

Meeting: International Public Sector Accounting
Standards Board

Meeting Location: Kuala Lumpur, Malaysia

Meeting Date: December 4–7, 2018

Agenda Item 9

For:

☐ Approval

☒ Discussion

☐ Information

Public Sector Measurement

Project summary	Project will revise IPSAS requirements for measurement and measurement-related disclosure, provide guidance on measurement and address the treatment of transaction costs and borrowing costs.	
	Topic	Agenda Item
Project management	Instructions —Up to December 2018 meeting	9.1.1
	Decisions —Up to December 2018 meeting	9.1.2
	Project roadmap	9.1.3
Decisions required at this meeting	Revisions to Exposure draft, <i>Measurement</i> , and Consultation Paper, <i>Public Sector Measurement</i>	9.2.1
	Review of Cost of Fulfillment Measurement	9.2.2
	Cost of Fulfillment Principles	9.2.3
	Discount Rate (Cost of Fulfillment)	9.2.4
	Process Followed by Staff (Cost of Fulfillment)	9.2.5
	Measurement of Assets Held for Sale or Disposal	9.2.6
Supporting documents	Consultation Paper and Exposure Draft, <i>Measurement</i>	9.3.1
	Fair value application guidance—marked up version	9.3.2

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9.1.1

IPSASB Instructions—September 2018 meeting and earlier

Meeting	Instructions	Actions
Sept 2018	<ol style="list-style-type: none"> 1. Apply the Project Overview approach to the CP and ED to submit complete documents to the December meeting. 2. Include an illustration in the ED of the approach of including generic measurement-related disclosures for measurement bases. 3. Review the fair value text for specific text that belongs in IPSAS 41 (financial instruments) or another individual IPSAS. Coordinate with Financial Instruments Task Force and staff. 4. Revise ED's objective, scope and definitions (including adding new definitions). 5. Develop explanatory text for measurement bases. 6. Identify/develop generic guidance for inclusion in the ED's appendices. 7. Make recommendation on an appendix for measurement of assets held for sale or disposal. 8. Assess whether best estimate in IPSAS 19, <i>Provisions, etc.</i> is same as "cost of fulfillment." 9. Develop explanatory section for CP-ED, with visuals and statement that this is not an IFRS-alignment project. 10. Develop the flow charts with examples to illustrate their application to particular topics. 	<p>Done</p> <p>Disclosures in appendices</p> <p>Done</p> <p>Not done</p> <p>Done</p> <p>Done</p> <p>Done</p> <p>Done</p> <p>Done</p> <p>Done</p>

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9.1.1

Meeting	Instructions	Actions
June 2018	<ol style="list-style-type: none"> 1. Develop the flow chart for subsequent measurement of assets so that it also addresses financial instruments. 2. Develop definitions or explanations of key terms used in the flowchart. 3. Provide recommendations on what amendments should be made to the text of IFRS 13, Fair Value Measurement, for inclusion in ED, Measurement. 4. Revise the table of equivalence. 5. Develop a flow chart and ED text for the subsequent measurement of liabilities, and consider the contractual/non-contractual distinction during development. 6. Develop an At-a-Glance summary of the project. 	<p>Done</p> <p>Done</p> <p>Done</p> <p>In progress</p> <p>Done/ in progress</p> <p>Topic 1's project overview</p>
March 2018	<ol style="list-style-type: none"> 1. Present combined CP and ED document using mark-up to identify text changes since March. 2. For ED, (a) locate definitions after scope paragraph(s); (b) include all IFRS 13 definitions and other material for fair value, (c) add a Basis for Conclusions, (d) remove ED footnotes, (e) review IPSAS 17 for coverage to include, and (f) retain two impairment IPSASs. 3. For the ED's Basis for Conclusions (a) include Chapter 7's discussion of fair value, (b) show relationship between fair value and market value, and (c) reflect IPSASB's decision that fair value may apply. 4. For CP, (a) consider whether outline approved in December should be revised, (b) revise arguments in Chapter 3 and circulate for intermeeting IPSASB review. 5. Develop a flow chart for measurement of assets and focus on asset measurement for June. 6. Transaction costs and borrowing costs: (a) consider how IVS define transaction costs, (b) develop two definitions for transaction costs related to entry/exit values, and (c) provide recommendation on whether transaction costs should be discussed in the CP or in the ED's 	<p>Done</p> <p>Done</p> <p>Done</p> <p>Done</p> <p>Done</p> <p>In progress</p>

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9.1.1

Meeting	Instructions	Actions
	Basis for Conclusions. 7. Develop an equivalence table. 8. Consider qualitative characteristics and constraints as they apply to measurement.	Done In progress
Dec 2017	1. Consider definitions used in International Valuation Standards (IVS) and Government Finance Statistics (GFS). 2. Monitor discount rate developments and bring paper to IPSASB's September 2018. 3. Review IPSASs against the Conceptual Framework with no presumption that current measurement requirements should continue. 4. Develop ED sections for the March 2018 IPSASB meeting.	1. Done 2. In progress 3. Done 4. Done
Sept 2017	1. Develop a hybrid IPSAS that applies the Conceptual Framework to public sector specific (PSS) measurement issues and has a section on application of IFRS 13's approach to fair value (Option B) 2. Develop an outline of the CP 3. Develop a description of public sector specific (PSS) measurement issues 4. Develop proposals for when either a PSS measurement approach is needed or where an IFRS 13 fair value measurement approach could apply 5. Consider the boundary between IPSAS, <i>Measurement</i> , and individual IPSASs 6. Test responses to CP, <i>Heritage</i> , against the PS Measurement approach	1. In progress 2. Done 3. Done 4. Done 5. Done. See ED outline 6. Will apply ED principles

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Meeting	Instructions	Actions
June 2017	<ol style="list-style-type: none"> 1. Consider convergence with IFRS, particularly scope to incorporate an IFRS 13, <i>Fair Value Measurement</i>, approach into IPSAS 2. Apply the Conceptual Framework's measurement objective to the treatment of transaction costs 3. For September 2017 IPSASB meeting: <ol style="list-style-type: none"> a) Bring back the transaction costs and borrowing costs issues as part of a more general discussion of asset valuation for the IPSASB's consideration; b) Provide an education session on IFRS 13 and its post-implementation review; and c) Discuss ways to address fair value in IPSAS, in the context of the Conceptual Framework's approach to current value measurement and IFRS 13's approach. 	<ol style="list-style-type: none"> 1. Done 2. Done 3 (a) Done 3 (b) Done 3 (c) Done
March 2017	<ol style="list-style-type: none"> 1. Revise project brief and create project page 2. Develop a questionnaire for IPSASB/Technical Adviser/Observers' input on the project's scope 3. Identify project work streams 4 Provide education session on the IASB's post implementation review of IFRS 13 in September 5. Log information on how other IPSASB projects relate to the Public Sector Measurement project 	<ol style="list-style-type: none"> 1. Done 2. Done 3. Done 4 Done 5 Done
September 2015 to December 2016	Project awaits start. First discussion in March 2017	Done
June 2015	Revise project brief for IPSASB revisions.	Done

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9.1.2

IPSASB Decisions—September 2018 meeting and earlier

Meeting	Decisions
September 2018	<ol style="list-style-type: none"> 1. Applying the Project Overview approach, ED, <i>Measurement</i>, will define each measurement basis and provide explanatory material in its core text and application guidance on how to derive the measurement bases in its appendices, while individual IPSASs will continue to address which measurement basis should be used. 2. Measurement-related disclosures could be located as follows; neutral (generic) in ED, <i>Measurement</i>, and specific in the relevant IPSAS. 3. The IPSASB agreed to adopt the majority of fair value text from IFRS 13 in application guidance or in another IPSAS(s), reflecting the Financial Instruments Task Force and staff recommendation. 4. Develop ED, <i>Measurement</i>, further, as per point (1) above. 5. ED, <i>Measurement</i>, appendices for December will have generic application guidance for historical cost, replacement cost, fair value, and cost of fulfillment. 6. Guidance specific to a particular topic remains in the individual IPSASs. 7. CP, <i>Public Sector Measurement</i>, to be developed further, consistent with the Project Overview approach in point (1) above. 8. There should be sufficient coverage of measurement issues raised by assets held for service potential/capacity, within the context of the Conceptual Framework measurement objective.
June 2018	<ol style="list-style-type: none"> 1. The table of equivalence will not be authoritative 2. The measurement basis for subsequent measurement of liabilities can be different from that for initial measurement
March 2018	<ol style="list-style-type: none"> 1. Agreed ED paragraphs for objective and scope 2. ED, <i>Measurement</i> will cover measurement for all IPSASs 3. ED, <i>Measurement</i>, will include IFRS 13 text, not refer to IFRS 13 4. ED, <i>Measurement</i>, will have a Basis for Conclusions 5. Agreed a Preliminary View to expense all borrowing costs

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December 2017	<ol style="list-style-type: none"> 1. Apply ED and CP outlines (December 2017 meeting) for their development 2. For project's timeline, Route 1 used for planning purposes
September 2017	<ol style="list-style-type: none"> 1. The CP will wrap around an ED 2. IPSAS, <i>Measurement</i>, should be a hybrid IPSAS that applies the Conceptual Framework to public sector specific measurement issues and has a section on application of IFRS 13 fair value 3. Treatment of borrowing costs issue will be included in the CP 4. Project will address measurement of heritage and infrastructure assets through Application Guidance in IPSAS, <i>Measurement</i>
June 2017	Work on measurement guidance and disclosures will occur after work on measurement bases
March 2017	Approved revisions to the project brief
September 2015 to December 2016	No decisions as project awaits start. First discussion will be in March 2017.
June 2015	Approved the "Public Sector Measurement" project brief

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Public Sector Measurement Project Roadmap¹

Meeting	Completed Discussions/ Planned Discussions:
Next meeting²	
March 2019	<ol style="list-style-type: none"> 1. Approve Exposure Draft and Consultation Paper (CP) for issuance. 2. Decision on exposure period.
This meeting	
December 2018	<ol style="list-style-type: none"> 1. Review the ED as a whole—(1) objective, scope, definitions, explanatory text for measurement bases; (2) measurement-related disclosures; (3) application guidance for historical cost, replacement cost, fair value, and cost of fulfillment; and, (4) the basis for conclusions, including basis for treatment of fair value and measurement-related disclosures. 2. Review the CP as a whole: (1) visual explanation for the CP/ED package; (2) any revisions to Chapters 1-6, since September; (3) transaction costs; and (4) flow charts. 3. Consider related issues: For the ED, (1) Report back from Financial Instruments Task Force (application guidance), (3) measurement-related disclosures, and (4) accounting for sale/disposal of assets. For the CP, treatment of transaction costs (topic (5)).
Past meeting	
September 2018	<ol style="list-style-type: none"> 1. Approved Project Overview approach, whereby IPSAS, Measurement will cover the meaning of measurement bases and application guidance for them (i.e. address what and how), while other IPSASs identify the applicable measurement base(s) (i.e. address which). 2. Provided comment on draft application guidance for the ED; approved recommendations on fair value text; and, reviewed Chapters 1-6 of the CP. Noted draft ED sections for objective, scope, definitions, and illustrative coverage of explanatory text, and application guidance.

¹ The project's approach changed during May-September 2018. This road map has been revised to reflect the changes.

² Meetings after the exposure period for ED/CP, *Measurement*, are shown on the following page.

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Meeting	Planned Discussions (After Exposure of ED/CP)
December 2019	1. Review of responses to ED/CP
March 2020	1. Review IPSAS, <i>Measurement</i> (draft). 2. Discuss proposed consequential amendments.
June 2020	1. Approve ED 2, <i>Amendments to IPSASs Measurement Requirements</i> , for issuance 2. Approve IPSAS, <i>Measurement</i> (Draft), which will accompany ED 2.
March 2021	1. Review responses to ED 2, <i>Amendments to IPSASs for Measurement</i>
June 2021	1. Review the draft pronouncement on consequential amendments; and 2. Discuss any issues related to the draft pronouncement.
September 2021	1. Approve consequential amendment for issuance/application to IPSASs.

Revisions to ED, *Measurement*, and CP, *Public Sector Measurement*

Questions

1. What are the IPSASB's views on the draft:
 - (a) ED, *Measurement*; and
 - (b) CP, *Public Sector Measurement*?

Detail

2. This paper and its two appendices provide an overview of:
 - (a) Points that the IPSASB may wish to consider during its review of the draft ED and CP; and
 - (b) Revisions to the ED and CP since the IPSASB's September meeting.

The revised CP and ED (Agenda Paper 9.3.1)

3. [Agenda paper 9.3.1](#) has the draft CP and ED for IPSASB review. The CP's two new sections (the "Before you read" introduction and Chapter 4, *Transaction Costs*) are unmarked. Text that has been submitted to the IPSASB for review previously with no revisions occurring is shaded. All changes since September have been highlighted using track changes, except for the deletion of illustrative text for the ED's application guidance appendices, where the text from September has been completely removed (i.e. no track changes to show the old text) and replaced with new text., which is highlighted as new, using track changes.
4. [Appendix 1](#) to this paper (9.2.1) summarize revisions to the ED since the IPSASB's September meeting. [Appendix 2](#) summarize revisions to the CP. The two appendices also identify content that is outstanding and/or requires further development for the IPSASB's March 2019 meeting.
5. Revisions to the CP and ED reflect both the IPSASB's September instructions and instructions received subsequently from the IPSASB and Task Force Chairs, and IPSASB Technical Director. Members of the Public Sector Measurement Task Force provided input on the ED's fair value and replacement cost application guidance appendices and the CP's flow charts on asset and liabilities measurement.

Exposure Draft—Points to consider during review

Core ED text

6. Revisions to the ED's core text were restricted to the addition of:
 - (a) Explanatory text for the measurement bases (based on text in Chapter 7 of the Conceptual Framework); and
 - (b) Text on measurement-related disclosures, where the approach used is to refer to the disclosure requirements in the application guidance appendices.
7. IPSASB members may wish to consider these points during their review of the ED's core text:
 - (a) *Defined terms*: Does the ED need to include further defined terms? Staff were instructed not to revise this section, however comments previously received indicate that there should be definitions for "existing use," "restricted use," and "specialized assets." There may be other terms introduced in the application guidance for cost of fulfillment, historical cost, and

replacement cost, for which definitions should be provided. Note that defined terms for the fair value guidance should be identical to those in IFRS 13, *Fair Value Measurement*.

- (b) *Disclosures*: Are there generic measurement-related disclosure requirements, which apply across different measurement bases and should be included in the ED's core text?

Application guidance appendices

8. The ED has application guidance appendices for cost of fulfillment, fair value, historical cost, and replacement cost. IPSASB members may wish to consider these points as they review the appendices:
 - (a) *Generic application guidance*: Does each appendix provide sufficient generic guidance on application of the measurement basis, while avoiding guidance that is too specific and should be included in another IPSAS(s)?
 - (b) *Disclosures*: As noted under the points on the ED's core text, are there generic measurement-related disclosure requirements that should be in the ED's main text rather than the appendices? Would any of disclosures included be better placed in another IPSAS, on the basis that they are specific to a particular topic covered in another IPSAS?
 - (c) *Further guidance on other measurement bases*: Should application guidance be developed for other measurement bases, for example net selling price (assets) or amortized cost (liabilities)? Are there any measurement bases that are not presently included, but which need to be included based on criteria such as (a) constituents' comments that more guidance is needed; (b) the measurement basis is used extensively in the public sector; or (c) the flow charts in Chapters 5 and 6 of the draft CP identify a measurement basis as relevant?
 - (d) *Treatment of transaction costs*: Should the ED's application guidance appendices address the treatment of transaction costs? Note that Chapter 4 of the draft CP discusses how to account for transaction costs. In this draft ED the historical cost appendix proposes that transaction costs be added to calculate the measurement basis, while the replacement cost appendix does not discuss this issue. The cost of fulfillment and fair value appendices specify that transaction costs not be added to calculate each measurement basis.

Consultation Paper— Points to consider during review

9. During their review of the draft CP, IPSASB members may wish to consider the following points:
 - (a) *CP's overall coverage*: Whether the CP's contents capture the issues that the IPSASB expects the CP to address.
 - (b) *Before you read further*: Whether this section addresses the IPSASB's instruction to develop an explanatory section for the CP-ED, with visuals and a statement that this is not an IFRS-alignment project, and whether the tone is right or instead is too informal.
 - (c) *Chapter 4, Transaction Costs*: Whether the transaction costs issues to address have been identified, and (if so) whether IPSASB members agree with the choice of options to discuss, and the proposed preliminary view on treatment of transaction costs.
 - (d) *Flow charts in Chapters 5 and 6*: Whether the two flow charts (Asset Measurement, in Chapter 5, and Liability Measurement, in Chapter 6) will support the IPSASB's future review of measurement bases in IPSASs.

Decisions required

The IPSASB is asked to

- (a) Carry out a page-by-page review of the:
 - (i) Draft ED, *Measurement*, and
 - (ii) Draft CP, Public Sector Measurement; and
- (b) Identify revisions necessary to prepare the ED and CP for approval at the IPSASB's March 2019 meeting.

Appendix 1—ED Revisions since September IPSASB Meeting

Headings	Revisions	Further comment:
Request for comments	None	Outstanding—Preliminary views and specific matters for comment to be developed
Contents page	New	Reflects September decisions on ED's content.
Objective	None	None.
Scope	None	Outstanding— Scope exceptions may need to be included
Definitions	None	Outstanding—Further defined terms may be needed.
Measurement	New	Explanatory text for measurement bases added. Text is based on Conceptual Framework descriptions.
Disclosures	New	Text refers to the disclosures identified in the application guidance appendices.
Effective Date	None	Placeholder: The actual date depends on the IPSAS's approval date.
APPLICATION GUIDANCE APPENDICES³		
Contents page	Revised.	Revised to reflect instructions on measurement bases to cover.
A Cost of fulfillment—application guidance	New.	See 9.2.2-9.2.5 for issues raised.
B Fair value—application guidance	Revised	Guidance reflects the decision to adopt the majority of fair value text from IFRS 13, <i>Fair Value Measurement</i> .
C Historical cost—application guidance	New.	Guidance reflects generic issues addressed in IPSAS.
D Replacement cost—application guidance	New.	Guidance is based on guidance from IPSAS 17, material from the UK Treasury website, and guidance in the international valuation standards handbook.
E Net selling price	Placeholder.	Outstanding—Include text if necessary.
Basis for Conclusions	New sections	New text on “Relationship between the ED and other IPSASs” and “application guidance on fair value.”)

³ Text provided in September's version of the ED, to indicate the type of coverage that might be included in the application guidance appendices, has been removed without highlighting the deletions through track changes.]

Appendix 2—Consultation Paper Revisions since September IPSASB Meeting

Chapter/Section	Revisions	Further comment
Executive summary	Placeholder	Outstanding—still to address
Request for comments	Revised	Outstanding—still to address
Contents page	Revised	
Users' Guide (Before you read)	New	Responds to September instruction to include an explanatory section for the CP-ED, with visuals and a statement that this is not an IFRS-alignment project.
1, Introduction	Revised	Revisions to reflect CP's revised structure
2, Conceptual Framework & Measurement	Revised	Revisions to remove duplication between this chapter and the new user's guidance (before you read) section.
3, Borrowing Costs	No revisions.	Text unchanged since IPSASB reviews in March and the March-June intermeeting period.
4, Transaction Costs	New	The chapter tentatively proposes transaction cost issues to address, options to consider, and a preliminary view.
5, PS Measurement: Assets	New-Flow chart & explanation	Assets flow chart revised to address financial instruments, with related explanation added.
6, PS Measurement: Liabilities	New-Flow chart & explanation	Liabilities flow chart revised to address financial instruments, with related explanation added.
Chapter: Application Guidance	Deleted	Removed to align with CP and ED revisions.
Appendix A, Assets: Measurement Bases	Deleted	Placeholder removed to align with CP and ED revisions.
Appendix B, Liabilities: Measurement Bases	Deleted	Placeholder removed to align with CP and ED revisions.
Appendix A, ED, Measurement	Revised	Appendix 1 provides a summary of revisions to the ED.

Review of Cost of Fulfillment Measurement

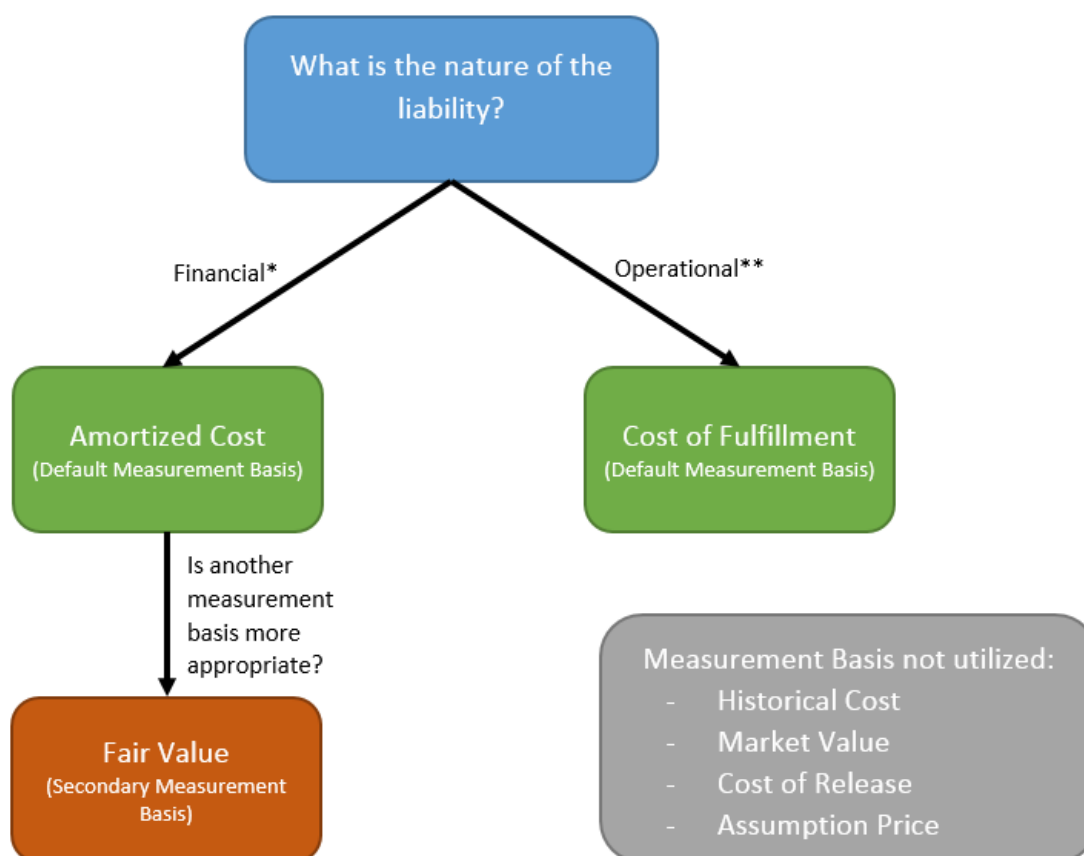
Purpose

1. To provide the IPSASB context in their review of the [Cost of Fulfillment Appendix](#).

Detail

2. At this stage of the project, the IPSASB is not evaluating the appropriate measurement basis to be applied in specific standards. However, in the context of reviewing the [Cost of Fulfillment Appendix](#), it may be useful for members to understand to which transactions the guidance may apply.
3. The cost of fulfillment is the cost the entity will incur fulfilling an obligation. A cost of fulfillment measurement basis therefore applies only to liabilities.
4. Applying the [liabilities “flowchart”](#) developed in the Consultation Paper indicates the cost of fulfillment is used for liabilities arising from operations for which the method of settlement must still be determined. Tentatively, this would include liabilities arising from Employee Benefits and Provisions. In developing the guidance staff consider how the measurement principles are applied to decommissioning liabilities.

Figure 1 – Liabilities Flowchart included in Public Sector Measurement Consultation Paper



5. Cost of fulfillment does not apply to liabilities where a decision has been made in how the liability will be settled (i.e., liabilities with a financial nature in the [Consultation Paper Flowchart](#)). As such, the cost of fulfillment guidance was not developed to be applied in measuring liabilities created to settle the purchase of goods or services. Such liabilities are financial liabilities and

are measured at amortized cost, or fair value, in accordance with IPSAS 41, *Financial Instruments*.

Decisions required

No decision required. This agenda item supports members in their review of the [Cost of Fulfillment Appendix](#) in the ED.

Cost of Fulfillment Principles

Question

- Whether the Board agrees with the core principles developed in measuring the cost of fulfillment.

Background

- The conceptual framework defines the cost of fulfillment as *the costs that the entity will incur in fulfilling the obligations represented by the liability, assuming that it does so in the least costly manner.*

Detail

- In developing guidance for the [Cost of Fulfillment Appendix](#), staff disaggregated the definition of cost of fulfillment into four components and developed principles to support constituents in applying the measurement basis in the public sector.

Component of definition	Principle
<i>The costs...</i>	<ul style="list-style-type: none"> Costs only include the future outflows of resources the entity expects to incur to satisfy the obligation (no transaction costs)
<i>...that the entity will incur in fulfilling the obligations...</i>	<ul style="list-style-type: none"> The obligation will be fulfilled by the entity in the normal course of operations (under the existing terms of the arrangement and with the current counterparty)
<i>...represented by the liability ...</i>	<ul style="list-style-type: none"> The cost of fulfillment measurement is a liability measurement basis that can relate to a stand-alone liability, or a group of liabilities.
<i>...assuming that it does so in the least costly manner.</i>	<ul style="list-style-type: none"> The entity must have the ability to access the settlement method that results in the obligation being settled in the least costly manner at the expected settlement date.

- Underpinning each component of the definition is the presumption that the cost of fulfillment is an entity specific value (i.e., the entity will fulfill its own obligation and should measure the liability accordingly).
- This has been operationalized in the Appendix by requiring assumptions be based on those a market participant would make if their estimates of the amount and timing of the future outflow of resources are made from the entity's point of view. For example, an entity is obligated to return the site of a nuclear power facility to its original condition when the plant is decommissioned. In measuring the cost of fulfillment the entity applies the following assumptions:
 - Facility will be decommissioned in 20 years;
 - Cost of returning the site to original condition in 20 years equals CU10 million;

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- (c) Rate applied in discounting the future cash flows equals 5%.
- 6. These are entity specific assumptions (i.e. the entity has determined, based on the information available, the facility will be closed in 20 years). However, the use of observable inputs is maximized where available (for example, the discount rate should be based on an observable rate in the market – likely a government bond rate).

Decisions required

Does the IPSASB agree that:

- (a) The cost should only include the future outflows of resources the entity expects to incur to satisfy the obligation;
- (b) The obligation will be fulfilled by the entity in the normal course of operations;
- (c) The cost of fulfillment measurement is a liability measurement basis;
- (d) The entity must have the ability to access the settlement method that results in the obligation being settled in the least costly manner at the expected settlement date; and
- (e) Cost of fulfillment is an entity specific measurement basis that maximizes the use of observable inputs where available?

Discount Rate (Cost of Fulfillment)

Question

1. Whether the Board agrees a market rate should be used to discount future outflows of resources when measuring the cost of fulfillment.

Background

2. In measuring the cost of fulfillment, an entity determines the present value of future outflows of resources by applying a discount rate to the outflows.
3. The process of determining a discount rate can be challenging and is often controversial in practice.
4. Developing guidance useful to public sector users to determine the appropriate discount rate is important in facilitating the application of this measurement basis in practice.

Detail

5. When estimating a discount rate to measure the cost to fulfill a liability, the [Cost of Fulfillment Appendix](#) requires entities estimate a rate with similar terms to the liability being measured. This requires an entity consider instruments with outflows whose characteristics are consistent with those of the liability being measured, in terms of, for example, timing, currency and liquidity.
6. Staff consider two discount rates when developing the cost of fulfillment measurement guidance:
 - (a) Entity's incremental rate of borrowing – the interest rate that the entity would have incurred to borrow, over a similar term and with similar security for the borrowing, the funds necessary to settle the obligation.
 - (b) Market rate – observable rates for comparable liabilities that are traded in an active market.

Analysis

7. Determining whether the market rate or the entity's incremental rate of borrowing should be applied in measuring the cost of fulfillment is challenging. Both are rates available to the entity, and both reflect a rate at which the entity would have to pay to borrow funds to fulfill the liability being measured.
8. To illustrate the difference between the entity's incremental rate of borrowing and the market rate, assume a public sector entity requires funds. Assuming the entity elects to borrow these funds, there are two common sources:
 - (a) Issue bonds in the market (market rate); or
 - (b) Borrow funds from a financial institution (incremental rate of borrowing).

The difference between these rates is one rate is observable to market participants and the other is not. It should be noted, since the incremental rate of borrowing is the rate at which the entity can access funds, this rate could also be the market rate.

Market Rate

9. The main advantages in requiring the use of a market rate include:

- (a) **Consistent measurement methodology** – each entity would apply the same base in estimating its discount rate (the market rate). While adjustments to this rate may be necessary, they are outlined in the [Cost of Fulfillment Appendix](#). This provides users with a strong understanding of how the discount rate was determined.
 - (b) **Observable** – using observable data in estimating the discount rate facilitates the supportability of the rate as other market participants can estimate the rate using the same methodology.
 - (c) **Consistency with IPSAS 19** – IPSAS 19, *Provisions, Contingent Liabilities and Contingent Assets*, requires a discount rate reflect the current market assessments of the time value of money and the risks specific to the liability.⁴ This is consistent with using a market rate to determine the cost of fulfillment as both are the current market assessment of the time value of money. Consistency with existing standards is beneficial as preparers will not need to make changes to their existing estimates.
 - (d) **Easy to audit** – since the market rate is observable, the auditor will be familiar with the rate and how it is determined.
10. Disadvantages to applying the market rate include:
- (a) **Difficult to apply in practice** – determining the market rate for a liability with similar characteristics can be difficult to determine. Liabilities are generally not actively traded. This will result in the entity applying professional judgment.
 - (b) **Creates divisions in what practice each jurisdiction feels is appropriate** – prescribing a specify rate will benefit some jurisdictions and disadvantage others. The IPSASB will have to be prepared to defend the prescribed rate.

Entity's Incremental Rate of Borrowing

11. The main advantages in requiring the use of the entity's incremental borrowing rate include:
- (a) **Entity Specific Measure** – The entity uses its own assumptions in determining the rate at which the future outflows of resources should be discounted. As the cost of fulfillment is an entity specific measurement basis, all inputs should be entity specific.
 - (b) **Flexibility** – allows the entity to independently estimate the discount rate required to measure the present value of the future outflow of resources.
12. Disadvantages to applying the entity's incremental rate of borrowing include:
- (a) **Difficult to support** – using entity specific measures are inherently challenging for an entity to support. Internal data must be used to support the assumption rather than market information.
 - (b) **Creates divisions in what practice each jurisdiction feels is appropriate** – while it is possible each jurisdiction evaluates decisions based on the entity's incremental rate of borrowing, it is unlikely each jurisdiction will agree discounting expected cash flows at the incremental rate represents the cost of fulfillment. The IPSASB will have to be prepared to defend the prescribed rate.

⁴ IPSAS 19, paragraph 56 indicates *the discount rate (or rates) shall be a pre-tax rate (or rates) that reflect(s) current market assessments of the time value of money and the risks specific to the liability. The discount rate(s) shall not reflect risks for which future cash flow estimates have been adjusted.*

Staff Recommendation

13. Staff recommend using a market rate when discounting future outflows of resources to determine the cost of fulfillment. This is because the [Cost of Fulfillment Appendix](#) clearly states the cost of fulfillment is an entity specific measure, requiring assumptions be based on those a market participant would use if they were valuing the liability from the entity's point of view.

Decisions required

Does the IPSASB agree a market rate should be used to discount future outflows of resources when measuring the cost of fulfillment?

Process Followed by Staff (Cost of Fulfillment)

Purpose

1. To communicate the process applied in developing the [Cost of Fulfillment Appendix](#).

Detail

2. Staff applied the following process in developing the [Cost of Fulfillment Appendix](#):
 - (a) Developed a definition and principles for the cost of fulfillment;
 - (i) Reviewed the existing definition of cost of fulfillment in the conceptual framework;
 - (ii) Reviewed external cost of fulfillment guidance considering which concepts were relevant for the public sector;
 - (iii) Considered whether changes to the existing conceptual framework definition were necessary. Staff concluded no changes were necessary;
 - (iv) Developed principles based on the cost of fulfillment as defined in the conceptual framework (see [Agenda Item 9.2.2](#))
 - (b) Evaluated the principles developed against transactions a cost of fulfillment measurement basis could be applied to;
 - (i) Using the [Consultation Paper Flowcharts](#), staff identified transactions that could be measured using the cost of fulfillment (for example, decommissioning cost);
 - (ii) Reviewed the principles developed to ensure they are appropriate for the transactions identified in (b)(i);
 - (c) Developed guidance;
 - (i) Staff followed the format applied in the fair value measurement appendix to ensure consistency across the appendices. This resulted in the following format:
 - a. Definition;
 - b. Explanation of each component of the definition;
 - c. Valuation Techniques; and
 - d. Disclosures.

Decisions required

No decision required. This agenda item supports members in their review of the Cost of Fulfillment Appendix in the ED.

Measurement of Assets Held for Sale or Disposal

Question

1. Does the IPSASB agree with the recommendation that the measurement of assets held for sale or disposal should be addressed through a separate IPSASB project, rather than through development of an appendix in ED, *Measurement*?

Detail

2. In September, the IPSASB briefly considered whether ED, *Measurement*, should include an appendix on the measurement of assets held for sale or disposal. There were different views on this question. The IPSASB instructed the Task Force and staff to provide a recommendation for the IPSASB's consideration in December 2018. This paper considers the issue in terms of whether ED, *Measurement*, would be incomplete without an appendix to address the measurement of assets held for sale or disposal, while also addressing the following specific points:
 - (a) The prevalence of the transactions covered by IFRS 5, *Non-current Assets Held for Sale and Discontinued Operations* (IFRS 5), in the public sector;
 - (b) How well other measurement bases, in particular net selling price, deal with public sector circumstances; and
 - (c) The relevance of the disclosures in IFRS 5.

