



**INTERNATIONAL FEDERATION
OF ACCOUNTANTS**

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DATE: 7 NOVEMBER 2005
MEMO TO: MEMBERS OF THE IPSASB
FROM: PAUL SUTCLIFFE
SUBJECT: IMPAIRMENT OF CASH GENERATING ASSETS

ACTION REQUIRED

The IPSASB is asked to:

- **Review** the draft Exposure Drafts (EDs) and provide directions for further development.

AGENDA MATERIAL:

	Pages
12.2 Draft ED #1 “Impairment of Cash-Generating Assets”	12.6 – 12.45
12.3 Draft ED #2 “Impairment of Non-Cash-Generating Assets and Cash-Generating Assets”	To follow

BACKGROUND

The Draft EDs have been prepared by a subcommittee comprising Ron Salole (Canada), Erna Swart (South Africa) and David Bean (USA).

A preliminary draft ED was prepared by this subcommittee and briefly considered at the November 2004 meeting (Delhi). The IPSASB agreed that it would add value to the set of IPSASs if requirements on impairment of cash-generating assets were developed. It was also agreed that the ED should be further developed during 2005 and brought back to the IPSASB when staff was in a better position to review the draft ED. (An extract of the Delhi minutes dealing with this matter is attached to this memorandum.)

At the New York meeting in July 2005, the IPSASB agreed the work program for the remainder of 2005, including that an initial review of a first draft of an ED on this topic should be considered at this meeting. Consistent with the work program, the subcommittee have prepared materials for consideration of the IPSASB at this meeting.

The subcommittee is of the view that IPSAS 21 “Impairment of Non-Cash-Generating Assets” should be revised to incorporate requirements for cash-generating as well as non-cash-generating assets (a “combined” IPSAS on impairment). However, the subcommittee also recognizes that some (including staff) have a view that there may be merit in issuing an additional separate IPSAS dealing with only impairment of cash-generating assets, and that the viability of such an approach should not be rejected without further consideration. Accordingly, the subcommittee is developing materials to provide an indication of how each approach might develop.

Staff have subjected the draft EDs prepared by the subcommittee to a high level (rather than detailed drafting) review and have provided the subcommittee with comments. The subcommittee has responded to a number of structural and other issues identified by staff and has prepared for initial consideration of the IPSASB at this meeting drafts of EDs which illustrate the broad requirements of:

- A possible new “stand alone” IPSAS to deal with impairment of cash generating assets. This draft is attached at Agenda item 13.2 - Draft #1; and
- A draft ED of an updated (combined) IPSAS 21, revised to include requirements for cash-generating as well as non-cash-generating assets. The subcommittee are finalizing this draft. It will be forward to members by the end of this week. It will be identified as Agenda item 13.3 - Draft #2.

Staff believe the drafts provide a sound basis for IPSASB discussion at this meeting. Staff have also identified a number of general additional issues that could usefully be considered by the IPSASB as it considers the scope and structure of the draft ED which is to be further developed by the subcommittee (see issues below). The subcommittee have been advised of these issues and will address them in materials to be tabled at, and/or in the course of discussion at, the November/December 2005 meeting.

Specific issues of an editorial or explanatory nature are being progressively identified by the subcommittee and staff, and will be dealt with as this ED is further developed. Similarly, refinements to conform with the evolving style and format of IPSASs will be made as the ED is further developed.

It is intended that at this meeting the IPSASB will determine the approach to be adopted moving forward (separate IPSAS dealing only with cash-generating assets or amend/update IPSAS 21 to include both non-cash-generating and cash-generating assets) and provide guidance on areas for further development. The subcommittee will then develop a revised draft ED to be presented at the next IPSASB meeting (March 2006 in Tokyo, Japan) for approval to issue.

Broad Issues:

- A) Staff are of the view that there is a case for developing a separate ED/IPSAS to deal with only impairment of cash-generating assets (a “stand-alone” ED/IPSAS). This is because adding to IPSAS 21 requirements dealing with the impairment of cash generating assets could require users to navigate through a potentially complex document to identify the sections relevant to “non-cash-generating assets” and “cash-generating assets”. In the expectation that many users of IPSASs will not have cash generating assets as defined (or cash generating units) there is then merit in developing separate IPSASs to deal with impairment of non-cash-generating assets and of cash-generating assets.

Subcommittee revisions to drafts of a combined proposed IPSAS (Draft #2) have progressively reduced its complexity and increased its user friendly nature. However, staff still believe that issuing a stand alone standard for impairment of cash generating assets is worthy of full consideration.

Staff also believe that, if examples of impairment of cash-generating-assets are included in the text of a combined ED/IPSAS, there should also be examples of impairment of non-cash-generating assets – to ensure a balance. The subcommittee is sympathetic to this view and intends to respond to it if a combined ED is developed.

B) The draft EDs apply to cash-generating assets and cash-generating units. Staff are of the view that the relationship between cash generating assets (defined in terms of generating a commercial return) cash generating units (defined in terms of ability to generate independent cash flows) needs to be further developed. The staff concern is that it is not clear whether:

- a non-cash-generating asset (which may generate some cash inflows though not a commercial return) is to be included in a cash-generating-unit, and how the discount rate for such a cash-generating-unit is to be determined; or
- how any impairment of the unit is to be allocated across cash-generating and non-cash-generating assets included within the unit.

Similarly, staff are not convinced that the assets comprising a cash generating unit should be impaired on the basis identified in the ED where that cash generating unit and all assets encompassed within it are not operated to generate a commercial return. In this context, it may be useful to consider whether in the examples following paragraphs 92 and 97 of Draft #1 (and similar examples in Draft #2), the site and plant are operated to generate a commercial return or are simply cash generating units as defined.

C) Illustrative Example 1B in Draft #1 (the illustrative examples will also be included in Draft #2, but have not been reproduced) indicates that where an asset is not held primarily to generate a commercial return, impairment should be determined in accordance with IPSAS 21. Staff are of the view that there is merit in drawing this out in the text. It would also be useful to draw out whether assets that might be diverted to a commercial use on a temporary basis (for example, because of a temporary excess of capacity), should be considered as non-cash generating assets or cash generating assets during that temporary period for purposes of determining which impairment test to apply (i.e. the impairment test applicable to non-cash-generating assets or the impairment test applicable to cash-generating assets).

D) Examples: It would be useful to further develop a number of the examples in the exposure drafts to make it clear that they are not GBE's, but are appropriately the subject of IPSASs. See for example, the examples following paragraphs 81 and 82 of Draft #1 (and similar examples in Draft #2) and illustrative example 1A. It would also be useful to draw out the implications of any social policy obligations that might be imposed on the site/plant in the example following paragraphs 92 and 97 of Draft #1 (and similar examples in Draft #2).

E) Scope and structural issues that staff believe should be reconsidered as the EDs are further developed include whether:

- The exclusion of deferred tax assets at 2(c) is necessary given that an IPSAS based on IAS 12 has not been developed and there is a catch all paragraph at 2(h); and
- All of paragraphs 4, 5, 11 and 13 in Draft #1 are necessary – staff are of the view that paragraph 5 amended to remove reference to GBEs and paragraph 13 are sufficient;
- Terminology for a cross-reference to an IFRS/IAS which the IPSASB has not yet reviewed for applicability to the public sector should be replaced with references to "...international or national accounting standards dealing with...(for example, recognition and measurement of financial instruments rather than IAS 39)". A similar approach should be adopted for other instances.

Extract of Minutes of IPSASB meeting November 2004, Delhi

14. PROPOSED IPSAS 22, “IMPAIRMENT OF CASH-GENERATING ASSETS”

Members received and considered:

- A memorandum from Erna Swart, David Bean and Ron Salole; and
- A draft proposed IPSAS 22 “Impairment of Cash-Generating Assets”.

Ron Salole introduced the topic and noted that he, Erna Swart and David Bean had been working on the project, electronically, since the last meeting. Ron advised the Committee that the subcommittee had concluded that, with respect to this project, if the Committee wanted to proceed, it had a number of options:

- Delay issuing IPSAS 21 “Impairment of Non-Cash-Generating Assets” and incorporate provisions relating to cash-generating assets into that IPSAS;
- Issue a separate IPSAS 22 on “Impairment of Cash-Generating Assets”;
- Apply IPSAS 21 to all assets, including the small number of cash-generating assets in the public sector; or
- Issue an amendment to IPSAS 21.

