverable amount to its carrying amount excluding the goodwill.

Schedule 4. Application of 'bottom-up' test (Amount in Rs. lakhs)

End of 20X4	*A*
Carrying amount	1,300
Recoverable amount	1,350
Impairment loss	0

A65. Therefore, no impairment loss is recognised for A as a result of the 'bottom-up' test.

A66. Since the goodwill could not be allocated on a reasonable and consistent basis to A, M also performs a 'top-down' test in accordance with paragraph

78(b) of this Statement. It compares the carrying amount of Z as a whole to its recoverable amount (Z as a whole is the smallest cash-generating unit that includes A and to which goodwill can be allocated on a reasonable and consistent basis).

Schedule 5. Application of the 'top-down' test (Amount in Rs. lakhs)

End of 20X4	*A*	*B*	*C*	*Goodwill*	*Z*
Carrying amount	1,300	1,200	800	120	3,420
Impairment loss arising from the 'bottom-up' test	0	–	–	–	0
Carrying amount after the 'bottom-up' test	1,300	1,200	800	120	3,420
Recoverable amount					3,400
Impairment loss arising from 'top-down' test					20

A67. Therefore, M recognises an impairment loss of Rs. 20 lakhs that it allocates fully to goodwill in accordance with paragraph 87 of this Statement.

Example 8 - Allocation of Corporate Assets

In this example, tax effects are ignored.

Background

A68. Enterprise M has three cash-generating units: A, B and C. 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 Rs. 100 lakhs, Rs. 150 lakhs and Rs. 200 lakhs respectively.

A69. The operations are conducted from a headquarter. The carrying amount of the headquarter assets is Rs. 200 lakhs: a headquarter building of Rs. 150 lakhs and a research centre of Rs. 50 lakhs. The relative carrying amounts of the cash-generating units are a reasonable indication of the proportion of the head-quarter 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.

A70. The remaining estimated useful life of cash-generating unit A is 10 years. The remaining useful lives of B, C and the headquarter assets are 20 years. The headquarter assets are depreciated on a straight-line basis.

A71. There is no basis on which to calculate a net selling price for each cash-generating unit. Therefore, the recoverable amount 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%.

Identification of Corporate Assets

A72. In accordance with paragraph 85 of this Statement, M first identifies all the corporate assets that relate to the individual cash-generating units under review. The corporate assets are the headquarter building and the research centre.

A73. M then decides how to deal with each of the corporate assets:

(a) the carrying amount of the headquarter building can be allocated on a reasonable and consistent basis to the cash-generating units under review. Therefore, only a 'bottom-up' test is necessary; 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. Therefore, a 'top-down' test will be applied in addition to the 'bottom-up' test.

Allocation of Corporate Assets

A74. The carrying amount of the headquarter 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 headquarter building (Amount in Rs. lakhs)

End of 20X0	*A*	*B*	*C*	*Total*
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	12.5% (100/800)	37.5% (300/800)	50% (400/800)	100%
Allocation of the carrying amount of the building (based on pro-rata above)	19	56	75	150
Carrying amount (after allocation of the building)	119	206	275	600

Determination of Recoverable Amount

A75. The 'bottom-up' test requires calculation of the recoverable amount of each individual cash-generating unit. The 'top-down' test requires calculation of the recoverable amount of M as a whole (the smallest cash-generating unit that includes the research centre).

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

	A		B		C		M	
Year	*Future cash flows*	*Discount at 15%*	*Future cash flows*	*Discount at 15%*	*Future cash flows*	*Discount at 15%*	*Future cash flows*	*Discount at 15%*
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		199		164		271		720[(1)]

[(1)] It is assumed that the research centre generates additional future cash flows for the enterprise 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 headquarter building.

Calculation of Impairment Losses

A76. In accordance with the 'bottom-up' test, M compares the carrying amount of each cash-generating unit (after allocation of the carrying amount of the building) to its recoverable amount.

Schedule 3. Application of 'bottom-up' test (Amount in Rs. lakhs)

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

A77. The next step is to allocate the impairment losses between the assets of the cash-generating units and the headquarter building.

Schedule 4. Allocation of the impairment losses for cash-generating units B and C (Amount in Rs. lakhs)

Cash-generating unit	*B*	*C*
To headquarter building	(12) (42*56/206)	(1) (4*75/275)
To assets in cash-generating unit	(30) (42*150/206)	(3) (4*200/275)
	(42)	(4)

A78. In accordance with the 'top-down' test, since 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 cash-generating unit to which the carrying amount of the research centre can be allocated (i.e., M as a whole) to its recoverable amount.

Schedule 5. Application of the 'top-down' test (Amount in Rs. lakhs)

End of 20X0	*A*	*B*	*C*	*Building*	*Research centre*	*M*
Carrying amount	100	150	200	150	50	650
Impairment loss arising from the 'bottom-up' test	–	(30)	(3)	(13)	–	(46)
Carrying amount after the 'bottom-up' test	100	120	197	137	50	604
Recoverable amount (Schedule 2)						720
Impairment loss arising from 'top-down' test						0

A79. Therefore, no additional impairment loss results from the application of the 'top-down' test. Only an impairment loss of Rs. 46 lakhs is recognised as a result of the application of the 'bottom-up' test.