Would ED, Measurement be incomplete without coverage similar to that in IFRS 5?

3. IFRS 5's objective is to specify the accounting for assets held for sale, and the presentation and disclosure of discontinued operations. IFRS 5 addresses both how to identify when assets are held for sale and what measurement bases to use in those circumstances. These two concerns go beyond the coverage presently established by ED, *Measurement*'s objective, which is to:

...define measurement bases that assist in reflecting fairly the cost of services, operational capacity, and financial capacity and how to identify approaches under those measurement bases to be applied through individual IPSASs to achieve the objectives of financial reporting.
4. Therefore, including coverage similar to that in IFRS 5 would expand ED, *Measurement*'s coverage. However, the ED's objective does envisage text to address what different measurement bases used in IPSAS mean and how to derive them. Therefore, including a definition of net selling prices, related explanatory text, and application guidance would be within the ED's present objective.

Prevalence of the transactions covered by IFRS 5 in the public sector

5. Public sector entities do hold non-current assets for sale or disposal and they do decide to discontinue operations. Without empirical evidence on this point, it appears likely that this type of situation occurs frequently enough to warrant the development of IPSAS guidance to support appropriate financial reporting for such situations.
6. In 2014 and 2018 the IPSASB's work plan and strategy deliberations considered a project to develop an IPSAS (IFRS-aligned, if appropriate) to address IFRS 5's scope and requirements. Based on responses received and resource availability the IPSASB decided not to include this project on its work plan. Although both decisions indicated that this topic was not a high priority for

the IPSASB to address, the 2014 discussion noted that the IPSASB considers that this topic has relevance in the public sector.

Relevance of IFRS 5 disclosures

7. The relevance of the disclosures in IFRS 5 depends on future IPSASB decisions on the adaptation of IFRS 5 for the public sector. IFRS 5 disclosures are likely to be relevant if the IPSAS coverage takes broadly the same approach as that taken by IFRS 5.

Net selling prices appropriate when assets held for sale?

8. IFRS 5 requires the lower of carrying amount and fair value less costs to sell (with fair value being defined as per IFRS 13). Net selling price appears more appropriate given that it is a measurement basis identified in the IPSASB's Conceptual Framework. When a public sector entity holds assets for sale or disposal arguably it is their contribution to the entity's financial capacity which is the main concern, rather than their service potential. This suggests that net selling price is an appropriate measurement basis to apply. However, further consideration of the objective of measurement, the qualitative characteristics and constraints applied to this situation may indicate that carrying amount is relevant as well in some situations.
9. The appropriateness of each measurement basis (net selling price, fair value less costs to sell, and carrying amount) in different circumstances would be an important issue to address.

Project Overview and Impact on Public Sector Measurement's Timeline

10. Including this topic in IPSAS, *Measurement*, represents a change of scope compared to the Project Overview paper scope, which the IPSASB supported in September.
11. To address this topic adequately involves, as a first step, applying the IPSASB's two policies (IFRS alignment and reduction of unnecessary differences between IPSAS and GFS reporting guidelines), with consideration of whether there are any public sector specific issues. The extent to which this sub-project delays approval of the Measurement CP and ED will depend on (a) what emerges from this first step and (b) the availability of additional staff resources.

Recommendation

12. It is recommended that the measurement of assets held for sale or disposal be developed through a separate IPSASB project, rather than through development of an appendix in ED, *Measurement*.

Decision required

13. The IPSASB is invited to agree with the recommendation that the measurement of assets held for sale or disposal be developed through a separate IPSASB project, rather than through development of an appendix in ED, *Measurement*.

Agenda Item 9.3.1**Agenda Item 9.3.1****CONSULTATION PAPER AND EXPOSURE DRAFT: MEASUREMENT**

Consultation Paper
April 2019
Comments due: August 31, 2019

Public Sector Measurement

This document was developed and approved by the International Public Sector Accounting Standards Board® (IPSASB®).

The objective of the IPSASB is to serve the public interest by setting high-quality public sector accounting standards and by facilitating the adoption and implementation of these, thereby enhancing the quality and consistency of practice throughout the world and strengthening the transparency and accountability of public sector finances.

In meeting this objective the IPSASB sets IPSAS™ and Recommended Practice Guidelines (RPGs) for use by public sector entities, including national, regional, and local governments, and related governmental agencies.

IPSAS relate to the general purpose financial statements (financial statements) and are authoritative. RPGs are pronouncements that provide guidance on good practice in preparing general purpose financial reports (GPFRs) that are not financial statements. Unlike IPSAS RPGs do not establish requirements. Currently all pronouncements relating to GPFRs that are not financial statements are RPGs. RPGs do not provide guidance on the level of assurance (if any) to which information should be subjected.

The structures and processes that support the operations of the IPSASB are facilitated by the International Federation of Accountants® (IFAC®).

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Executive Summary

The IPSASB initiated the project for which this Consultation Paper (CP) and accompanying Exposure Draft (ED) are intermediate outputs to address a number of issues:

- [include issues here]

More information about the problems addressed and an overview of the CP's content here.

The IPSASB has reached several preliminary views (PVs), and these are summarized below:

- PV 1.
- PV 2
- PV 3

More information.

REQUEST FOR COMMENTS

This Consultation Paper, *Public Sector Measurement*, was developed and approved by the International Public Sector Accounting Standards Board® (IPSASB®).

The proposals in this Consultation Paper may be modified in light of comments received before being issued in final form. **Comments are requested by August 31 2019.**

Respondents are asked to submit their comments electronically through the IPSASB website, using the “[Submit a Comment](#)” link. Please submit comments in both a PDF and Word file. Also, please note that first-time users must register to use this feature. All comments will be considered a matter of public record and will ultimately be posted on the website. This publication may be downloaded from the IPSASB website: www.ipsasb.org. The approved text is published in the English language.

Guide for Respondents

The IPSASB welcomes comments on all of the matters discussed in this Consultation Paper, including all Preliminary Views and Specific Matters for Comment. Comments are most helpful if they indicate the specific paragraph or group of paragraphs to which they relate and contain a clear rationale.

The Preliminary Views and Specific Matters for Comment in this Consultation Paper are provided below. Paragraph numbers identify the location of the Preliminary View or Specific Matter for Comment in the text.

Preliminary View—Chapter 3.1 (following paragraph 3.28)

All borrowing costs should be expensed rather than capitalized, with no exception for borrowing costs that are directly attributable to the acquisition, construction, or production of a qualifying asset.

Do you agree with the IPSASB’s Preliminary View? If not, please provide your reasons, the other option(s) that you support instead, and your reasons for supporting that other option(s).

~~Specific Matters for Comment—Chapter 2 (following paragraph 2.8)~~

~~Are there any other measurement issues on which the IPSASB should provide application guidance?~~

~~If so, please identify the other measurement issues for which you consider that the IPSASB should provide application guidance in IPSAS, Measurement.~~

~~Specific Matters for Comment—Chapter 5.1 (following paragraph X.X)~~

~~Do you agree that Diagram 5.1—Subsequent Measurement of Assets (Financial and Non-Financial) is a useful tool to support the IPSASB’s review of measurement bases in extant IPSASs and identification of appropriate measurement bases for use in future IPSASs?~~

~~If not, please provide your views on how to improve the flow chart so that it will be useful.~~

~~Specific Matters for Comment—Chapter 6.1~~

~~Do you agree that Diagram 6.1—Subsequent Measurement of Liabilities (Financial and Non-Financial) is a useful tool to support the IPSASB’s review of measurement bases in extant IPSAS and identification of appropriate measurement bases for use in future IPSASs?~~

~~If not, please provide your views on how to improve the flow chart so that it will be useful.~~

PUBLIC SECTOR MEASUREMENT

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Before you read further: How this works**A Consultation Paper—Exposure Draft Combination**

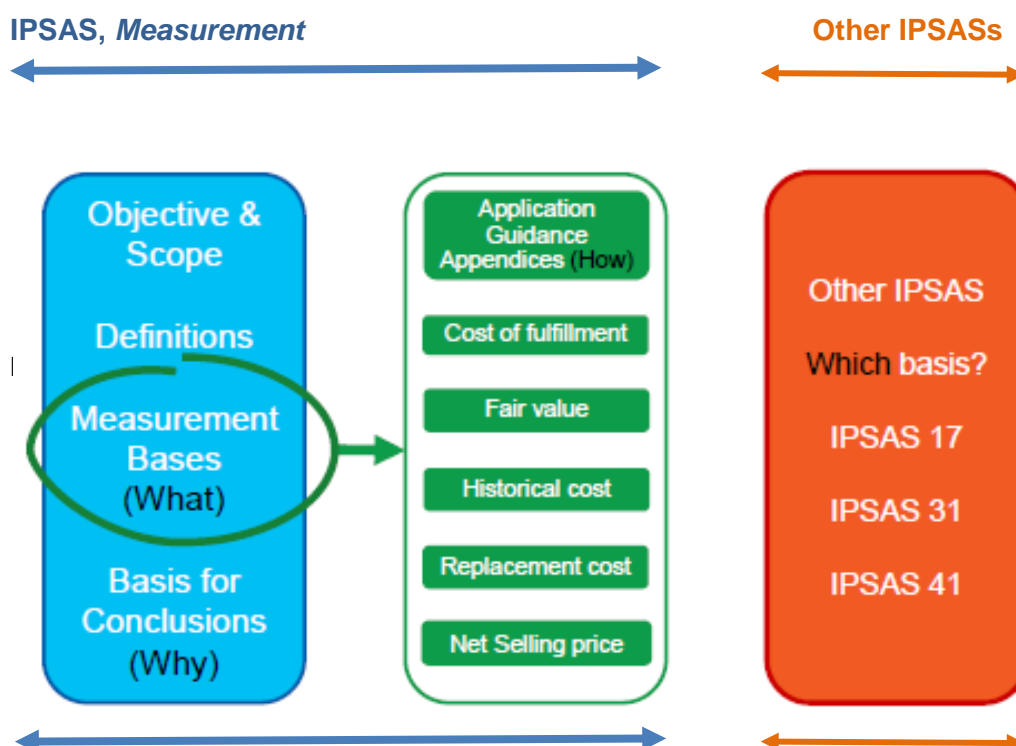
- B4-1. In this document the IPSASB has done something new and different from what we have done in the past. So we think that readers could benefit from some explanation of:
- What we have done here;
 - Why; and
 - What this means for you.
- B4-2. In this single document, the IPSASB has provided both a consultation paper (CP) and a draft IPSAS (i.e. an exposure draft (ED)). the IPSASB is asking for constituents' views on both documents.

Why the IPSASB decided to add an Exposure Draft to the Consultation Paper

- B4-3. The IPSASB is pioneering this new approach in order to improve how it consults with its constituents. This approach provides both:
- A concepts-based discussion, in the **Consultation Paper**, which identifies areas where the IPSASB has reached preliminary views; and
 - An **Exposure Draft**, which illustrates the IPSASB's ideas with specific and more detailed proposals for measurement.
- B4-4. ED, *Measurement*, illustrates what the IPSASB thinks that the final product will look like, given its discussions up to now. But your views are needed. The idea is to provide you with a clearer view of the IPSASB's direction of travel, by showing what the ideas in the CP would result in as a draft IPSAS. By being more transparent about where the IPSASB's discussions and the ideas in the CP are leading, we hope to get better feedback from you on those ideas.
- B4-5. At the same time, asking for your comments on the ED puts the IPSASB further ahead, because after this first round of consultation the IPSASB will have a better understanding of what our constituents want to see at the end of the development process.
- B4-6. We hope that this new approach will result in faster "idea to market" delivery of a new IPSAS.

The Product: IPSAS, *Measurement*

- B4-7. Diagram 1, on the following page, shows what IPSAS, *Measurement*, will do, and how it relates to other IPSASs that have measurement requirements.

Diagram 1: Relationship between IPSAS, *Measurement*, and Other IPSASs

- B4-8. IPSAS, *Measurement*, will identify the measurement bases that are likely to apply in most circumstances when measuring assets and liabilities. It will provide definitions and explanatory text for those measurement bases, i.e. it answers the “what?” question for each measurement basis. The appendices to IPSAS, *Measurement*, will have application guidance on how to derive those measurement bases. The Basis for Conclusions explains why the IPSASB decided particular issues in the way that they did, as they developed IPSAS, *Measurement*.
- B4-9. Other IPSASs will continue to address the choice of a measurement basis, i.e. they will address the “which measurement basis?” question. For example, IPSAS 17, *Property, Plant and Equipment*, provides requirements for which measurement bases to use when accounting for property plant and equipment, while IPSAS 41, *Financial Instruments*, identifies the appropriate measurement bases when measuring financial instruments.

Your views needed on both the Consultation Paper and Exposure Draft

- B4-10. We need your views on both the CP and the ED. Both documents address important issues for your consideration. This section describes what each documents addresses. First, it explains what both documents have in common. Then it describes how their roles differ.

Both Documents Contain IPSASB Proposals

- B4-11. CP, *Public Sector Measurement*, and ED, *Measurement*, are both consultation documents. They both represent IPSASB proposals on ways to improve the IPSAS treatment of measurement. Both documents include Specific Matters for Comment (SMCs), but only the CP includes Preliminary Views (PVs).

Consultation Paper—Describes the Project, Discusses Issues, and Provides Preliminary Views

- B4-12. CP, *Public Sector Measurement*, explains why the IPSASB has undertaken this Public Sector Measurement Project. It provides an overview of the key issues that the project is trying to

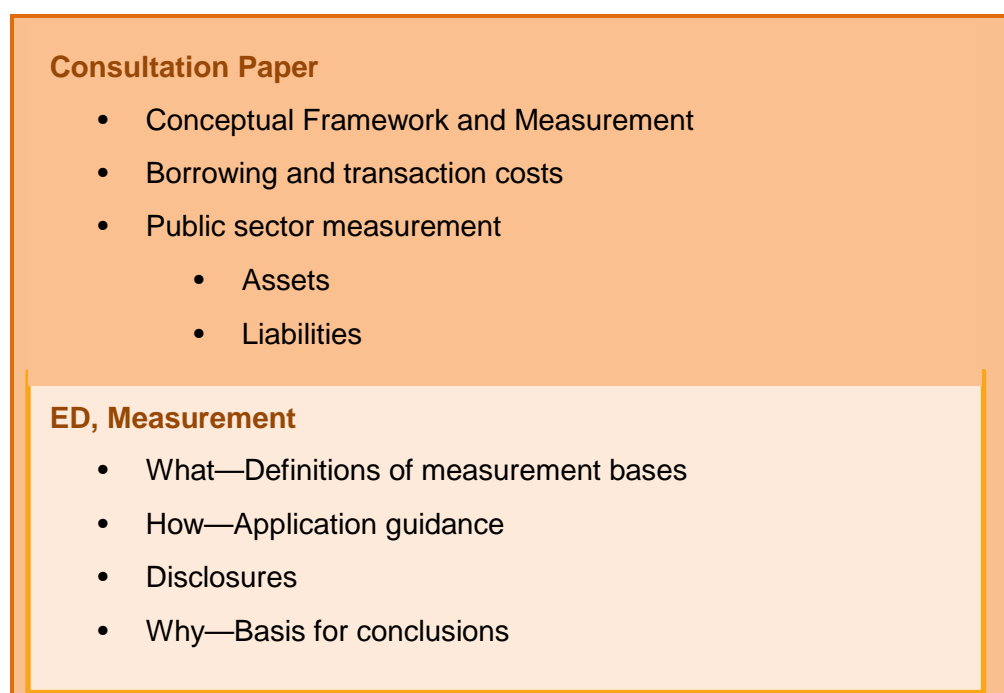
address. It should be read in conjunction with ED, *Measurement*, which is in Appendix A of the CP. The ED's *Basis for Conclusions* provides the rationale for the IPSASB's decisions.

- B4-13. The IPSASB's Public Sector Measurement project is not an IFRS-alignment project. It aims to address measurement issues raised by the public sector's context and special characteristics.
- B4-14. The CP discusses those issues where the IPSASB has reached a preliminary view and considers that constituents' comments should be considered before illustrating that view in the ED. The CP also provides flowcharts that show how the IPSASB will consider appropriate measurement bases, as it reviews IPSASs.
- B4-15. The issues discussed in the CP broadly fall into two categories:
- (a) *Issues illustrated in the ED:* For these issues the IPSASB has reached a provisional view, and that view is encapsulated (or illustrated) in ED, *Measurement*.
 - (b) *Issues only discussed in the CP (no ED illustration):* For some issues the IPSASB decided that constituents' views would be needed, before translating its preliminary views on these issues into either (i) amendments to existing IPSASs or (ii) a subsection within ED, *Measurement*.

Exposure Draft—Illustrates IPSASB Views on Measurement

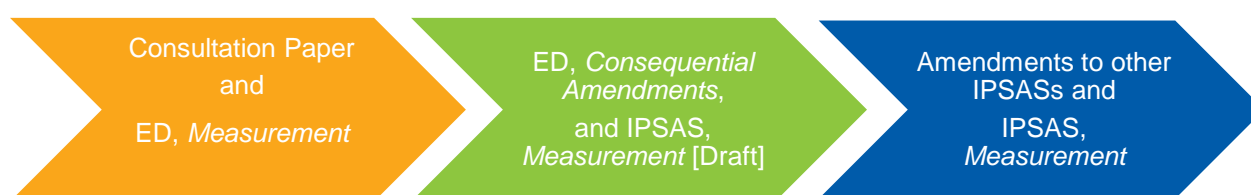
- B4-16. ED, *Measurement*, defines measurement bases, and has generic application guidance for their derivation. It also addresses measurement-related disclosures. Diagram 2 below shows the breakdown for the content in each of these two documents.

Diagram 2: Content of ED, *Measurement*, and CP, *Public Sector Measurement*



The Process from here

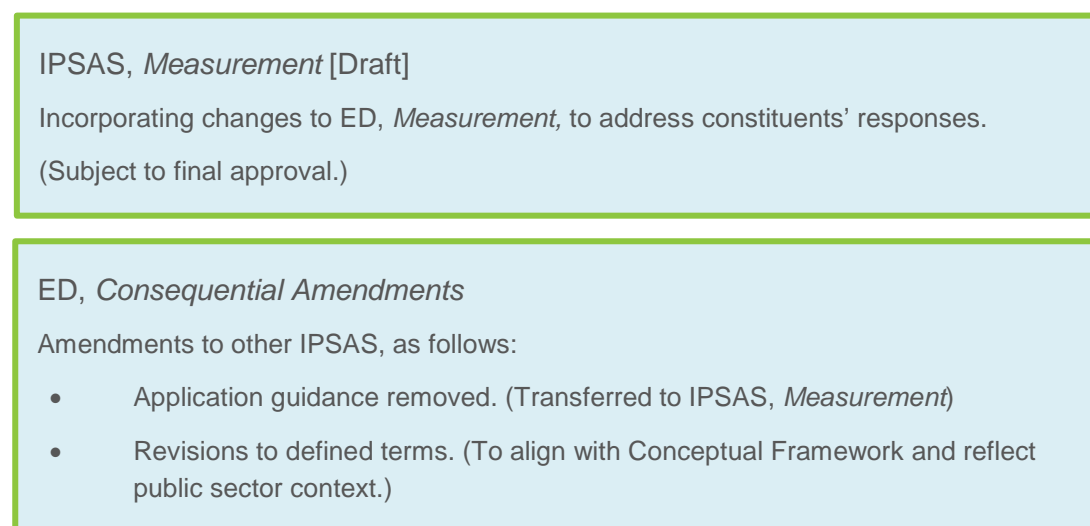
- B4-17. Diagram 3 on the following page shows the process to develop IPSAS, *Measurement*. We are presently in Phase 1, represented by the orange arrow on the left. This CP+ED package has been approved by the IPSASB and published for consultation.

Diagram 3: The Process from Consultation to Approved IPSAS, *Measurement*

B4-18. After the IPSASB reviews the comments received on both the ED and the CP the next step—Phase 2 represented by the middle, green arrow—will be to develop and approve:

- (a) A preliminary version of IPSAS, *Measurement*, which will be issued as “IPSAS, *Measurement* [Draft]”; and
- (b) An exposure draft with consequential amendments to other IPSASs.

B4-19. Both documents—IPSAS, *Measurement* [Draft] and ED, *Consequential Amendments*, will then be published. The IPSASB’s constituents will see how their comments have contributed to IPSAS, *Measurement*, and provide comments on the consequential amendments to other IPSASs, in ED, *Consequential Amendments*. Diagram 4 shows the content expected to be included in these two documents.

Diagram 4: Content of IPSAS, *Measurement* [Draft], and ED, *Consequential Amendments*

Approval of IPSAS, Measurement, in Phase 3

B4-20. The IPSASB will then review the responses received from constituents on this second set of documents and develop the final version of IPSAS, *Measurement*, for issuance. The consequential amendments to other IPSASs will also be reviewed, in light of the responses received from constituents.

B4-21. The blue arrow on the right in Diagram 3 represents the final step in this process. After the IPSASB revises the two documents in light of constituents’ responses, IPSAS, *Measurement*, will be issued as a final standard. Other IPSASs will be amended, as required, through finalized consequential amendments.

Chapter 1, Introduction

Consultation Paper's Focus

- ~~1.1. In 2017 the IPSASB decided to develop IPSAS, *Measurement*, by issuing an exposure draft (ED) at the same time as an accompanying CP. The aim of this new approach is to allow the earlier issuance of a draft IPSAS, without consequential amendments, and get feedback from constituents. This CP should be read in conjunction with ED, *Measurement*, which is in Appendix C of this document.~~
- ~~1.2. This CP addresses three main areas. First, it discusses those issues where the IPSASB has reached a preliminary view, and considers that constituents' comments should be considered before integrating this into the ED. Where the IPSASB has reached a firm decision on how to address an issue, the relevant text is included in the ED and discussed instead in the ED's *Basis for Conclusions*.~~
- ~~1.3. Second, this CP provides an overview of the impact of the measurement requirements in ED, *Measurement*, on individual IPSASs. It does not provide either extensive detail or, as stated above, a list of consequential amendments to each individual IPSAS. The aim is to keep this CP-ED combination at a high enough level to provide a good basis for constituents' input. There are SMCs in this CP to solicit constituents' views on the ED's impact on measurement in individual IPSASs.~~
- ~~1.4. Third, this CP also discusses some general issues related to IPSAS measurement. For example, Chapter 6 considers the general issue of what measurement application guidance should be provided in ED, *Measurement*.~~

Structure of this Conceptual Paper

~~1.5.1.1. This CP discusses topics in the following order:~~

~~Chapter 2, the *Conceptual Framework's* guidance on measurement in the financial statements;~~

~~Chapter 3, treatment of transaction costs and borrowing costs;~~

~~Chapter 4, measurement of assets;~~

~~Chapter 5, measurement of liabilities; and~~

~~Chapter 6, application guidance for measurement of assets and liabilities.~~

Background to the Consultation Paper

~~1.6.1.1.~~ The IPSASB completed *The Conceptual Framework for General Purpose Financial Reporting by Public Sector Entities* (the Conceptual Framework) in 2014. The Conceptual Framework establishes the concepts that underpin financial reporting, which the IPSASB applies in developing IPSASs. The Conceptual Framework does not establish authoritative requirements for financial reporting by public sector entities that adopt IPSASs, nor does it override the requirements of IPSASs or RPGs.

~~1.7.1.2.~~ After completing the *Conceptual Framework*, the IPSASB recognized a need to address measurement requirements in IPSAS. In their responses to the IPSASB's 2014 Strategy and Work Plan consultation, constituents supported a Public Sector Measurement project.

~~1.8.1.3.~~ The Public Sector Measurement project began in 2017, with the rationale that measurement requirements in IPSASs should be amended to better align them with the *Conceptual Framework's* measurement concepts. The project's objectives are to:

- (a) Issue amended IPSASs with revised requirements for measurement at initial recognition, subsequent measurement, and measurement-related disclosure;
- (b) Provide more detailed guidance on the implementation of historical cost, replacement cost, ~~and~~ cost of fulfillment, and fair value, and the circumstances under which these measurement bases will be used; and
- (c) Address transaction costs and borrowing costs.

Measurement Issues to Address

The Conceptual Framework and Measurement

~~4.9.1.4.~~ When IPSASs were first developed they used measurement bases developed for private sector financial reporting and adapted them for the public sector. The IPSASB took into account public sector financial reporting needs and the special characteristics of the public sector in Chapter 7 of the *Conceptual Framework*, which addresses measurement in the financial statements. Financial statement measurement requirements in IPSAS now need to be better aligned with the measurement concepts in the *Conceptual Framework*. IPSAS measurement generally needs to be reviewed against the objective of measurement in the *Conceptual Framework*.

~~4.10.1.5.~~ IPSAS measurement also takes into account the IPSASB's policies on alignment with International Financial Reporting Standards (IFRS) and reduction of differences between IPSAS and government finance statistics (GFS) reporting guidelines¹.

IFRS 13, Fair Value Measurement

~~4.11.1.6.~~ One objective for this project is to consider the use of fair value in IPSAS. Fair value is a specified measurement basis in many IPSASs. The *Conceptual Framework* does not include fair value as a measurement basis, although its definition of "market value" is the same as the current IPSAS definition of "fair value," which is either an entry value or an exit value.

~~4.12.1.7.~~ The International Accounting Standards Board (IASB) issued IFRS 13, *Fair Value Measurement*, in 2011. IFRS 13 defines fair value as an exit value. IFRS 13's approach to fair value measurement is different from the *Conceptual Framework*'s approach to measurement bases. Fair value in IFRS 13 is also different from the current IPSAS definition of fair value. Because of these differences, the IPSASB decided to apply a rebuttable presumption that IPSAS references to fair value would need revision for better alignment with the *Conceptual Framework*, as it developed the draft Standard, accompanying this CP.

1.8. ED, *Measurement*,¹ Basis for Conclusions discusses the IPSASB's decision to include fair value—defined to be consistent with the IFRS 13 definition—as a measurement basis relevant to IPSAS. If review of individual IPSASs indicates that fair value is appropriate, then the ED's fair value definition and application guidance will apply. ~~Chapter 6 discusses the IPSASB's approach to application guidance in the ED, including application guidance for fair value.~~

Structure of this Conceptual Paper

1.9. This CP discusses topics in the following order:

Chapter 2, ~~†~~The *Conceptual Framework*'s ~~G~~uidance on ~~¶~~Measurement in the ~~f~~Financial ~~s~~Statements;

¹ These policies are set out in the IPSASB's *Process for Reviewing and Modifying IASB Documents* and *Process for Considering GFS Reporting Guidelines during Development of IPSASs*.

~~Chapter 3, Treatment of transaction costs and borrowing costs;~~

~~Chapter 4, Treatment of Transaction Costs;~~

~~Chapter 5, Measurement of Assets;~~

~~Chapter 6, Measurement of Liabilities; and~~

~~1.10. Chapter 6, application guidance for measurement of assets and liabilities. Appendix A has ED, Measurement.~~

Chapter 2, Conceptual Framework and Measurement

- 2.1. As noted in Chapter 1, the Conceptual Framework discusses measurement in Chapter 7, *Measurement of Assets and Liabilities in the Financial Statements*. Chapter 7 establishes the objective of measurement, which addresses the selection of measurement bases.

Selection of Measurement Bases

- 2.2. The objective of measurement is:

To select those measurement bases that most fairly reflect the cost of services, operational capacity and financial capacity of the entity in a manner that is useful in holding the entity to account, and for decision-making purposes.

- 2.3. The Conceptual Framework identifies the measurement bases from which a selection should be made. Those are:

Measurement Bases for Assets

Historical cost;
Market value;
Replacement cost;
Net selling price; and
Value in use.

Measurement Bases for Liabilities

Historical cost;
Cost of fulfillment;
Market value;
Cost of release; and
Assumption price.

- 2.4. The Conceptual Framework provides guidance on selection, by discussing each measurement basis in terms of:

- (a) The information it provides about the cost of services, operating capacity and financial capacity (i.e. achievement of the objective of measurement); and
- (b) The extent to which the information provided is likely to meet the qualitative characteristics taking into account the constraints.

Factors to Consider when Selecting a Measurement Basis

- 2.5. The Conceptual Framework identifies factors for consideration when selecting a measurement basis. The factors identified include:

- (a) The nature of a measurement basis, and specifically whether it:
 - (i) Provides an entry or exit value;
 - (ii) Is observable in a market (or not); and
 - (iii) Is entity-specific (or not).
- (b) Factors related to the nature and circumstances of the asset/liability, for example, whether:

- (i) Assets were acquired (or liabilities incurred) in a non-exchange transaction.
 - (ii) Assets are held to provide services (non-cash-generating assets), to generate a commercial return (cash-generating assets), and/or for trading or sale.
 - (iii) Assets are specialized, where they have been created or adapted for a particular purpose. Their specialization may relate to their design, location, specification, size or any combination of these factors. These factors are specific to the service being provided, and as a consequence there may be no commercial use against which the value of the asset can be benchmarked.
 - (iv) There are restrictions on what the entity is able to do with the asset/liability.
- (c) Whether a market exists for similar assets and liabilities and the type of market, for example it is open, active and orderly.

Application of Measurement Bases—Issues Arising in Practice

2.6. Many different issues arise in practice when applying measurement bases. For example, when applying the historical cost measurement basis to assets, there are issues related to:

- (a) Costs to be capitalized on initial acquisition/ construction of an asset;
- (b) Lack of initial cost, with a resulting need to determine a deemed cost, when an asset has been acquired through a non-exchange transaction or is recognized on first time adoption of accruals accounting and information on acquisition cost is missing; and
- (c) Measurement of service potential for non-cash generating assets.

2.7. Where an entity applies a current value measurement basis to an asset or liability, application issues that arise include:

- (a) Frequency of revaluations;
- (b) Purpose of a valuation (for example, when valuing an asset, the purpose could be either to reflect the asset's existing use or its highest and best use);
- (c) Choice of valuation methodology (for example, if a liability will be valued using a discounted cash flow then there is a choice of different methodologies for this type of valuation);
- (d) Appropriate sources of information (inputs) for use in a revaluation (including, for example, sources to determine a discount rate or a market value for similar items);
- (e) Impact of restrictions on valuations (for example, on an asset's use and/or disposal or the entity's ability to transfer a liability).

~~How ED, Measurement, Relates to Other IPSAS~~

~~2.8. ED, Measurement, defines measurement bases and provides application guidance. However, it does not specify where the measurement bases should be used. The proposed approach is:~~

- ~~(a) Individual IPSASs continue to address which measurement basis should be used and what disclosures should be made; and~~
- ~~(b) IPSAS, Measurement, will:~~
 - ~~(i) Define what each measurement basis means;~~
 - ~~(ii) Provide application guidance on how to derive measurement bases; and~~

~~(iii) — Include a *Basis for Conclusions* that explains why the IPSASB reached its decisions.~~

~~2.9. — Chapters 4 and 5 discuss the IPSASB's approach to reviewing the measurement bases in individual IPSASs to consider their appropriateness given to (for example):~~

~~(a) — The Conceptual Framework's guidance on measurement; and~~

~~(b) — The meaning of "fair value" in extant IPSASs, as indicating either an IFRS 13 (exit value) meaning or another measurement basis such as, for example, replacement cost for specialized public sector assets held for their on-going service potential.~~

~~2.10. — Chapter 6 discusses the IPSASB's approach to application guidance for measurement bases and identifies related issues, on which constituents' views are requested.~~

Chapter 3, Borrowing Costs

Capitalization or Expensing of Borrowing Costs

- 3.1. IPSAS 5, *Borrowing Costs*, defines borrowing costs as interest and other expenses incurred by an entity in connection with the borrowing of funds. It generally requires the immediate expensing of borrowing costs. However, it permits, as an allowed alternative treatment, the capitalization of borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset. A qualifying asset is an asset that necessarily takes a substantial period of time to get ready for its intended use or sale.
- 3.2. Borrowing costs may be attributable to acquisition of the asset, but are not part of the asset's purchase price or, in the case of construction or production, the prices of material and labor. They are not a characteristic of the asset being valued. They are entity-specific costs, which depend on the entity's financing choices. Capitalization of borrowing costs results in similar assets being measured at different amounts, because entities have different financing profiles and different ways to finance their asset acquisition and/or construction.
- 3.3. The question of how to account for borrowing costs also applies to subsequent measurement, when an entity revalues assets applying a cost-based estimate such as replacement cost. IPSAS application guidance does not address the issue of whether, and if so, how, borrowing costs should be incorporated into the calculation of a cost-based current value. If borrowing costs must be expensed for measurement on initial recognition then it follows that no estimate of borrowing costs would be included in a cost-based revaluation. Alternatively, if borrowing costs are capitalized then application guidance on changes in actual borrowing costs, compared to those initially capitalized and/or derivation of an estimate of borrowing costs would be needed.

Previous IPSASB Considerations: Project 2007–2009

- 3.4. The IPSASB's previous project on the treatment of borrowing costs, from 2007 to 2009, was prompted by the International Accounting Standards Board (IASB)'s decision to revise the equivalent International Financial Reporting Standard (IFRS)² by removing the option to expense borrowing costs and instead require capitalization.
- 3.5. The IPSASB decided that:
 - (a) There are public sector specific reasons to diverge from IFRS in this case, one of which is the common use of centralized borrowing with many entities prohibited from borrowing on their own account;
 - (b) Expensing borrowing costs is generally the most appropriate accounting policy; and
 - (c) Capitalization of borrowing costs should be restricted to cases where there is a direct link between the debt instrument and the qualifying asset.
- 3.6. However, after considering responses to an exposure draft³, the IPSASB concluded that there was no clear mandate from respondents to finalize the ED and no clear indication as to the direction that the IPSASB should take⁴ and decided that the borrowing cost issue should be deferred until the Conceptual Framework had been completed.

² IAS 23, *Borrowing Costs*. The IASB decided to require capitalization of borrowing costs in order to converge with the Financial Accounting Standards Board's treatment of borrowing costs. For small and medium sized entities IFRS requires the simpler and less burdensome accounting treatment of expensing these borrowing costs.

³ Exposure draft (ED) 35, *Borrowing Costs*, was issued in September 2008, with comments requested by 7 January, 2009.

⁴ Minutes of the IPSASB's February 2009 meeting.