Ron noted that:

- As demonstrated by the marked-up proposed IPSAS 22 in attachment 14.2, much of the proposed IPSAS duplicates material that is already in IPSAS 21;
- The proposed IPSAS does not include the IAS 36 provisions in relation to goodwill because the PSC has not considered IFRS 3, “Business Combinations”; and
- The proposed IPSAS does include intangible assets notwithstanding that the PSC has not considered the applicability of IAS 38, “Intangible Assets” to the public sector, because of the potential significance of intangible assets to public sector entities. Members expressed concern that this did not align with the PSC’s policy as agreed for the IPSAS Improvements project.

Ron noted that the review process had been most useful as part of the PSC’s due diligence in respect of the applicability of IAS 36 to public sector entities, but the subcommittee was increasingly of the view that ultimately a separate IPSAS on impairment of cash generating assets by public sector entities other than GBE’s was not necessary. Rather, a separate ED should be developed on the impairment of cash generating assets but that that ED should propose certain amendments be made to IPSAS 21 to deal with cash generating assets. Ron also noted that the subcommittee was strongly of the view that the issue of IPSAS 21 dealing with non- cash-generating- assets should not be delayed pending due process on impairment of cash generating assets.

The Committee discussed the project and concluded that it is worthwhile preparing public sector requirements in relation to the impairment of cash-generating assets and that it supports the view of the subcommittee that ultimately amending IPSAS 21 may be the best approach. It also noted that currently, there are insufficient staff resources to permit this project to take a high priority.

The subcommittee volunteered to continue to develop during 2005 a proposed ED to amend IPSAS 21 or issue an additional IPSAS dealing with impairment of cash generating assets, and the proposed ED would be brought to the PSC when staffing resources enabled a thorough review of the subcommittee's work.

<i>Action Required:</i>	<i>Continue to develop draft ED, review and present to the Committee.</i>
<i>Person(s) Responsible:</i>	<i>Ron Salole, Erna Swart, David Bean, PSC Technical Director.</i>

First Draft for review of IPSASB

Nov/Dec 2005 Cape Town – South Africa

DRAFT ED #1:
IMPAIRMENT OF CASH-GENERATING ASSETS

**SEPARATE PROPOSED IPSAS TO DEAL ONLY WITH IMPAIRMENT OF
CASH GENERATING ASSETS**

COVER TO GO HERE

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Introduction to the International Public Sector Accounting Standards

The International Federation of Accountants' International Public Sector Accounting Standards Board (IPSASB) develops accounting standards for public sector entities referred to as International Public Sector Accounting Standards (IPSASs). The IPSASB recognizes the significant benefits of achieving consistent and comparable financial information across jurisdictions and it believes that the IPSASs will play a key role in enabling these benefits to be realized. The IPSASB strongly encourages governments and national standard-setters to engage in the development of its Standards by commenting on the proposals set out in Exposure Drafts.

The IPSASB issues IPSASs dealing with financial reporting under the cash basis of accounting and the accrual basis of accounting. The accrual basis IPSASs are based on the International Financial Reporting Standards (IFRSs), issued by the International Accounting Standards Board (IASB) where the requirements of those Standards are applicable to the public sector. They also deal with public sector specific financial reporting issues that are not dealt with in IFRSs.

The adoption of IPSASs by governments will improve both the quality and comparability of financial information reported by public sector entities around the world. The IPSASB recognizes the right of governments and national standard-setters to establish accounting standards and guidelines for financial reporting in their jurisdictions. The IPSASB encourages the adoption of IPSASs and the harmonization of national requirements with IPSASs. Financial statements should be described as complying with IPSASs only if they comply with all the requirements of each applicable IPSAS. .

Due Process and Timetable

An important part of the process of developing IPSASs is for the IPSASB to receive comments on the proposals set out in IPSAS Exposure Drafts from governments, public sector entities, auditors, standard-setters and other parties with an interest in public sector financial reporting. Accordingly, each proposed IPSAS is first released as an Exposure Draft, inviting interested parties to provide their comments. Exposure Drafts will usually have a comment period of four months, although longer periods may be used for certain Exposure Drafts. Upon the closure of the comment period, the IPSASB will consider the comments received on the Exposure Draft and may modify the proposed IPSAS in the light of the comments received before proceeding to issue a final Standard.

Background

TO BE UPDATED

Draft IPSAS XX

IMPAIRMENT OF CASH-GENERATING ASSETS

(BASED ON IAS 36)

The cover, boilerplate text including acknowledgment of IAS 36 and table of contents have been excluded from this draft.
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Impairment of Cash-Generating Assets

Objective

1. The objective of this Standard is to prescribe the procedures that an entity applies to determine whether a cash-generating asset is impaired and to ensure that impairment losses are recognized. The Standard also specifies when an entity should reverse an impairment loss and prescribes disclosures.

Scope

2. ***An entity which prepares and present financial statements under the accrual basis of accounting shall apply this Standard in accounting for the impairment of cash-generating assets, except for:***
 - (a) ***Inventories (see IPSAS 12 Inventories);***
 - (b) ***Assets arising from construction contracts (see IPSAS 11 Construction Contracts);***
 - (c) ***Deferred tax assets (see IAS 12 Income Taxes);***
 - (d) ***Assets arising from employee benefits (see IAS 19 Employee Benefits);***
 - (e) ***Financial assets that are within the scope of IPSAS 15 Financial Instruments: Disclosure and Presentation;***
 - (f) ***Investment property that is measured at fair value (see IPSAS 16 Investment Property);***
 - (g) ***Cash-generating property, plant and equipment that is measured at revalued amounts (see IPSAS 17, Property, Plant and Equipment); and***
 - (h) ***Other cash generating assets in respect of which accounting requirements for impairment are included in another International Public Sector Accounting Standard.***
3. ***This Standard applies to all public sector entities other than Government Business Enterprises (GBEs).***
4. ***Public sector entities that hold non-cash generating assets as defined in paragraph 14 shall apply the International Public Sector Accounting Standard IPSAS 21, Impairment of Non-Cash Generating Assets to such assets. Public sector entities that hold cash-generating assets shall apply the requirements of this Standard to cash-generating assets.***
5. This Standard excludes from its scope the impairment of cash-generating assets that are dealt with in another International Public Sector Accounting Standard. Government Business Enterprises (GBEs) apply IAS 36 and therefore are not subject to the provisions of this Standard. Public sector entities other than GBEs apply IPSAS 21 to their non-cash-generating assets and apply this Standard to their cash-generating assets. Paragraphs 6 to 13 explain the scope of the Standard in greater detail.
6. This Standard includes cash-generating intangible assets within its scope. Entities apply the requirements of this Standard to recognizing and measuring impairment

losses, and reversals of impairment losses, related to cash-generating intangible assets.

7. This Standard does not apply to inventories, cash-generating assets arising from construction contracts, because existing Standards applicable to these assets contain requirements for recognizing and measuring these assets.
8. This Standard does not apply to any financial assets that are included in the scope of IPSAS 15, Financial Instruments: Presentation and Disclosure. Impairment of these assets will be dealt with in any International public sector accounting standard that the IPSASB develops on the basis of IAS 39, Financial Instruments: Recognition and Measurement to deal with the recognition and measurement of financial instruments.
9. This Standard does not require the application of an impairment test to an investment property that is carried at fair value in accordance with IPSAS 16, Investment Property. This is because under the fair value model in IPSAS 16, an investment property is carried at fair value at the reporting date and any impairment will be taken into account in the valuation.
10. This Standard does not require the application of an impairment test to cash-generating assets that are carried at revalued amounts under the allowed alternative treatment in IPSAS 17, "Property, Plant and Equipment". This is because under the allowed alternative treatment in IPSAS 17, assets will be revalued with sufficient regularity to ensure that they are carried at an amount that is not materially different from their fair value as at the reporting date and any impairment will be taken into account in the valuation. The approach adopted in this Standard to measuring an asset's recoverable service amount means that it is unlikely that the recoverable amount of an asset will be materially less than an assets revalued amount and that any such differences would relate to the costs of disposal of the asset.
11. Consistent with the requirements of paragraph 4 above, items of property, plant and equipment that are classified as non-cash-generating assets including those that are carried at revalued amounts under the allowed alternative treatment in IPSAS 17, are dealt with under IPSAS 21.
12. Investments in:
 - (a) Controlled entities, as defined in IPSAS 6, "Consolidated Financial Statements and Accounting for Controlled Entities;"
 - (b) Associates, as defined in IPSAS 7, "Accounting for Investments in Associates;" and
 - (c) Joint ventures, as defined in IPSAS 8, "Financial Reporting of Interests in Joint Ventures;"

are financial assets that are excluded from the scope of IPSAS 15. Where such investments are classified as cash-generating assets, they are dealt with under this Standard. Where these assets are in the nature of non-cash-generating assets, they are dealt with under IPSAS 21.

13. The *Preface to International Financial Reporting Standards* as issued by the International Accounting Standards Board (IASB) explains that International Financial reporting Standards (IFRSs) are designed to apply to the general purpose financial statements of all profit-oriented entities. GBEs are defined in paragraph 14 below. They are profit-oriented entities. Accordingly, they are required to comply with IFRSs.

Definitions

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

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

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

Carrying amount is the amount at which an asset is recognized after deducting any accumulated depreciation and accumulated impairment losses thereon.

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.

Cash-generating assets are assets held to generate a commercial return.

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

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

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

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

Government Business Enterprise means an entity that has all the following characteristics:

- (a) is an entity with the power to contract in its own name;
- (b) has been assigned the financial and operational authority to carry on a business;
- (c) sells goods and services, in the normal course of its business, to other entities at a profit or full cost recovery;
- (d) is not reliant on continuing government funding to be a going concern (other than purchases of outputs at arm's length); and
- (e) is controlled by a public sector entity.

An impairment is a loss in the future economic benefits or service potential of an asset, over and above the systematic recognition of the loss of the asset's future economic benefits or service potential through depreciation.

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

Non-cash-generating assets are assets other than cash-generating assets.

The recoverable amount of an asset is the higher of its fair value less costs to sell and its value in use.

Useful life is either:

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

Value in use *is the present value of the estimated future cash flows and service potential expected to be derived from the continuing use of an asset and from its disposal at the end of its useful life.*

Government Business Enterprises

15. Government Business Enterprises (GBEs) include both trading enterprises, such as utilities, and financial enterprises, such as financial institutions. GBEs are, in substance, no different from entities conducting similar activities in the private sector. GBEs generally operate to make a profit, although some may have limited community service obligations under which they are required to provide some individuals and organizations in the community with goods and services at either no charge or a significantly reduced charge.

Cash Generating Assets

16. Cash-generating assets are those that are held to generate a commercial return. An asset generates a commercial return when it is deployed in a manner consistent with the manner that would be adopted by a profit-oriented entity. "Commercial return" indicates that an entity intends to generate positive cash inflows from the asset and earn a return that reflects the risk involved in holding the asset. Investment property meets the definition of a cash-generating asset.
17. Assets held by GBEs are cash-generating assets. Public sector entities other than GBEs may hold assets to generate a commercial rate of return. For the purposes of this Standard, an asset held by a non-GBE public sector entity is classified as a cash-generating asset if the asset (or unit of which the asset is a part) operates with the objective of generating a commercial rate of return through the provision of services to external parties.

Depreciation

18. Depreciation and amortization are the systematic allocation of the depreciable amount of an asset over its useful life. In the case of an intangible asset or goodwill, the term "amortization" is generally used instead of "depreciation". Both terms have the same meaning.

Impairment

19. This Standard defines an "impairment" as a loss in the future economic benefits or service potential of an asset, over and above the systematic recognition of the loss of the asset's future economic benefits or service potential through depreciation. Impairment, therefore, reflects a decline in the utility of an asset to the entity that controls it. For example, an entity may have a purpose-built military storage facility that it no longer uses. In addition, because of the specialized nature of the facility and its location, it is unlikely that it can be leased out or sold and therefore the entity is unable to generate cash flows from the leasing or disposal of the asset. The asset is regarded as impaired because it is no longer capable of providing the entity with service potential—it has little, or no, utility for the entity in contributing to the achievement of its objectives.

Identifying an Asset that may be Impaired

20. Paragraphs 21-30 specify when recoverable amount shall be determined. These requirements use the term 'an asset' but apply equally to an individual asset or a cash generating unit. The remainder of this Standard is structured as follows:
- (a) paragraphs 31-70 set out the requirements for measuring recoverable amount. These requirements also use the term 'an asset' but apply equally to an individual asset and a cash-generating unit.
 - (b) paragraphs 71-99 set out the requirements for recognizing and measuring impairment losses. Recognition and measurement of impairment losses for individual assets are dealt with in paragraphs 71-78. Paragraphs 79-99 deal with the recognition and measurement of impairment losses for cash-generating units.
 - (c) paragraphs 100-107 set out the requirements for reversing an impairment loss recognized in prior periods for an asset or a cash-generating unit. Again, these requirements also use the term 'an asset' but apply equally to an individual asset and a cash-generating unit. Additional requirements for an individual asset are set out in paragraphs 107-111 and for a cash-generating unit in paragraphs 112-113.
 - (d) paragraphs 114-120 specify the information to be disclosed about impairment losses and reversals of impairment losses for assets and cash-generating units. Paragraphs 121-124 specify additional disclosure requirements for cash-generating units to which intangible assets with indefinite useful lives have been allocated for impairment testing purposes.
21. An asset is impaired when its carrying amount exceeds its recoverable amount. Paragraphs 25-27 describe some indications that an impairment loss may have occurred: if any of those indications is present, an entity is required to make a formal estimate of recoverable amount. Except as described in paragraph 23, this Standard does not require an entity to make a formal estimate of recoverable amount if no indication of an impairment loss is present.
- 22. *An entity shall assess at each reporting date whether there is any indication that an asset may be impaired. If any such indication exists, the entity shall estimate the recoverable amount of the asset.***
- 23. *Irrespective of whether there is any indication of impairment, an entity shall also test an intangible asset with an indefinite useful life or an intangible asset not yet available for use for impairment annually by comparing its carrying amount with its recoverable amount. This impairment test may be performed at any time during an annual period, provided it is performed at the same time every year. Different intangible assets may be tested for impairment at different times. However, if such an intangible asset was initially recognized during the current annual period, that intangible asset shall be tested for impairment before the end of the current annual period.***
24. The ability of an intangible asset to generate sufficient future economic benefits to recover its carrying amount is usually subject to greater uncertainty before the asset is available for use than after it is available for use. Therefore, this Standard requires an entity to test for impairment, at least annually, the carrying amount of an intangible asset that is not yet available for use.
- 25. *In assessing whether there is any indication that an asset may be impaired, an entity shall consider, as a minimum, the following indications:***

External sources of information

- (a) during the period, an asset's market value has declined significantly more than would be expected as a result of the passage of time or normal use.*
- (b) significant changes with an adverse effect on the entity have taken place during the period, or will take place in the near future, in the technological, market, economic or legal environment in which the entity operates or in the market to which an asset is dedicated.*
- (c) market interest rates or other market rates of return on investments have increased during the period, and those increases are likely to affect the discount rate used in calculating an asset's value in use and decrease the asset's recoverable amount materially.*

Internal sources of information

- (d) evidence is available of obsolescence or physical damage of an asset.*
 - (e) significant changes with an adverse effect on the entity have taken place during the period, or are expected to take place in the near future, in the extent to which, or manner in which, an asset is used or is expected to be used. These changes include the asset becoming idle, plans to discontinue or restructure the operation to which an asset belongs, plans to dispose of an asset before the previously expected date, and reassessing the useful life of an asset as finite rather than indefinite.*
 - (f) evidence is available from internal reporting that indicates that the economic performance of an asset is, or will be, worse than expected.*
26. The list in paragraph 25 is not exhaustive. An entity may identify other indications that an asset may be impaired and these would also require the entity to determine the asset's recoverable amount.
27. 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 net surplus or deficit flowing from the asset that are significantly worse than those budgeted;
 - (c) a significant decline in budgeted net cash flows or surpluses or a significant increase in budgeted loss, flowing from the asset; or
 - (d) deficits or net cash outflows for the asset, when current period amounts are aggregated with budgeted amounts for the future.
28. As indicated in paragraph 25, this Standard requires an intangible asset with an indefinite useful life or not yet available for use to be tested for impairment, at least annually. Apart from when the requirements in paragraph 25 apply, the concept of materiality applies in identifying whether the recoverable amount of an asset needs to be estimated. For example, if previous calculations show that an asset's recoverable amount is significantly greater than its carrying amount, the entity need not re-estimate the asset's recoverable amount if no events have occurred that would eliminate that difference. Similarly, previous analysis may show that an asset's recoverable amount is not sensitive to one (or more) of the indications listed in paragraph 27.