Public Sector Borrowing

- 3.7. The IPSASB considers that there are significant differences between borrowing in the public and private sectors. Borrowing in the public sector is often centralized and borrowing requirements are determined for the economic entity as a whole. For example, a national government often borrows on behalf of all of its subsidiary entities, including government departments, hospitals, schools and entities responsible for construction of buildings and infrastructure. While centralized borrowing also occurs in the private sector, the public sector approach to centralized borrowing, which may be for investing, financing or operating activities, is different.
- 3.8. A feature of fiscal management in the public sector is that governments may budget for deficits, occasionally for extended periods of time, and those deficits are financed by borrowing. Governments seek to control their aggregate level of borrowing in the context of political and economic factors, such as decisions on the appropriate levels of taxation, or the timing of cash inflows in general. In many jurisdictions outlays on qualifying assets are a relatively minor part of the government's annual outlays, the bulk of which are consumed by expenses, such as the payment of social benefits to individuals and households. Funding allocated to specific programs and entities may be derived from a variety of sources, and consequently it is often difficult to determine whether the acquisition/construction/production of an asset has been financed through external borrowing or from other sources. Thus, there is often no meaningful way to attribute borrowing costs to qualifying assets.
- 3.9. However, there are situations where public sector entities borrow specifically to finance capital projects. For example, local governments such as city and district councils may finance their construction of infrastructure (roads, bridges, etc.) through specific external borrowing. In these situations public sector entities are able to attribute borrowing costs to a qualifying asset. Similarly an international development bank such as the World Bank or the European Investment Bank may finance part or all of the construction of a particular infrastructure project undertaken by a public sector entity. Public sector entities responsible for infrastructure investments may have a relatively high proportion of their borrowing costs attributable to qualifying assets.

Options for Treatment of Borrowing Costs

- 3.10. The IPSASB has identified four options for treatment of borrowing costs for a qualifying asset during the period between the start of acquisition/construction/production and active use, as shown in Table 1 below.

Table 1: Treatment of Borrowing Costs: Options

Borrowing costs—<i>acquisition, construction or production of qualifying asset:</i>	Option 1	Option 2	Option 3	Option 4
Directly attributable ► and specifically incurred	Expense or capitalize	Must capitalize	Expense or capitalize	Expense
Directly attributable ► but not specifically incurred	Expense or capitalize	Must capitalize	Expense	Expense
Borrowing costs—<i>other</i>	Expense	Expense	Expense	Expense

- 3.11. Option 1 is the status quo, and would mean no change to IPSAS 5. This option allows for an entity to choose either to capitalize or expense borrowing costs that are directly attributable to a qualifying asset during its acquisition, construction or production. Direct attribution could involve,

for example, a formula to estimate the fraction of borrowing that logically applies to asset construction activities, as opposed to other operations. Option 1 is not converged with IFRS nor is it aligned with GFS reporting guidelines, which require expensing of all borrowing costs.

- 3.12. Option 2 requires capitalization and removes the choice to expense. Capitalization applies only during acquisition, construction or production of the qualifying asset, and the borrowings costs must be directly attributable. This option is converged with the IFRS accounting treatment in IAS 23. On the one hand it provides better comparability, because the accounting policy choice has been removed and all entities will capitalize borrowing costs when the same circumstances apply. On the other hand, asset values will be affected by an entity's financing choices, which is likely to reduce comparability. Furthermore, this option is not suitable for the majority of transactions, because of the difficulty in distinguishing the financing portion between external borrowing and other sources of finance. This option is not aligned with GFS reporting guidelines.
- 3.13. Option 3 requires that the accounting policy choice for capitalization only apply to those borrowing costs that are *both* directly attributable to, *and specifically incurred* for, acquisition, construction or production of a qualifying asset. A choice remains, although the extent of choice is narrower than is the case under Option 1. The IPSASB developed this option during its 2007-09 project, in order to address concerns that the focus on borrowing costs that are "directly attributable" allows for too much preparer discretion. By requiring a stronger, clearer relationship between the asset and the borrowing costs that are capitalized, preparer discretion is reduced. Option 3 is not converged with IFRS nor is it aligned with GFS reporting guidelines. However Option 3 has the benefit of providing scope to expense borrowing costs when, for example, a national government's approach to financing means that borrowing costs are not specifically incurred for the qualifying asset, and capitalize borrowing costs when an entity borrows specifically to finance a qualifying asset, as may occur in local government.
- 3.14. Option 4 requires that all borrowing costs, without exception, be expensed. This option is aligned with GFS reporting guidelines. This option also provides greater comparability than other options, because there is no accounting policy choice and entities' financing choices do not impact on asset values.

Discussion of the Four Options

- 3.15. This discussion focuses primarily on the Conceptual Framework's coverage of measurement and the IPSASB's policies as they apply to this issue. The Conceptual Framework's objective of measurement addresses the selection of measurement bases rather than their derivation. However the Conceptual Framework's concerns that measurement should generate information that is useful for assessments of operational capacity, cost of services and financial capacity can be applied to the derivation of measurement bases. In addition, the Conceptual Framework's discussion of the extent to which each measurement basis is likely to provide information that achieves the qualitative characteristics, while taking into account the constraints, suggests that different options for measurement basis derivation should consider the extent to which the resulting information will achieve the qualitative characteristics, taking into account the constraints.
- 3.16. The IPSASB has policies to pursue IFRS alignment and reduce unnecessary differences between IPSAS and GFS reporting guidelines, to the extent appropriate. The descriptions of the four options explain that Option 2 is the only option converged with IFRS, while Option 4 is the only option aligned with GFS reporting guidelines.

Objective of Measurement

- 3.17. The objective of measurement is to select those measurement bases that most fairly reflect the cost of services, operational capacity and financial capacity of the entity in a manner that is useful in holding the entity to account, and for decision-making purposes⁵.
- 3.18. Capitalization of borrowing costs increases the amount recognized as an asset. Yet there appears to be no relationship between an asset's future economic benefits and/or service potential and the extent of borrowing costs incurred. Therefore, capitalization of borrowing costs appears to incorrectly convey to users of the financial statements that assets financed through borrowing have more service potential or ability to generate economic benefits compared to similar assets held by an entity that does not use debt to finance its asset acquisitions. Capitalization has the result that users of the financial statements assess an entity's operational capacity and financial capacity as higher than would be the case if no capitalization occurred. With respect to the cost of services, capitalization of borrowing costs defers costs to future periods.
- 3.19. An argument in favor of capitalization of borrowing costs applies the principle that historical cost includes all costs which are directly attributable to getting an asset ready for its intended use, and this includes borrowing costs where they meet this criterion. Historical cost is an entity specific measure and normally will not generate asset measures that are comparable between entities. Furthermore capitalization of borrowing costs ensures that expenses are allocated to the reporting period in which they occur, i.e. expensed as the economic benefits and/or service potential of the qualifying asset is consumed. The capitalization accounting policy will, applying this reasoning, better support assessment of the cost of services.
- 3.20. If all borrowing costs are expensed then the interest cost item in the entity's statement of financial performance allows users to see a government's total borrowing cost, with no amount "hidden" in assets. Those users of the financial statements that consider total interest costs to be an important indicator of financial performance will likely prefer Option 4, because it provides them with useful information to hold the entity to account and for decision-making purposes. Alternatively, Option 3's approach to capitalizing borrowing costs allows an entity to link costs to the asset for which borrowing was incurred, if the entity applies the accounting policy choice to capitalize borrowing costs that are directly attributable and specifically incurred with respect to qualifying assets, and some argue that this also provides useful information for accountability and decision making. If the amount of interest that has been capitalized is disclosed in the notes to the financial statements then users are still able to calculate the total interest costs for the period.

Public Sector Borrowing and Capitalization of Borrowing Costs

- 3.21. The reasons why the public sector borrows, outlined in paragraphs 3.7-3.9 above, show that for national governments and their subsidiary entities there is usually little linkage between entities' borrowings and the acquisition, construction or production of qualifying assets. For example, a government that has a policy of maintaining CU100 billion in bonds in the market, while not actually needing the cash, will find that, if it were required to capitalize borrowing costs, it would capitalize interest for any qualifying assets acquired, constructed or produced in any years in which bonds are outstanding. While it may be feasible to allocate these borrowings to qualifying assets, the IPSASB is of the view that doing so is unlikely to provide relevant and representationally faithful information or support achievement of financial reporting objectives, by enhancing either accountability or decision-making.

⁵ Paragraph 7.2 of the Conceptual Framework.

- 3.22. In the public sector, controlling entities may have a large number of controlled entities. Many of these controlled entities are responsible for acquiring, constructing or producing qualifying assets. Although there will be a general policy framework, many controlled entities may have their own financial management systems, reflecting their own financial reporting needs. Funding for such controlled entities may be by means of appropriation from a central fund without regard to whether such appropriations are financed from taxes, borrowings or other sources. Any accounting system used to track directly attributable borrowing costs and their application to qualifying assets is likely to be complex and resource intensive. The IPSASB is of the view that the complexity would mean that the costs incurred in capitalizing borrowing costs would be considerable and likely to exceed the related benefits.
- 3.23. Option 2, the capitalization of borrowing costs option, is converged with IFRS requirements and therefore avoids the potential problem of different accounting policies within a group of entities. Where one or more controlled entities apply IFRS while the controlling entity applies an IPSAS-based allowance to expense borrowing costs, the controlling entity will need to adjust for this difference in its consolidated financial statements. This introduces preparation costs which would be avoided if the IPSAS treatment for borrowing costs is fully converged with IFRS.
- 3.24. As noted in the introduction to this chapter, there are cases where public sector entities borrow specifically to finance the acquisition, construction or production of a qualifying asset, for example, where a municipality issues bonds specifically to finance an infrastructure project. In such cases capitalizing borrowing costs may be appropriate because the costs to capitalize are relatively straightforward to identify. Then the cost-benefit argument shifts towards entities being permitted to capitalize borrowing costs. This is an argument in favor of Options 1 and 3, both of which allow entities to capitalize borrowing costs where appropriate, while also allowing for non-capitalization when inappropriate, for example when entities are within a national government with centralized borrowing.
- 3.25. However, even in this situation, questions as to the relevance of the resulting information argue in favor of allowing capitalization of borrowing costs rather than making it a requirement. The further condition in Option 3, whereby public sector entities only have the option to capitalize where borrowing is incurred specifically to finance an asset's acquisition, construction or production, reduces the costs involved in tracking and computing those borrowing costs that should be capitalized, while increasing the representational faithfulness of the resulting information. This argues in favor of Option 3 rather than Option 1. Arguably Option 4, where all borrowing costs are expensed, provides even more support for achievement of the qualitative characteristics, because its clear-cut approach best supports both understandability and representational faithfulness.

Preliminary View—Expense All Borrowing Costs

- 3.26. In considering the arguments for and against the four options the IPSASB noted that allowing entities to choose whether to expense or capitalize borrowing costs reduces comparability between entities and within the same entity. Furthermore, where borrowing costs are difficult to attribute, the representational faithfulness of the resulting information may be reduced. If borrowings are limited to funds borrowed specifically for the purpose of acquiring, constructing or producing a particular qualifying asset (Option 3), then this would reduce complexity, with benefits in terms of achievement of the qualitative characteristics and reduced costs. However, comparability issues would remain, because they would arise both when an option in IPSAS is permitted and where entities' different financing profiles impact on the reported value of assets.

- 3.27. The IPSASB considers that neither requiring public sector entities to capitalize nor providing an option to capitalize borrowing costs support achievement of the qualitative characteristics. In particular, capitalizing borrowing costs appears likely to diminish the comparability of information in the financial statements. Given the extent to which judgement is needed for Options 1 to 3, the IPSASB does not consider that these three options would contribute significantly towards achievement of the objectives of financial reporting. The IPSASB considers that, having regard to the constraints, the option of expensing borrowing costs, Option 4, will provide more useful information for users' assessments of entities' operational capacity, financial capacity and cost of services. Option 4 will also align borrowing cost measurement under IPSAS with GFS reporting guidelines.
- 3.28. Therefore, the IPSASB's preliminary view is that all borrowing costs should be expensed.

Preliminary View—Chapter 3.1

All borrowing costs should be expensed rather than capitalized, with no exception for borrowing costs that are directly attributable to the acquisition, construction, or production of a qualifying asset.

Do you agree with the IPSASB's Preliminary View?

If not, please provide your reasons, the other option that you support instead, and your reasons for supporting that other option.

Chapter 4, Transaction Costs

- 4.1. This chapter begins by discussing the meaning of transaction costs and their significance when viewed from different perspectives. It then describes the IPSASB's views on transaction cost issues that need to be addressed, in order to:
- (a) Clarify the treatment of such costs when deriving measurement bases for application in IPSAS; and
 - (b) Provide better support, in IPSAS, for entities to account for transaction costs appropriately and consistently, when they measure assets and liabilities.
- 4.2. The chapter concludes with the IPSASB's preliminary views on the treatment of transaction costs when applying historical cost, cost of fulfillment, and replacement cost.

Fair value (IFRS 13) and transaction costs

- 4.3. This chapter refers to fair value. For example, its discussion of different accounting options for transaction costs refers to fair value when assessing options in terms of their alignment with IFRS. However, the focus is primarily on the appropriate treatment of transaction costs when applying cost of fulfillment, historical cost, and replacement cost.
- 4.4. The IPSASB has reached a view, which is illustrated in ED, *Measurement*, that the meaning of fair value in IPSAS should be consistent with that in IFRS 13. That approach means that, consistent with IFRS 13, transaction costs are neither added nor subtracted when deriving fair value. Therefore, the options discussed in this chapter do not apply to fair value, and nor does the preliminary view.

Avoid an overlap between application guidance in IPSAS, Measurement, and other IPSAS

- 4.5. During its discussion of transaction costs the IPSASB noted that, whatever its views on the treatment of transaction costs, the application guidance in IPSAS, *Measurement*, and requirements in other IPSASs will need to be coordinated. Otherwise transaction costs could either be added twice or subtracted twice as a result of the same requirement appearing in both IPSAS, *Measurement*, and another IPSAS⁶. This need will be addressed after constituent feedback on the measurement proposals in this CP, including those illustrated in ED, *Measurement*, has been received.

Transaction Costs*Meaning of transaction costs*

- 4.6. IPSAS defines transaction costs for financial instruments in IPSAS 29, *Financial Instruments: Recognition and Measurement*⁷. That definition could be revised to be more generally applicable by

⁶ [Note that this issue already exists for the draft application guidance in ED, *Measurement*, submitted to the December 2018 IPSASB meeting, since that guidance sometimes excludes transaction costs and other times includes them. An approach consistent with fair value (IFRS 13) would involve excluding transaction costs from all measurement bases in ED, *Measurement*. However that approach would result in different definitions in ED, *Measurement*, from those in the Conceptual Framework.

⁷ Paragraph 10, IPSAS 29, states that: Transaction costs are incremental costs that are directly attributable to the acquisition, issue or disposal of a financial asset or financial liability... An incremental cost is one that would not have been incurred if the entity had not acquired, issued or disposed of the financial instrument.

replacing references to financial assets and financial liabilities with references to assets and liabilities, and the definition would then read as follows:

Transaction costs are incremental costs that are directly attributable to the acquisition, issue or disposal of an asset or liability. An incremental cost is one that would not have been incurred if the entity had not acquired, issued or disposed of the asset or liability. Examples of transaction costs include: professional fees for legal services and transfer taxes⁸.

- 4.7. Financial reporting standards may require that transaction costs be capitalized when initially measuring the cost of an asset, reflected in the amount at which an asset is carried in the financial statements. This suggests that they are viewed as adding to the value of an asset's future economic benefits and/or service potential. By contrast, economists and investors view transaction costs as expenses that do not add value⁹. They result from market imperfections and are sometimes called "frictional costs". A market improves if transaction costs reduce¹⁰.
- 4.8. Financial reporting may deduct transaction costs from the selling price of an asset to determine its exit value. Then the primary focus is generally the asset's net realizable value, and its contribution to the entity's financial capacity, rather than to its operational capacity.
- 4.9. Financial reporting may not explicitly address the treatment of transaction costs when an entity incurs a liability. The resulting obligation relates to costs that the entity will incur, in the future, to fulfill the obligation. (Transaction costs already incurred would already have been expensed.) Depending on the measurement basis, transaction costs related to settlement of the liability may need to be included in a liability's settlement value.

The Conceptual Framework's references to transaction costs

- 4.10. Accounting for transaction costs on acquisition of an asset can be considered from the perspective of either asset definition or the application of measurement bases. The element definition and recognition perspective involves asking whether or not transaction costs incorporate economic benefits and/or service potential, and therefore warrant being capitalized as part of the value of an asset. The Conceptual Framework does not refer to transaction costs when it discusses the definition and recognition of assets and liabilities.
- 4.11. From a measurement perspective the question is whether or not transaction costs are relevant to the applicable measurement basis and, if so, whether they are added or deducted. In its chapter on measurement the Conceptual Framework explains that transaction costs are one of two differences that distinguish entry prices from exit prices¹¹: It states that where a measurement basis is an entry value and entity-specific, transaction costs are likely to be included. Conversely, if a measurement basis is either an exit value or expected to be non-entity-specific, then transaction costs are not

⁸ This description is consistent with the IFRS 13, *Fair Value Measurement*, definition and references in the project brief and Conceptual Framework. See Agenda Item 11.3.3 for further information.

⁹ Economics definition: "The cost associated with exchange of goods or services and incurred in overcoming market imperfections. Transaction costs cover a wide range: communication charges, legal fees, informational cost of finding the price, quality, and durability, etc., and may also include transportation costs."
<http://www.businessdictionary.com/definition/transaction-cost.html>

¹⁰ See <http://www.investopedia.com/terms/t/transactioncosts.asp>

¹¹ Paragraph 7.8 of the Conceptual Framework.

included¹². However, apart from the measurement basis “net selling price,” where transaction costs to sell the asset are deducted to derive the measurement, the Conceptual Framework does not explicitly address the treatment of transaction costs for different measurement bases.

Assets measured at historical cost or replacement cost

- 4.12. Although the Conceptual Framework’s descriptions of historical cost and replacement cost do not refer to transaction costs, it does describe these two measurement bases as entry values, which implies that transaction costs should be capitalized¹³. The earlier Conceptual Framework consultation paper stated that transaction costs will generally be capitalized for historical cost and should be included in replacement cost. For historical cost the costs to capitalize would be actual transaction costs incurred. For replacement cost the costs would be an estimate of transaction costs that would need to be incurred in order to replace the service potential of an asset at the reporting date.

Liabilities measured at cost of fulfillment

- 4.13. The Conceptual Framework’s measurement chapter does not discuss the treatment of transaction costs when measuring liabilities. However, paragraph 5.28 of the Conceptual Framework consultation paper on measurement, explained that for both the cost of fulfillment and the cost of release the liability settlement amount should include all the costs that will be incurred including, for example, transaction costs.

Treatment in IPSAS and other sources of measurement guidance

IPSAS and transaction costs

- 4.14. IPSAS includes a mixture of explicit references to transaction costs (see, for example, IPSAS 16, *Investment Properties*) and references to costs that would usually be viewed as transaction costs, but are not labelled as such in the Standard.
- 4.15. IPSASs will usually capitalize transaction costs for an entry value (see, for example, IPSASs 17 and 31), while transaction costs are deducted to derive an exit value (see, for example, IPSAS 27, *Agriculture*).
- 4.16. However, the IPSAS treatment of transaction costs is not always clear. For example:
- (a) IPSAS does not state whether the ‘fair value’ (as currently defined in IPSAS) of an asset acquired through a non-exchange transaction includes an estimate of transaction costs.
 - (b) When replacement cost is used, as an appropriate measure for deemed cost or ‘fair value’/current value, IPSAS does not explain whether an estimate of transaction costs should be used to calculate the replacement cost.
 - (c) IPSAS does not explain how to account for future estimates of transaction costs necessary to fulfill the obligations, when measuring non-financial liabilities.

¹² “Included” in the cost of an exit value such as “net selling price” means that the value of the asset excludes the transaction costs (i.e. the sales cost), by deducting them to derive the value per that measurement price. The calculation includes transaction costs, but the resulting value does not.

¹³ Note that, in the Conceptual Framework’s consultation paper on measurement, paragraph 3.18 stated that “[replacement cost] includes all the costs, including transaction costs that would necessarily be incurred in the replacement of the service potential of an asset.” For historical cost, paragraph 2.1 stated that “Transaction costs—that is, costs other than the purchase price incurred in connection with the acquisition of the asset—are generally included in cost for this purpose.”

- (d) Transaction costs are not clearly identified in IPSAS measurement requirements. The term “transaction costs” is used in some IPSASs, but not in others. The only IPSAS definition of transaction costs relates to financial instruments. There is no general definition.

GFS Reporting Guidelines—Treatment of transaction costs

4.17. Transactions costs are called “costs of ownership transfer” in GFS. They are:

- (a) Included in the cost of acquisition for nonfinancial assets; and
- (b) Expensed for financial assets and liabilities¹⁴.

International Valuation Standards (IVS)—Treatment of transaction costs

- 4.18. IVS explain that most bases of value represent the estimated exchange price of an asset without regard to the seller’s costs of sale or the buyer’s costs of purchase and without adjustment for any taxes payable by either party as a direct result of the transaction. [210.1, IVS] This is consistent with IFRS 13’s definition and guidance on measurement of fair value.
- 4.19. IVS state that the cost approach should capture all of the costs that would be incurred by a typical participant [70.10., IVS] and so transaction costs may be included when valuing assets. The list of costs to consider shows:
 - (a) Direct costs, such as materials and labor; and
 - (b) Indirect costs, such as transport costs, installation costs, professional fees (design, permit, architectural, legal, etc.), other fees (commissions, etc.), overheads, taxes, finance costs (e.g., interest on debt financing), and profit margin/entrepreneurial profit to the creator of the asset (e.g. return to investors).
- 4.20. These costs include examples of transaction costs (legal fees, commissions and taxes). Although IVS therefore indicates transaction costs are likely to be included when doing a cost approach valuation, a valuer will consider the purpose of a valuation and adjust the approach to ensure that it is fit for purpose.

IFRS treatment of transaction costs

- 4.21. IFRS 13 excludes transaction costs from the calculation of fair value. However, individual IASs and IFRSs may then add such costs back (or deduct them) in their requirements for measurement of particular types of assets and liabilities.

Transaction cost issues to address

- 4.22. The IPSASB considers that there is scope to improve how IPSAS addresses the accounting treatment for transaction costs. Issues identified during the development of this CP and ED, *Measurement*, include that:
 - (a) IPSAS has not provided an explicit conceptual basis for its different accounting treatments for transaction costs, although the Conceptual Framework and IPSASB documents produced during its development do provide guidance on the treatment of transaction costs, which links their treatment to the particular measurement basis applied.

¹⁴ The IPSASB’s GFS Tracking Table provides more detail relevant to this point. However, this summary captures the main points necessary for this general discussion of different approaches to asset valuation.

- (b) IPSAS does not address the treatment of transaction costs in the following situations:
 - (i) When a current value is used to measure an asset's deemed cost (e.g. on first time adoption) and when assets are subsequently measured at a current value; and
 - (ii) Where the relevant IPSAS does not provide guidance on the treatment of transaction costs, although such costs occur. For example, when measuring some types of liabilities.
- (c) Although the treatment of transaction costs is addressed in several IPSASs (e.g. IPSAS 12, 16, 17, 27 and 31), these IPSASs refer to such costs using different phrases, and generally do not label transaction costs as such. IPSAS lacks a general definition of transaction costs, to ensure a consistent meaning for transaction costs across all IPSASs, while also supporting the understandability of IPSASs.

Options to address the issues above

4.23. In order to address the issues described above, the IPSASB decided that the Public Sector Measurement Project should develop guidance on the appropriate accounting treatment for transaction costs, when applying different measurement bases to measure assets and liabilities. The IPSASB identified the following two options:

- Option 1. Expense all transaction costs, regardless of the applicable measurement basis and asset or liability measurement circumstances, and exclude such costs from estimates of current value.
- Option 2. Account for transaction cost as indicated by the Conceptual Framework, when applying the following measurement bases:
 - (a) Cost of fulfillment—add transaction costs (i.e. add an estimate of future transaction costs, necessarily incurred to fulfill the obligation(s)).
 - (b) Historical cost—add transaction costs.
 - (c) Replacement cost—add transaction costs (i.e. add an estimate of future transaction costs necessary to replace the asset).

4.24. The IPSASB noted that, to the extent that IFRS and GFS reporting guidelines unambiguously address transaction costs, their treatment of such costs appears to be aligned with Option 2.

Discussion of options

Option 1

- 4.25. Option 1 has the benefit of providing a clear, simple accounting treatment, which can be consistently applied to all transaction costs, regardless of the applicable measurement basis and the circumstances of measurement. Preparers will find this approach straightforward to apply. There appears to be good conceptual support for this treatment from both economists and valuers.
- 4.26. Option 1 is aligned with IFRS 13's treatment of transaction costs for the measurement of fair value. However, this treatment is not aligned with all IFRS measurement. For example, other IFRSs have requirements that either add or subtract transaction costs when measuring assets at either historical cost or fair value. IAS 16, for example, adds transaction costs to derive the historical cost of property, plant and equipment on initial acquisition. (Like IPSAS, IFRS does not necessarily explain the

treatment of transaction costs when measuring non-financial liabilities, resulting in a similar lack of clarity as that in IPSAS.)

- 4.27. In addition to the lack of alignment with IFRS, other issues raised by Option 1 include that it would:
- (a) Not be aligned with the GFS reporting guidelines for the treatment of transaction costs when first measuring the cost of acquisition of non-financial assets.
 - (b) Require significant change to the treatment of transaction costs across IPSASs. (For example, most IPSASs capitalize transaction costs when deriving the acquisition cost (historical cost) of non-financial assets.)
 - (c) Introduce another “mixed group” problem, for public sector entities that consolidate entities reporting on IFRS.
- 4.28. For this option (and also for Option 2) guidance would be needed on the meaning of transaction costs, including the type of costs that should be classified as transaction costs.

Option 2

- 4.29. Option 2 would apply the IPSASB's Conceptual Framework to resolve an IPSAS measurement issue, which means that this approach has a solid conceptual foundation, which reflects financial reporting ideas about how to derive different measurement bases so that they provide the information that GPFR users need for accountability and decision making.
- 4.30. Option 2 would also:
- (a) Remove ambiguity in IPSASs, without introducing major changes to existing requirements;
 - (b) Better support alignment with IFRS than would Option 1; and
 - (c) Maintain the present level of alignment between IPSAS and GFS reporting guidelines.
- 4.31. Option 2 is not as simple to apply as Option 1. Furthermore, Option 2 partly relies upon an interpretation of the Conceptual Framework, supported by the more detailed discussion of measurement bases in the consultation paper that led to the Conceptual Framework's chapter on measurement. For Option 2 (as for Option 1) guidance would be needed on the meaning of transaction costs, including the type of costs that should be classified as transaction costs.

Preliminary View

- 4.32. Given the arguments for and against the two options above, the IPSASB has decided that Option 2 is its preferred approach to accounting for transaction costs. Option 2 applies the IPSASB's Conceptual Framework to identify an appropriate treatment for transaction costs when deriving the three measurement bases for which ED, *Measurement*, provides application guidance. In comparison to Option 1, Option 2 provides better alignment with IFRS, while also doing better with respect to avoiding unnecessary differences between IPSAS and GFS reporting guidelines.
- 4.33. The IPSASB considers that GPFR users will benefit from clarifying how IPSAS treats transaction costs when using these measurement bases. As a result information in the financial statements will be more comparable and understandable. Option 2 would mean that the appropriate treatment of transaction costs would be clear for preparers, when they apply historical cost and replacement cost to measure assets and cost of fulfillment to measure liabilities.

Preliminary View—Chapter 4.1

When applying the following measurement bases transaction costs should be accounted for as follows:

- (a) Cost of fulfillment—add transaction costs (i.e. add an estimate of future transaction costs, necessarily incurred to fulfill the obligation(s).
- (b) Historical cost—add transaction costs.
- (c) Replacement cost—add transaction costs (i.e. add an estimate of future transaction costs necessary to replace the asset).

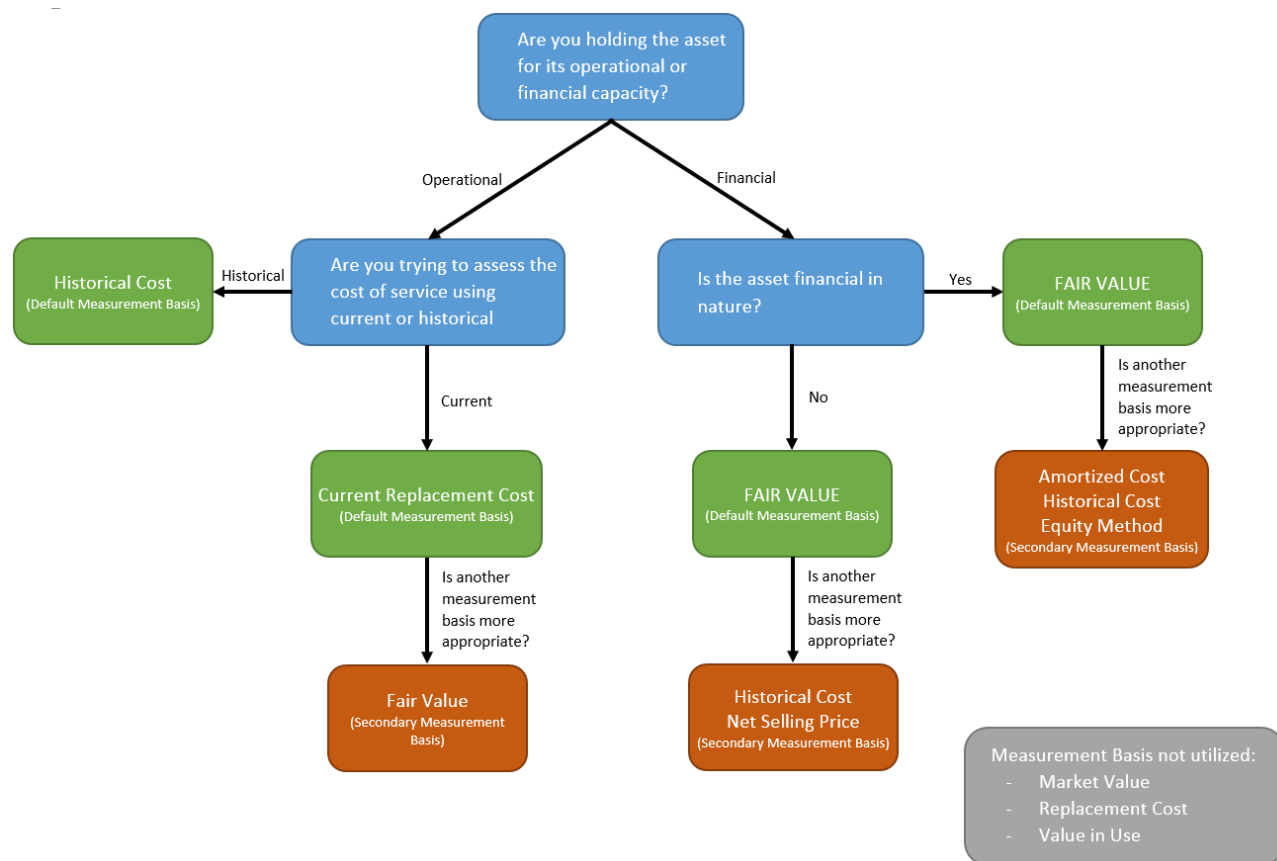
Do you agree with the IPSASB's Preliminary View?

If not, please provide your reasons, the other option that you support instead, and your reasons for supporting that other option.

Chapter 45, Public Sector Measurement: Assets

- 5.1. ~~This chapter discusses the IPSASB's approach to reviewing measurement bases in extant IPSASs to identify whether they should be amended to ensure that the measurement of assets:~~ This chapter formalizes the IPSASB's methodology for determining the appropriate measurement of assets. Any changes to IPSAS measurement requirements, or the development of new IPSAS measurement requirements, resulting from the application of this methodology, will be exposed to constituent for comment, in accordance with IPSAS due process. In formalizing its methodology the primary considerations of the Board included ensuring the measurement bases:
- (a) ~~Works~~ well for public sector specific assets;
 - (b) ~~Generates~~ useful information that achieves the Conceptual Framework's measurement objective and qualitative characteristics while taking account of the constraints on information in general purpose financial reports;
 - (c) ~~Improves~~ consistency across IPSAS to improve the comparability of financial statements;
 - (d) ~~Brings~~ IFRS 13, *Fair Value Measurement*, into IPSASB literature to the extent that an exit value is relevant to certain transactions and balances; and
 - (e) ~~Reduces~~ unnecessary differences between IPSAS and Government Finance Statistics (GFS) reporting guidelines.
- 5.2. During development and revision of individual IPSASs the IPSASB will consider a mixture of different factors in order to support the different review objectives above. The IPSASB believes it is important that global standard setters use the same term with the same meaning. The IPSAS definition of "fair value" pre-dates the IFRS 13 definition. The IPSASB's work since developing the Conceptual Framework has demonstrated that "fair value" as defined in IFRS 13 is appropriate for many public sector transactions (particularly financial instruments), but there are other transactions where this is not the case. The IPSASB will therefore evaluate all references to 'fair value' in the literature and determine whether the IFRS 13-based definition is appropriate or whether an alternative measurement basis should be adopted.
- 5.3. The flow chart on the following page (Diagram 45.1) aims to provide a useful tool to support the IPSASB's review approach. It reflects key aspects of the Conceptual Framework's discussion of measurement bases, while also indicating situations in which fair value could be an appropriate measurement basis for assets.
- 5.4. This flow chart is not expected to be used in a rigid, inflexible way and any 'answer' that the flow chart suggests in relation to a measurement basis for a particular type of asset or liability will be tested against the considerations outlined in paragraph 45.1 above. For example, the IPSASB's past considerations when developing IPSASs, which identified areas where public sector specific issues existed, where a current measurement requirement was not working well, or ~~those~~ where alignment with IFRS was deemed appropriate, remain relevant. The IPSASB's review approach includes scope to retain measurement approaches in extant IPSASs, where these meet the needs of users of GPFRs.

Diagram 45.1—Subsequent Measurement: ~~of Assets (Financial and Non-Financial)~~



Explanation of Flow Chart Decision Points

5.5. This flowchart is based on the measurement principles outlined in Chapter 7 of the IPSASB's Conceptual Framework. In determining the appropriate measurement basis, the Conceptual Framework outlines the measurement objective of financial reporting in the public sector is met by providing information that enables users to assess:

- (a) The cost of services provided in the period in historical or current terms;
- (b) Operational Capacity – the capacity of the entity to support the provision of the services in future periods through physical and other resources; and
- (c) Financial Capacity – the capacity of the entity to fund its activities.

5.6. Applying these concepts, the gating question in the flow chart asks whether the asset is held for operational or financial capacity.

- (a) When the asset is held for financial capacity, the flowchart assumes a fair value measurement is most relevant to users of the financial statements. However, the flow chart does provide for scenarios where this is not the case and highlights other measurement methodologies which may apply.
- (b) Where the asset is held for operational capacity, the flowchart incorporates a further measurement objective as to whether the cost of service should be assessed from the historical or current perspective.

5.7. The flowchart has identified several measurement bases in the Conceptual Framework that are not currently in use. The application of these bases will continue to be evaluated throughout this project.

6.1. Further explanations of the flow chart's decision points are provide below:

~~*Held-on-on-going basis:* Key attributes for assets that are “held-on-an-on-gong basis” are that they are not held with a view to sell or otherwise dispose of them. For physical assets the intention is use in the provision of services.~~

~~*Historical cost model:* The Conceptual Framework acknowledges both historical cost and current value. The extant allowances and/or requirements in IPSASs apply. The choice of accounting policy is likely to be made by regulators or in legislation. If not restricted by regulation or legislation then the entity establishes its accounting policy where an IPSAS provides a choice between the historical cost model and a current value model.~~

~~*Active, open and orderly market*¹⁵: In an open, active and orderly market, there are no barriers that prevent an entity from transacting, and there is sufficient frequency and volume of transactions to provide price information. Such markets are orderly (i.e. are run in a reliable, secure, accurate and efficient manner) with many well-informed buyers and sellers acting without compulsion, so there is assurance of “fairness” in determining current prices—including that prices do not represent distress sales. Such markets deal in assets that are identical and therefore mutually interchangeable, such as commodities, currencies and securities where prices are publicly available. (By contrast, markets for assets that are unique and rarely traded are not open, active and orderly; any purchases and sales are individually negotiated, and there may be a large range of prices at which a transaction might be agreed. Therefore, participants will incur significant costs to purchase or to sell an asset. In such circumstances it is necessary to use an estimation technique to estimate the price at which an orderly transaction to sell the asset would take place between market participants at the measurement date under current market conditions.)~~

~~*Specialized asset:* Specialized assets are more heterogeneous than homogenous, such that there are insufficient transactions to determine value by comparison with previous sales. Valuations of specialized buildings apply the assumption that the existing use of the building will continue. For example, a school laboratory is an example of a specialized asset, while an office building is not. Some buildings might have a conventional basic design that is superficially similar to other buildings that are regularly bought and sold in the market, but on closer inspection have specialised features designed to meet the requirements of the actual occupier. For example, a purpose-built embassy has the same general function as an office block but is likely to have additional security features or high-quality finishes that an office block would not normally require. This type of building will often cost considerably more to develop and build than a normal office building, but provide extra service potential (in the form of, for example, security for its occupants) which cannot be replicated through the purchase of a normal office building.~~

~~*Financial asset*¹⁶: A financial asset is defined as in IPSAS 28, *Financial Instruments: Presentation*, that is “any asset that is: (a) cash; (b) an equity instrument of another entity; (c) a contractual right to (i) receive cash or another financial asset from another entity; or (ii) exchange financial assets or financial liabilities with another entity under conditions that are potentially favorable to the entity; or (d) a contract that will or may be settled in the entity’s own equity instruments and is: (i) a non-~~

¹⁵—See paragraphs 7.28-7.29 of the Conceptual Framework.

¹⁶—Definition in IPSAS 28, paragraph 9.

~~derivative for which the entity is or may be obliged to receive a variable number of the entity's own equity instruments; or (ii) a derivative that will or may be settled other than by the exchange of a fixed amount of cash or another financial asset for a fixed number of the entity's own equity instruments. For this purpose the entity's own equity instruments do not include puttable financial instruments classified as equity instruments in accordance with paragraphs 15 and 16 (of IPSAS 28), instruments that impose on the entity an obligation to deliver to another party a pro rata share of the net assets of the entity only on liquidation and are classified as equity instruments in accordance with paragraphs 17 and 18 (of IPSAS 28), or instruments that are contracts for the future receipt or delivery of the entity's own equity instruments."~~

Specific Matters for Comment—Chapter 4.1

~~Do you agree that Diagram 4.1—Subsequent Measurement of Assets (Financial and Non-Financial) is a useful tool to support the IPSASB's review of measurement bases in extant IPSASs and identification of appropriate measurement bases for use in future IPSASs?~~

~~If not, please provide your views on how to improve the flow chart so that it will be useful.~~

Chapter 56, Public Sector Measurement: Liabilities

~~6.1. This chapter discusses the IPSASB's approach to reviewing measurement bases in extant IPSASs to identify whether there should be amendments to ensure that the measurement of liabilities:~~

~~6.1. This chapter formalizes the IPSASB's methodology for determining the appropriate measurement of liabilities. Any changes to IPSAS measurement requirements, or the development of new IPSAS measurement requirements, resulting from the application of this methodology, will be exposed to constituents for comment, in accordance with the IPSASB's due process.~~

~~6.2. In formalizing its methodology the primary considerations of the IPSASB included ensuring the measurement bases:~~

- ~~(a) Works well for public sector specific liabilities;~~
- ~~(b) Generates useful information that achieves the Conceptual Framework's measurement objective and qualitative characteristics while taking account of the constraints on information in general purpose financial reports;~~
- ~~(c) Improves consistency across IPSAS to improve the comparability of financial statements;~~
- ~~(d) Brings IFRS 13, *Fair Value Measurement*, into IPSASB literature to the extent that an exit value is relevant to certain transactions and balances; and~~
- ~~(e) Reduces unnecessary differences between IPSAS and Government Finance Statistics (GFS) reporting guidelines.~~

~~6.2.6.3. The flow chart on the following page (Diagram 56.1) aims to provide a useful tool to support the IPSASB's review approach and, as with the assets flow chart, will be used only as an indication of where an existing measurement basis might need to be changed in order to meet the objectives set out in paragraph 56.1. It reflects key aspects of the Conceptual Framework's discussion of measurement bases, while also indicating situations in which fair value could be an appropriate measurement basis for liabilities.~~

~~6.3. The Conceptual Framework's Discussion of Measurement Bases~~

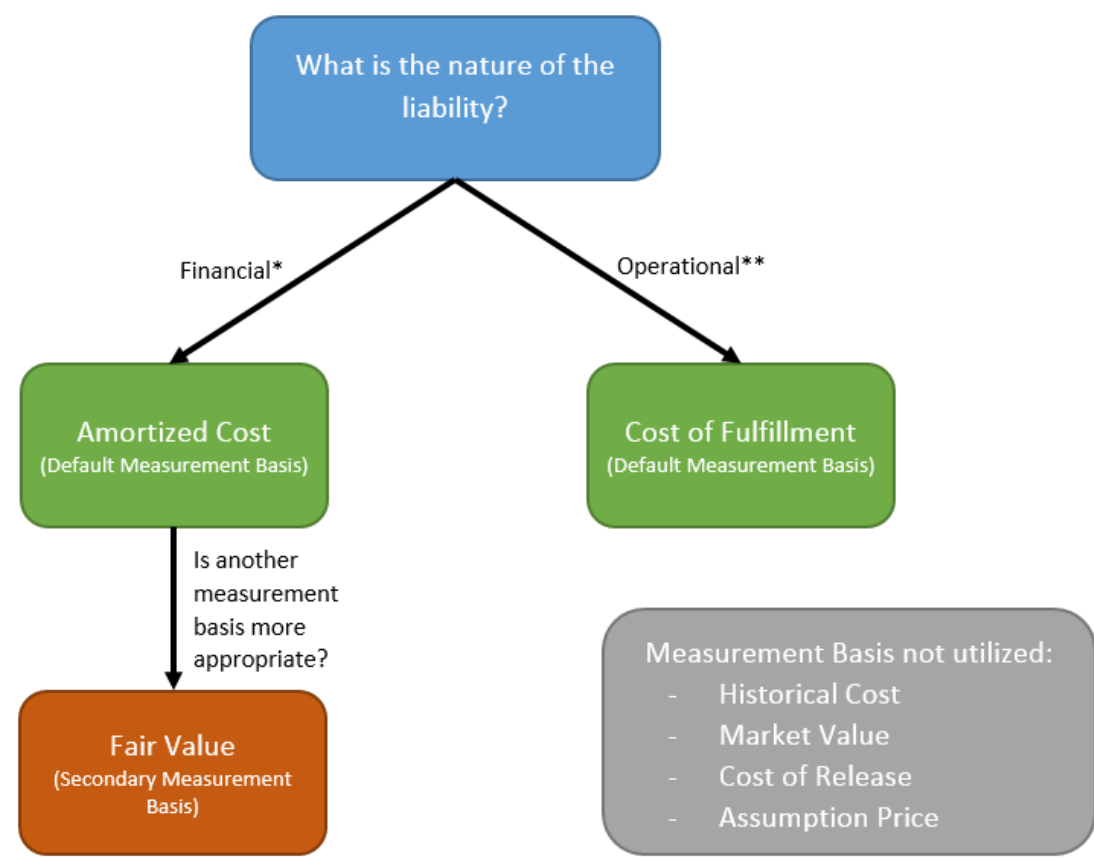
~~The Conceptual Framework discusses five measurement bases. It acknowledges that there are only limited circumstances in which cost of release and assumption prices could apply¹⁷. These two measurement bases do not appear, therefore, in the flowchart, which has been developed to cover situations where cost of fulfillment and historical cost are likely to be relevant.~~

~~The flow chart additionally includes fair value (defined consistently with IFRS 13), given its relevance to the subsequent measurement of financial liabilities. Fair value is a type of market value, and the Conceptual Framework's discussion of when market value could be appropriate clearly applies to financial liabilities. Examples of non-financial liabilities for which market value would apply were difficult to identify. The flow chart shows that either historical cost or cost of fulfillment are generally more relevant to non-financial liabilities.~~

~~Subsequent Measurement for Liabilities~~

~~Diagram 6.1 considers subsequent measurement for non-current liabilities and current liabilities for which significant value fluctuations may occur in short time spans, for example derivatives.~~

¹⁷ See paragraphs BC7.42 and BC7.43 of Chapter 7's Basis for Conclusions.

Diagram 6.1—~~Subsequent Measurement of Liabilities (Financial and Non-Financial)~~

Explanation of Flow Chart Decision Points

6.4. The primary measurement objective when measuring a liability is to provide the user of the public sector financial statements with information allow them to determine the amount required for the entity satisfy the obligations. In order to satisfy this measurement objective and determine the most appropriate measurement base, the entity must determine whether:

- (a) A decision has been made in how the liability will be funded or settled (for example, financial instruments, as they are a contract to deliver cash); or
- (b) The liability has arisen from the operations of the entity for which a method of settlement has yet to be determined (for example, decommissioning liabilities as the liability will settle in a future period and how it will be settled has not been determined).

6.5. When the nature of the liability is operational, it is measured at its cost of fulfillment. That is, the amount the entity will incur in fulfilling its obligations represented by the liability. This is relevant to the user of the public sector financial statements has it represents the present amount the entity expects to incur in order to settle the liability.

6.6. When the nature of the liability is financial, the primary measurement basis is amortized cost. However, in the flowchart recognizes there maybe scenarios where the variability in future cash flows may be significant, at which point the liability is measured at fair value.

6.7. The flowchart has identified several measurement bases in the Conceptual Framework that are not currently in use. The application of these bases will continue to be evaluated throughout this project.

~~Specific Matters for Comment—Chapter 5.1~~

~~Do you agree that Diagram 5.1—Subsequent Measurement of Liabilities (Financial and Non-Financial) is a useful tool to support the IPSASB's review of measurement bases in extant IPSAS and identification of appropriate measurement bases for use in future IPSASs?~~

~~If not, please provide your views on how to improve the flow chart so that it will be useful.~~

Chapter 6, Application Guidance for Measurement Bases

- 8.1. This chapter discusses the IPSASB's approach to developing application guidance in line with the principle that individual IPSASs will say which measurement basis should be used and what disclosures should be made and that, i.e. that IPSAS, *Measurement*, will:
- (a) Define what each measurement basis means, with explanatory material in the core text; and
 - (a) Provide Application Guidance on how to derive the different measurement bases.
- 8.2. The approach is illustrated in the accompanying Exposure Draft, which contains some application guidance for the following measurement bases:
- (a) Cost of Fulfillment. This material is based on relevant material from IPSAS 19;
 - (a) Fair Value. The material combines IFRS 13, *Fair Value Measurement*, to the extent that it is application guidance (other IFRS 13 material is included in the main ED *Measurement*, (for example, the definitions) and material taken from IPSAS 16, *Investment Property*;
 - (a) Historical Cost. Material on cost on initial and subsequent measurement when using the cost model is derived from IPSASs 16, 17 (*Property, Plant, and Equipment*), and 31 (*Intangible Assets*);
 - (a) Market Value. Application guidance on market value is based on the guidance on fair value (which is not fair value within the meaning of ED, *Measurement*) in IPSASs 17 and 31; and
 - (a) Replacement Cost. This material is taken from IPSASs 17 and 31.
- 8.3. The remaining paragraphs of this chapter explain the rationale behind the inclusion of this material and the next steps, and then explain the impact on individual IPSASs of including measurement application guidance in [draft] IPSAS, *Measurement*.

Rationale and Next Steps

- 8.4. Feedback from stakeholders about application guidance in IPSASs generally focuses on guidance related to the measurement of assets and, in particular, to specialized assets. There is also, of course, the need to provide guidance on the use of fair value in those circumstances where it is an appropriate measurement basis for use in the public sector. The IPSAS decided, therefore, to illustrate its approach to providing guidance by:
- (a) Placing generic guidance on the measurement bases in ED, *Measurement*, and removing it from individual IPSASs;
 - (b) Refining that guidance—for example, by improving the drafting or by eliminating inconsistencies arising from the different source material; and
 - (c) Identifying gaps where more guidance is required: an obvious example, based on the material in the ED (Appendix G) and on constituents' feedback is how to derive an optimized depreciated replacement cost.
- 8.5. The next steps, following this consultation, will be to review all other IPSASs to determine which material should be moved to the new IPSAS and to refine the existing guidance as outlined in 6.3(b) above and then to supplement that guidance with new material where relevant and appropriate. Table 1 summarizes the measurement bases for which application guidance will be included in a

~~future IPSAS, together with a note of the source and a brief description of the coverage of the guidance.~~

Impact on Individual IPSASs

8.6. ~~Using the illustrative material in the ED, the impact on the individual IPSASs will be to delete:~~

- ~~(a) IPSAS 16: paragraphs 26 to 64;~~
- ~~(b) IPSAS 17: paragraphs 26 to 41, 43 to 58 and the Implementation Guidance;~~
- ~~(c) IPSAS 19: paragraphs 44 to 62, and 93 to 96; and~~
- ~~(d) IPSAS 31: paragraphs 41 to 43, 63 to 65, 73 to 86 and the Application Guidance.~~

~~IPSAS 41 will also need to be reviewed to ensure that material in ED, *Measurement*, does not duplicate material in IPSAS 41. Other IPSASs from which material is moved to ED, *Measurement*, will be similarly affected.~~

8.7. ~~In addition, it [will][may] be necessary to amend individual IPSASs to incorporate text to say which measurement basis should be used and also to review individual IPSASs to ensure that sufficient text is included on disclosure requirements to reflect any changes that might be recommended as a result of developing additional application guidance.~~

Specific Matters for Comment—Chapter 6.1

~~Do you agree that the application guidance planned for inclusion on the following measurement bases [to be determined] is sufficient for those measurement bases?~~

~~If not, please indicate what other application guidance should be provided.~~

Specific Matters for Comment—Chapter 6.2

~~Are there any other measurement bases for which you consider that application guidance is needed?~~

~~If yes, please indicate what other measurement bases need application guidance and what type of application guidance is needed.~~

TABLE 1: SOURCES FOR APPLICATION GUIDANCE ON MEASUREMENT BASES **WORK IN PROGRESS**

Measurement basis	Conceptual Framework ¹⁸	CF-CP, Measurement	IPSASs	Other
Assets				
Historical cost	7.13—7.15	[Review CP for relevance.]	IPSAS 17, IPSAS 34 ¹⁹	[Review guidance database]
Market value	7.24—7.29	(Analysis depends on need.)	(Analysis depends on need.)	(Analysis depends on need.)
Fair value (Market value-exit)	Not applicable	Not applicable	Not applicable	IFRS 13
Replacement cost	7.37—7.42	[Review CP for relevance.]	IPSAS 17, IPSAS 34	[Review guidance database]
Value in use	7.58 (Definition only)	[Review CP for relevance.]	Review impairment IPSASs	[Review guidance database]
Net selling price	7.49—7.50	[Review CP for relevance.]	[Review CP for relevance.]	[Review guidance database]
Liabilities				
Historical cost	7.70-7.72,	[Review CP for relevance.]	(Analysis depends on need.)	(Analysis depends on need.)
Market value	7.80 (Definition only)	(Analysis depends on need.)	(Analysis depends on need.)	(Analysis depends on need.)
Fair value (Market value-exit)	Not applicable	Not applicable	Not applicable	IFRS 13
Cost of fulfillment	Table 2, page 4; main section 7.74—7.79, BC 7.43	5.23, table page 32, 5.28—5.30, main section: 5.31-5.37, A3 (entity's own credit risk)	IPSAS 19?	[Review guidance database]
Cost of release	7.82-7.84, & BC7.43	(Analysis depends on need.)	(Analysis depends on need.)	(Analysis depends on need.)
Assumption price	7.87-7.93, & BC7.42	(Analysis depends on need.)	(Analysis depends on need.)	(Analysis depends on need.)

¹⁸ Chapter 7 of the Conceptual Framework provides a definition and usually some description of each of the measurement bases that it identifies. These paragraph references cover the definition and description, and exclude the subsequent discussion of the extent to which each measurement basis achieves the measurement objectives, etc.

¹⁹ See review documents for each IPSAS.

Content before Appendix C:

~~[Note: The following CP chapter and appendices will come before Appendix C, which begins on the following page, once the IPSASB has discussed these issues and the resulting text has been developed:~~

~~Appendix A, Assets: Measurement Bases in each IPSAS~~

~~Appendix B, Liabilities: Measurement Bases in each IPSAS]~~

~~Appendix C, Exposure Draft, *Measurement*, begins on the following page~~

Exposure Draft XX

~~January–April~~ 2019

Comments due: ~~May–August~~ 1531, 2019

*Proposed International Public Sector Accounting
Standard®*

Measurement

This document was developed and approved by the International Public Sector Accounting Standards Board® (IPSASB®).

The objective of the IPSASB is to serve the public interest by setting high-quality public sector accounting standards and by facilitating the adoption and implementation of these, thereby enhancing the quality and consistency of practice throughout the world and strengthening the transparency and accountability of public sector finances.

In meeting this objective the IPSASB sets IPSAS® and Recommended Practice Guidelines (RPGs) for use by public sector entities, including national, regional, and local governments, and related governmental agencies.

IPSAS relate to the general purpose financial statements (financial statements) and are authoritative. RPGs are pronouncements that provide guidance on good practice in preparing general purpose financial reports (GPFRs) that are not financial statements. Unlike IPSAS RPGs do not establish requirements. Currently all pronouncements relating to GPFRs that are not financial statements are RPGs. RPGs do not provide guidance on the level of assurance (if any) to which information should be subjected.

The structures and processes that support the operations of the IPSASB are facilitated by the International Federation of Accountants® (IFAC®).

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REQUEST FOR COMMENTS

This Exposure Draft, *Public Sector Measurement*, was developed and approved by the International Public Sector Accounting Standards Board® (IPSASB®).

The proposals in this Exposure Draft may be modified in light of comments received before being issued in final form. **Comments are requested by May 15 August 31, 2019.**

Respondents are asked to submit their comments electronically through the IPSASB website, using the “[Submit a Comment](#)” link. Please submit comments in both a PDF and Word file. Also, please note that first-time users must register to use this feature. All comments will be considered a matter of public record and will ultimately be posted on the website. This publication may be downloaded from the IPSASB website: www.ipsasb.org. The approved text is published in the English language.

Objective of the Exposure Draft

~~The objective of this [draft] standard is to define measurement bases that assist in reflecting fairly the cost of services, operational capacity, and financial capacity and how to identify approaches under those measurement bases to be applied through individual IPSASs to achieve the objectives of financial reporting. The objective of this Exposure Draft is to propose requirements for the measurement of assets and liabilities.~~

Guide for Respondents

The IPSASB would welcome comments on all of the matters discussed in this Exposure Draft. Comments are most helpful if they indicate the specific paragraph or group of paragraphs to which they relate, contain a clear rationale and, where applicable, provide a suggestion for alternative wording.

The Preliminary Views and Specific Matters for Comment requested for the Exposure Draft are provided below.

[Preliminary views and specific matters for comment will be included here.]

EXPOSURE DRAFT XX, MEASUREMENT

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BASIS FOR CONCLUSIONS	X

Objective

1. The objective of this [draft] standard is to define measurement bases that assist in reflecting fairly the cost of services, operational capacity, and financial capacity and how to identify approaches under those measurement bases to be applied through individual IPSASs to achieve the objectives of financial reporting.

Scope

2. An entity that prepares and presents financial statements under the accrual basis of accounting shall apply this [draft] Standard in measuring items.
3. Except as specified in paragraphs X-X, this IPSAS applies when another IPSAS requires or permits:
 - (a) One or more of the measurement bases defined herein or disclosures about one or more of these measurement bases; and
 - (b) Measurements that are based on one or more of the measurement bases (e.g. market value less costs to sell) or disclosures about those measurements.
4. [Include exceptions here, once identified.]
5. The measurement application guidance described in this IPSAS applies to both initial and subsequent measurement.

Definitions

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

[Further defined terms will be added as necessary.]

Active market is a market in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis.

Assumption price is the amount which the entity would rationally be willing to accept in exchange for assuming an existing liability.

Cost approach is a valuation technique that reflects the amount that would be required currently to replace the service capacity of an asset (often referred to as current replacement cost).

Cost of fulfillment is the costs that the entity will incur in fulfilling the obligations represented by the liability, assuming that it does so in the least costly manner.

Cost of release is the amount that either the creditor will accept in settlement of its claim, or a third party would charge to accept the transfer of the liability from the obligor.

Entry price is the price paid to acquire an asset or received to assume a liability in an exchange transaction.

Exit price is the price received to sell an asset or paid to transfer a liability.

Expected cash flow is the probability-weighted average (i.e. mean of the distribution) of possible future cash flows.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Highest and best use is the use of a non-financial asset by market participants that would maximize the value of the asset or the group of assets and liabilities (e.g. an operation) within which the asset would be used.

Historical cost for an asset is the consideration given to acquire or develop an asset, which is the cash or cash equivalents or the value of the other consideration given, at the time of its acquisition or development.

Historical cost for a liability is the consideration received to assume an obligation, which is the cash or cash equivalents, or the value of the other consideration received at the time the liability is incurred.

Income approach is valuation techniques that convert future amounts (e.g. cash flows or income and expenses) to a single current (i.e. discounted) amount. The fair value measurement is determined on the basis of the value indicated by current market expectations about those future amounts.

Inputs are the assumptions that market participants would use when pricing the asset or liability, including assumptions about risk, such as the following:

- (a) The risk inherent in a particular valuation technique used to measure fair value (such as a pricing model); and
- (b) The risk inherent in the inputs to the valuation technique.

Inputs may be observable or unobservable.

Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.

Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.

Level 3 inputs are unobservable inputs for the asset or liability.

Market approach is a valuation technique that uses prices and other relevant information generated by market transactions involving identical or comparable (i.e. similar) assets, liabilities or a group of assets and liabilities, such as an operation.

Market participants are buyers and sellers in the principal (or most advantageous) market for the asset or liability that have all of the following characteristics:

- (a) They are independent of each other, i.e. they are not related parties as defined in IPSAS 20, although the price in a related party transaction may be used as an input to a fair value measurement if the entity has evidence that the transaction was entered into at market terms.
- (b) They are knowledgeable, having a reasonable understanding about the asset or liability and the transaction using all available information, including information that might be obtained through due diligence efforts that are usual and customary.
- (c) They are able to enter into a transaction for the asset or liability.
- (d) They are willing to enter into a transaction for the asset or liability, i.e. they are motivated but not forced or otherwise compelled to do so.

Market value for assets is the amount for which an asset could be exchanged between knowledgeable, willing parties in an arm's length transaction.

Market value for liabilities is the amount for which a liability could be settled between knowledgeable, willing parties in an arm's length transaction.

Market-corroborated inputs are inputs that are derived principally from or corroborated by observable market data by correlation or other means.

Most advantageous market is the market that maximises the amount that would be received to sell the asset or minimises the amount that would be paid to transfer the liability, after taking into account transaction costs and transport costs.

Net selling price is the amount that the entity can obtain from sale of the asset, after deducting the costs of sale.

Non-performance risk is the risk that an entity will not fulfil an obligation. Non-performance risk includes, but may not be limited to, the entity's own credit risk.

Observable inputs are inputs that are developed using market data, such as publicly available information about actual events or transactions, and that reflect the assumptions that market participants would use when pricing the asset or liability.

Orderly transaction is a transaction that assumes exposure to the market for a period before the measurement date to allow for marketing activities that are usual and customary for transactions involving such assets or liabilities; it is not a forced transaction (e.g. a forced liquidation or distress sale).

Principal market is the market with the greatest volume and level of activity for the asset or liability.

Replacement cost is the optimized depreciated replacement cost of an asset.

Risk premium is the compensation sought by risk-averse market participants for bearing the uncertainty inherent in the cash flows of an asset or a liability. Also referred to as a 'risk adjustment'.

Transaction costs are the costs to sell an asset or transfer a liability in the principal (or most advantageous) market for the asset or liability that are directly attributable to the disposal of the asset or the transfer of the liability and meet both of the following criteria:

- (a) They result directly from and are essential to that transaction.
- (b) They would not have been incurred by the entity had the decision to sell the asset or transfer the liability not been made.

Transport costs are the costs that would be incurred to transport an asset from its current location to its principal (or most advantageous) market.

Unit of account is the level at which an asset or a liability is aggregated or disaggregated in an IPSAS for recognition purposes.

Unobservable inputs are inputs for which market data are not available and that are developed using the best information available about the assumptions that market participants would use when pricing the asset or liability.

Value in use is the present value to the entity of the asset's remaining service potential or ability to generate economic benefits if it continues to be used, and of the net amount that the entity will receive from its disposal at the end of its useful life.

Terms defined in other IPSASs are used in this Standard with the same meaning as in those Standards, and are reproduced in the *Glossary of Defined Terms* published separately.

Assumption price

7. In the context of an activity that is carried out with a view to profit, an entity will assume a liability only if the amount it is paid to assume the liability is greater than the cost of fulfillment or release—i.e., the settlement amount. Once that assumption price has been received by the entity, the entity has an obligation to its creditor.
8. At the time a liability is first incurred in an exchange transaction, assumption price represents the amount that was accepted by the entity for assuming the liability—it is therefore usually reasonable to assume that assumption price is the price that the entity would rationally accept for assuming a similar liability. It would charge a higher amount, if competitive pressures allowed it to do so, but it might be unwilling to accept a lower price. Just as replacement cost is a current value so, conceptually, is assumption price. There are, however, practical problems in reflecting changes in prices in obligations that are stated at assumption price.
9. A consequence of stating performance obligations at the assumption price is that no surplus is reported at the time the obligation is taken on. A surplus or deficit is reported in the financial statements in the period when fulfillment (or release) takes place, as it is the difference between the revenue arising from satisfaction of the liability and the cost of settlement.
- ~~7-10.~~ An entity may have a potential obligation that is larger than assumption price. If the entity has to seek release from a contract, the other party to the contract may be able to claim recompense for losses that it will sustain, as well as the return of any amounts paid. However, provided that the entity can settle the obligation by fulfillment, it can avoid such additional obligations and it is representationally faithful to report the obligation at no more than assumption price—this is analogous to the position where an asset will yield greater benefits than replacement cost. Under such circumstances, replacement cost rather than value in use is the most relevant measurement basis.

Cost of fulfillment

11. Cost of fulfillment is the costs that the entity will incur in fulfilling the obligations represented by the liability, assuming that it does so in the least costly manner. Where the cost of fulfillment depends on uncertain future events, all possible outcomes are taken into account in the estimated cost of fulfillment, which aims to reflect all those possible outcomes in an unbiased manner.
12. Where fulfillment requires work to be done—for example, where the liability is to rectify environmental damage—the relevant costs are those that the entity will incur. This may be the cost to the entity of doing the remedial work itself, or of contracting with an external party to carry out the work. However, the costs of contracting with an external party are only relevant where employing a contractor is the least costly means of fulfilling the obligation.
13. Where fulfillment will be made by the entity itself, the fulfillment cost does not include any surplus, because any such surplus does not represent a use of the entity's resources. Where fulfillment amount is based on the cost of employing a contractor, the amount will implicitly include the profit required by the contractor, as the total amount charged by the contractor will be a claim on the entity's resources—this is consistent with the approach for assets, where replacement cost would include the profit required by a supplier, but no profit would be included in the replacement cost for assets that the entity would replace through self-construction.

14. Where fulfillment will not take place for an extended period, the cash flows need to be discounted to reflect the value of the liability at the reporting date.

Cost of release

15. Cost of release refers to the amount of an immediate exit from the obligation. Cost of release is the amount that either the creditor will accept in settlement of its claim, or a third party would charge to accept the transfer of the liability from the obligor. Where there is more than one way of securing release from the liability, the cost of release is that of the lowest amount—this is consistent with the approach for assets, where net selling price would not reflect the amount that would be received on sale to a scrap dealer, if a higher price could be obtained from sale to a purchaser who would use the asset.
16. For some liabilities, particularly in the public sector, transfer of a liability is not practically possible and cost of release will therefore be the amount that the creditor will accept in settlement of its claim. This amount will be known if it is specified in the agreement with the creditor—for example, where a contract includes a specific cancellation clause.
8. In some cases there may be evidence of the price at which a liability may be transferred—for example, in the case of some pension liabilities. Transferring a liability may be distinguished from entering into an agreement with another party that will fulfill the entity's obligation or bear all the costs stemming from a liability. For a liability to be transferred it is necessary that all of the creditor's rights against the entity are extinguished. If this is not the effect of an arrangement, the liability remains a liability of the entity.

Fair value

- ~~9.~~17. Fair value is a market-based measurement, not an entity-specific measurement. For some assets and liabilities, observable market transactions or market information might be available. For other assets and liabilities, observable market transactions and market information might not be available. However, the objective of a fair value measurement in both cases is the same—to estimate the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants at the measurement date under current market conditions (i.e., an exit price at the measurement date from the perspective of a market participant that holds the asset or owes the liability).
- ~~10.~~18. When a price for an identical asset or liability is not observable, an entity measures fair value using another valuation technique that maximizes the use of relevant observable inputs and minimizes the use of unobservable inputs. Because fair value is a market-based measurement, it is measured using the assumptions that market participants would use when pricing the asset or liability, including assumptions about risk. As a result, an entity's intention to hold an asset or to settle or otherwise fulfil a liability is not relevant when measuring fair value.
- ~~11.~~19. The definition of fair value focuses on assets and liabilities because they are a primary subject of accounting measurement. In addition, this IPSAS shall be applied to an entity's own equity instruments measured at fair value.

Historical cost

20. Historical cost is an entry, entity-specific value. (The term "historical cost" may also be referred to as the "cost model" or generically as "cost-based measures.") Under the historical cost model assets are initially reported at the cost incurred on their acquisition. Subsequent to initial recognition, this cost may be allocated as an expense to reporting periods in the form of depreciation or amortization for certain assets, as the service potential or ability to generate

economic benefits provided by such assets are consumed over their useful lives. Following initial recognition, the measurement of an asset is not changed to reflect changes in prices or increases in the value of the asset.

21. Under the historical cost model the amount of an asset may be reduced by recognizing impairments. Impairment is the extent to which the service potential or ability to generate economic benefits provided by an asset have diminished due to changes in economic or other conditions, as distinct to their consumption. This involves assessments of recoverability. Conversely, the amount of an asset may be increased to reflect the cost of additions and enhancements (excluding price increases for unimproved assets) or other events, such as the accrual of interest on a financial asset.
22. When measuring liabilities under the historical cost model initial measures may be adjusted to reflect factors such as the accrual of interest, the accretion of discount or amortization of a premium.
- ~~12-23.~~ Where the time value of a liability is material—for example, where the length of time before settlement falls due is significant— the amount of the future payment is discounted so that, at the time a liability is first recognized, it represents the value of the amount received. The difference between the amount of the future payment and the present value of the liability is amortized over the life of the liability, so that the liability is stated at the amount of the required payment when it falls due.

Net selling price

- ~~13-24.~~ Net selling price is the amount that the entity can obtain from sale of the asset, after deducting the costs of sale. An asset cannot be worth less to the entity than the amount it could obtain on sale of the asset. Net selling price differs from market value in that it does not require an open, active and orderly market or the estimation of a price in such a market and that it includes the entity's costs of sale. Net selling price therefore reflects constraints on sale. It is entity-specific.