29. As an illustration of paragraph 27, if market interest rates or other market rates of return on investments have increased during the period, an entity is not required to make a formal estimate of an asset's recoverable amount in the following cases:
- (a) if the discount rate used in calculating the asset's value in use is unlikely to be affected by the increase in these market rates. For example, increases in short-term interest rates may not have a material effect on the discount rate used for an asset that has a long remaining useful life.
 - (b) if the discount rate used in calculating the asset's value in use is likely to be affected by the increase in these market rates but previous sensitivity analysis of recoverable amount shows that:
 - (i) it is unlikely that there will be a material decrease in recoverable amount because future cash flows are also likely to increase (eg in some cases, an entity may be able to demonstrate that it adjusts its revenues (mainly exchange 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.
30. If there is an indication that an asset may be impaired, this may indicate that the remaining useful life, the depreciation (amortization) method or the residual value for the asset needs to be reviewed and adjusted in accordance with the Standard applicable to the asset, even if no impairment loss is recognized for the asset.

Measuring Recoverable Amount

31. This Standard defines recoverable amount as the higher of an asset's fair value less costs to sell and its value in use. Paragraphs 32-70 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.
32. It is not always necessary to determine both an asset's fair value less costs to sell and its value in use. If either of these amounts exceeds the asset's carrying amount, the asset is not impaired and it is not necessary to estimate the other amount.
33. It may be possible to determine fair value less costs to sell, even if an asset is not traded in an active market. However, sometimes it will not be possible to determine fair value less costs to sell because there is no basis for making a reliable estimate of the amount obtainable from the sale of the asset in an arm's length transaction between knowledgeable and willing parties. In this case, the entity may use the asset's value in use as its recoverable amount.
34. If there is no reason to believe that an asset's value in use materially exceeds its fair value less costs to sell, the asset's fair value less costs to sell may be used as its recoverable amount. This will often be the case for an asset that is held for disposal. This is because the value in use of an asset held for disposal will consist mainly of the net disposal proceeds, as the future cash flows from continuing use of the asset until its disposal are likely to be negligible.
35. Recoverable amount is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. If this is the case, recoverable amount is determined for the cash-generating unit to which the asset belongs (see paragraphs 79-98), unless either:
- (a) the asset's fair value less costs to sell is higher than its carrying amount; or

- (b) the asset's value in use can be estimated to be close to its fair value less costs to sell and fair value less costs to sell can be determined.
36. In some cases, estimates, averages and computational short cuts may provide reasonable approximations of the detailed computations for determining fair value less costs to sell or value in use.

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

37. Paragraph 23 requires an intangible asset with an indefinite useful life to be tested for impairment annually by comparing its carrying amount with its recoverable amount, irrespective of whether there is any indication that it may be impaired. However, the most recent detailed calculation of such an asset's recoverable amount made in a preceding period may be used in the impairment test for that asset in the current period, provided all of the following criteria are met:
- (a) if the intangible asset does not generate cash inflows from continuing use that are largely independent of those from other assets or groups of assets and is therefore tested for impairment as part of the cash-generating unit to which it belongs, the assets and liabilities making up that unit have not changed significantly since the most recent recoverable amount calculation;
 - (b) the most recent recoverable amount calculation resulted in an amount that exceeded the asset's carrying amount by a substantial margin; and
 - (c) based on an analysis of events that have occurred and circumstances that have changed since the most recent recoverable amount calculation, the likelihood that a current recoverable amount determination would be less than the asset's carrying amount is remote.

Fair Value less Costs to Sell

38. The best evidence of an asset's fair value less costs to sell is a price in a binding sale agreement in an arm's length transaction, adjusted for incremental costs that would be directly attributable to the disposal of the asset.
39. If there is no binding sale agreement but an asset is traded in an active market, fair value less costs to sell is the asset's market price less the costs of disposal. The appropriate market price is usually the current bid price. When current bid prices are unavailable, the price of the most recent transaction may provide a basis from which to estimate fair value less costs to sell, provided that there has not been a significant change in economic circumstances between the transaction date and the date as at which the estimate is made.
40. If there is no binding sale agreement or active market for an asset, fair value less costs to sell is based on the best information available to reflect the amount that an entity could obtain, at the balance sheet date, from the disposal of the asset in an arm's length transaction between knowledgeable, willing parties, after deducting the costs of disposal. In determining this amount, an entity considers the outcome of recent transactions for similar assets within the same industry. Fair value less costs to sell does not reflect a forced sale, unless management is compelled to sell immediately.
41. Costs of disposal, other than those that have been recognized as liabilities, are deducted in determining fair value less costs to sell. Examples of such costs are legal costs, stamp duty and similar transaction taxes, costs of removing the asset, and

direct incremental costs to bring an asset into condition for its sale. However, termination benefits and costs associated with reducing or reorganizing a business following the disposal of an asset are not direct incremental costs to dispose of the asset.

42. Sometimes, the disposal of an asset would require the buyer to assume a liability and only a single fair value less costs to sell is available for both the asset and the liability. Paragraph 92 explains how to deal with such cases.

Value in Use

- 43. *The following elements shall be reflected in the calculation of an asset's value in use:***

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

44. Estimating the value in use of an asset involves the following steps:
- (a) estimating the future cash inflows and outflows to be derived from continuing use of the asset and from its ultimate disposal; and
 - (b) applying the appropriate discount rate to those future cash flows.
45. The elements identified in paragraph 43(b), (d) and (e) can be reflected either as adjustments to the future cash flows or as adjustments to the discount rate. Whichever approach an entity adopts to reflect expectations about possible variations in the amount or timing of future cash flows, the result shall be to reflect the expected present value of the future cash flows, ie the weighted average of all possible outcomes. Appendix A provides additional guidance on the use of present value techniques in measuring an asset's value in use.

Basis for Estimates of Future Cash Flows

- 46. *In measuring value in use an entity shall:***

- (a) base cash flow projections on reasonable and supportable assumptions that represent management's best estimate of the range of economic conditions that will exist over the remaining useful life of the asset. Greater weight shall be given to external evidence.***
- (b) base cash flow projections on the most recent financial budgets/forecasts approved by management, but shall exclude any estimated future cash inflows or outflows expected to arise from future restructurings or from improving or enhancing the asset's performance. Projections based on these budgets/forecasts shall cover a maximum period of five years, unless a longer period can be justified.***
- (c) estimate cash flow projections beyond the period covered by the most recent budgets/forecasts by extrapolating the projections based on the***

budgets/forecasts using a steady or declining growth rate for subsequent years, unless an increasing rate can be justified. This growth rate shall not exceed the long-term average growth rate for the products, industries, or country or countries in which the entity operates, or for the market in which the asset is used, unless a higher rate can be justified.

47. Management assesses the reasonableness of the assumptions on which its current cash flow projections are based by examining the causes of differences between past cash flow projections and actual cash flows. Management shall ensure that the assumptions on which its current cash flow projections are based are consistent with past actual outcomes, provided the effects of subsequent events or circumstances that did not exist when those actual cash flows were generated make this appropriate.
48. Detailed, explicit and reliable financial budgets/forecasts of future cash flows for periods longer than five years are generally not available. For this reason, management's estimates of future cash flows are based on the most recent budgets/forecasts for a maximum of five years. Management may use cash flow projections based on financial budgets/forecasts over a period longer than five years if it is confident that these projections are reliable and it can demonstrate its ability, based on past experience, to forecast cash flows accurately over that longer period.
49. 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.
50. When conditions are favorable, competitors may enter the market and restrict growth. Therefore, entities will have difficulty in exceeding the average historical growth rate over the long term (say, twenty years) for the products, industries, or country or countries in which the entity operates, or for the market in which the asset is used.
51. In using information from financial budgets/forecasts, an entity considers whether the information reflects reasonable and supportable assumptions and represents management's best estimate of the set of economic conditions that will exist over the remaining useful life of the asset.