Replacement cost

25. Replacement cost is the most economic cost required for the entity to replace the service potential of an asset (including the amount that the entity will receive from its disposal at the end of its useful life) at the reporting date. Replacement cost is equivalent to the optimized depreciated replacement cost, which denotes that replacement cost refers to the replacement of the service potential embodied in an asset and not the asset itself.
26. Replacement cost differs from market value because it:
 - (a) Is explicitly an entry value that reflects the cost of replacing the service potential of an asset;
 - (b) Includes all the costs that would necessarily be incurred in the replacement of the service potential of an asset; and
 - (c) Is entity specific and therefore reflects the economic position of the entity, rather than the position prevailing in a hypothetical market. (For example, the replacement cost of a vehicle is less for an entity that usually acquires a large number of vehicles in a single transaction and is regularly able to negotiate discounts than for an entity that purchases vehicles individually.)
27. Because entities usually acquire their assets by the most economic means available, replacement cost reflects the procurement or construction process that an entity generally follows. Replacement cost reflects the replacement of service potential in the normal course of

operations, and not the costs that might be incurred if an urgent necessity arose as a result of some unforeseeable event, such as a fire.

28. Replacement cost is the cost of replacing an asset's service potential. Replacement cost adopts an optimized approach and differs from reproduction cost, which is the cost of acquiring an identical asset. (There may be cases where replacement cost equates to reproduction cost. This is where the most economic way of replacing service potential is to reproduce the asset.) Although in many cases the most economic replacement of the service potential will be by purchasing an asset that is similar to that which is controlled, replacement cost is based on an alternative asset if that alternative would provide the same service potential more cheaply. For financial reporting purposes, it is therefore necessary to reflect the difference in service potential between the existing and replacement asset.
29. The appropriate service potential is that which the entity is capable of using or expects to use, having regard to the need to hold sufficient service capacity to deal with contingencies. Therefore, the replacement cost of an asset reflects reductions in required service capacity. For example, if an entity owns a school that accommodates 500 pupils but, because of demographic changes since its construction, a school for 100 pupils would be adequate for current and reasonably foreseeable requirements, the replacement cost of the asset is that of a school for 100 pupils.
- 14.30. In some cases the value that will be derived from an asset will be greater than its replacement cost. However, it would not be appropriate to measure the asset at that value, as it includes benefits from future activities, rather than service potential at the reporting date. Replacement cost represents the highest potential value of an asset, as, by definition, the entity is able to secure equivalent service potential by incurring replacement cost.

Measurement

15.31. When another IPSAS establishes measurement requirements with reference to one or more of the measurement bases below an entity shall apply the application guidance in the relevant appendix to derive each measurement basis:

- ~~(a)~~—Assumption price;
- ~~(b)~~(a) Cost of fulfilment;
- ~~(c)~~(b) Fair value;
- ~~(d)~~(c) Historical cost; and
- ~~(e)~~—Market value;
- ~~(f)~~—Net selling price; and
- ~~(g)~~(d) Replacement cost.

Disclosures

- 16.32. An entity shall disclose the information listed in the relevant application guidance appendix of this Standard when using one or more of those measurement bases to measure assets and/or liabilities.**
- 17.33. Appendices A–D to this Standard, which have application guidance for cost of fulfillment, fair value, historical cost, and replacement cost, also list disclosures that an entity should make, when applying each measurement basis.

Effective Date

~~18-34.~~ **An entity shall apply this [draft] Standard for annual financial statements covering periods beginning on or after MMMM DD, YY. Earlier adoption is encouraged. If an entity applies this [draft] Standard for a period beginning before MMMM DD, YY, it shall disclose that fact.**

~~19-35.~~ When an entity adopts the accrual basis IPSASs of accounting as defined in IPSAS 33, *First-time Adoption of Accrual Basis International Public Sector Accounting Standards (IPSASs)* for financial reporting purposes subsequent to this effective date, this [draft] Standard applies to the entity's annual financial statements covering periods beginning on or after the date of adoption of IPSASs.

Application Guidance Appendices

These application guidance appendices are an integral part of [draft] IPSAS [X] (ED XX) ¹

Contents	Paragraphs
Appendix A: Assumption price–application guidance	AG1 - AGX
Appendix BA : Cost of fulfilment–application guidance	AGX - AGX
Appendix CB : Fair value–application guidance	AGX - AGX
Appendix DC : Historical cost–application guidance	AGX - AGX
Appendix E: Market value–application guidance	AGX - AGX
Appendix F: Net selling price–application guidance	AGX - AGX
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Appendix E: Measurement of assets held for sale or disposal	AGX - AGX

¹ These appendices are expected to provide application guidance on, inter alia, the topics identified in paragraph 10(b) of agenda paper 8.2.1.

Appendix A: Cost of fulfillment–application guidance

This Appendix is an integral part of IPSAS XX, Measurement.

Measurement

1. The objective of cost of fulfillment measurement is to estimate the value of a liability assuming the entity will fulfill its obligation in the least costly manner. A cost of fulfillment measurement requires an entity to determine all the following:
 - (a) The particular liability that is the subject of the measurement (consistently with its unit of account).
 - (b) The manner in which the liability will be settled.
 - (c) The liability's expected timing of settlement.
 - (d) The valuation technique(s) appropriate for the measurement, considering the availability of data with which to develop inputs that represent the assumptions that market participants would use when pricing the liability.

The liability

2. A cost of fulfillment measurement is for a particular liability. Therefore, when measuring the cost of fulfillment, an entity takes into account characteristics of the particular liability relevant in determining the cost of fulfillment at the measurement date. Such characteristics include, for example, the following:
 - (a) The entity's expectations about the amount and timing of the future outflow of resources; and
 - (b) The risk that the actual future outflow of resources may ultimately differ from those expected (i.e. a risk premium).
3. The effect on the measurement arising from a particular characteristic will differ depending on how that characteristic would be taken into account by the specific entity.
4. The liability measured at its cost of fulfillment might be either of the following:
 - (a) A stand-alone liability (e.g., a legal claim against the entity); or
 - (b) A group of liabilities (e.g., decommissioning liabilities associated with a particular asset).
5. Whether the liability is a stand-alone liability or a group liabilities for recognition or disclosure purposes depends on the liability's unit of account. The unit of account for the liability shall be determined in accordance with the IPSAS that requires or permits the cost of fulfillment measurement, except as provided in this Application Guidance.

The least costly manner

6. The cost of fulfillment measurement assumes that the liability is settled by the entity in the least costly manner.
7. An entity need not undertake an exhaustive search of all settlement methods to identify the least costly manner of settlement, but it shall take into account all information that is reasonably available. In the absence of evidence to the contrary, the least costly manner of settlement is presumed to be the manner in which the entity has currently selected to release itself from the obligation. For

example, if an entity elects to fulfill its decommissioning liability using its own employees, it is presumed this is the least costly manner of settlement, regardless of the entity's ability to contract the decommissioning to third parties.

8. Once an entity has a designated settlement method, the cost of fulfillment measurement shall be based on this method, even if the cost using a different method is potentially more advantageous at the measurement date. Once an entity designates a settlement method, whether a less costly method exists is irrelevant as the entity cannot access this secondary method.
9. The entity must have the ability to access the settlement method that results in the obligation being settled in the least costly manner at the expected settlement date. Because different entities (and operations within those entities) with different activities may have access to a variety of settlement methods, the least costly manner for the same liability might be different for different entities (and operations within those entities). Therefore, the least costly manner shall be considered from the perspective of the entity, thereby allowing for differences between and among entities with different activities.
10. Where fulfillment requires work to be done—for example, where the liability is to rectify environmental damage—the relevant costs are those that the entity will incur. This may be the cost to the entity of doing the remedial work itself, or of contracting with an external party to carry out the work. However, the costs of contracting with an external party are only relevant where employing a contractor is the least costly means of fulfilling the obligation.
11. Where fulfillment will be made by the entity itself, the fulfillment cost does not include any surplus, because any such surplus does not represent a use of the entity's resources. Where the cost of fulfillment amount is based on the cost of employing a contractor, the amount will implicitly include the profit required by the contractor, as the total amount charged by the contractor will be a claim on the entity's resources.

Entity-specific value

12. **The cost of fulfillment is an entity specific value. An entity shall measure the cost of fulfillment of a liability using the assumptions from the entity's perspective, assuming the entity acts in its own economic best interest.**
13. In developing those entity-specific assumptions, an entity shall identify characteristics specific to the entity and the liability, considering factors specific to all the following:
 - (a) The liability;
 - (b) The entity's expectations about the amount and timing of future outflows of resources;
 - (c) The time value of money; and
 - (d) The risk that the actual outflow of resources may ultimately differ from those expected (i.e. a risk premium).
14. When measuring an entity specific value, the estimate of risk premium and the time value of money should be market based. This does not require an entity to use the same assumptions as a market participant, however maximizing the use of market based assumptions is required. For example, when discounting future cash flows, a market based discount rate should be applied where appropriate.

15. Accordingly, the risk premium and time value of money in an entity specific measure of a liability should be the amount market participants would apply if their estimates of the amount and timing of the future outflow of resources were the same as the entity's estimates.

The cost that the entity will incur

16. **The cost of fulfillment estimates the cost assuming the entity fulfills its obligation.**
17. A cost of fulfillment measurement, both at initial and subsequent measurement, should only incorporate the future outflows of resources the entity expects to incur to satisfy the obligation.
18. The price used to measure the cost of fulfilling the liability shall not be adjusted for *transaction costs*. Transaction costs shall be accounted for in accordance with other IPSASs. Transaction costs are not a characteristic of a liability; rather, they are specific to a transaction and will differ depending on how an entity enters into a transaction for the liability.
19. Where the cost of fulfillment depends on uncertain future events, all possible outcomes are taken into account in the estimated cost of fulfillment, which aims to reflect all those possible outcomes in an unbiased manner.
20. Where settlement of the obligation will not take place for an extended period, the cash flows need to be discounted to reflect the value of the liability at the measurement date using a valuation technique. As a practical expedient, an entity need not discount the value of the future outflow of resources if the entity expects the obligation to be settled within one year.

Fulfilling its obligations

21. **The cost of fulfillment is the cost that the entity expects to incur to settle its obligation in the normal course of operations.**
22. **In estimating the cost to settle its obligation in the normal course of operations, the entity assumes the obligation will be fulfilled under the existing terms of the arrangement, with the current counterparty and that the liability will not be transferred to a third party.**
23. In estimating the cost of fulfillment the entity takes into account all readily available information at the measurement date under current market conditions in estimating the outflow of resources required to settle the liability at the expected settlement date.
24. The cost of fulfillment shall not include the non-performance risk of the entity to settle its obligation. Non-performance risk is the risk that an entity will not fulfil its obligations and it is a characteristic of a liability. However, in estimating the cost of fulfilling a liability, an entity should not include non-performance risk in its estimate.
25. A cost of fulfillment measurement is a measure of the value of a liability assuming the entity will fulfil its obligations. As non-performance risk takes into account the effect on the value of a liability of the entity potentially not meeting its obligations it is inconsistent to include in the measure of a liability the possibility that it may not meet its obligations when the cost of fulfillment measurement assumes the liability will be fulfilled in the normal course of operations.

Valuation techniques

26. **An entity shall use valuation techniques that are appropriate in the circumstances and for which sufficient data is available to measure the cost of fulfillment, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs.**

27. The objective of using a valuation technique is to estimate the cost that the entity will incur in fulfilling the obligations represented by the liability at the measurement date under current market conditions. The most commonly used valuation approach when measuring the cost of fulfillment is an income approach. The main aspects of that approach as it relates to the cost of fulfillment are summarized in paragraphs 28–61.

Income approach

28. The income approach converts future outflows of resources (e.g., cash flows) to a single current (i.e., discounted) amount. When the income approach is used, the cost of fulfillment measurement reflects current market expectations about those future amounts.

29. The most commonly used valuation techniques when measuring the cost of fulfillment are present value techniques. (see paragraphs 30–61);

Present value techniques

30. Paragraphs 31–61 describe the use of present value techniques to measure the cost of fulfillment. Those paragraphs neither prescribe the use of a single specific present value technique nor limit the use of present value techniques to measure the cost of fulfillment to the techniques discussed. The present value technique used to measure the cost of fulfillment will depend on facts and circumstances specific to the liability being measured and the availability of sufficient data.

The components of a present value measurement

31. Present value (i.e., an application of the income approach) is a tool used to link future amounts (e.g., cash flows) to a present amount using a discount rate. A cost of fulfillment measurement of a liability using a present value technique captures all the following elements from the entity's perspective at the measurement date:

- (a) An estimate of future outflows of resources for the liability being measured.
- (b) Expectations about possible variations in the amount and timing of the outflows of resources representing the uncertainty inherent in the outflows of resources.
- (c) The time value of money, represented by the rate on risk-free monetary liabilities that have maturity dates or durations that coincide with the period covered by the outflows of resources and pose neither uncertainty in timing nor risk of default to the holder (i.e., a risk-free interest rate).
- (d) The price for bearing the uncertainty inherent in the outflows of resources (i.e., a risk adjustment).
- (e) Other factors that the entity would take into account in the circumstances.

General principles

32. Present value techniques differ in how they capture the elements in paragraph 31. However, all the following general principles govern the application of any present value technique used to measure the cost of fulfillment:

- (a) Outflows of resources and discount rates should reflect entity specific assumptions that market participants would use when pricing the liability that is expected to be settled through fulfillment of the arrangement.

- (b) Outflows of resources and discount rates should take into account only the factors attributable to the liability being measured.
- (c) To avoid double-counting or omitting the effects of risk factors, discount rates should reflect assumptions that are consistent with those inherent in the outflows of resources. For example, a discount rate that reflects the uncertainty in expectations about future defaults is appropriate if using contractual cash flows of a loan (i.e., a discount rate adjustment technique). That same rate should not be used if using expected (i.e., probability-weighted) cash flows (i.e., an expected present value technique) because the expected cash flows already reflect assumptions about the uncertainty in future defaults; instead, a discount rate that is commensurate with the risk inherent in the expected cash flows should be used.
- (d) Assumptions about outflows of resources and discount rates should be internally consistent. For example, nominal cash flows, which include the effect of inflation, should be discounted at a rate that includes the effect of inflation. The nominal risk-free interest rate includes the effect of inflation. Real cash flows, which exclude the effect of inflation, should be discounted at a rate that excludes the effect of inflation. Similarly, after-tax cash flows should be discounted using an after-tax discount rate. Pre-tax cash flows should be discounted at a rate consistent with those cash flows.
- (e) Discount rates should be consistent with the underlying economic factors of the currency in which the outflows of resources are denominated.

Risk adjustment

- 33. A cost of fulfillment measurement using present value techniques is made under conditions of uncertainty because the actual resource flows may ultimately differ from those expected. In many cases both the amount and timing of the outflows of resources are uncertain. Even contractually fixed amounts, such as the payments on a loan, are uncertain if there is a prepayment option.
- 34. A cost of fulfillment measurement should include a risk based on the entity's estimates of future outflows of resources. The estimated risk premium for a cost of fulfillment measurement is an entity specific assumption. This risk premium does not represent the market risk premium reflecting the amount market participants would demand for bearing the risk that the actual outflows of resources maybe different from their expectations, however, it does reflect the entity's expectation of the variability in timing and amounts related to the flows of resources. The risk adjustment measures the compensation that the entity would require to make the entity indifferent between:
 - (a) Fulfilling a liability that has a range of possible outcomes; and
 - (b) Fulfilling a liability that will generate fixed outflows of resources with the same expected present value as the liability being measured.

For example, the risk adjustment would measure the compensation that the entity would require to make it indifferent between fulfilling a liability that has a 50 per cent probability of being CU90 and a 50 per cent probability of being CU110 and fulfilling a liability that is fixed at CU100. As a result, the risk adjustment conveys information to users of financial statements about the entity's perception of the effects of uncertainty about the amount and timing of cash flows that arise from a liability.

- 35. The risk adjustment shall reflect all risks associated with the liability. It shall not reflect the risks that do not arise from the liability, such as general operational risk that relates to future transactions.

36. The risk adjustment shall be included in the measurement in an explicit way. Thus, in principle, the risk adjustment is separate from the estimates of future outflow of resources and the discount rates that adjust those outflow of resources for the time value of money. The entity shall not double-count the risk adjustments by, for example, including the risk adjustment implicitly when determining the estimates of future outflow of resources or the discount rates.
37. This Appendix does not specify the technique that is used to determine the risk adjustment. However, to meet the objective in paragraph 34, the risk adjustment shall have the following characteristics:
- (a) Risks with low frequency and high severity will result in higher risk adjustments than risks with high frequency and low severity;
 - (b) For similar risks, contracts with a longer duration will result in higher risk adjustments than contracts with a shorter duration;
 - (c) Risks with a wide probability distribution will result in higher risk adjustments than risks with a narrower distribution;
 - (d) The less that is known about the current estimate and its trend, the higher the risk adjustment; and
 - (e) To the extent that emerging experience reduces uncertainty, risk adjustments will decrease and vice versa.
38. An entity shall apply judgement when determining an appropriate risk adjustment technique to use. If a risk premium were not included, the measurement would not faithfully represent the cost to fulfill the liability. In some cases determining the appropriate risk premium might be difficult. However, the degree of difficulty alone is not a sufficient reason to exclude a risk premium.

Future outflows of resources

39. The estimates of outflows of resources used to determine the cost of fulfillment shall include all inflows of resources and outflows of resources that relate directly to the fulfilment of the liability. Those estimates shall:
- (a) Be explicit (i.e., the entity shall estimate those outflows of resources separately from the estimates of discount rates that adjust those future outflows of resources for the time value of money and the risk adjustment that adjusts those future outflows of resources for the effects of uncertainty about the amount and timing of those outflows of resources);
 - (b) Reflect the perspective of the entity, provided that the estimates of any relevant market variables do not contradict the observable market prices for those variables (see paragraphs 43–47);
 - (c) Incorporate, in an unbiased way, all of the available information about the amount, timing and uncertainty of all of the inflows of resources and outflows of resources that are expected to arise as the entity fulfils the liability (see paragraph 48); and
 - (d) Be current (i.e., the estimates shall reflect all of the available information at the measurement date) (see paragraphs 49–53).

Uncertainty and the expected value approach

40. The expected present value technique uses as a starting point a set of outflows of resources that represents the probability-weighted average of all possible future outflows of resources (i.e., the expected outflows of resources). The resulting estimate is identical to expected value, which, in

statistical terms, is the weighted average of a discrete random variable's possible values with the respective probabilities as the weights. Because all possible outflows of resources are probability-weighted, the resulting expected outflows of resources is not conditional upon the occurrence of any specified event (unlike the outflows of resources used in the discount rate adjustment technique).

41. In determining the expected outflows of resources an entity must:

- (a) Identify each possible outcome;
- (b) Make an unbiased estimate of the amount and timing of the future outflows of resources for each outcome;
- (c) Make an unbiased estimate of the probability of each outcome.

42. Paragraph 41 requires the estimate of expected values reflect an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes. In practice, this may not need to be a complex analysis. In some cases, relatively simple modelling may be sufficient, without the need for a large number of detailed simulations of scenarios. For example, the identification of scenarios that specify the amount and timing of the outflows of resources for particular outcomes and the estimated probability of those outcomes will probably be needed. In those situations, the expected outflows of resources shall reflect at least two outcomes.

Market variables and non-market variables (paragraph 39(b))

43. This application guidance identifies two types of variables:

- (a) Market variables—variables that can be observed in, or derived directly from, markets (for example, interest rates); and
- (b) Non-market variables—all other variables (for example, the frequency and severity of natural disasters impacting decommissioning liabilities).

Market variables

44. Estimates of market variables shall be consistent with observable market prices at the end of the reporting period. An entity shall not substitute its own estimates for observed market prices except as described in paragraph 66 of Appendix B. In accordance with Appendix B, if market variables need to be estimated (for example, because no observable market variables exist), they shall be as consistent as possible with observable market variables.

Non-market variables

- 45. Estimates of non-market variables shall reflect all of the available evidence, both external and internal.
- 46. Non-market external data (for example, national statistics for decommissioning of a nuclear power facility) may have more or less relevance than internal data (for example, internally developed statistics for decommissioning of a nuclear power facility), depending on the circumstances.
- 47. Estimated probabilities for non-market variables shall not contradict observable market variables. For example, estimated probabilities for future inflation rate scenarios shall be as consistent as possible with probabilities implied by market interest rates.

Estimating probabilities of future payments (paragraph 39(c))

48. An entity estimates the probabilities associated with future payments under existing contracts on the basis of:

- (a) Information about the known or estimated characteristics of the liability;
- (b) Historical data about the entity's own experience, supplemented when necessary with historical data from other sources. Historical data is adjusted if, for example:
 - (i) The characteristics of the liability differ (or will differ, for example because of adverse selection) from those of the population that has been used as a basis for the historical data;
 - (ii) There is evidence that historical trends will not continue, that new trends will emerge or that economic or other changes may affect the outflow of resources that arise from the existing liability; or
 - (iii) There have been changes in the entity's practices or procedures that may affect the relevance of historical data to the liability.

Under current estimates (paragraph 39(d))

49. In estimating the probability of each outflow of resources scenario, an entity shall use all of the available current information at the end of the reporting period. An entity shall review the estimates of the probabilities that it made at the end of the previous reporting period and update them for any changes. In doing so, an entity shall consider whether:
- (a) The updated estimates faithfully represent the conditions at the end of the reporting period; and
 - (b) The changes in estimates faithfully represent the changes in conditions during the period. For example, suppose that estimates were at one end of a reasonable range at the beginning of the period. If the conditions have not changed, changing the estimates to the other end of the range at the end of the period would not faithfully represent what has happened during the whole period. If an entity's most recent estimates are different from its previous estimates, but conditions have not changed, it shall assess whether the new probabilities that are assigned to each scenario are justified. In updating its estimates of those probabilities, the entity shall consider both the evidence that supported its previous estimates and all of the new available evidence, giving more weight to the more persuasive evidence.
50. The probability assigned to each scenario shall reflect the conditions at the end of the reporting period. Consequently, in accordance with IPSAS 14, *Events after the Reporting Date*, an event that occurs after the end of the reporting period and resolves a condition that existed at the reporting date does not provide evidence of a condition that existed at the end of the reporting period. For example, there may be a 20 per cent probability at the end of the reporting period that a major storm will strike prior to a facility being decommissioned that would increase the cost of decommission. After the end of the reporting period and before the financial statements are authorized for issue, a storm strikes. The outflow of resources under that contract shall not reflect the storm that, with hindsight, is known to have occurred. Instead, the outflow of resources that were included in the measurement are multiplied by the 20 per cent probability that was apparent at the end of the reporting period (with appropriate disclosure, in accordance with IPSAS 14, that a non-adjusting event occurred after the end of the reporting period).

Future Events (paragraph 39(d))

51. Estimates of non-market variables shall consider not just current information about the liabilities but also information about trends. For example, technology has consistently improved over long periods

decreasing decommissioning costs. The determination of the outflow of resources reflects the probabilities that would be assigned to each possible trend scenario in the light of all of the available evidence.

52. Similarly, if the outflow of resources associated with fulfilling the liability are sensitive to inflation, the determination of the outflow of resources shall reflect possible future inflation rates. Because inflation rates are likely to be correlated with interest rates, the measurement of the outflow of resources reflects the probabilities for each inflation scenario in a way that is consistent with the probabilities that are implied by market interest rates.
53. When estimating the outflow of resources associated with fulfilling the liability, an entity shall take into account future events that might affect the outflow of resources. The entity shall develop scenarios that reflect those future events, as well as unbiased estimates of the probability weights for each scenario. However, an entity shall not take into account future events, such as a change in legislation, that would change or discharge the present obligation or create new obligations under the existing liability.

Time value of money

54. Entities are not indifferent to the timing of an outflow of resources. Accordingly, the timing of the future outflows of resources is a characteristic of a liability and needs to be encompassed in any measurement of a liability's current value. Failure to reflect the time value of money would mean that the resulting measurement would not be a faithful representation of the economic burden the liability represents.
55. An entity shall determine the estimated outflows of resources by adjusting the estimates of future outflows of resources for the time value of money, using discount rates that reflect the characteristics of the liability. Such rates shall:
- (a) Be consistent with observable current market prices for instruments with outflows of resources whose characteristics are consistent with those of the liability's outflows of resources, in terms of, for example, timing, currency and liquidity.
 - (b) Exclude the effect of any factors that influence the observable market prices but that are not relevant to the outflows of resources of the liability.
56. When using a risk-free rate, the logical sources of reference rates are high quality bonds, for example, bonds issued by a financially sound government. These instruments should include no or insignificant default risk. They will also typically have a range of maturity dates or durations to match the liability durations. In the event that long-dated bonds are unavailable for liabilities with long durations, such as some decommissioning liabilities, it would be necessary to use extrapolation techniques to estimate the rates.
57. Although rates on high quality government bonds will not need to be adjusted for default risk in determining the risk free discount rate, they may need to be adjusted for liquidity risk. Some government bonds are traded in deep and liquid markets enabling bond holders to readily sell them at minimal cost. The rate payable on such bonds is lower than the rate payable on an equivalent illiquid bond. Accordingly, it might be necessary to include a 'premium for illiquidity' in the observed rate for government bonds that are not traded in deep and liquid markets.

Inputs to valuation techniques

General principles

58. **Valuation techniques used in a cost of fulfillment measurement shall maximize the use of relevant observable inputs and minimize the use of unobservable inputs.**
59. The cost of fulfillment measurement is an entity specific valuation. When a valuation technique is applied, an entity shall select inputs that are consistent with the characteristics of the liability (see paragraph 13). The technique should maximize the use of observable inputs that are available to a market participant that is making the same valuation as the entity, from the entity's perspective. For example, when measuring the cost to fulfill a decommissioning liability where payments are due in 50 years, an observable market input when discounting the outflow of resources is the government bond rate applicable to the entity.
60. In some cases the characteristics of a liability may result in the application of an adjustment (e.g., there is no corresponding bond rate to discount an outflow of resources due in 3.5 years). However, a cost of fulfillment measurement shall not incorporate an adjustment that is inconsistent with the unit of account in the IPSAS that requires or permits the cost of fulfillment measurement.
61. When a liability will settle at a future date, the assumptions applied in developing and identifying inputs are based on current market conditions. For example, a decommissioning liability may be expected to settle in 50 years. The payment due on settlement and the associated discount rate are both based on information available at the measurement date.

Disclosure

62. **For liabilities that are measured at cost of fulfillment in the statement of financial position an entity shall disclose information that helps users of its financial statements assess the valuation techniques and inputs used to develop those measurements.**
63. To meet the objectives in paragraph 62, an entity shall consider all the following:
- (a) The level of detail necessary to satisfy the disclosure requirements;
 - (b) How much emphasis to place on each of the various requirements;
 - (c) How much aggregation or disaggregation to undertake; and
 - (d) Whether users of financial statements need additional information to evaluate the quantitative information disclosed.
- If the disclosures provided in accordance with this IPSAS and other IPSASs are insufficient to meet the objectives in paragraph 62, an entity shall disclose additional information necessary to meet those objectives.
64. To meet the objectives in paragraph 62, an entity shall disclose, at a minimum, the following information for each class of liabilities measured at cost of fulfillment in the statement of financial position after initial recognition:
- (a) A description of the valuation technique(s) used in the cost of fulfillment measurement. If there has been a change in valuation technique, the entity shall disclose that change and the reason(s) for making it.

- (b) The significant assumptions and significant inputs applied in estimating the cost of fulfillment measurements. If there has been a change in significant assumptions or significant inputs, the entity shall disclose that change and the reason(s) for making it.
- (c) The sources of the significant assumptions and significant inputs applied in estimating the cost of fulfillment measurements.
- (d) The timing of significant future outflows of resources that will be applied in settling the obligation measured using the cost of fulfillment.
- (e) The amount of the total gains or losses for the period included in surplus or deficit that is attributable to the change in unrealized gains or losses relating to those liabilities held at the end of the reporting period, and the line item(s) in surplus or deficit in which those unrealized gains or losses are recognized.
- (f) A narrative description of the sensitivity of the cost of fulfillment measurement to changes in significant inputs if a change in those inputs to a different amount might result in a significantly higher or lower cost of fulfillment measurement.

Appendix C: Fair value—application guidance

This Appendix is an integral part of IPSAS XX, Measurement.

Measurement

Paragraph 1 is IFRS 13.AG2

1. The objective of a fair value measurement is to estimate the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants at the measurement date under current market conditions. A fair value measurement requires an entity to determine all the following:
 - (a) The particular asset or liability that is the subject of the measurement (consistently with its unit of account).
 - (b) For a non-financial asset, the valuation premise that is appropriate for the measurement (consistently with its highest and best use).
 - (c) The principal (or most advantageous) market for the asset or liability.
 - (d) The valuation technique(s) appropriate for the measurement, considering the availability of data with which to develop inputs that represent the assumptions that market participants would use when pricing the asset or liability and the level of the fair value hierarchy within which the inputs are categorized.

The asset or liability

65. A fair value measurement is for a particular asset or liability. Therefore, when measuring fair value an entity shall take into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Such characteristics include, for example, the following:
 - (a) **The condition and location of the asset; and**
 - (b) **Restrictions, if any, on the sale or use of the asset.**
66. The effect on the measurement arising from a particular characteristic will differ depending on how that characteristic would be taken into account by market participants.
67. The asset or liability measured at fair value might be either of the following:
 - (a) A stand-alone asset or liability (e.g., a financial instrument or a non-financial asset); or
 - (b) A group of assets, a group of liabilities or a group of assets and liabilities (e.g., a cash-generating unit or an operation).
68. Whether the asset or liability is a stand-alone asset or liability, a group of assets, a group of liabilities or a group of assets and liabilities for recognition or disclosure purposes depends on its *unit of account*. The unit of account for the asset or liability shall be determined in accordance with the IPSAS that requires or permits the fair value measurement, except as provided in this Application Guidance.

The transaction

69. **A fair value measurement assumes that the asset or liability is exchanged in an orderly transaction between market participants to sell the asset or transfer the liability at the measurement date under current market conditions.**
70. **A fair value measurement assumes that the transaction to sell the asset or transfer the liability takes place either:**
- (a) In the principal market for the asset or liability; or**
 - (b) In the absence of a principal market, in the most advantageous market for the asset or liability.**
71. An entity need not undertake an exhaustive search of all possible markets to identify the principal market or, in the absence of a principal market, the most advantageous market, but it shall take into account all information that is reasonably available. In the absence of evidence to the contrary, the market in which the entity would normally enter into a transaction to sell the asset or to transfer the liability is presumed to be the principal market or, in the absence of a principal market, the most advantageous market.
72. If there is a principal market for the asset or liability, the fair value measurement shall represent the price in that market (whether that price is directly observable or estimated using another valuation technique), even if the price in a different market is potentially more advantageous at the measurement date.
73. The entity must have access to the principal (or most advantageous) market at the measurement date. Because different entities (and operations within those entities) with different activities may have access to different markets, the principal (or most advantageous) market for the same asset or liability might be different for different entities (and operations within those entities). Therefore, the principal (or most advantageous) market (and thus, market participants) shall be considered from the perspective of the entity, thereby allowing for differences between and among entities with different activities.
74. Although an entity must be able to access the market, the entity does not need to be able to sell the particular asset or transfer the particular liability on the measurement date to be able to measure fair value on the basis of the price in that market.
75. Even when there is no observable market to provide pricing information about the sale of an asset or the transfer of a liability at the measurement date, a fair value measurement shall assume that a transaction takes place at that date, considered from the perspective of a market participant that holds the asset or owes the liability. That assumed transaction establishes a basis for estimating the price to sell the asset or to transfer the liability.

Market participants

76. **An entity shall measure the fair value of an asset or a liability using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.**
77. In developing those assumptions, an entity need not identify specific market participants. Rather, the entity shall identify characteristics that distinguish market participants generally, considering factors specific to all the following:

- (a) The asset or liability;
- (b) The principal (or most advantageous) market for the asset or liability; and
- (c) Market participants with whom the entity would enter into a transaction in that market.

The price

78. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction in the principal (or most advantageous) market at the measurement date under current market conditions (i.e., an exit price) regardless of whether that price is directly observable or estimated using another valuation technique.
79. The price in the principal (or most advantageous) market used to measure the fair value of the asset or liability shall not be adjusted for *transaction costs*. Transaction costs shall be accounted for in accordance with other IPSASs. Transaction costs are not a characteristic of an asset or a liability; rather, they are specific to a transaction and will differ depending on how an entity enters into a transaction for the asset or liability.
80. Transaction costs do not include *transport costs*. If location is a characteristic of the asset (as might be the case, for example, for a commodity), the price in the principal (or most advantageous) market shall be adjusted for the costs, if any, that would be incurred to transport the asset from its current location to that market.

Fair value at initial recognition

81. When an asset is acquired or a liability is assumed in an exchange transaction for that asset or liability, the transaction price is the price paid to acquire the asset or received to assume the liability (an *entry price*). In contrast, the fair value of the asset or liability is the price that would be received to sell the asset or paid to transfer the liability (an exit price). Entities do not necessarily sell assets at the prices paid to acquire them. Similarly, entities do not necessarily transfer liabilities at the prices received to assume them.
82. In many cases the transaction price will equal the fair value (e.g., that might be the case when on the transaction date the transaction to buy an asset takes place in the market in which the asset would be sold).
83. When determining whether fair value at initial recognition equals the transaction price, an entity shall take into account factors specific to the transaction and to the asset or liability. Paragraph AG4 describes situations in which the transaction price might not represent the fair value of an asset or a liability at initial recognition.
84. If another IPSAS requires or permits an entity to measure an asset or a liability initially at fair value and the transaction price differs from fair value, the entity shall recognize the resulting gain or loss in surplus or deficit unless that IPSAS specifies otherwise.

Paragraph 22 is IFRS 13.AG4

85. When determining whether fair value at initial recognition equals the transaction price, an entity shall take into account factors specific to the transaction and to the asset or liability. For example, the transaction price might not represent the fair value of an asset or a liability at initial recognition if any of the following conditions exist:

- (a) The transaction is between related parties, although the price in a related party transaction may be used as an input into a fair value measurement if the entity has evidence that the transaction was entered into at market terms.
- (b) The transaction takes place under duress or the seller is forced to accept the price in the transaction. For example, that might be the case if the seller is experiencing financial difficulty.
- (c) The unit of account represented by the transaction price is different from the unit of account for the asset or liability measured at fair value. For example, that might be the case if the asset or liability measured at fair value is only one of the elements in the transaction (e.g., in a public sector combination), the transaction includes unstated rights and privileges that are measured separately in accordance with another IPSAS, or the transaction price includes transaction costs.
- (d) The market in which the transaction takes place is different from the principal market (or most advantageous market). For example, those markets might be different if the entity is a dealer that enters into transactions with customers in the retail market, but the principal (or most advantageous) market for the exit transaction is with other dealers in the dealer market.