Composition of Estimates of Future Cash Flows

52. Estimates of future cash flows shall include:

- (a) projections of cash inflows from the continuing use of the asset;***
- (b) projections of cash outflows that are necessarily incurred to generate the cash inflows from continuing use of the asset (including cash outflows to prepare the asset for use) and can be directly attributed, or allocated on a reasonable and consistent basis, to the asset; and***
- (c) net cash flows, if any, to be received (or paid) for the disposal of the asset at the end of its useful life.***

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

54. Projections of cash outflows include those for the day-to-day servicing of the asset as well as future overheads that can be attributed directly, or allocated on a reasonable and consistent basis, to the use of the asset.
55. 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.
56. To avoid double-counting, estimates of future cash flows do not include:
 - (a) cash inflows from assets that generate cash inflows that are largely independent of the cash inflows from the asset under review (for example, financial assets such as receivables); and
 - (b) cash outflows that relate to obligations that have been recognized as liabilities (for example, payables, pensions or provisions).
57. ***Future cash flows shall be estimated for the asset in its current condition. Estimates of future cash flows shall not include estimated future cash inflows or outflows that are expected to arise from:***
 - (a) a future restructuring to which an entity is not yet committed; or***
 - (b) improving or enhancing the asset's performance.***
58. Because future cash flows are estimated for the asset in its current condition, value in use does not reflect:
 - (a) future cash outflows or related cost savings (for example reductions in staff costs) or benefits that are expected to arise from a future restructuring to which an entity is not yet committed; or
 - (b) future cash outflows that will improve or enhance the asset's performance or the related cash inflows that are expected to arise from such outflows.
59. A restructuring is a program that is planned and controlled by management and materially changes either the scope of the business undertaken by an entity or the manner in which the business is conducted. IPSAS 19 *Provisions, Contingent Liabilities and Contingent Assets* contains guidance clarifying when an entity is committed to a restructuring.
60. When an entity becomes committed to a restructuring, some assets are likely to be affected by this restructuring. Once the entity is committed to the restructuring:
 - (a) its estimates of future cash inflows and cash outflows for the purpose of determining value in use reflect the cost savings and other benefits from the restructuring (based on the most recent financial budgets/forecasts approved by management); and
 - (b) its estimates of future cash outflows for the restructuring are included in a restructuring provision in accordance with IPSAS 19.
61. Until an entity incurs cash outflows that improve or enhance the asset's performance, estimates of future cash flows do not include the estimated future cash inflows that are expected to arise from the increase in economic benefits associated with the cash outflow.
62. Estimates of future cash flows include future cash outflows necessary to maintain the level of economic benefits expected to arise from the asset in its current condition.

When a unit consists of assets with different estimated useful lives, all of which are essential to the ongoing operation of the unit, the replacement of assets with shorter lives is considered to be part of the day-to-day servicing of the unit when estimating the future cash flows associated with the unit. Similarly, when a single asset consists of components with different estimated useful lives, the replacement of components with shorter lives is considered to be part of the day-to-day servicing of the asset when estimating the future cash flows generated by the asset.

63. *Estimates of future cash flows shall not include:*

- (a) cash inflows or outflows from financing activities; or***
- (b) income tax receipts or payments.***

64. 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 determined on a pre-tax basis.

65. *The estimate of net cash flows to be received (or paid) for the disposal of an asset at the end of its useful life shall be the amount that an entity expects to obtain from the disposal of the asset in an arm's length transaction between knowledgeable, willing parties, after deducting the estimated costs of disposal.*

66. The estimate of net cash flows to be received (or paid) for the disposal of an asset at the end of its useful life is determined in a similar way to an asset's fair value less costs to sell, except that, in estimating those net cash flows:

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

Foreign Currency Future Cash Flows

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

Discount Rate

68. *The discount rate (rates) shall reflect(s) current market assessments of:*

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

69. A rate that reflects current market assessments of the time value of money and the risks specific to the asset is the return that investors would require if they were to choose an investment that would generate cash flows of amounts, timing and risk

profile equivalent to those that the entity expects to derive from the asset. This rate is estimated from the rate implicit in current market transactions for similar assets. However, the discount rate(s) used to measure an asset's value in use shall not reflect risks for which the future cash flow estimates have been adjusted. Otherwise, the effect of some assumptions will be double-counted.

70. When an asset-specific rate is not directly available from the market, an entity uses surrogates to estimate the discount rate. Appendix A provides additional guidance on estimating the discount rate in such circumstances.

Recognizing and Measuring an Impairment Loss

71. Paragraphs 72-78 set out the requirements for recognizing and measuring impairment losses for an individual asset. Recognizing and measuring impairment losses for cash-generating units are dealt with in paragraphs 79-99.
72. ***If, and only if, the recoverable amount of an asset is less than its carrying amount, the carrying amount of the asset shall be reduced to its recoverable amount. That reduction is an impairment loss.***
73. ***An impairment loss shall be recognized immediately in net surplus or deficit, unless the asset is carried at revalued amount in accordance with another Standard (for example, in accordance with the revaluation model in IPSAS 17 Property, Plant and Equipment). Any impairment loss of a revalued asset shall be treated as a revaluation decrease in accordance with that other Standard.***
74. An impairment loss on a non-revalued asset is recognized in ***net surplus or deficit***. However, an impairment loss on a revalued asset is recognized directly against any revaluation surplus for the asset to the extent that the impairment loss does not exceed the amount in the revaluation surplus for that same asset.
75. ***When the amount estimated for an impairment loss is greater than the carrying amount of the asset to which it relates, an entity shall recognize a liability if, and only if, that is required by another Standard.***
76. ***After the recognition of an impairment loss, the depreciation (amortization) charge for the asset shall be adjusted in future periods to allocate the asset's revised carrying amount, less its residual value (if any), on a systematic basis over its remaining useful life.***
78. If an impairment loss is recognized, any related deferred tax assets or liabilities are determined in accordance with the International Accounting Standard *Income Taxes*.

Cash-generating Units

79. Paragraphs 80-98 set out the requirements for identifying the cash-generating unit to which an asset belong and determining the carrying amount of, and recognizing impairment losses for, cash-generating units.

Identifying the Cash-generating Unit to Which an Asset Belongs

80. ***If there is any indication that an asset may be impaired, recoverable amount shall be estimated for the individual asset. If it is not possible to estimate the recoverable amount of the individual asset, an entity shall determine the recoverable amount of the cash-generating unit to which the asset belongs (the asset's cash-generating unit).***
81. The recoverable amount of an individual asset cannot be determined if:

- (a) the asset's value in use cannot be estimated to be close to its fair value less costs to sell (for example, when the future cash flows from continuing use of the asset cannot be estimated to be negligible); and
- (b) the asset does not generate cash inflows that are largely independent of those from other assets. In such cases, value in use and, therefore, recoverable amount, can be determined only for the asset's cash-generating unit.

Example

A municipality runs a waste disposal entity that owns a crushing plant to support its waste disposal activities. The crushing plant could be sold only for scrap value and it does not generate cash inflows that are largely independent of the cash inflows from the other assets of the waste disposal entity.

It is not possible to estimate the recoverable amount of the crushing plant because its value in use cannot be determined and is probably different from scrap value. Therefore, the entity estimates the recoverable amount of the cash-generating unit to which the crushing plant belongs, ie the waste disposal entity as a whole.

82. As defined in paragraph 14, an asset's cash-generating unit is the smallest group of assets that includes the asset and generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. Identification of an asset's cash-generating unit involves judgment. If recoverable amount cannot be determined for an individual asset, an entity identifies the lowest aggregation of assets that generate largely independent cash inflows.

Example

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

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

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

(b) the future cash outflows used to determine the value in use of any other assets or cash-generating units that are affected by the internal transfer pricing.

85. Even if part or all of the output produced by an asset or a group of assets is used by other units of the entity (for example, products at an intermediate stage of a production process), this asset or group of assets forms a separate cash-generating unit if the entity could sell the output on an active market. This is because the asset or group of assets could generate cash inflows that would be largely independent of the cash inflows from other assets or groups of assets. In using information based on financial budgets/forecasts that relates to such a cash-generating unit, or to any other asset or cash-generating unit affected by internal transfer pricing, an entity adjusts this information if internal transfer prices do not reflect management's best estimate of future prices that could be achieved in arm's length transactions.
- 86. *Cash-generating units shall be identified consistently from period to period for the same asset or types of assets, unless a change is justified.***
87. If an entity determines that an asset belongs to a cash-generating unit different from that in previous periods, or that the types of assets aggregated for the asset's cash-generating unit have changed, paragraph 118 requires disclosures about the cash-generating unit, if an impairment loss is recognized or reversed for the cash-generating unit.

Recoverable Amount and Carrying Amount of a Cash-generating Unit

88. The recoverable amount of a cash-generating unit is the higher of the cash-generating unit's fair value less costs to sell and its value in use. For the purpose of determining the recoverable amount of a cash-generating unit, any reference in paragraphs 32-70 to 'an asset' is read as a reference to 'a cash-generating unit'.
- 89. *The carrying amount of a cash-generating unit shall be determined on a basis consistent with the way the recoverable amount of the cash-generating unit is determined.***
90. The carrying amount of a cash-generating unit:
- (a) includes the carrying amount of only those assets that can be attributed directly, or allocated on a reasonable and consistent basis, to the cash-generating unit and will generate the future cash inflows used in determining the cash-generating unit's value in use; and
 - (b) does not include the carrying amount of any recognized liability, unless the recoverable amount of the cash-generating unit cannot be determined without consideration of this liability. This is because fair value less costs to sell and value in use of a cash-generating unit are determined excluding cash flows that relate to assets that are not part of the cash-generating unit and liabilities that have been recognized (see paragraphs 41 and 56).
91. When assets are grouped for recoverability assessments, it is important to include in the cash-generating unit all assets that generate or are used to generate the relevant stream of cash inflows. Otherwise, the cash-generating unit may appear to be fully recoverable when in fact an impairment loss has occurred.
92. It may be necessary to consider some recognized liabilities to determine the recoverable amount of a cash-generating unit. This may occur if the disposal of a cash-generating unit would require the buyer to assume the liability. In this case, the fair value less costs to sell (or the estimated cash flow from ultimate disposal) of the

cash-generating unit is the estimated selling price for the assets of the cash-generating unit and the liability together, less the costs of disposal. To perform a meaningful comparison between the carrying amount of the cash-generating unit and its recoverable amount, the carrying amount of the liability is deducted in determining both the cash-generating unit's value in use and its carrying amount.

Example

A municipality operates a waste disposal site and is required to restore the site on completion of its operations. The cost of restoration includes the replacement of the overburden, which must be removed before waste disposal operations commence. A provision for the costs to replace the overburden was recognized as soon as the overburden was removed. The amount provided was recognized as part of the cost of the site and is being depreciated over the site's useful life. The carrying amount of the provision for restoration costs is CU500,¹ which is equal to the present value of the restoration costs.

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

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

¹In this Standard, monetary amounts are denominated in 'currency units' (CU).

93. For practical reasons, the recoverable amount of a cash-generating unit is sometimes determined after consideration of assets that are not part of the cash-generating unit (for example, receivables or other financial assets) or liabilities that have been recognized (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.

Impairment Loss for a Cash-generating Unit

94. ***An impairment loss shall be recognized for a cash-generating unit if, and only if, its recoverable amount is less than the carrying amount. The impairment loss shall be allocated to reduce the carrying amount of the assets of the unit 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 shall be treated as impairment losses on individual assets and recognized in accordance with paragraph 73.***
95. ***In allocating an impairment loss in accordance with paragraph 94, an entity shall not reduce the carrying amount of an asset below the highest of:***
- (a) its fair value less costs to sell (if determinable);***
 - (b) its value in use (if determinable); and***
 - (c) zero.***

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

96. If it is not practicable to estimate the recoverable amount of each individual asset of a cash-generating unit, this Standard requires an arbitrary allocation of an impairment loss between the assets of that unit, because all assets of a cash-generating unit work together.
97. If the recoverable amount of an individual asset cannot be determined (see paragraph 81):
- (a) an impairment loss is recognized for the asset if its carrying amount is greater than the higher of its fair value less costs to sell and the results of the allocation procedures described in paragraphs 94 and 95; and
 - (b) no impairment loss is recognized for the asset if the related cash-generating unit is not impaired. This applies even if the asset's fair value less costs to sell is less than its carrying amount.

Example

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

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

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

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

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

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

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

- 98. After the requirements in paragraphs 94 and 95 have been applied, a liability shall be recognized for any remaining amount of an impairment loss for a cash-generating unit if, and only if, that is required by another Standard.**

Reversing an Impairment Loss

99. Paragraphs 100-111 set out the requirements for reversing an impairment loss recognized for an asset or a cash-generating unit in prior periods. These requirements use the term 'an asset' but apply equally to an individual asset or a cash generating unit. Additional requirements for an individual asset are set out in paragraphs 107-111 and for a cash-generating unit in paragraphs 112 and 113.
- 100. An entity shall assess at each reporting date whether there is any indication that an impairment loss recognized in prior periods for an asset may no longer exist or may have decreased. If any such indication exists, the entity shall estimate the recoverable amount of that asset.**
- 101. In assessing whether there is any indication that an impairment loss recognized in prior periods for an asset may no longer exist or may have decreased, an entity shall consider, as a minimum, the following indications:**

External sources of information

- (a) the asset's market value has increased significantly during the period.**
- (b) significant changes with a favorable effect on the entity have taken place during the period, or will take place in the near future, in the technological, market, economic or legal environment in which the entity operates or in the market to which the asset is dedicated.**
- (c) market interest rates or other market rates of return on investments have decreased during the period, and those decreases are likely to affect the discount rate used in calculating the asset's value in use and increase the asset's recoverable amount materially.**

Internal sources of information

- (d) significant changes with a favorable effect on the entity have taken place during the period, or are expected to take place in the near future, in the extent to which, or manner in which, the asset is used or is expected to be used. These changes include costs incurred during the period to improve or enhance the asset's performance or restructure the operation to which the asset belongs.**
 - (e) evidence is available from internal reporting that indicates that the economic performance of the asset is, or will be, better than expected.**
102. Indications of a potential decrease in an impairment loss in paragraph 101 mainly mirror the indications of a potential impairment loss in paragraph 25.
103. If there is an indication that an impairment loss recognized for an asset may no longer exist or may have decreased, this may indicate that the remaining useful life, the depreciation (amortization) method or the residual value may need to be reviewed and adjusted in accordance with the Standard applicable to the asset, even if no impairment loss is reversed for the asset.
- 104. An impairment loss recognized in prior periods for an asset shall be reversed if, and only if, there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognized. If**

this is the case, the carrying amount of the asset shall, except as described in paragraph 107, be increased to its recoverable amount. That increase is a reversal of an impairment loss.

105. A reversal of an impairment loss reflects an increase in the estimated service potential of an asset, either from use or from sale, since the date when an entity last recognized an impairment loss for that asset. Paragraph 118 requires an entity to identify the change in estimates that causes the increase in estimated service potential. Examples of changes in estimates include:
- (a) a change in the basis for recoverable amount (ie whether recoverable amount is based on fair value less costs to sell or value in use);
 - (b) if recoverable amount was based on value in use, a change in the amount or timing of estimated future cash flows or in the discount rate; or
 - (c) if recoverable amount was based on fair value less costs to sell, a change in estimate of the components of fair value less costs to sell.
106. An asset's value in use may become greater than the asset's carrying amount simply because the present value of future cash inflows increases as they become closer. However, the service potential of the asset has not increased. Therefore, an impairment loss is not reversed just because of the passage of time (sometimes called the 'unwinding' of the discount), even if the recoverable amount of the asset becomes higher than its carrying amount.

Reversing an Impairment Loss for an Individual Asset

- 107. The increased carrying amount of an asset attributable to a reversal of an impairment loss shall not exceed the carrying amount that would have been determined (net of amortization or depreciation) had no impairment loss been recognized for the asset in prior years.***
108. Any increase in the carrying amount of an asset above the carrying amount that would have been determined (net of amortization or depreciation) had no impairment loss been recognized for the asset in prior years is a revaluation. In accounting for such a revaluation, an entity applies the Standard applicable to the asset.
- 109. A reversal of an impairment loss for an asset shall be recognized immediately in net surplus or deficit, unless the asset is carried at revalued amount in accordance with another Standard (for example, the revaluation model in IPSAS 17 Property, Plant and Equipment). Any reversal of an impairment loss of a revalued asset shall be treated as a revaluation increase in accordance with that other Standard.***
110. A reversal of an impairment loss on a revalued asset is credited directly to net assets under the heading revaluation surplus. However, to the extent that an impairment loss on the same revalued asset was previously recognized in net surplus or deficit, a reversal of that impairment loss is also recognized in net surplus or deficit.
- 111. After a reversal of an impairment loss is recognized, the depreciation (amortization) charge for the asset shall be adjusted in future periods to allocate the asset's revised carrying amount, less its residual value (if any), on a systematic basis over its remaining useful life.***

Reversing an Impairment Loss for a Cash-generating Unit

- 112. A reversal of an impairment loss for a cash-generating unit shall be allocated to the assets of the unit pro rata with the carrying amounts of those assets.***

These increases in carrying amounts shall be treated as reversals of impairment losses for individual assets and recognized in accordance with paragraph 109.

113. In allocating a reversal of an impairment loss for a cash-generating unit in accordance with paragraph 112, the carrying amount of an asset shall not be increased above the lower of:

- (a) its recoverable amount (if determinable); and**
- (b) the carrying amount that would have been determined (net of amortisation or depreciation) had no impairment loss been recognized for the asset in prior periods.**

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

Disclosure

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

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

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

116. The information required in paragraph 104 may be presented with other information disclosed for the class of assets. For example, this information may be included in a reconciliation of the carrying amount of property, plant and equipment, at the beginning and end of the period, as required by IPSAS 17 *Property, Plant and Equipment*.