Valuation techniques

- 23. **An entity shall use valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs.**
- 24. The objective of using a valuation technique is to estimate the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants at the measurement date under current market conditions. Three widely used valuation techniques are the market approach, the cost approach and the income approach. The main aspects of those approaches are summarized in paragraphs 29–35. An entity shall use valuation techniques consistent with one or more of those approaches to measure fair value.
- 25. In some cases a single valuation technique will be appropriate (e.g., when valuing an asset or a liability using quoted prices in an active market for identical assets or liabilities). In other cases, multiple valuation techniques will be appropriate (e.g., that might be the case when valuing a cash-generating unit). If multiple valuation techniques are used to measure fair value, the results (i.e., respective indications of fair value) shall be evaluated considering the reasonableness of the range of values indicated by those results. A fair value measurement is the point within that range that is most representative of fair value in the circumstances.
- 26. If the transaction price is fair value at initial recognition and a valuation technique that uses unobservable inputs will be used to measure fair value in subsequent periods, the valuation technique shall be calibrated so that at initial recognition the result of the valuation technique equals the transaction price. Calibration ensures that the valuation technique reflects current market conditions, and it helps an entity to determine whether an adjustment to the valuation technique is necessary (e.g., there might be a characteristic of the asset or liability that is not captured by the valuation technique). After initial recognition, when measuring fair value using a valuation technique or techniques that use unobservable inputs, an entity shall ensure that those valuation techniques reflect observable market data (e.g., the price for a similar asset or liability) at the measurement date.
- 27. Valuation techniques used to measure fair value shall be applied consistently. However, a change in a valuation technique or its application (e.g., a change in its weighting when multiple valuation

techniques are used or a change in an adjustment applied to a valuation technique) is appropriate if the change results in a measurement that is equally or more representative of fair value in the circumstances. That might be the case if, for example, any of the following events take place:

- (a) New markets develop;
- (b) New information becomes available;
- (c) Information previously used is no longer available;
- (d) Valuation techniques improve; or
- (e) Market conditions change.

28. Revisions resulting from a change in the valuation technique or its application shall be accounted for as a change in accounting estimate in accordance with IPSAS 3. However, the disclosures in IPSAS 3 for a change in accounting estimate are not required for revisions resulting from a change in a valuation technique or its application.

Market approach

Paragraphs 29-31 are IFRS 13.AG5-AG7

29. The market approach uses prices and other relevant information generated by market transactions involving identical or comparable (i.e., similar) assets, liabilities or a group of assets and liabilities, such as an operation.
30. For example, valuation techniques consistent with the market approach often use market multiples derived from a set of comparables. Multiples might be in ranges with a different multiple for each comparable. The selection of the appropriate multiple within the range requires judgement, considering qualitative and quantitative factors specific to the measurement.
31. Valuation techniques consistent with the market approach include matrix pricing. Matrix pricing is a mathematical technique used principally to value some types of financial instruments, such as debt securities, without relying exclusively on quoted prices for the specific securities, but rather relying on the securities' relationship to other benchmark quoted securities.

Cost approach

Paragraphs 32 and 33 are IFRS 13.AG8 and AG9

32. The cost approach reflects the amount that would be required currently to replace the service capacity of an asset (often referred to as current replacement cost).
33. From the perspective of a market participant seller, the price that would be received for the asset is based on the cost to a market participant buyer to acquire or construct a substitute asset of comparable utility, adjusted for obsolescence. That is because a market participant buyer would not pay more for an asset than the amount for which it could replace the service capacity of that asset. Obsolescence encompasses physical deterioration, functional (technological) obsolescence and economic (external) obsolescence and is broader than depreciation for financial reporting purposes (an allocation of historical cost) or tax purposes (using specified service lives). In many cases the current replacement cost method is used to measure the fair value of tangible assets that are used in combination with other assets or with other assets and liabilities.

Income approach

Paragraphs 34 and 35 are IFRS 13.AG10 and AG11

34. The income approach converts future amounts (e.g., cash flows or income and expenses) to a single current (i.e., discounted) amount. When the income approach is used, the fair value measurement reflects current market expectations about those future amounts.
35. Those valuation techniques include, for example, the following:
- (a) Present value techniques (see paragraphs 36–54);
 - (b) Option pricing models, such as the Black-Scholes-Merton formula or a binomial model (i.e., a lattice model), that incorporate present value techniques and reflect both the time value and the intrinsic value of an option; and
 - (c) The multi-period excess earnings method, which is used to measure the fair value of some intangible assets.

Present value techniques

Paragraphs 36 and 37 are IFRS 13.AG12 and AG13

36. Paragraphs 37–54 describe the use of present value techniques to measure fair value. Those paragraphs focus on a discount rate adjustment technique and an expected cash flow (expected present value) technique. Those paragraphs neither prescribe the use of a single specific present value technique nor limit the use of present value techniques to measure fair value to the techniques discussed. The present value technique used to measure fair value will depend on facts and circumstances specific to the asset or liability being measured (e.g., whether prices for comparable assets or liabilities can be observed in the market) and the availability of sufficient data.

The components of a present value measurement

37. Present value (i.e., an application of the income approach) is a tool used to link future amounts (e.g., cash flows or values) to a present amount using a discount rate. A fair value measurement of an asset or a liability using a present value technique captures all the following elements from the perspective of market participants at the measurement date:
- (a) An estimate of future cash flows for the asset or liability being measured.
 - (b) Expectations about possible variations in the amount and timing of the cash flows representing the uncertainty inherent in the cash flows.
 - (c) The time value of money, represented by the rate on risk-free monetary assets that have maturity dates or durations that coincide with the period covered by the cash flows and pose neither uncertainty in timing nor risk of default to the holder (i.e., a risk-free interest rate).
 - (d) The price for bearing the uncertainty inherent in the cash flows (i.e., a risk premium).
 - (e) Other factors that market participants would take into account in the circumstances.
 - (f) For a liability, the non-performance risk relating to that liability, including the entity's (i.e., the obligor's) own credit risk.

General principlesParagraph 38 is IFRS 13.AG14

38. Present value techniques differ in how they capture the elements in paragraph 37. However, all the following general principles govern the application of any present value technique used to measure fair value:

- (a) Cash flows and discount rates should reflect assumptions that market participants would use when pricing the asset or liability.
- (b) Cash flows and discount rates should take into account only the factors attributable to the asset or liability being measured.
- (c) To avoid double-counting or omitting the effects of risk factors, discount rates should reflect assumptions that are consistent with those inherent in the cash flows. For example, a discount rate that reflects the uncertainty in expectations about future defaults is appropriate if using contractual cash flows of a loan (i.e., a discount rate adjustment technique). That same rate should not be used if using expected (i.e., probability-weighted) cash flows (i.e., an expected present value technique) because the expected cash flows already reflect assumptions about the uncertainty in future defaults; instead, a discount rate that is commensurate with the risk inherent in the expected cash flows should be used.
- (d) Assumptions about cash flows and discount rates should be internally consistent. For example, nominal cash flows, which include the effect of inflation, should be discounted at a rate that includes the effect of inflation. The nominal risk-free interest rate includes the effect of inflation. Real cash flows, which exclude the effect of inflation, should be discounted at a rate that excludes the effect of inflation. Similarly, after-tax cash flows should be discounted using an after-tax discount rate. Pre-tax cash flows should be discounted at a rate consistent with those cash flows.
- (e) Discount rates should be consistent with the underlying economic factors of the currency in which the cash flows are denominated.

Risk and uncertaintyParagraphs 39-41 are IFRS 13.AG15-AG17

39. A fair value measurement using present value techniques is made under conditions of uncertainty because the cash flows used are estimates rather than known amounts. In many cases both the amount and timing of the cash flows are uncertain. Even contractually fixed amounts, such as the payments on a loan, are uncertain if there is risk of default.

40. Market participants generally seek compensation (i.e., a risk premium) for bearing the uncertainty inherent in the cash flows of an asset or a liability. A fair value measurement should include a risk premium reflecting the amount that market participants would demand as compensation for the uncertainty inherent in the cash flows. Otherwise, the measurement would not faithfully represent fair value. In some cases determining the appropriate risk premium might be difficult. However, the degree of difficulty alone is not a sufficient reason to exclude a risk premium.

41. Present value techniques differ in how they adjust for risk and in the type of cash flows they use. For example:

- (a) The discount rate adjustment technique (see paragraphs 42-46) uses a risk-adjusted discount rate and contractual, promised or most likely cash flows.
- (b) Method 1 of the expected present value technique (see paragraph 49) uses risk-adjusted expected cash flows and a risk-free rate.
- (c) Method 2 of the expected present value technique (see paragraph 50) uses expected cash flows that are not risk-adjusted and a discount rate adjusted to include the risk premium that market participants require. That rate is different from the rate used in the discount rate adjustment technique.

Discount rate adjustment technique

Paragraphs 42-46 are IFRS 13.AG18-AG22

- 42. The discount rate adjustment technique uses a single set of cash flows from the range of possible estimated amounts, whether contractual or promised (as is the case for a bond) or most likely cash flows. In all cases, those cash flows are conditional upon the occurrence of specified events (e.g., contractual or promised cash flows for a bond are conditional on the event of no default by the debtor). The discount rate used in the discount rate adjustment technique is derived from observed rates of return for comparable assets or liabilities that are traded in the market. Accordingly, the contractual, promised or most likely cash flows are discounted at an observed or estimated market rate for such conditional cash flows (i.e., a market rate of return).
- 43. The discount rate adjustment technique requires an analysis of market data for comparable assets or liabilities. Comparability is established by considering the nature of the cash flows (e.g., whether the cash flows are contractual or non-contractual and are likely to respond similarly to changes in economic conditions), as well as other factors (e.g., credit standing, collateral, duration, restrictive covenants and liquidity). Alternatively, if a single comparable asset or liability does not fairly reflect the risk inherent in the cash flows of the asset or liability being measured, it may be possible to derive a discount rate using data for several comparable assets or liabilities in conjunction with the risk-free yield curve (i.e., using a 'build-up' approach).
- 44. To illustrate a build-up approach, assume that Asset A is a contractual right to receive CU800 in one year (i.e., there is no timing uncertainty). There is an established market for comparable assets, and information about those assets, including price information, is available. Of those comparable assets:
 - (a) Asset B is a contractual right to receive CU1,200 in one year and has a market price of CU1,083. Thus, the implied annual rate of return (i.e., a one-year market rate of return) is 10.8 per cent $[(CU1,200/CU1,083) - 1]$.
 - (b) Asset C is a contractual right to receive CU700 in two years and has a market price of CU566. Thus, the implied annual rate of return (i.e., a two-year market rate of return) is 11.2 per cent $[(CU700/CU566)^{0.5} - 1]$.
 - (c) All three assets are comparable with respect to risk (i.e., dispersion of possible pay-offs and credit).
- 45. On the basis of the timing of the contractual payments to be received for Asset A relative to the timing for Asset B and Asset C (i.e., one year for Asset B versus two years for Asset C), Asset B is deemed more comparable to Asset A. Using the contractual payment to be received for Asset A (CU800) and the one-year market rate derived from Asset B (10.8 per cent), the fair value of Asset A is CU722 $(CU800/1.108)$. Alternatively, in the absence of available market information for Asset B, the one-

year market rate could be derived from Asset C using the build-up approach. In that case the two-year market rate indicated by Asset C (11.2 per cent) would be adjusted to a one-year market rate using the term structure of the risk-free yield curve. Additional information and analysis might be required to determine whether the risk premiums for one-year and two-year assets are the same. If it is determined that the risk premiums for one-year and two-year assets are not the same, the two-year market rate of return would be further adjusted for that effect.

46. When the discount rate adjustment technique is applied to fixed receipts or payments, the adjustment for risk inherent in the cash flows of the asset or liability being measured is included in the discount rate. In some applications of the discount rate adjustment technique to cash flows that are not fixed receipts or payments, an adjustment to the cash flows may be necessary to achieve comparability with the observed asset or liability from which the discount rate is derived.

Expected present value technique

Paragraphs 47-54 are IFRS 13.AG23-AG30

47. The expected present value technique uses as a starting point a set of cash flows that represents the probability-weighted average of all possible future cash flows (i.e., the expected cash flows). The resulting estimate is identical to expected value, which, in statistical terms, is the weighted average of a discrete random variable's possible values with the respective probabilities as the weights. Because all possible cash flows are probability-weighted, the resulting expected cash flow is not conditional upon the occurrence of any specified event (unlike the cash flows used in the discount rate adjustment technique).

48. In making an investment decision, risk-averse market participants would take into account the risk that the actual cash flows may differ from the expected cash flows. Portfolio theory distinguishes between two types of risk:

- (a) Unsystematic (diversifiable) risk, which is the risk specific to a particular asset or liability.
- (b) Systematic (non-diversifiable) risk, which is the common risk shared by an asset or a liability with the other items in a diversified portfolio.

Portfolio theory holds that in a market in equilibrium, market participants will be compensated only for bearing the systematic risk inherent in the cash flows. (In markets that are inefficient or out of equilibrium, other forms of return or compensation might be available.)

49. Method 1 of the expected present value technique adjusts the expected cash flows of an asset for systematic (i.e., market) risk by subtracting a cash risk premium (i.e., risk-adjusted expected cash flows). Those risk-adjusted expected cash flows represent a certainty-equivalent cash flow, which is discounted at a risk-free interest rate. A certainty-equivalent cash flow refers to an expected cash flow (as defined), adjusted for risk so that a market participant is indifferent to trading a certain cash flow for an expected cash flow. For example, if a market participant was willing to trade an expected cash flow of CU1,200 for a certain cash flow of CU1,000, the CU1,000 is the certainty equivalent of the CU1,200 (i.e., the CU200 would represent the cash risk premium). In that case the market participant would be indifferent as to the asset held.
50. In contrast, Method 2 of the expected present value technique adjusts for systematic (i.e., market) risk by applying a risk premium to the risk-free interest rate. Accordingly, the expected cash flows are discounted at a rate that corresponds to an expected rate associated with probability-weighted cash flows (i.e., an expected rate of return). Models used for pricing risky assets, such as the capital asset

pricing model, can be used to estimate the expected rate of return. Because the discount rate used in the discount rate adjustment technique is a rate of return relating to conditional cash flows, it is likely to be higher than the discount rate used in Method 2 of the expected present value technique, which is an expected rate of return relating to expected or probability-weighted cash flows.

51. To illustrate Methods 1 and 2, assume that an asset has expected cash flows of CU780 in one year determined on the basis of the possible cash flows and probabilities shown below. The applicable risk-free interest rate for cash flows with a one-year horizon is 5 per cent, and the systematic risk premium for an asset with the same risk profile is 3 per cent.

<u>Possible cash flows</u>	<u>Probability</u>	<u>Probability-weighted cash flows</u>
<u>CU500</u>	<u>15%</u>	<u>CU75</u>
<u>CU800</u>	<u>60%</u>	<u>CU480</u>
<u>CU900</u>	<u>25%</u>	<u>CU225</u>
<u>Expected cash flows</u>		<u>CU780</u>

52. In this simple illustration, the expected cash flows (CU780) represent the probability-weighted average of the three possible outcomes. In more realistic situations, there could be many possible outcomes. However, to apply the expected present value technique, it is not always necessary to take into account distributions of all possible cash flows using complex models and techniques. Rather, it might be possible to develop a limited number of discrete scenarios and probabilities that capture the array of possible cash flows. For example, an entity might use realized cash flows for some relevant past period, adjusted for changes in circumstances occurring subsequently (e.g., changes in external factors, including economic or market conditions, industry trends and competition as well as changes in internal factors affecting the entity more specifically), taking into account the assumptions of market participants.
53. In theory, the present value (i.e., the fair value) of the asset's cash flows is the same whether determined using Method 1 or Method 2, as follows:
- (a) Using Method 1, the expected cash flows are adjusted for systematic (i.e., market) risk. In the absence of market data directly indicating the amount of the risk adjustment, such adjustment could be derived from an asset pricing model using the concept of certainty equivalents. For example, the risk adjustment (i.e., the cash risk premium of CU22) could be determined using the systematic risk premium of 3 per cent ($CU780 - [CU780 \times (1.05/1.08)]$), which results in risk-adjusted expected cash flows of CU758 ($CU780 - CU22$). The CU758 is the certainty equivalent of CU780 and is discounted at the risk-free interest rate (5 per cent). The present value (i.e., the fair value) of the asset is CU722 ($CU758/1.05$).
- (b) Using Method 2, the expected cash flows are not adjusted for systematic (i.e., market) risk. Rather, the adjustment for that risk is included in the discount rate. Thus, the expected cash flows are discounted at an expected rate of return of 8 per cent (i.e., the 5 per cent risk-free interest rate plus the 3 per cent systematic risk premium). The present value (i.e., the fair value) of the asset is CU722 ($CU780/1.08$).

54. When using an expected present value technique to measure fair value, either Method 1 or Method 2 could be used. The selection of Method 1 or Method 2 will depend on facts and circumstances specific to the asset or liability being measured, the extent to which sufficient data are available and the judgements applied.

Inputs to valuation techniques

General principles

55. **Valuation techniques used to measure fair value shall maximize the use of relevant observable inputs and minimize the use of unobservable inputs.**

56. Examples of markets in which inputs might be observable for some assets and liabilities (e.g., financial instruments) include exchange markets, dealer markets, brokered markets and principal-to-principal markets (see paragraph 57).

Paragraph 57 is IFRS 13.AG34

57. Examples of markets in which inputs might be observable for some assets and liabilities (e.g., financial instruments) include the following:

- (a) Exchange markets. In an exchange market, closing prices are both readily available and generally representative of fair value. An example of such a market is the London Stock Exchange.
- (b) Dealer markets. In a dealer market, dealers stand ready to trade (either buy or sell for their own account), thereby providing liquidity by using their capital to hold an inventory of the items for which they make a market. Typically bid and ask prices (representing the price at which the dealer is willing to buy and the price at which the dealer is willing to sell, respectively) are more readily available than closing prices. Over-the-counter markets (for which prices are publicly reported) are dealer markets. Dealer markets also exist for some other assets and liabilities, including some financial instruments, commodities and physical assets (e.g., used equipment).
- (c) Brokered markets. In a brokered market, brokers attempt to match buyers with sellers but do not stand ready to trade for their own account. In other words, brokers do not use their own capital to hold an inventory of the items for which they make a market. The broker knows the prices bid and asked by the respective parties, but each party is typically unaware of another party's price requirements. Prices of completed transactions are sometimes available. Brokered markets include electronic communication networks, in which buy and sell orders are matched, and commercial and residential real estate markets.
- (d) Principal-to-principal markets. In a principal-to-principal market, transactions, both originations and resales, are negotiated independently with no intermediary. Little information about those transactions may be made available publicly.

58. An entity shall select inputs that are consistent with the characteristics of the asset or liability that market participants would take into account in a transaction for the asset or liability (see paragraphs 2 and 3). In some cases those characteristics result in the application of an adjustment, such as a premium or discount (e.g., a control premium or non-controlling interest discount). However, a fair value measurement shall not incorporate a premium or discount that is inconsistent with the unit of account in the IPSAS that requires or permits the fair value measurement (see paragraphs 0 and 7).

Premiums or discounts that reflect size as a characteristic of the entity's holding (specifically, a blockage factor that adjusts the quoted price of an asset or a liability because the market's normal daily trading volume is not sufficient to absorb the quantity held by the entity, as described in paragraph 67) rather than as a characteristic of the asset or liability (e.g., a control premium when measuring the fair value of a controlling interest) are not permitted in a fair value measurement. In all cases, if there is a quoted price in an active market (i.e., a *Level 1 input*) for an asset or a liability, an entity shall use that price without adjustment when measuring fair value, except as specified in paragraph 66.

Fair value hierarchy

59. To increase consistency and comparability in fair value measurements and related disclosures, this Application Guidance establishes a fair value hierarchy that categorizes into three levels (see paragraphs 63–90) the inputs to valuation techniques used to measure fair value. The fair value hierarchy gives the highest priority to quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1 inputs) and the lowest priority to unobservable inputs (*Level 3 inputs*).
60. In some cases, the inputs used to measure the fair value of an asset or a liability might be categorized within different levels of the fair value hierarchy. In those cases, the fair value measurement is categorized in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement. Assessing the significance of a particular input to the entire measurement requires judgement, taking into account factors specific to the asset or liability. Adjustments to arrive at measurements based on fair value, such as costs to sell when measuring fair value less costs to sell, shall not be taken into account when determining the level of the fair value hierarchy within which a fair value measurement is categorized.
61. The availability of relevant inputs and their relative subjectivity might affect the selection of appropriate valuation techniques (see paragraph 23). However, the fair value hierarchy prioritizes the inputs to valuation techniques, not the valuation techniques used to measure fair value. For example, a fair value measurement developed using a present value technique might be categorized within Level 2 or Level 3, depending on the inputs that are significant to the entire measurement and the level of the fair value hierarchy within which those inputs are categorized.
62. If an observable input requires an adjustment using an unobservable input and that adjustment results in a significantly higher or lower fair value measurement, the resulting measurement would be categorized within Level 3 of the fair value hierarchy. For example, if a market participant would take into account the effect of a restriction on the sale of an asset when estimating the price for the asset, an entity would adjust the quoted price to reflect the effect of that restriction. If that quoted price is a *Level 2 input* and the adjustment is an unobservable input that is significant to the entire measurement, the measurement would be categorized within Level 3 of the fair value hierarchy.

Level 1 inputs

63. Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.
64. A quoted price in an active market provides the most faithfully representative evidence of fair value and shall be used without adjustment to measure fair value whenever available, except as specified in paragraph 66.

65. A Level 1 input will be available for many financial assets and financial liabilities, some of which might be exchanged in multiple active markets (e.g., on different exchanges). Therefore, the emphasis within Level 1 is on determining both of the following:
- (a) The principal market for the asset or liability or, in the absence of a principal market, the most advantageous market for the asset or liability; and
 - (b) Whether the entity can enter into a transaction for the asset or liability at the price in that market at the measurement date.
66. An entity shall not make an adjustment to a Level 1 input except in the following circumstances:
- (a) When an entity holds a large number of similar (but not identical) assets or liabilities (e.g., debt securities) that are measured at fair value and a quoted price in an active market is available but not readily accessible for each of those assets or liabilities individually (i.e., given the large number of similar assets or liabilities held by the entity, it would be difficult to obtain pricing information for each individual asset or liability at the measurement date). In that case, as a practical expedient, an entity may measure fair value using an alternative pricing method that does not rely exclusively on quoted prices (e.g., matrix pricing). However, the use of an alternative pricing method results in a fair value measurement categorized within a lower level of the fair value hierarchy.
 - (b) When a quoted price in an active market does not represent fair value at the measurement date. That might be the case if, for example, significant events (such as transactions in a principal-to-principal market, trades in a brokered market or announcements) take place after the close of a market but before the measurement date. An entity shall establish and consistently apply a policy for identifying those events that might affect fair value measurements. However, if the quoted price is adjusted for new information, the adjustment results in a fair value measurement categorized within a lower level of the fair value hierarchy.
 - (c) When measuring the fair value of a liability or an entity's own equity instrument using the quoted price for the identical item traded as an asset in an active market and that price needs to be adjusted for factors specific to the item or the asset (see paragraph xx of IPSAS 41). If no adjustment to the quoted price of the asset is required, the result is a fair value measurement categorized within Level 1 of the fair value hierarchy. However, any adjustment to the quoted price of the asset results in a fair value measurement categorized within a lower level of the fair value hierarchy.
67. If an entity holds a position in a single asset or liability (including a position comprising a large number of identical assets or liabilities, such as a holding of financial instruments) and the asset or liability is traded in an active market, the fair value of the asset or liability shall be measured within Level 1 as the product of the quoted price for the individual asset or liability and the quantity held by the entity. That is the case even if a market's normal daily trading volume is not sufficient to absorb the quantity held and placing orders to sell the position in a single transaction might affect the quoted price.

Level 2 inputs

68. Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.
69. If the asset or liability has a specified (contractual) term, a Level 2 input must be observable for substantially the full term of the asset or liability. Level 2 inputs include the following:

- (a) Quoted prices for similar assets or liabilities in active markets.
 - (b) Quoted prices for identical or similar assets or liabilities in markets that are not active.
 - (c) inputs other than quoted prices that are observable for the asset or liability, for example:
 - (i) Interest rates and yield curves observable at commonly quoted intervals;
 - (ii) Implied volatilities; and
 - (iii) Credit spreads.
 - (d) Market-corroborated inputs.
70. Adjustments to Level 2 inputs will vary depending on factors specific to the asset or liability. Those factors include the following:
- (a) The condition or location of the asset;
 - (b) The extent to which inputs relate to items that are comparable to the asset or liability (including those factors described in paragraph xx of IPSAS 41; and
 - (c) The volume or level of activity in the markets within which the inputs are observed.
71. An adjustment to a Level 2 input that is significant to the entire measurement might result in a fair value measurement categorized within Level 3 of the fair value hierarchy if the adjustment uses significant unobservable inputs.
72. Paragraph 73 describes the use of Level 2 inputs for particular assets and liabilities.

Paragraph 73 is IFRS 13.AG35

73. Examples of Level 2 inputs for particular assets and liabilities include the following:
- (a) Licensing arrangement. For a licensing arrangement that is acquired in a public sector combination and was recently negotiated with an unrelated party by the acquired entity (the party to the licensing arrangement), a Level 2 input would be the royalty rate in the contract with the unrelated party at inception of the arrangement.
 - (b) Finished goods inventory at a retail outlet. For finished goods inventory that is acquired in a public sector combination, a Level 2 input would be either a price to customers in a retail market or a price to retailers in a wholesale market, adjusted for differences between the condition and location of the inventory item and the comparable (i.e., similar) inventory items so that the fair value measurement reflects the price that would be received in a transaction to sell the inventory to another retailer that would complete the requisite selling efforts. Conceptually, the fair value measurement will be the same, whether adjustments are made to a retail price (downward) or to a wholesale price (upward). Generally, the price that requires the least amount of subjective adjustments should be used for the fair value measurement.
 - (c) Building held and used. A Level 2 input would be the price per square meter for the building (a valuation multiple) derived from observable market data, e.g., multiples derived from prices in observed transactions involving comparable (i.e., similar) buildings in similar locations.
 - (d) Cash-generating unit. A Level 2 input would be a valuation multiple (e.g., a multiple of earnings or revenue or a similar performance measure) derived from observable market data, e.g., multiples derived from prices in observed transactions involving comparable (i.e., similar) operations, taking into account operational, market, financial and non-financial factors.

Level 3 inputs

74. Level 3 inputs are unobservable inputs for the asset or liability.
75. Unobservable inputs shall be used to measure fair value to the extent that relevant observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset or liability at the measurement date. However, the fair value measurement objective remains the same, i.e., an exit price at the measurement date from the perspective of a market participant that holds the asset or owes the liability. Therefore, unobservable inputs shall reflect the assumptions that market participants would use when pricing the asset or liability, including assumptions about risk.
76. Assumptions about risk include the risk inherent in a particular valuation technique used to measure fair value (such as a pricing model) and the risk inherent in the inputs to the valuation technique. A measurement that does not include an adjustment for risk would not represent a fair value measurement if market participants would include one when pricing the asset or liability. For example, it might be necessary to include a risk adjustment when there is significant measurement uncertainty (e.g., when there has been a significant decrease in the volume or level of activity when compared with normal market activity for the asset or liability, or similar assets or liabilities, and the entity has determined that the transaction price or quoted price does not represent fair value, as described in paragraphs 77–87).

Measuring fair value when the volume or level of activity for an asset or a liability has significantly decreased

Paragraphs 77-87 are IFRS 13.AG37-AG47
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77. The fair value of an asset or a liability might be affected when there has been a significant decrease in the volume or level of activity for that asset or liability in relation to normal market activity for the asset or liability (or similar assets or liabilities). To determine whether, on the basis of the evidence available, there has been a significant decrease in the volume or level of activity for the asset or liability, an entity shall evaluate the significance and relevance of factors such as the following:
- (a) There are few recent transactions.
 - (b) Price quotations are not developed using current information.
 - (c) Price quotations vary substantially either over time or among market-makers (e.g., some brokered markets).
 - (d) Indices that previously were highly correlated with the fair values of the asset or liability are demonstrably uncorrelated with recent indications of fair value for that asset or liability.
 - (e) There is a significant increase in implied liquidity risk premiums, yields or performance indicators (such as delinquency rates or loss severities) for observed transactions or quoted prices when compared with the entity's estimate of expected cash flows, taking into account all available market data about credit and other non-performance risk for the asset or liability.
 - (f) There is a wide bid-ask spread or significant increase in the bid-ask spread.
 - (g) There is a significant decline in the activity of, or there is an absence of, a market for new issues (i.e., a primary market) for the asset or liability or similar assets or liabilities.
 - (h) Little information is publicly available (e.g., for transactions that take place in a principal-to-principal market).

78. If an entity concludes that there has been a significant decrease in the volume or level of activity for the asset or liability in relation to normal market activity for the asset or liability (or similar assets or liabilities), further analysis of the transactions or quoted prices is needed. A decrease in the volume or level of activity on its own may not indicate that a transaction price or quoted price does not represent fair value or that a transaction in that market is not orderly. However, if an entity determines that a transaction or quoted price does not represent fair value (e.g., there may be transactions that are not orderly), an adjustment to the transactions or quoted prices will be necessary if the entity uses those prices as a basis for measuring fair value and that adjustment may be significant to the fair value measurement in its entirety. Adjustments also may be necessary in other circumstances (e.g., when a price for a similar asset requires significant adjustment to make it comparable to the asset being measured or when the price is stale).
79. This Application Guidance does not prescribe a methodology for making significant adjustments to transactions or quoted prices. See paragraphs 23-28 and 29-35 for a discussion of the use of valuation techniques when measuring fair value. Regardless of the valuation technique used, an entity shall include appropriate risk adjustments, including a risk premium reflecting the amount that market participants would demand as compensation for the uncertainty inherent in the cash flows of an asset or a liability (see paragraph 41). Otherwise, the measurement does not faithfully represent fair value. In some cases determining the appropriate risk adjustment might be difficult. However, the degree of difficulty alone is not a sufficient basis on which to exclude a risk adjustment. The risk adjustment shall be reflective of an orderly transaction between market participants at the measurement date under current market conditions.
80. If there has been a significant decrease in the volume or level of activity for the asset or liability, a change in valuation technique or the use of multiple valuation techniques may be appropriate (e.g., the use of a market approach and a present value technique). When weighting indications of fair value resulting from the use of multiple valuation techniques, an entity shall consider the reasonableness of the range of fair value measurements. The objective is to determine the point within the range that is most representative of fair value under current market conditions. A wide range of fair value measurements may be an indication that further analysis is needed.
81. Even when there has been a significant decrease in the volume or level of activity for the asset or liability, the objective of a fair value measurement remains the same. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction (i.e., not a forced liquidation or distress sale) between market participants at the measurement date under current market conditions.
82. Estimating the price at which market participants would be willing to enter into a transaction at the measurement date under current market conditions if there has been a significant decrease in the volume or level of activity for the asset or liability depends on the facts and circumstances at the measurement date and requires judgement. An entity's intention to hold the asset or to settle or otherwise fulfil the liability is not relevant when measuring fair value because fair value is a market-based measurement, not an entity-specific measurement.

Identifying transactions that are not orderly

83. The determination of whether a transaction is orderly (or is not orderly) is more difficult if there has been a significant decrease in the volume or level of activity for the asset or liability in relation to normal market activity for the asset or liability (or similar assets or liabilities). In such circumstances it is not appropriate to conclude that all transactions in that market are not orderly (i.e., forced

liquidations or distress sales). Circumstances that may indicate that a transaction is not orderly include the following:

- (a) There was not adequate exposure to the market for a period before the measurement date to allow for marketing activities that are usual and customary for transactions involving such assets or liabilities under current market conditions.
- (b) There was a usual and customary marketing period, but the seller marketed the asset or liability to a single market participant.
- (c) The seller is in or near bankruptcy or receivership (i.e., the seller is distressed).
- (d) The seller was required to sell to meet regulatory or legal requirements (i.e., the seller was forced).
- (e) The transaction price is an outlier when compared with other recent transactions for the same or a similar asset or liability.

An entity shall evaluate the circumstances to determine whether, on the weight of the evidence available, the transaction is orderly.

84. An entity shall consider all the following when measuring fair value or estimating market risk premiums:

- (a) If the evidence indicates that a transaction is not orderly, an entity shall place little, if any, weight (compared with other indications of fair value) on that transaction price.
- (b) If the evidence indicates that a transaction is orderly, an entity shall take into account that transaction price. The amount of weight placed on that transaction price when compared with other indications of fair value will depend on the facts and circumstances, such as the following:
 - (i) The volume of the transaction.
 - (ii) The comparability of the transaction to the asset or liability being measured.
 - (iii) The proximity of the transaction to the measurement date.
- (c) If an entity does not have sufficient information to conclude whether a transaction is orderly, it shall take into account the transaction price. However, that transaction price may not represent fair value (i.e., the transaction price is not necessarily the sole or primary basis for measuring fair value or estimating market risk premiums). When an entity does not have sufficient information to conclude whether particular transactions are orderly, the entity shall place less weight on those transactions when compared with other transactions that are known to be orderly.

An entity need not undertake exhaustive efforts to determine whether a transaction is orderly, but it shall not ignore information that is reasonably available. When an entity is a party to a transaction, it is presumed to have sufficient information to conclude whether the transaction is orderly.

Using quoted prices provided by third parties

85. This Application Guidance does not preclude the use of quoted prices provided by third parties, such as pricing services or brokers, if an entity has determined that the quoted prices provided by those parties are developed in accordance with this Application Guidance.