117. An entity that reports segment information in accordance with IPSAS 18 *Segment Reporting* shall disclose the following for each reportable segment based on an entity's primary reporting format:

- (a) the amount of impairment losses recognized in net surplus or deficit and directly in equity during the period.**
- (b) the amount of reversals of impairment losses recognized in net surplus or deficit and directly in equity during the period.**

118. An entity shall disclose the following for each material impairment loss recognized or reversed during the period for an asset or a cash-generating unit:

- (a) the events and circumstances that led to the recognition or reversal of the impairment loss.**

- (b) the amount of the impairment loss recognized or reversed.*
 - (c) for an asset:*
 - (i) the nature of the asset; and*
 - (ii) if the entity reports segment information in accordance with IPSAS 18, the reportable segment to which the asset belongs, based on the entity's primary reporting format.*
 - (e) whether the recoverable amount of the asset is its fair value less costs to sell or its value in use.*
 - (f) if recoverable amount is fair value less costs to sell, the basis used to determine fair value less costs to sell (such as whether fair value was determined by reference to an active market).*
 - (g) if recoverable amount is value in use, the discount rate(s) used in the current estimate and previous estimate (if any) of value in use.*
- 119. An entity shall disclose the following information for the aggregate impairment losses and the aggregate reversals of impairment losses recognized during the period for which no information is disclosed in accordance with paragraph 118:**
- (a) the main classes of assets affected by impairment losses and the main classes of assets affected by reversals of impairment losses.*
 - (b) the main events and circumstances that led to the recognition of these impairment losses and reversals of impairment losses.*
- 120. An entity is encouraged to disclose assumptions used to determine the recoverable amount of assets during the period. However, paragraph 121 requires an entity to disclose information about the estimates used to measure the recoverable amount of a cash-generating unit when an intangible asset with an indefinite useful life is included in the carrying amount of that unit.**

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

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

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

that fact shall be disclosed, together with the aggregate carrying amount of intangible assets with indefinite useful lives allocated to those units. In addition, if the recoverable amounts of any of those units are based on the same key assumption(s) and the aggregate carrying amount of intangible assets with indefinite useful lives allocated to them is significant in comparison with the entity's total carrying amount of intangible assets with indefinite useful lives, an entity shall disclose that fact, together with:

- (a) the aggregate carrying amount of intangible assets with indefinite useful lives allocated to those units.*
- (b) a description of the key assumption(s).*
- (c) a description of management's approach to determining the value(s) assigned to the key assumption(s), whether those value(s) reflect past experience or, if appropriate, are consistent with external sources of information, and, if not, how and why they differ from past experience or external sources of information.*
- (e) if a reasonably possible change in the key assumption(s) would cause the aggregate of the units' carrying amounts to exceed the aggregate of their recoverable amounts:*
 - (i) the amount by which the aggregate of the units' recoverable amounts exceeds the aggregate of their carrying amounts.*
 - (ii) the value(s) assigned to the key assumption(s).*
 - (iii) the amount by which the value(s) assigned to the key assumption(s) must change, after incorporating any consequential effects of the change on the other variables used to measure recoverable amount, in order for the aggregate of the units' recoverable amounts to be equal to the aggregate of their carrying amounts.*

123. The most recent detailed calculation made in a preceding period of the recoverable amount of a cash-generating unit may, in accordance with paragraph 37, be carried forward and used in the impairment test for that unit in the current period provided specified criteria are met. When this is the case, the information for that unit that is incorporated into the disclosures required by paragraphs 112 and 113 relate to the carried forward calculation of recoverable amount.

Effective Date

124 (a) An entity shall apply this International Public Sector Accounting Standard for annual periods beginning on or after Month XX, Year. Earlier application is encouraged. If an entity applies this Standard for an earlier period it shall disclose that fact.

125 (b) When an entity adopts the accrual basis of accounting, as defined by International Public Sector Accounting Standards, for financial reporting purposes, subsequent to this effective date, this Standard applies to the entity's annual financial statements covering periods beginning on or after the date of adoption.

Comparison with IAS 36

International Public Sector Accounting Standard IPSAS XX *Impairment of Cash-Generating Assets* deals with the impairment of Cash-Generating assets in the public sector. The main differences between IPSAS XX2 and International Accounting Standard IAS 36, “Impairment of Assets” are as follows:

- IPSAS XX deals with the impairment of Cash-Generating assets of public sector entities while IAS 36 deals with the impairment of cash-generating assets of profit-oriented entities. IPSAS XX, however, requires that the impairment of non-cash-generating assets of public sector entities be accounted for under IPSAS 21.
- The objective as stated in IPSAS XX2 applies specifically to cash-generated assets whereas the objective in IAS 36 applies to assets.
- The Scope paragraph differs in that the introductory paragraph has been aligned with IPSAS 21 and the scope exclusions are narrower than IAS 36.
- Identification changes from IASs to the applicable IPSASs have been made.
- The topic of “cash generating units” has been deleted from the IPSAS but “intangible assets” have been retained.
- Market capitalization as an indicator to assess whether an asset may be impaired has been deleted from the IPSAS.
- IPSAS XX uses different terminology, in certain instances, from IAS 36. The most significant examples are the use of the terms “entity,” “revenue,” “recoverable service amount,” “statement of financial performance” and “statement of financial position” in IPSAS XX. The equivalent terms in IAS 36 are “enterprise,” “income,” “recoverable amount,” “income statement” and “balance sheet.”
- IPSAS XX contains many of the definitions of technical terms used in IAS 36 and an additional glossary of other defined terms.

Appendix A

Using Present Value Techniques to Measure Value in Use

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

The Components of a Present Value Measurement

A1. The following elements together capture the economic differences between assets:

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

A2. This appendix contrasts two approaches to computing present value, either of which may be used to estimate the value in use of an asset, depending on the circumstances. Under the 'traditional' approach, adjustments for factors (b)-(e) described in paragraph A1 are embedded in the discount rate. Under the 'expected cash flow' approach, factors (b), (d) and (e) cause adjustments in arriving at risk-adjusted expected cash flows. Whichever approach an entity adopts to reflect expectations about possible variations in the amount or timing of future cash flows, the result should be to reflect the expected present value of the future cash flows, ie the weighted average of all possible outcomes.

General Principles

A3. The techniques used to estimate future cash flows and interest rates will vary from one situation to another depending on the circumstances surrounding the asset in question. However, the following general principles govern any application of present value techniques in measuring assets:

- (a) interest rates used to discount cash flows should reflect assumptions that are consistent with those inherent in the estimated cash flows. Otherwise, the effect of some assumptions will be double-counted or ignored. For example, a discount rate of 12 per cent might be applied to contractual cash flows of a loan receivable. That rate reflects expectations about future defaults from loans with particular characteristics. That same 12 per cent rate should not be used to discount expected cash flows because those cash flows already reflect assumptions about future defaults.
- (b) estimated cash flows and discount rates should be free from both bias and factors unrelated to the asset in question. For example, deliberately understating estimated net cash flows to enhance the apparent future profitability of an asset introduces a bias into the measurement.
- (c) estimated cash flows or discount rates should reflect the range of possible outcomes rather than a single most likely, minimum or maximum possible amount.

Traditional and Expected Cash Flow Approaches to Present Value

Traditional Approach

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

Expected Cash Flow Approach

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

cent and 30 per cent, respectively. The example below shows the computation of expected present value in that situation.

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

- A9. The expected present value of CU892.36 differs from the traditional notion of a best estimate of CU902.73 (the 60 per cent probability). A traditional present value computation applied to this example requires a decision about which of the possible timings of cash flows to use and, accordingly, would not reflect the probabilities of other timings. This is because the discount rate in a traditional present value computation cannot reflect uncertainties in timing.
- A10. The use of probabilities is an essential element of the expected cash flow approach. Some question whether assigning probabilities to highly subjective estimates suggests greater precision than, in fact, exists. However, the proper application of the traditional approach (as described in paragraph A6) requires the same estimates and subjectivity without providing the computational transparency of the expected cash flow approach.
- A11. Many estimates developed in current practice already incorporate the elements of expected cash flows informally. In addition, accountants often face the need to measure an asset using limited information about the probabilities of possible cash flows. For example, an accountant might be confronted with the following situations:
- the estimated amount falls somewhere between CU50 and CU250, but no amount in the range is more likely than any other amount. Based on that limited information, the estimated expected cash flow is CU150 $[(50 + 250)/2]$.
 - the estimated amount falls somewhere between CU50 and CU250, and the most likely amount is CU100. However, the probabilities attached to each amount are unknown. Based on that limited information, the estimated expected cash flow is CU133.33 $[(50 + 100 + 250)/3]$.
 - the estimated amount will be CU50 (10 per cent probability), CU250 (30 per cent probability), or CU100 (60 per cent probability). Based on that limited information, the estimated expected cash flow is CU140 $[(50 \times 0.10) + (250 \times 0.30) + (100 \times 0.60)]$. In each case, the estimated expected cash flow is likely to provide a better estimate of value in use than the minimum, most likely or maximum amount taken alone.
- A12. The application of an expected cash flow approach is subject to a cost-benefit constraint. In some cases, an entity may have access to extensive data and may be able to develop many cash flow scenarios. In other cases, an entity may not be able to develop more than general statements about the variability of cash flows without

incurring substantial cost. The entity needs to balance the cost of obtaining additional information against the additional reliability that information will bring to the measurement.

- A13. Some maintain that expected cash flow techniques are inappropriate for measuring a single item or an item with a limited number of possible outcomes. They offer an example of an asset with two possible outcomes: a 90 per cent probability that the cash flow will be CU10 and a 10 per cent probability that the cash flow will be CU1,000. They observe that the expected cash flow in that example is CU109 and criticize that result as not representing either of the amounts that may ultimately be paid.
- A14. Assertions like the one just outlined reflect underlying disagreement with the measurement objective. If the objective is accumulation of costs to be incurred, expected cash flows may not produce a representationally faithful estimate of the expected cost. However, this Standard is concerned with measuring the recoverable amount of an asset. The recoverable amount of the asset in this example is not likely to be CU10, even though that is the most likely cash flow. This is because a measurement of CU10 does not incorporate the uncertainty of the cash flow in the measurement of the asset. Instead, the uncertain cash flow is presented as if it were a certain cash flow. No rational entity would sell an asset with these characteristics for CU10.

Discount Rate

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

- A19. The discount rate is independent of the entity's capital structure and the way the entity financed the purchase of the asset, because the future cash flows expected to arise from an asset do not depend on the way in which the entity financed the purchase of the asset.
- A20. Paragraph 55 requires the discount rate used to be a pre-tax rate. Therefore, when the basis used to estimate the discount rate is post-tax, that basis is adjusted to reflect a pre-tax rate.
- A21. An entity normally uses a single discount rate for the estimate of an asset's value in use. However, an entity uses separate discount rates for different future periods where value in use is sensitive to a difference in risks for different periods or to the term structure of interest rates.

Illustrative Examples

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Illustrative Examples

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

Most assets held by public sector entities are non-cash generating assets and accounting for their impairment should be undertaken in accordance with IPSAS 21.

In those rare circumstances when an asset held by a government on one of its agencies is considered to be cash generating the provisions of this IPSAS should be followed. Most cash-generating assets will arise in business activities run by government agencies that do not meet the definition of a Government Business Enterprise. For example, an entity would fail the definition if it is unable to contract in its own name.

For the purposes of these illustrative examples, a public sector entity is presumed to have commercial activities undertaken but that it is not a Government Business Enterprise.

Example 1 - Identification of Cash-generating Units

The purpose of this example is: (a) to indicate how cash-generating units are identified in various situations; and (b) to highlight certain factors that an entity may consider in identifying the cash-generating unit to which an asset belongs.

A - Plant for an Intermediate Step in a Production Process

Background

- IE1. A significant raw material used for plant Y's final production is an intermediate product bought from plant X of the same entity. X's products are sold to Y at a transfer price that passes all margins to X. Eighty per cent of Y's final production is sold to customers outside of the entity. Sixty per cent of X's final production is sold to Y and the remaining 40 per cent is sold to customers outside of the entity. For each of the following cases, what are the cash-generating units for X and Y? Case 1: X could sell the products it sells to Y in an active market. Internal transfer prices are higher than market prices. Case 2: There is no active market for the products X sells to Y.

Analysis

Case 1

- IE2. X could sell its products in an active market and, so, generate cash inflows that would be largely independent of the cash inflows from Y. Therefore, it is likely that X is a separate cash-generating unit, although part of its production is used by Y (see paragraph 70 of IAS 36).
- IE3. It is likely that Y is also a separate cash-generating unit. Y sells 80 per cent of its products to customers outside of the entity. Therefore, its cash inflows can be regarded as largely independent.
- IE4. Internal transfer prices do not reflect market prices for X's output. Therefore, in determining value in use of both X and Y, the entity adjusts financial

budgets/forecasts to reflect management's best estimate of future prices that could be achieved in arm's length transactions for those of X's products that are used internally (see paragraph 70 of IAS 36).

Case 2

- IE5. It is likely that the recoverable amount of each plant cannot be assessed independently of the recoverable amount of the other plant because:
- (a) the majority of X's production is used internally and could not be sold in an active market. So, cash inflows of X depend on demand for Y's products. Therefore, X cannot be considered to generate cash inflows that are largely independent of those of Y.
 - (b) the two plants are managed together.
- IE6. As a consequence, it is likely that X and Y together are the smallest group of assets that generates cash inflows that are largely independent.

B - Building Half-Rented to Others and Half-Occupied for Own

Use Background

- IE7. M is the printing arm of a government entity. It owns a 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

- IE8. The primary purpose of the building is to serve as a government asset, supporting M's printing activities. Therefore, the building as a whole cannot be considered to generate cash inflows that are largely independent of the cash inflows from the entity as a whole. So, it is likely that the cash-generating unit for the building is M as a whole.
- IE9. 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

Background and Calculation of Value in Use

- IE10. At the beginning of 20X0, government R, through its department of power, puts into service a power plant that it constructed for CU250 million.
- IE11. At the beginning of 20X4, power plants constructed by competitors are put into service resulting in a reduction in the revenues produced by the power plant of government R. Reductions in revenue result because of the volume of electricity generated has decreased from expectations and because the price for electricity and for standby capacity have decreased from expectations..
- IE12. The reduction in revenue is evidence that the economic performance of the asset is worse than expected. Consequently, government R is required to determine the asset's recoverable amount.

- IE13. R uses straight-line depreciation over a 20-year life for the power plant and anticipates no residual value.
- IE14. To determine the value in use for the power plant (see Schedule 1), R:
- (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 20Y0-20Y9) based on declining growth rates ranging from -6 per cent to -3 per cent.
 - (c) selects a 6 per cent discount rate, which represents a rate that reflects current market assessments of the time value of money and the risks specific to government R's power plant.

Recognition and Measurement of Impairment Loss

- IE15. The recoverable amount of government R's power plant is CU121.1 million.
- IE16. R compares the recoverable amount of the power plant to its carrying amount (see Schedule 2).
- IE17. Because the carrying amount exceeds the recoverable amount by CU78.9 million, recognizes an impairment loss of CU78.9 immediately in profit or loss.

Schedule 1. Calculation of the value in use of government R's power plant at the end of 20X4

<i>Year</i>	<i>Long-term growth rates</i>	<i>Future cash flows</i>	<i>Present value factor at 15% discount rate§</i>	<i>Discounted future cash flows CU</i>
20X5 (n=1)		16.8 *	0.94340	15.8
20X6		14.4 *	0.89000	12.8
20X7		14.2 *	0.83962	11.9
20X8		14.1 *	0.79209	11.2
20X9		13.9 *	0.74726	10.4
20Y0	-6%	13.1 †	0.70496	9.2
20Y1	-6%	12.3 †	0.66506	8.2
20Y2	-6%	11.6 †	0.62741	7.3
20Y3	-5%	11.0 †	0.59190	6.5
20Y4	-5%	10.5 †	0.55839	5.9
20Y5	-5%	10.0 †	0.52679	5.3
20Y6	-4%	9.6 †	0.49697	4.8
20Y7	-4%	9.2 †	0.46884	4.3
20Y8	-3%	8.9 †	0.44230	3.9
20Y9	-3%	8.6 †	0.41727	3.6
Value in use				<u>121.1</u>

* Based on management's best estimate of net cash flow projections.

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

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

Schedule 2. Calculation of the impairment loss for government R's power plant at the beginning of 20X5

Beginning of 20X5

	<i>Total CU</i>
Historical cost	250
Accumulated depreciation (20X4)	(50)
Carrying amount	200
Impairment loss	(78.9)
Carrying amount after impairment loss	121.1

Example 3 - Reversal of an Impairment Loss

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

Background

- IE18. In 20X6, government R is still in office, but the demand for power is improving. The effects of power plant closures by competitors resulted in an increase in the revenues produced by the power plant of Government R and prove to be more drastic than initially expected by Government R. As a result, Government R estimates that production will increase by 30 per cent. This favorable change requires the government to re-estimate the recoverable amount of the power plant. (see paragraphs XX and XX of IPSAS XX).
- IE19. Calculations similar to those in Example 2 show that the recoverable amount of the power plant is now CU157.7.

Reversal of Impairment Loss

- IE20. The government compares the recoverable amount and the net carrying amount of the power plant.