86. If there has been a significant decrease in the volume or level of activity for the asset or liability, an entity shall evaluate whether the quoted prices provided by third parties are developed using current information that reflects orderly transactions or a valuation technique that reflects market participant assumptions (including assumptions about risk). In weighting a quoted price as an input to a fair value measurement, an entity places less weight (when compared with other indications of fair value that reflect the results of transactions) on quotes that do not reflect the result of transactions.
87. Furthermore, the nature of a quote (e.g., whether the quote is an indicative price or a binding offer) shall be taken into account when weighting the available evidence, with more weight given to quotes provided by third parties that represent binding offers.
88. An entity shall develop unobservable inputs using the best information available in the circumstances, which might include the entity's own data. In developing unobservable inputs, an entity may begin with its own data, but it shall adjust those data if reasonably available information indicates that other market participants would use different data or there is something particular to the entity that is not available to other market participants (e.g., an entity-specific synergy). An entity need not undertake exhaustive efforts to obtain information about market participant assumptions. However, an entity shall take into account all information about market participant assumptions that is reasonably available. Unobservable inputs developed in the manner described above are considered market participant assumptions and meet the objective of a fair value measurement.
89. Paragraph 90 describes the use of Level 3 inputs for particular assets and liabilities.

Paragraph 90 is IFRS 13.AG36

90. Examples of Level 3 inputs for particular assets and liabilities include the following:
- (a) Long-dated currency swap. A Level 3 input would be an interest rate in a specified currency that is not observable and cannot be corroborated by observable market data at commonly quoted intervals or otherwise for substantially the full term of the currency swap. The interest rates in a currency swap are the swap rates calculated from the respective countries' yield curves.
 - (b) Three-year option on exchange-traded shares. A Level 3 input would be historical volatility, i.e., the volatility for the shares derived from the shares' historical prices. Historical volatility typically does not represent current market participants' expectations about future volatility, even if it is the only information available to price an option.
 - (c) Interest rate swap. A Level 3 input would be an adjustment to a mid-market consensus (non-binding) price for the swap developed using data that are not directly observable and cannot otherwise be corroborated by observable market data.
 - (d) Decommissioning liability assumed in a public sector combination. A Level 3 input would be a current estimate using the entity's own data about the future cash outflows to be paid to fulfil the obligation (including market participants' expectations about the costs of fulfilling the obligation and the compensation that a market participant would require for taking on the obligation to dismantle the asset) if there is no reasonably available information that indicates that market participants would use different assumptions. That Level 3 input would be used in a present value technique together with other inputs, e.g., a current risk-free interest rate or a credit-adjusted risk-free rate if the effect of the entity's credit standing on the fair value of the liability is reflected in the discount rate rather than in the estimate of future cash outflows.

- (e) Cash-generating unit. A Level 3 input would be a financial forecast (e.g., of cash) developed using the entity's own data if there is no reasonably available information that indicates that market participants would use different assumptions.

Disclosure

91. **An entity shall disclose information that helps users of its financial statements assess both of the following:**

- (a) **For assets and liabilities that are measured at fair value on a recurring or non-recurring basis in the statement of financial position after initial recognition, the valuation techniques and inputs used to develop those measurements.**
- (b) **For recurring fair value measurements using significant unobservable inputs (Level 3), the effect of the measurements on surplus or deficit or net assets/equity for the period.**

92. To meet the objectives in paragraph 91, an entity shall consider all the following:

- (a) The level of detail necessary to satisfy the disclosure requirements;
- (b) How much emphasis to place on each of the various requirements;
- (c) How much aggregation or disaggregation to undertake; and
- (d) Whether users of financial statements need additional information to evaluate the quantitative information disclosed.

If the disclosures provided in accordance with this IPSAS and other IPSASs are insufficient to meet the objectives in paragraph 91, an entity shall disclose additional information necessary to meet those objectives.

93. To meet the objectives in paragraph 91, an entity shall disclose, at a minimum, the following information for each class of assets and liabilities (see paragraph 94 for information on determining appropriate classes of assets and liabilities) measured at fair value (including measurements based on fair value within the scope of this Application Guidance) in the statement of financial position after initial recognition:

- (a) For recurring and non-recurring fair value measurements, the fair value measurement at the end of the reporting period, and for non-recurring fair value measurements, the reasons for the measurement. Recurring fair value measurements of assets or liabilities are those that other IPSASs require or permit in the statement of financial position at the end of each reporting period. Non-recurring fair value measurements of assets or liabilities are those that other IPSASs require or permit in the statement of financial position in particular circumstances (e.g., when an entity measures an asset held for sale at fair value less costs to sell in accordance with IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations* because the asset's fair value less costs to sell is lower than its carrying amount).
- (b) For recurring and non-recurring fair value measurements, the level of the fair value hierarchy within which the fair value measurements are in their entirety (Level 1, 2 or 3).
- (c) For assets and liabilities held at the end of the reporting period that are measured at fair value on a recurring basis, the amounts of any transfers between Level 1 and Level 2 of the fair value hierarchy, the reasons for those transfers and the entity's policy for determining when transfers between levels are deemed to have occurred (see paragraph 96). Transfers into each level shall be disclosed and discussed separately from transfers out of each level.

- (d) For recurring and non-recurring fair value measurements categorized within Level 2 and Level 3 of the fair value hierarchy, a description of the valuation technique(s) and the inputs used in the fair value measurement. If there has been a change in valuation technique (e.g., changing from a market approach to an income approach or the use of an additional valuation technique), the entity shall disclose that change and the reason(s) for making it. For fair value measurements categorized within Level 3 of the fair value hierarchy, an entity shall provide quantitative information about the significant unobservable inputs used in the fair value measurement. An entity is not required to create quantitative information to comply with this disclosure requirement if quantitative unobservable inputs are not developed by the entity when measuring fair value (e.g., when an entity uses prices from prior transactions or third-party pricing information without adjustment). However, when providing this disclosure an entity cannot ignore quantitative unobservable inputs that are significant to the fair value measurement and are reasonably available to the entity.
- (e) For recurring fair value measurements categorized within Level 3 of the fair value hierarchy, a reconciliation from the opening balances to the closing balances, disclosing separately changes during the period attributable to the following:
- (i) Total gains or losses for the period recognized in surplus or deficit, and the line item(s) in surplus or deficit in which those gains or losses are recognized.
 - (ii) Total gains or losses for the period recognized in net assets/equity, and the line item(s) in net assets/equity in which those gains or losses are recognized.
 - (iii) Purchases, sales, issues and settlements (each of those types of changes disclosed separately).
 - (iv) The amounts of any transfers into or out of Level 3 of the fair value hierarchy, the reasons for those transfers and the entity's policy for determining when transfers between levels are deemed to have occurred (see paragraph 96). Transfers into Level 3 shall be disclosed and discussed separately from transfers out of Level 3.
- (f) For recurring fair value measurements categorized within Level 3 of the fair value hierarchy, the amount of the total gains or losses for the period in (e)(i) included in surplus or deficit that is attributable to the change in unrealized gains or losses relating to those assets and liabilities held at the end of the reporting period, and the line item(s) in surplus or deficit in which those unrealized gains or losses are recognized.
- (g) For recurring and non-recurring fair value measurements categorized within Level 3 of the fair value hierarchy, a description of the valuation processes used by the entity (including, for example, how an entity decides its valuation policies and procedures and analyses changes in fair value measurements from period to period).
- (h) For recurring fair value measurements categorized within Level 3 of the fair value hierarchy:
- (i) For all such measurements, a narrative description of the sensitivity of the fair value measurement to changes in unobservable inputs if a change in those inputs to a different amount might result in a significantly higher or lower fair value measurement. If there are interrelationships between those inputs and other unobservable inputs used in the fair value measurement, an entity shall also provide a description of those interrelationships and of how they might magnify or mitigate the effect of changes in the unobservable inputs on the fair value measurement. To comply with that disclosure requirement, the

narrative description of the sensitivity to changes in unobservable inputs shall include, at a minimum, the unobservable inputs disclosed when complying with (d).

(ii) For financial assets and financial liabilities, if changing one or more of the unobservable inputs to reflect reasonably possible alternative assumptions would change fair value significantly, an entity shall state that fact and disclose the effect of those changes. The entity shall disclose how the effect of a change to reflect a reasonably possible alternative assumption was calculated. For that purpose, significance shall be judged with respect to surplus or deficit, and total assets or total liabilities, or, when changes in fair value are recognized in net assets/equity, total equity.

(i) For recurring and non-recurring fair value measurements, if the highest and best use of a non-financial asset differs from its current use, an entity shall disclose that fact and why the non-financial asset is being used in a manner that differs from its highest and best use.

94. An entity shall determine appropriate classes of assets and liabilities on the basis of the following:

(a) The nature, characteristics and risks of the asset or liability; and

(b) The level of the fair value hierarchy within which the fair value measurement is categorized.

The number of classes may need to be greater for fair value measurements categorized within Level 3 of the fair value hierarchy because those measurements have a greater degree of uncertainty and subjectivity. Determining appropriate classes of assets and liabilities for which disclosures about fair value measurements should be provided requires judgement. A class of assets and liabilities will often require greater disaggregation than the line items presented in the statement of financial position. However, an entity shall provide information sufficient to permit reconciliation to the line items presented in the statement of financial position. If another IPSAS specifies the class for an asset or a liability, an entity may use that class in providing the disclosures required in this Application Guidance if that class meets the requirements in this paragraph.

95. An entity shall disclose and consistently follow its policy for determining when transfers between levels of the fair value hierarchy are deemed to have occurred in accordance with paragraph (c) and (e)(iv). The policy about the timing of recognizing transfers shall be the same for transfers into the levels as for transfers out of the levels. Examples of policies for determining the timing of transfers include the following:

(a) The date of the event or change in circumstances that caused the transfer.

(b) The beginning of the reporting period.

(c) The end of the reporting period.

96. If an entity makes an accounting policy decision to use the exception in paragraph xx of IPSAS 41, it shall disclose that fact.

97. For each class of assets and liabilities not measured at fair value in the statement of financial position but for which the fair value is disclosed, an entity shall disclose the information required by paragraph (b), (d) and (i). However, an entity is not required to provide the quantitative disclosures about significant unobservable inputs used in fair value measurements categorized within Level 3 of the fair value hierarchy required by paragraph (d). For such assets and liabilities, an entity does not need to provide the other disclosures required by this Application Guidance.

98. For a liability measured at fair value and issued with an inseparable third-party credit enhancement, an issuer shall disclose the existence of that credit enhancement and whether it is reflected in the fair value measurement of the liability.
99. An entity shall present the quantitative disclosures required by this Application Guidance in a tabular format unless another format is more appropriate.

Appendix C: Historical cost—application guidance for assets²

This Appendix is an integral part of IPSAS XX, Measurement.

Measurement

Historical Cost and Consideration

- 1 Historical cost for an asset is the consideration given to acquire or develop an asset, which is the cash or cash equivalents or the value of the other consideration given, at the time of its acquisition or development. The objective of an historical cost measurement of an asset is to identify the consideration given to acquire and/or develop the asset.
2. An historical cost measurement requires an entity to determine all the following:
 - (a) The particular asset that is the subject of the measurement (consistently with its unit of account).
 - (b) The consideration the entity gave to acquire and/or develop the asset. in terms of:
 - (i) Cash;
 - (ii) Cash equivalents; and
 - (iii) The value of other consideration.
 - (c) Factors used to identify what consideration should be included in (or excluded from) the asset's historical cost, including (for example) costs that are directly attributable to its acquisition and/or development and should be included (or not directly attributable and should be excluded).

Deferred payment—cash price equivalent

3. If payment for an asset is deferred, then the consideration to include in its historical cost is the cash price equivalent of the payment. The difference between this amount and the total payments is recognized as interest expense over the period of credit.

The value of other consideration: Exchange for non-monetary asset(s)

4. The consideration for an asset acquired in exchange for a nonmonetary asset or assets, or a combination of monetary and non-monetary assets, is the appropriate current value of the asset(s) given up³, unless (a) the transaction is non-exchange or otherwise lacks commercial substance or (b) the current value of the asset given up cannot be measured to achieve the qualitative characteristics, taking into account the constraints. In those circumstances, the consideration for the acquired asset is the carrying amount of the asset given up.

² For Basis for Conclusions: This application guidance focuses on historical cost for assets, because the consultation paper's flow chart for liability measurement indicates that historical cost is not applicable to the measurement of liabilities. It does not address depreciation, amortization and impairment, because previous IPSASB decisions have indicated that these should be addressed in other IPSASs, rather than IPSAS, *Measurement*.

³ Refer to the consultation paper's flow chart as guidance for choice of an appropriate current value. IPSAS 16 and 17 presently require that the cost of such an asset is measured at fair value, using the "old" definition of fair value, which is equivalent to the Conceptual Framework's definition of market value, and allows for either an entry value or an exit value.

Historical cost not possible in some circumstances

5. In the case of donated assets or first time adoption where there are no records of consideration given, historical cost is not available, and therefore, by definition, cannot be used. In these cases an appropriate current value measurement basis could be used instead of historical cost to measure the asset⁴.

The asset measured at historical cost

6. The asset measured at historical cost might be one of the following:
- (a) A stand-alone asset; or
 - (b) A group of assets:
 - (c) Assets that form part of a group of assets and liabilities (e.g., a cash-generating unit or an operation).
7. Whether the asset is a stand-alone asset, a group of assets, or assets that form part of a group of assets and liabilities for recognition or disclosure purposes depends on its *unit of account*. The unit of account for the asset shall be determined in accordance with the IPSAS that requires or permits the historical cost measurement.

Historical cost is entity specific and asset specific

8. Historical cost is an entity-specific measurement basis. Identification of the consideration given to acquire and/or develop the asset requires an understanding of the entity-specific:
- (a) Processes to acquire and/or develop the asset; and
 - (b) Procedures and timing for asset use (i.e. its use to provide services and/or generate cash flows).
9. The entity's (a) acquisition and development processes and (b) asset usage timing and procedures are also asset-specific, so that an historical cost measurement depends on collecting information about how the entity acquired and/or developed the particular asset that and is either readying for use or has put into use.

The asset's acquisition and/or development

10. When measuring historical cost an entity shall identify the consideration applicable to the asset's acquisition and/or development, by taking into account:
- (a) The entity's process to acquire and/or develop the asset;
 - (b) The period during which the entity incurred acquisition costs and/or development costs for the asset; and
 - (c) When the entity began to use the asset to provide services and/or generate future economic benefits.

⁴ Include more on the choice of an appropriate current value measurement basis, once the IPSASB has reviewed and approved the consultation paper's flow chart for asset measurement.

Process to acquire, construct, and/or develop an asset

11. The process to acquire an asset may be relatively simple (e.g. purchase of a car or a bond) or complex (e.g. development of new software or construction of a subway line).
12. The purchase of an asset may be followed by further expenditures to adapt the asset for the entity's own use and, until the asset is able to be used by the entity for its intended purpose, expenditures necessary to bring the asset into use will be included in the consideration identified as part of the asset's historical cost.

Acquisition of an asset through purchase: The consideration given

13. **The consideration of a purchased asset is the price paid to acquire the asset and any directly attributable expenditure. Directly attributable expenditure includes:**
 - (a) Transaction costs;**
 - (b) Transport costs incurred to transport the asset from the location where it was purchased to the place where it is used by the entity; and**
 - (c) Expenditures necessary to adapt the asset for the entity's own use.**

Construction and development of an asset: The consideration given

14. **The consideration of an asset that the entity has constructed or developed itself comprises:**
 - (a) The consideration of purchased assets used in the construction or development of the asset; and**
 - (b) Other consideration directly attributable to the asset's construction or development.**

Purchase, construction and development of an asset: Examples of consideration to include

15. **Consideration includes costs that are directly attributable to the asset's acquisition and/or development, and these should be included in the asset's historical cost. Examples include:**
 - (a) The asset's purchase price, including import duties and non-refundable purchase taxes, after deducting trade discounts and rebates.**
 - (b) Any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management. Examples of such costs include:**
 - (i) Costs of employee benefits (as defined in IPSAS 25, *Employee Benefits*) arising directly from the construction or acquisition of the asset;**
 - (ii) Costs of site preparation;**
 - (iii) Initial delivery and handling costs;**
 - (iv) Installation and assembly costs;**
 - (v) Costs of testing whether the asset is functioning properly, after deducting the net proceeds from selling any items produced while bringing the asset to that location and condition (such as samples produced when testing equipment); and**
 - (vi) Professional fees arising directly from bringing the asset to its working condition.**

- (c) Estimated costs to discharge an entity's obligations to dispose of the asset or restore the location/situation prior to acquiring and/or developing the asset, where those obligations are incurred either when the item is acquired, or as a consequence of having used the item during the asset acquisition and/or development period.

Purchase, construction and development of an asset: Examples of consideration to exclude

- 16. Costs related to an asset's acquisition and/or development are excluded from the consideration that forms part of an asset's historical cost, if they either:

- (a) Are not directly attributable to the asset's acquisition and/or development; or
- (b) Do not contribute to the asset's service potential and/or ability to generate future economic benefits.

- 17. Examples of such costs include:

- (a) Administration and other general overhead costs.
- (b) Start-up costs that are not necessary to bring the asset to the condition necessary for it to be capable of operating in the manner intended by management. For example,
 - (i) Costs of opening a new facility or introducing a new product or service (including costs of advertising and promotional activities); and
 - (ii) Costs of conducting business in a new location or with a new class of customers (including costs of staff training).
- (c) Costs of operations that are unnecessary and incidental to the asset, even though the costs may occur before or during the asset's acquisition, construction or development activities. (For example, a building site may be operated as a car park until construction starts. The car park operations are not necessary to construction of the building (i.e. bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management), and the related revenue and expenses are recognized in surplus or deficit, rather than included in the building's historical cost.
- (d) Operating losses incurred before the asset achieves its intended level of use; or
- (e) Abnormal amounts of wasted material, labor or other resources incurred in constructing or developing the asset.

Excluded: Costs incurred prior to recognition of an asset

- 18. Costs are excluded from an asset's historical cost, where those costs occur before the point at which another IPSAS allows that an asset should be recognized. For example, IPSAS 31, *Intangible Assets*, specifies that expenditure incurred before the date when an internally generated intangible asset first meets the recognition criteria in IPSAS 31, *Intangible Assets*, shall be expensed. IPSAS 31 prohibits reinstatement of expenditure previously recognized as an expense.

Excluded: Costs incurred after the acquisition and/or development of the asset

- 19. Once the entity has acquired and/or completed the adaption or development of an asset, further costs are not included in the asset's historical cost. For example, once an asset is in the location and condition necessary for it to be capable of being used in the manner intended by management further costs are excluded from the asset's historical cost. Examples of costs to exclude include:

- (a) Costs incurred while an asset is capable of operating in the manner intended by management and has not yet been brought into use or is operated at less than full capacity;
- (b) Initial operating losses, such as those incurred while demand for the asset's output builds up; and
- (c) Costs of relocating or reorganizing part or all of the entity's operations.

Appendix D: Replacement cost–application guidance

This Appendix is an integral part of IPSAS XX, Measurement.

Measurement

1. Replacement cost is the most economic cost required for the entity to replace the service potential of an asset (including the amount that the entity will receive from its disposal at the end of its useful life) at the reporting date. Also sometimes described as depreciated (or optimized depreciated) replacement cost (DRC), this valuation method indicates value by calculating the current replacement cost of a modern equivalent asset and then making deductions (the 'depreciation' of DRC) for physical deterioration and all relevant forms of obsolescence and optimization. Replacement cost adopts an optimized approach and takes account of the characteristics of the asset (see paragraph 6); it is not a cost of reproduction or of restoration.

NOTE: paragraphs 2 and 4 are taken from IPSAS 17.47 and 17.48 (and amended).

2. In many cases, the replacement cost of an asset can be established by reference to the buying price of a similar asset with similar remaining service potential in an active and liquid market. The replacement cost of an item of plant or equipment may be established by reference to the market buying price of components used to produce the asset or the indexed price for the same or a similar asset based on a price for a previous period. In the case of specialized buildings, other man-made structures and some equipment, values may be estimated using replacement cost, which may involve determining the asset's reproduction cost or use of the service units approach.

Reproduction Cost

3. An entity should consider very carefully whether or not to use a reproduction cost (or restoration cost) as a technique to determine replacement cost. Such considerations should include whether there is a statutory or other requirement to replace an asset with what is essentially a replica and whether an exact reproduction is possible; if not, then a technique that assesses the replacement of a modern equivalent asset is likely to be more appropriate for financial reporting purposes. The guidance in later paragraphs assumes that the replacement cost is that of a modern equivalent asset.

Service Units Approach

4. IPSAS 21 explains that, under the service units approach, the present value of the remaining service potential of the asset is determined by reducing the current cost of the remaining service potential of the asset before impairment to conform with the reduced number of service units expected from the asset in its impaired state. As in the reproduction cost approach, the current cost of replacing the remaining service potential of the asset before impairment is usually determined as the depreciated reproduction or replacement cost of the asset before impairment, whichever is lower.

The Use of Experts to Determine Replacement Cost

5. In determining the replacement cost of an asset, it is probable that an entity will need to obtain the professional input of experts with an in-depth understanding of the type of asset for which the replacement cost is required. These experts are unlikely to be accountants: these may include, but not be limited to, clinicians (in respect of medical equipment); engineers (for infrastructure assets); and surveyors (for land and built property). This Application Guidance provides preparers of financial statements with an overview of how they might work with these experts to obtain a replacement cost

of certain types of asset. In the case of surveyors, valuations of property will be carried out in accordance with International Valuation Standards (or their national equivalents); preparers of financial statements will need to have sufficient understanding of the principles contained in those standards in order to be able to:

- (a) Advise the valuer on the scope and objectives of any valuations for financial reporting purposes, which will include discussing the characteristics of the asset (see paragraphs 6- 20);
- (b) Discuss and understand the valuation report, including any information about componentization and lives of those components (see paragraphs 26-28); and
- (c) Incorporate the valuations into the records underlying the financial statements (such as a fixed asset register and/or general ledger, for example).

The asset

6. A replacement cost measurement is for a particular asset. Therefore, when measuring replacement cost, an entity shall take into account the characteristics of the asset, which include:

- (a) The location of the asset;**
- (b) The intended use of the asset;**
- (c) The specifications of the asset;**
- (d) The condition of the asset;**
- (e) Restrictions, if any, on the sale or use of the asset; and**
- (f) Componentization.**

The Location of the Asset

- 7. The location of an asset is generally relevant only to land and built property (although there may be instances where it is also relevant to military equipment – see [TBD]).**
- 8. A jurisdiction will usually deliver services to its citizens from an appropriate location. For example, schools and hospitals will ideally be located within the communities they serve; local authority offices will be easily accessible to all citizens. In some cases, therefore, the land on which the schools, hospitals or offices are built might be in expensive inner-city sites or in town and city centers rather than on cheaper land further away from the communities they serve. In these circumstances, the entity should instruct the valuer to take account of these social policy reasons for particular locations, which will often not reflect its 'highest and best' use, and value accordingly.**
- 9. There may be circumstances where it is appropriate to value the site for an alternative use such as where buildings are no longer required in the locality or on the actual site where they were originally constructed.**

The Intended Use of the Asset

- 10. The intended use of an asset is generally relevant only to land and built property.**
- 11. In carrying out an assessment of the replacement cost of land and built property, it is the use to which the asset has been put that will be the basis of the calculation of the replacement cost. For example, the replacement cost of an aircraft hangar that is being used as a storage warehouse will be that of**

a warehouse. Another example might be where city center land has been designated by the local authority as parkland.

The Specifications of the Asset

12. There are several examples in the public sector of assets whose specifications are such that there are few (if any) similar assets with similar remaining service potential whose replacement cost can be assessed in an active and liquid market.

Buildings of Conventional Appearance that have Specialized Features

13. Some buildings have a conventional basic design that is superficially similar to other buildings that are regularly bought and sold in the market, but on closer inspection have specialized features designed to meet the requirements of the actual occupier. A typical example is a purpose-built embassy, which, although built to perform an office function, is situated on a site that includes extra stand-off land and includes designed-in security features such as thickened walls and toughened glazing. This type of building will often cost considerably more to develop and build than a normal office building, but provide extra service potential (in the form of security for its occupants) which cannot be replicated through the purchase of a normal office building. In this instance, provided that the occupying entity continues to require the extra service potential, it is likely that the building should be treated as specialized and valued to DRC with full account taken of the extra cost of the specialized internal features and requirement for stand-off land.

Buildings that Include Specialized Adaptations

14. Some buildings will comprise conventional structures that have been adapted to the requirement of the occupier. For example, a commercial office building may have been purchased by a government department and adapted by provision of enhanced security features such as perimeter barriers or toughened glazing. An entity might opt to treat the cost of such specialized adaptations as a separate item in its financial statements⁵; in these cases, the valuer will value the conventional building). Where the entity has not accounted for the costs of adaptation separately, the valuer will need to consider whether the adaptations are such that the building should be valued to DRC.
15. Where an entity opts to include the adaptation costs within the property interest, the entity will need to ensure that the valuer understands the general nature of the adaptations. It will not be appropriate, for example, for a valuer to value an embassy's additional stand-off land (see paragraph 13) as surplus land: it is a necessary part of the property. Nor will it be appropriate for a valuer to value a newly built embassy building as a conventional office block.

Historic buildings

16. It is rarely appropriate to value historic buildings on the basis of costing a modern reproduction by use of an identical replacement or modified reconstruction approach. Where an entity is considering doing so, it must be able to demonstrate that it is not valuing a mere facsimile of the existing asset and that the historic property itself is intrinsically part of the service potential.
17. Where the historic nature of the property itself contributes to the service provided, it would be appropriate to reflect the cost of reproducing the existing asset in the cost of the modern equivalent.

⁵ As a guide, whilst specialized features designed-in to purpose-built buildings should normally be accounted for as part of the whole building, adaptations to existing buildings should normally be accounted for separately.

For example, in the event of loss, a parliament building may be reproduced rather than replaced with alternative accommodation, because of its significance to the community. However, where it would be impossible for a modern reproduction to recreate the original's historic significance, entities should not cost such a reproduction.

18. Buildings of iconic status (which might or might not be historic or listed) that would be replaced by similarly iconic buildings should be valued on the basis of a modern equivalent asset but including the costs of achieving that iconic status. For example, the replacement cost of an historic court house might be that of a modern court house with the addition of either a façade in keeping with the surrounding buildings, or even a reproduction façade (a replica of the façade of the existing court house).

Infrastructure

19. [Specifications for different types of infrastructure – dams/waterways/clean water supply/grey and dirty water treatment; roads/road-related structures; rail networks; electricity and gas supply networks.]

Plant and equipment

20. [Military equipment, clinical equipment?]

The Condition of the Asset

21. The replacement cost presented in the Statement of Financial Position and Notes to the Financial Statements should reflect the cost of replacing the service capacity of the asset at the reporting date. Thus the current gross replacement cost of a modern equivalent asset is adjusted by making deductions for the following, which are also used to assist in determining the useful economic life of the asset:

Physical obsolescence

22. Physical obsolescence relates to any loss of service capacity due to the physical deterioration of the asset or its components resulting from its age and use. In assessing physical obsolescence, the valuer will also take account of probable costs of future routine, regular maintenance.

Functional obsolescence

23. Functional obsolescence relates to any loss of service capacity resulting from inefficiencies in the asset that is being valued compared to its modern equivalent – is the asset suitable for its current function? Functional obsolescence might occur because of advances or changes in the design and/or specification of the asset, or because of technological advances. For example, advances in health care technology might mean that the asset in use is outdated, or technological advances in military materiel could mean that hardened aircraft hangers would be replaced by different types of structures: the valuer will discuss the effect of such advances with the entity in order to assess functional obsolescence.

Economic obsolescence

24. Economic obsolescence relates to any loss of utility caused by economic or other factors outside the control of the entity. The loss of service capacity might be temporary or permanent. For example, a school might have been built in a residential area and designed to take 500 pupils but demographic

changes have resulted in the need for only 300 school places. The valuation will reflect this reduction in required service capacity.

Restrictions on the Sale or Use of the Asset

25. The valuer also considers, in discussion with the entity, any factors that might affect the cost of replacing the service capacity of the existing asset. The existing use of the asset will be considered in the light of environmental issues such as the present and future characteristics of the location in terms of, for example, forecast demographic changes; local planning policies; national planning policies; existing restrictions on the use of the land and/or buildings; any restrictions on the sale or use of the land and/or buildings. An example of the latter might be where property was donated to a local authority 100 years ago, with restrictive clauses in the Deed of Gift so that the local authority can only use the property for the provision of named services (such as recreational or health).

Componentization

26. IPSAS 17 paragraph 60 states that ‘an entity allocates the amount initially recognized in respect of an item of property, plant, and equipment to its significant parts and depreciates separately each such part.’ Paragraph 61 states that significant parts with similar remaining useful lives can then be grouped together; the remaining parts will also be grouped together and ‘approximation techniques may be necessary to depreciate the remainder in a manner that faithfully represents the consumption pattern and/or useful life of its parts.
27. It is therefore important that the entity identifies the ‘significant parts’ or components and discusses these with the valuer before the assessment of the replacement cost of the service capacity of the asset can begin. This is because the extent of componentization adopted by the entity could affect the scope of the valuer’s work in terms of the information collected during the assessment. In identifying components, an entity should have regard to materiality of the asset(s) in relation to the Statement of Financial Position and also think carefully about what is ‘significant’ so as not to make the accounting process over-burdensome but at the same to ensure that the information presented in the financial statements is of relevance to users.
28. For example, an office building might comprise its external structure—foundations, walls, floors and roof—all of which have different design lives; its internal fit-out (offices, reception area, kitchen and canteen) which might have different lives; and plant (elevators, for example). If the building has been measured at (depreciated) replacement cost, the valuer’s report will normally have assigned a life and a cost to each component based on discussions with the entity as to, for example, the policy on refitting the internal structure. The assessment of the remaining life of the external structure and the plant will be based on a consideration of the physical obsolescence as noted in paragraph 22. An entity may elect to depreciate the component parts separately. If the entity elects to depreciate the building as one asset, however, the valuer will provide a single useful life for the asset using judgement to arrive at an overall life which may or may not be an average of the lives of the components. In such cases, the entity will need to

Other Considerations

29. The cost of a modern equivalent asset will reflect the cost that would be incurred if the works were commissioned on the date of valuation. However, there are factors that may result in the cost of a notional replacement being different from that of creating the actual asset.

Site preparation

30. Works that may have been undertaken to prepare the actual site for occupation might not need to be carried out on an assumed equivalent site. An entity might therefore instruct the valuer to assume that the site being valued is level and serviced and ready for development.

Phasing of work

31. A large site may have been developed in phases. The cost of a modern equivalent asset would normally be based on a single phase development, and this should be measured at the building cost at the date of valuation. To reflect the assumption that a public entity cannot identify borrowing costs (the cost of capital) that relate to the construction of a specific asset, an entity should instruct the valuer to assume that the construction has happened 'instantly'. As a consequence, it follows that there will be no phasing of payments, and there will be no reflection of the cost of capital in the valuation.

Optimal working conditions

32. Abnormal working conditions at the actual site are ignored if an alternative site is being valued.

Additional costs arising from extending an existing property

33. These costs should be ignored, since the norm is that the valuation will be of a modern equivalent asset.

Contract variations

34. Additional construction costs because of design or specification changes should be ignored. The modern equivalent asset being valued will have the same service potential as the existing asset.

Planning changes

35. Entities should consider with the valuer whether planning consent would need to be obtained were the modern equivalent asset to be constructed on the actual site

Disclosures in Respect of Measurement

Note: the disclosures in paragraph 36 are taken from IPSAS 16.86(e) and (g), IPSAS 16.88, and IPSAS 17.92 (all amended)

36. An entity shall disclose:

- (a) The extent to which the replacement cost of any asset (as measured or disclosed in the financial statements) is based on a valuation by an independent valuer who holds a recognized and relevant professional qualification and has recent experience in the location and category of the asset being valued. If there has been no such valuation, that fact shall be disclosed;
- (b) The existence and amounts of restrictions on the realizability of any asset or the remittance of revenue and proceeds of disposal;
- (c) When a valuation obtained for any asset is adjusted significantly for the purpose of the financial statements, the entity shall disclose a reconciliation between the valuation obtained and the adjusted valuation included in the financial statements.
- (d) The effective date of the revaluation;

- (e) Whether an independent valuer was involved;
- (f) The methods and significant assumptions applied in estimating the assets' replacement costs;
- (g) The extent to which the assets' replacement costs were determined directly by reference to observable prices in an active market or recent market transactions on arm's length terms, or were estimated using other valuation techniques;
- (h) The revaluation surplus, indicating the change for the period and any restrictions on the distribution of the balance to shareholders or other equity holders;
- (i) The sum of all revaluation surpluses for individual items of property, plant, and equipment within that class; and
- (j) The sum of all revaluation deficits for individual items of property, plant, and equipment within that class.

[Appendix E: Measurement of assets held for sale or disposal]

This Appendix is an integral part of IPSAS XX, Measurement.

[Include content (as necessary) for March 2019 IPSASB meeting.]

Basis for Conclusions

This Basis for Conclusions accompanies, but is not part of, [draft] IPSAS [X] (ED XX)

Introduction

The purpose of measurement in public sector financial statements

BC1. The purpose of measurement in public sector financial statements is to provide information about assets and liabilities that users' need for accountability and decision-making. Measurement that fairly reflects the cost of services, operational capacity and financial capacity of a public sector entity supports users' assessments of such matters as:

- (a) Whether the entity provided its services to constituents in an efficient and effective manner;
- (b) The resources currently available for future expenditures, and to what extent there are restrictions or conditions attached to their use;
- (c) To what extent the burden on future-year taxpayers of paying for current services has changed; and
- (d) Whether the entity's ability to provide services has improved or deteriorated compared with the previous year.

Service delivery objective and public sector assets and liabilities

BC2. Public sector measurement should take into account both the primary objective of most public entities and the type of assets and liabilities that such entities hold. The primary objective of most public sector entities is to deliver services to the public, rather than to make profits and generate a return on equity to investors. The type of assets and liabilities that a public sector entity holds is likely to reflect this objective. For example, in the public sector the primary reason for holding property, plant, and equipment and other assets is for their service potential rather than their ability to generate cash flows. Because of the types of services provided, a significant proportion of assets used by public sector entities is specialized—for example, roads and military assets. There may be a limited market for specialized assets and, even then, they may need considerable adaptation in order to be used by other operators. These factors have implications for the measurement of such assets.

BC3. Another common feature of public sector assets is that they have restrictions on their use, which need to be taken into account when measurement aims to derive a value that reflects existing use. Measurement issues arise even where there are no restrictions and the aim is to reflect an asset's highest and best use.

BC4. Governments and other public sector entities may hold items that contribute to the historical and cultural character of a nation or region—for example, art treasures, historical buildings, and other artifacts. They may also be responsible for national parks and other areas of natural significance with native flora and fauna. Such items and areas are not generally held for sale, even if markets exist. Rather, governments and public sector entities have a responsibility to preserve and maintain them for current and future generations.

BC5. Governments and other public sector entities incur liabilities related to their service delivery objectives. Many liabilities arise from non-exchange transactions and include those related to programs that operate to deliver social benefits. Liabilities may also arise from governments' role

as a lender of last resort and from any obligations to transfer resources to those affected by disasters. In addition many governments have obligations that arise from monetary activities such as currency in circulation.

Measurement of assets and liabilities for financial reporting by public sector entities

- BC6. Chapter 7 of *The Conceptual Framework for General Purpose Financial Reporting by Public Sector Entities* (the Conceptual Framework) addresses measurement of assets and liabilities in the financial statements. In developing Chapter 7 the IPSASB took into account the special characteristics of the public sector, the needs of users, public sector entities' objectives, different types of assets and liabilities, and the importance of service potential.
- BC7. Where an asset is held primarily for its service potential, rather than its ability to generate future economic benefits, its measurement should provide information on the value of the asset's service potential to the entity. This was an important consideration for the IPSASB, as it developed concepts for public sector measurement and identified appropriate measurement bases for use in the public sector.
- BC8. The objective of measurement and the measurement bases in Chapter 7 of the Conceptual Framework address public sector financial reporting needs. They differ from objectives and measurement bases developed for private sector entities that operate to make a profit and value assets and liabilities in terms of their ability to generate future economic benefits, which focuses on future cash flows. The objective of measurement is:

To select those measurement bases that most fairly reflect the cost of services, operational capacity and financial capacity of the entity in a manner that is useful in holding the entity to account, and for decision-making purposes.

- BC9. The measurement bases identified in Chapter 7 are: historical cost, market value, replacement cost, net selling price, and value in use, for assets; and, historical cost, cost of fulfillment, market value, cost of release, and assumption price, for liabilities.

Relationship between ED, Measurement and other IPSASs

- BC10. During development of this ED the IPSASB considered including all requirements with respect to measurement of assets and liabilities in one Standard, in order to provide a comprehensive "one stop shop". However, the IPSASB concluded that other IPSAS should address impairment, depreciation, amortization, and any specific measurement requirements relating to the assets or liabilities covered by the IPSAS, for example the measurement of intangible assets or of employee benefit liabilities. IPSAS, *Measurement*, should provide the definitions and generic application guidance for the measurement bases identified in the Conceptual Framework and fair value. The aim is to support consistent application of measurement bases referred to in other IPSAS.
- BC11. The IPSASB decided to develop application guidance for the following four measurement bases: cost of fulfillment, fair value, historical cost, and replacement cost, because the greater need for application guidance relates to these four measurement bases. Appendices with application guidance on other measurement bases may be added in the future.

Application Guidance on ~~Fair Value in IPSAS and IFRS 13, Fair Value Measurement~~

- BC12. This ED has application guidance for the fair value measurement basis. During development of this ED the IPSASB considered whether the fair value measurement basis was relevant to measuring

assets and liabilities held by public sector entities. The IPSASB concluded that: there are assets and liabilities held by public sector entities, which should be measured at fair value; and, the term “fair value” should have the same meaning as that established by IFRS 13, *Fair Value Measurement*.

BC13. In reaching these two conclusions the IPSASB noted that there are references to fair value throughout IPSAS, however the IPSAS definition of fair value is a derived from a pre-IFRS 13 definition. IFRS 13 defines fair value as an exit value, as follows:

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

BC14. The IPSASB’s Conceptual Framework does not include fair value in its list of measurement bases, because the IPSASB considered that the IFRS 13 meaning of fair value would not be appropriate for many public sector assets and liabilities, because it is an exit value. However, during development of this ED the IPSASB’s work on financial instruments has demonstrated that an exit-based definition of fair value is relevant for many financial instruments and more generally assets held for financial rather than operational capacity.

BC15. The IPSASB decided, with support from members of its Consultative Advisory Group (CAG), that if the term “fair value” continues to be used in IPSAS, the same meaning as that in IFRS 13 should apply. This avoids confusion and supports good quality measurement, when using this measurement basis.

BC16. In June 2018 the IPSASB approved IPSAS 41, *Financial Instruments*, which is an IFRS-aligned IPSAS. IPSAS 41 identifies fair value as a measurement basis applicable to financial instruments. The IPSASB had already decided, in September 2017, that the Public Sector Measurement project should allow for measurement at fair value, with the issue being one of how to integrate the IFRS 13 definition of fair value into IPSAS. The IPSASB decided that IPSAS, *Measurement*, should include the majority of IFRS 13 text to ensure that its definition of fair value would be consistent with that in IFRS 13, and adequately support IPSAS 41’s requirements with respect to measurement of financial instruments at fair value. On that basis the ED’s appendix with fair value application guidance has reproduced the majority of IFRS 13 text and aims to ensure that the ED’s definition of fair value is the same as that established in IFRS 13.

~~BC10. Fair value is a specified measurement basis in many IPSASs. The Conceptual Framework does not include fair value as a measurement basis, although its definition of “market value” is the same as the current IPSAS definition of “fair value,” which is either an entry value or an exit value.~~

~~BC11. The IPSASB decided not to include fair value in the Conceptual Framework because:~~

~~(a) Fair value is similar to market value and the inclusion of both measurement bases could be confusing to users of financial statements; and~~

~~(a) The IFRS 13, *Fair Value Measurement*, approach to fair value (see below) raises the following issues:~~

~~(i) In the public sector many assets are specialized and differences in entry and exit prices are therefore significant. Where an asset will provide future services or economic benefits with a greater value than the asset’s exit price, a measure reflecting exit values is not the most relevant basis.~~

~~(ii) Fair value in IFRS 13 is, in the IPSASB’s view, a model to represent a specific measurement outcome rather than a measurement basis.~~

~~(iii) In the Conceptual Framework replacement cost is a measurement basis in its own right, rather than a valuation technique to determine fair value.~~

~~(iv) The relevance of fair value in the public sector is likely to be primarily limited to providing information on financial capacity, rather than operating capacity and the cost of services.~~

~~BC12. The International Accounting Standards Board (IASB) issued IFRS 13, *Fair Value Measurement*, in 2011. IFRS 13 defines fair value as an exit value and establishes an approach to fair value measurement involving a hierarchy of inputs and use of measures derived from information about market values, costs and income. When the IPSASB decided against including fair value in the Conceptual Framework it noted, nonetheless, that there could be further work carried out at standards level to explain how the measurement bases in the Conceptual Framework align with IFRS 13's approach to fair value.~~

~~BC13. During development of the draft Standard accompanying this CP, the IPSASB decided:~~

~~(a) To apply a rebuttable presumption that IPSAS references to fair value would need revision for better alignment with the Conceptual Framework;~~

~~(a) There would be scope to use fair value for some types of assets and liabilities and in some situations; and~~

~~(b) Where fair value measurement is applied, the meaning of fair value should be consistent with the meaning in IFRS 13.~~

Objective (paragraph 1)

~~BC14-BC17.~~ ED XX's objective explains that it focuses on the definition of appropriate measurement bases and their derivation. It does not establish requirements for which measurement bases should be used in IPSASs. The ED's objective refers to the objective of measurement in the Conceptual Framework because this underpins its approach to measurement bases and their selection.

Scope and definitions (paragraphs 2–3)

~~BC15-BC18.~~ ED XX's scope conveys that the Standard's definitions of measurement bases and related application guidance applies when another IPSAS requires measurement using one of the defined measurement bases.

Subsequent Measurement

Depreciation and amortization

~~BC16-BC19.~~ Depreciation is a charge for the consumption of an asset over its useful life. ED XX does not address depreciation. Requirements and guidance on depreciation are provided at standards-level. For example, IPSAS 17, *Property, Plant and Equipment*, addresses:

- (a) The unit of account for depreciation,
- (b) The recognition of depreciation,
- (c) The point at which depreciation of an asset begins,
- (d) The relationship between economic and useful lives,
- (e) The circumstances under which land may be depreciated,

- (f) Depreciation methods, and
- (g) The relationship between the revenue generated by an asset and depreciation.

~~BC17-BC20.~~ Amortization is the term applied to the consumption of an intangible asset that does not have a physical substance. As for depreciation, requirements and guidance are provided at standards-level. ED XX does not address amortization. IPSAS 31, *Intangible Assets*, distinguishes intangible assets with definite and indefinite useful lives, and for the former provides requirements and guidance on amortization periods and methods and their review and residual value.

~~BC18-BC21.~~ The selection of an accounting policy for measurement subsequent to initial recognition may have an impact on whether an asset is depreciated or amortized. This is determined at standards level. For example IPSAS 17 requires that assets on the revaluation model with useful lives are depreciated. IPSAS 16, *Investment Property*, does not require depreciation of an investment property that is measured in accordance with the fair value model subsequent to initial recognition. IPSAS 31 does not permit amortization of an asset that is classified as held for sale.

Use of the historical cost model or revaluation model

~~BC19-BC22.~~ The IPSASB accepts that the existence of accounting policy options reduces comparability between reporting entities. The IPSASB discussed whether ED, *Measurement*, should consider the options for measurement subsequent to initial recognition in existing IPSAS with a view to eliminating or reducing those options.

~~BC20-BC23.~~ The IPSASB noted that Chapter Seven of the Conceptual Framework provides a measurement objective:

To select those measurement bases that most fairly reflect the cost of services, operational capacity and financial capacity of the entity in a manner that is useful in holding the entity to account, and for decision-making processes.

~~BC21-BC24.~~ The Conceptual Framework goes on to state that it is not possible to identify a single measurement basis that best meets the measurement objective and acknowledges both historical cost and current value measurements.

~~BC22-BC25.~~ The IPSASB concluded that:

- (a) It would be inconsistent with the Conceptual Framework to eliminate existing accounting policy options for subsequent measurement; and that
- (b) Such a step would be outside the scope of this ED, which is to provide requirements and guidance on the definitions and application of measurement bases (i.e. what is meant by each measurement basis and how to derive measurement bases), rather than to specify where they should be used. The latter is a decision for individual standards.

~~BC23-BC26.~~ A decision on whether to use historical cost or current value for measurement subsequent to initial recognition is likely to be made by regulator(s) in a particular jurisdiction. The Basis for Conclusions notes that many respondents to the Conceptual Framework Consultation Paper and ED on Measurement advocated the continued widespread use of historical cost, mostly in combination with other measurement bases. Supporters of historical cost referenced the accountability objective of financial reporting, the verifiability of historical cost and its suitability for budget reporting purposes where budgets are prepared on a historical cost basis.

~~BC24-BC27.~~ Conversely those who supported current values, and adopted a view that historical cost should be used as a proxy for current value, linked this view to both decision-making and accountability, arguing that the cost of service provision should reflect the value of assets used in service provision at the time they are consumed, rather than their transaction price. Some of these views may inform the decisions of regulators.

Application guidance

[Text in the Basis for Conclusions to be determined.]

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Agenda Item 9.3.2**Agenda Item 9.3.2****FAIR VALUE APPLICATION GUIDANCE—MARKED UP VERSION**

Appendix C: Fair value—application guidance

The Objective paragraphs 1 to 4 of IFRS 13 have been deleted: paragraph 1 on the grounds that it is subsumed within other statements within IPSAS *Measurement* and paragraphs 2 to 4 have been included in the core text.

The Scope paragraphs have been deleted on the grounds that the text would either be included in the core text (a variant of the 1st and 4th paragraphs below this box) or in individual standards as appropriate (2nd and 3rd paragraphs below).

Scope

~~This Application Guidance applies when an IPSAS requires or permits fair value measurements or disclosures about fair value measurements (and measurements, such as fair value less costs to sell, based on fair value or disclosures about those measurements), except as specified in paragraphs 2 and 3.~~

~~The measurement and disclosure requirements of this Application Guidance do not apply to the following:~~

- ~~(a) Share-based payment transactions to which the relevant international or national accounting standard dealing with share-based payment applies;~~
- ~~(b) Leasing transactions accounted for in accordance with IPSAS 16, *Leases*; and~~
- ~~(c) Measurements that have some similarities to fair value but are not fair value, such as net realizable value in IPSAS 12, *Inventories*, or value in use in IPSAS 21, *Impairment of Non-Cash-Generating Assets* and IPSAS 26, *Impairment of Cash-Generating Assets*.~~

~~The disclosures required by this Application Guidance are not required for the following:~~

- ~~(d) Plan assets measured at fair value in accordance with IPSAS 39, *Employee Benefits*; and~~
- ~~(e) Assets for which recoverable amount is fair value less costs of disposal in accordance with IPSAS 21 and IPSAS 26.~~

~~The fair value measurement framework described in this Application Guidance applies to both initial and subsequent measurement if fair value is required or permitted by other IPSASs.~~

Definitions have been deleted because they are included in the core text of the [ED].

Measurement

AG2. The objective of a fair value measurement is to estimate the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants at the measurement date under current market conditions. A fair value measurement requires an entity to determine all the following:

- (a) The particular asset or liability that is the subject of the measurement (consistently with its unit of account).

- (b) For a non-financial asset, the valuation premise that is appropriate for the measurement (consistently with its highest and best use).
- (c) The principal (or most advantageous) market for the asset or liability.
- (d) The valuation technique(s) appropriate for the measurement, considering the availability of data with which to develop inputs that represent the assumptions that market participants would use when pricing the asset or liability and the level of the fair value hierarchy within which the inputs are categorized.

The IFRS 13 definition paragraphs are deleted because the first paragraph repeats the definition and the second is unnecessary in this Appendix which is Application Guidance.

Definition of fair value

~~This IFRSIPSAS defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.~~

~~Paragraph AG2 describes the overall fair value measurement approach.~~

The asset or liability

1. **A fair value measurement is for a particular asset or liability. Therefore, when measuring fair value an entity shall take into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Such characteristics include, for example, the following:**
 - ~~(f)~~**(a)** The condition and location of the asset; and
 - ~~(g)~~**(b)** Restrictions, if any, on the sale or use of the asset.
2. The effect on the measurement arising from a particular characteristic will differ depending on how that characteristic would be taken into account by market participants.
3. The asset or liability measured at fair value might be either of the following:
 - (a) A stand-alone asset or liability (e.g., a financial instrument or a non-financial asset); or
 - (b) A group of assets, a group of liabilities or a group of assets and liabilities (e.g., a cash-generating unit or an operation).
4. Whether the asset or liability is a stand-alone asset or liability, a group of assets, a group of liabilities or a group of assets and liabilities for recognition or disclosure purposes depends on its *unit of account*. The unit of account for the asset or liability shall be determined in accordance with the IPSAS that requires or permits the fair value measurement, except as provided in this Application Guidance.

The transaction

5. **A fair value measurement assumes that the asset or liability is exchanged in an orderly transaction between market participants to sell the asset or transfer the liability at the measurement date under current market conditions.**

6. **A fair value measurement assumes that the transaction to sell the asset or transfer the liability takes place either:**
 - (a) **In the principal market for the asset or liability; or**
 - (b) **In the absence of a principal market, in the most advantageous market for the asset or liability.**
7. An entity need not undertake an exhaustive search of all possible markets to identify the principal market or, in the absence of a principal market, the most advantageous market, but it shall take into account all information that is reasonably available. In the absence of evidence to the contrary, the market in which the entity would normally enter into a transaction to sell the asset or to transfer the liability is presumed to be the principal market or, in the absence of a principal market, the most advantageous market.
8. If there is a principal market for the asset or liability, the fair value measurement shall represent the price in that market (whether that price is directly observable or estimated using another valuation technique), even if the price in a different market is potentially more advantageous at the measurement date.
9. The entity must have access to the principal (or most advantageous) market at the measurement date. Because different entities (and operations within those entities) with different activities may have access to different markets, the principal (or most advantageous) market for the same asset or liability might be different for different entities (and operations within those entities). Therefore, the principal (or most advantageous) market (and thus, market participants) shall be considered from the perspective of the entity, thereby allowing for differences between and among entities with different activities.
10. Although an entity must be able to access the market, the entity does not need to be able to sell the particular asset or transfer the particular liability on the measurement date to be able to measure fair value on the basis of the price in that market.
11. Even when there is no observable market to provide pricing information about the sale of an asset or the transfer of a liability at the measurement date, a fair value measurement shall assume that a transaction takes place at that date, considered from the perspective of a market participant that holds the asset or owes the liability. That assumed transaction establishes a basis for estimating the price to sell the asset or to transfer the liability.

Market participants

12. **An entity shall measure the fair value of an asset or a liability using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.**
13. In developing those assumptions, an entity need not identify specific market participants. Rather, the entity shall identify characteristics that distinguish market participants generally, considering factors specific to all the following:
 - (a) The asset or liability;
 - (b) The principal (or most advantageous) market for the asset or liability; and
 - (c) Market participants with whom the entity would enter into a transaction in that market.

The price

14. **Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction in the principal (or most advantageous) market at the measurement date under current market conditions (i.e., an exit price) regardless of whether that price is directly observable or estimated using another valuation technique.**
15. The price in the principal (or most advantageous) market used to measure the fair value of the asset or liability shall not be adjusted for *transaction costs*. Transaction costs shall be accounted for in accordance with other IPSASs. Transaction costs are not a characteristic of an asset or a liability; rather, they are specific to a transaction and will differ depending on how an entity enters into a transaction for the asset or liability.
16. Transaction costs do not include *transport costs*. If location is a characteristic of the asset (as might be the case, for example, for a commodity), the price in the principal (or most advantageous) market shall be adjusted for the costs, if any, that would be incurred to transport the asset from its current location to that market.

The paragraphs relating to 'Application to non-financial assets' have been deleted from this Application Guidance because they deal mainly with highest and best use – which is an issue that needs to be considered separately and is most (only?) applicable to IPSAS 16 and should be inserted in that IPSAS.

Application to non-financial assets

Highest and best use for non-financial assets

~~A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.~~

~~The highest and best use of a non-financial asset takes into account the use of the asset that is physically possible, legally permissible and financially feasible, as follows:~~

- ~~(a) A use that is physically possible takes into account the physical characteristics of the asset that market participants would take into account when pricing the asset (eg e.g., the location or size of a property).~~
- ~~(b) A use that is legally permissible takes into account any legal restrictions on the use of the asset that market participants would take into account when pricing the asset (eg e.g., the zoning regulations applicable to a property).~~
- ~~(c) A use that is financially feasible takes into account whether a use of the asset that is physically possible and legally permissible generates adequate income or cash flows (taking into account the costs of converting the asset to that use) to produce an investment return that market participants would require from an investment in that asset put to that use.~~

~~Highest and best use is determined from the perspective of market participants, even if the entity intends a different use. However, an entity's current use of a non-financial asset is presumed to be its highest and best use unless market or other factors suggest that a different use by market participants would maximise maximize the value of the asset.~~

~~To protect its competitive position, or for other reasons, an entity may intend not to use an acquired non-financial asset actively or it may intend not to use the asset according to its highest and best use. For example, that might be the case for an acquired intangible asset that the entity plans to use defensively by preventing others from using it. Nevertheless, the entity shall measure the fair value of a non-financial asset assuming its highest and best use by market participants.~~

~~Valuation premise for non-financial assets~~

~~The highest and best use of a non-financial asset establishes the valuation premise used to measure the fair value of the asset, as follows:~~

- ~~(d) The highest and best use of a non-financial asset might provide maximum value to market participants through its use in combination with other assets as a group (as installed or otherwise configured for use) or in combination with other assets and liabilities (eg e.g., an businessoperation).~~
 - ~~(i) If the highest and best use of the asset is to use the asset in combination with other assets or with other assets and liabilities, the fair value of the asset is the price that would be received in a current transaction to sell the asset assuming that the asset would be used with other assets or with other assets and liabilities and that those assets and liabilities (ie i.e., its complementary assets and the associated liabilities) would be available to market participants.~~
 - ~~(ii) Liabilities associated with the asset and with the complementary assets include liabilities that fund working capital, but do not include liabilities used to fund assets other than those within the group of assets.~~
 - ~~(iii) Assumptions about the highest and best use of a non-financial asset shall be consistent for all the assets (for which highest and best use is relevant) of the group of assets or the group of assets and liabilities within which the asset would be used.~~
- ~~(e) The highest and best use of a non-financial asset might provide maximum value to market participants on a stand-alone basis. If the highest and best use of the asset is to use it on a stand-alone basis, the fair value of the asset is the price that would be received in a current transaction to sell the asset to market participants that would use the asset on a stand-alone basis.~~

~~The fair value measurement of a non-financial asset assumes that the asset is sold consistently with the unit of account specified in other IFRS IPSASs (which may be an individual asset). That is the case even when that fair value measurement assumes that the highest and best use of the asset is to use it in combination with other assets or with other assets and liabilities because a fair value measurement assumes that the market participant already holds the complementary assets and the associated liabilities.~~

~~Paragraph AG3 describes the application of the valuation premise concept for non-financial assets.~~

The paragraphs relating to 'Application to liabilities and an entity's own equity instruments' have been deleted on the grounds that the text suggests these paragraphs are relevant only to financial instruments and should be part of IPSAS 41.

Application to liabilities and an entity's own equity instruments

General principles

~~A fair value measurement assumes that a financial or non-financial liability or an entity's own equity instrument (eg e.g., equity interests issued as consideration in a business public sector combination) is transferred to a market participant at the measurement date. The transfer of a liability or an entity's own equity instrument assumes the following:~~

- ~~(f) A liability would remain outstanding and the market participant transferee would be required to fulfil the obligation. The liability would not be settled with the counterparty or otherwise extinguished on the measurement date.~~
- ~~(g) An entity's own equity instrument would remain outstanding and the market participant transferee would take on the rights and responsibilities associated with the instrument. The instrument would not be cancelled or otherwise extinguished on the measurement date.~~

~~Even when there is no observable market to provide pricing information about the transfer of a liability or an entity's own equity instrument (eg e.g., because contractual or other legal restrictions prevent the transfer of such items), there might be an observable market for such items if they are held by other parties as assets (eg e.g., a corporate bond or a call option on an entity's shares).~~

~~In all cases, an entity shall maximise maximize the use of relevant observable inputs and minimise minimize the use of unobservable inputs to meet the objective of a fair value measurement, which is to estimate the price at which an orderly transaction to transfer the liability or equity instrument would take place between market participants at the measurement date under current market conditions.~~

Liabilities and equity instruments held by other parties as assets

~~When a quoted price for the transfer of an identical or a similar liability or entity's own equity instrument is not available and the identical item is held by another party as an asset, an entity shall measure the fair value of the liability or equity instrument from the perspective of a market participant that holds the identical item as an asset at the measurement date.~~

~~In such cases, an entity shall measure the fair value of the liability or equity instrument as follows:~~

- ~~(h) using Using the quoted price in an active market for the identical item held by another party as an asset, if that price is available.~~
- ~~(i) if If that price is not available, using other observable inputs, such as the quoted price in a market that is not active for the identical item held by another party as an asset.~~
- ~~(j) if If the observable prices in (a) and (b) are not available, using another valuation technique, such as:~~

- (i) ~~an An income approach (eg e.g., a present value technique that takes into account the future cash flows that a market participant would expect to receive from holding the liability or equity instrument as an asset; see paragraphs AG10 and AG11).~~
- (ii) ~~a A market approach (eg e.g., using quoted prices for similar liabilities or equity instruments held by other parties as assets; see paragraphs AG5–AG7).~~

~~An entity shall adjust the quoted price of a liability or an entity's own equity instrument held by another party as an asset only if there are factors specific to the asset that are not applicable to the fair value measurement of the liability or equity instrument. An entity shall ensure that the price of the asset does not reflect the effect of a restriction preventing the sale of that asset. Some factors that may indicate that the quoted price of the asset should be adjusted include the following:~~

- (k) ~~The quoted price for the asset relates to a similar (but not identical) liability or equity instrument held by another party as an asset. For example, the liability or equity instrument may have a particular characteristic (eg e.g., the credit quality of the issuer) that is different from that reflected in the fair value of the similar liability or equity instrument held as an asset.~~
- (l) ~~The unit of account for the asset is not the same as for the liability or equity instrument. For example, for liabilities, in some cases the price for an asset reflects a combined price for a package comprising both the amounts due from the issuer and a third-party credit enhancement. If the unit of account for the liability is not for the combined package, the objective is to measure the fair value of the issuer's liability, not the fair value of the combined package. Thus, in such cases, the entity would adjust the observed price for the asset to exclude the effect of the third-party credit enhancement.~~

~~Liabilities and equity instruments not held by other parties as assets~~

~~**When a quoted price for the transfer of an identical or a similar liability or entity's own equity instrument is not available and the identical item is not held by another party as an asset, an entity shall measure the fair value of the liability or equity instrument using a valuation technique from the perspective of a market participant that owes the liability or has issued the claim on equity.**~~

~~For example, when applying a present value technique an entity might take into account either of the following:~~

- (m) ~~the The future cash outflows that a market participant would expect to incur in fulfilling the obligation, including the compensation that a market participant would require for taking on the obligation (see paragraphs AG31–AG33).~~
- (n) ~~the The amount that a market participant would receive to enter into or issue an identical liability or equity instrument, using the assumptions that market participants would use when pricing the identical item (eg e.g., having the same credit characteristics) in the principal (or most advantageous) market for issuing a liability or an equity instrument with the same contractual terms.~~

~~Non-performance risk~~

~~**The fair value of a liability reflects the effect of *non-performance risk*. Non-performance risk includes, but may not be limited to, an entity's own credit risk (as defined in IFRS 7 IPSAS 30,**~~

~~Financial Instruments: Disclosures)~~ Non-performance risk is assumed to be the same before and after the transfer of the liability.

~~When measuring the fair value of a liability, an entity shall take into account the effect of its credit risk (credit standing) and any other factors that might influence the likelihood that the obligation will or will not be fulfilled. That effect may differ depending on the liability, for example:~~

- ~~(o) whether Whether the liability is an obligation to deliver cash (a financial liability) or an obligation to deliver goods or services (a non-financial liability);~~
- ~~(p) the The terms of credit enhancements related to the liability, if any.~~

~~The fair value of a liability reflects the effect of non-performance risk on the basis of its unit of account. The issuer of a liability issued with an inseparable third-party credit enhancement that is accounted for separately from the liability shall not include the effect of the credit enhancement (eg e.g., a third-party guarantee of debt) in the fair value measurement of the liability. If the credit enhancement is accounted for separately from the liability, the issuer would take into account its own credit standing and not that of the third-party guarantor when measuring the fair value of the liability.~~

~~Restriction preventing the transfer of a liability or an entity's own equity instrument~~

~~When measuring the fair value of a liability or an entity's own equity instrument, an entity shall not include a separate input or an adjustment to other inputs relating to the existence of a restriction that prevents the transfer of the item. The effect of a restriction that prevents the transfer of a liability or an entity's own equity instrument is either implicitly or explicitly included in the other inputs to the fair value measurement.~~

~~For example, at the transaction date, both the creditor and the obligor accepted the transaction price for the liability with full knowledge that the obligation includes a restriction that prevents its transfer. As a result of the restriction being included in the transaction price, a separate input or an adjustment to an existing input is not required at the transaction date to reflect the effect of the restriction on transfer. Similarly, a separate input or an adjustment to an existing input is not required at subsequent measurement dates to reflect the effect of the restriction on transfer.~~

~~Financial liability with a demand feature~~

~~The fair value of a financial liability with a demand feature (eg e.g., a demand deposit) is not less than the amount payable on demand, discounted from the first date that the amount could be required to be paid.~~

The paragraphs on 'Application to financial assets and financial liabilities with offsetting positions in market risks or counterparty credit risk' have been deleted on the grounds that these are relevant only to financial instruments and should be part of IPSAS 41.

~~Application to financial assets and financial liabilities with offsetting positions in market risks or counterparty credit risk~~

~~An entity that holds a group of financial assets and financial liabilities is exposed to market risks (as defined in IFRS 7/IPSAS 30) and to the credit risk (as defined in IFRS 7/IPSAS 30) of each of the counterparties. If the entity manages that group of financial assets and financial liabilities on the basis of its net exposure to either market risks or credit risk, the entity is permitted to apply an~~

exception to this IFRSIPSAS for measuring fair value. That exception permits an entity to measure the fair value of a group of financial assets and financial liabilities on the basis of the price that would be received to sell a net long position (ie i.e., an asset) for a particular risk exposure or paid to transfer a net short position (ie i.e., a liability) for a particular risk exposure in an orderly transaction between market participants at the measurement date under current market conditions. Accordingly, an entity shall measure the fair value of the group of financial assets and financial liabilities consistently with how market participants would price the net risk exposure at the measurement date.

An entity is permitted to use the exception in paragraph 494948 only if the entity does all the following:

- (q) — manages Manages the group of financial assets and financial liabilities on the basis of the entity's net exposure to a particular market risk (or risks) or to the credit risk of a particular counterparty in accordance with the entity's documented risk management or investment strategy;
- (r) — provides Provides information on that basis about the group of financial assets and financial liabilities to the entity's key management personnel, as defined in IPSAS 24 20, Related Party Disclosures; and
- (s) — is is required or has elected to measure those financial assets and financial liabilities at fair value in the statement of financial position at the end of each reporting period.

The exception in paragraph 494948 does not pertain to financial statement presentation. In some cases the basis for the presentation of financial instruments in the statement of financial position differs from the basis for the measurement of financial instruments, for example, if an IFRSIPSAS does not require or permit financial instruments to be presented on a net basis. In such cases an entity may need to allocate the portfolio-level adjustments (see paragraphs 545453–575756) to the individual assets or liabilities that make up the group of financial assets and financial liabilities managed on the basis of the entity's net risk exposure. An entity shall perform such allocations on a reasonable and consistent basis using a methodology appropriate in the circumstances.

An entity shall make an accounting policy decision in accordance with IPSAS 8 3, Accounting Policies, Changes in Accounting Estimates and Errors, to use the exception in paragraph 494948. An entity that uses the exception shall apply that accounting policy, including its policy for allocating bid-ask adjustments (see paragraphs 545453–565655) and credit adjustments (see paragraph 575756), if applicable, consistently from period to period for a particular portfolio.

The exception in paragraph 494948 applies only to financial assets, financial liabilities and other contracts within the scope of IFRS 9IPSAS 41, Financial Instruments (or IPSAS 39 29, Financial Instruments: Recognition and Measurement, if IFRS 9IPSAS 41 has not yet been adopted). The references to financial assets and financial liabilities in paragraphs 494948–525251 and 545453–575756 should be read as applying to all contracts within the scope of, and accounted for in accordance with, IFRS 9IPSAS 41 (or IPSAS 39 29, if IFRS 9IPSAS 41 has not yet been adopted), regardless of whether they meet the definitions of financial assets or financial liabilities in IPSAS 32 28, Financial Instruments: Presentation.

Exposure to market risks

When using the exception in paragraph 494948 to measure the fair value of a group of financial assets and financial liabilities managed on the basis of the entity's net exposure to a particular

~~market risk (or risks), the entity shall apply the price within the bid-ask spread that is most representative of fair value in the circumstances to the entity's net exposure to those market risks (see paragraphs 717170 and 727271).~~

~~When using the exception in paragraph 494948, an entity shall ensure that the market risk (or risks) to which the entity is exposed within that group of financial assets and financial liabilities is substantially the same. For example, an entity would not combine the interest rate risk associated with a financial asset with the commodity price risk associated with a financial liability because doing so would not mitigate the entity's exposure to interest rate risk or commodity price risk. When using the exception in paragraph 494948, any basis risk resulting from the market risk parameters not being identical shall be taken into account in the fair value measurement of the financial assets and financial liabilities within the group.~~

~~Similarly, the duration of the entity's exposure to a particular market risk (or risks) arising from the financial assets and financial liabilities shall be substantially the same. For example, an entity that uses a 12-month futures contract against the cash flows associated with 12 months' worth of interest rate risk exposure on a five-year financial instrument within a group made up of only those financial assets and financial liabilities measures the fair value of the exposure to 12-month interest rate risk on a net basis and the remaining interest rate risk exposure (ie i.e., years 2-5) on a gross basis.~~

Exposure to the credit risk of a particular counterparty

~~When using the exception in paragraph 494948 to measure the fair value of a group of financial assets and financial liabilities entered into with a particular counterparty, the entity shall include the effect of the entity's net exposure to the credit risk of that counterparty or the counterparty's net exposure to the credit risk of the entity in the fair value measurement when market participants would take into account any existing arrangements that mitigate credit risk exposure in the event of default (eg e.g., a master netting agreement with the counterparty or an agreement that requires the exchange of collateral on the basis of each party's net exposure to the credit risk of the other party). The fair value measurement shall reflect market participants' expectations about the likelihood that such an arrangement would be legally enforceable in the event of default.~~

Fair value at initial recognition

17. When an asset is acquired or a liability is assumed in an exchange transaction for that asset or liability, the transaction price is the price paid to acquire the asset or received to assume the liability (an *entry price*). In contrast, the fair value of the asset or liability is the price that would be received to sell the asset or paid to transfer the liability (an *exit price*). Entities do not necessarily sell assets at the prices paid to acquire them. Similarly, entities do not necessarily transfer liabilities at the prices received to assume them.
18. In many cases the transaction price will equal the fair value (e.g., that might be the case when on the transaction date the transaction to buy an asset takes place in the market in which the asset would be sold).
19. When determining whether fair value at initial recognition equals the transaction price, an entity shall take into account factors specific to the transaction and to the asset or liability. Paragraph AG4 describes situations in which the transaction price might not represent the fair value of an asset or a liability at initial recognition.

20. If another IPSAS requires or permits an entity to measure an asset or a liability initially at fair value and the transaction price differs from fair value, the entity shall recognize the resulting gain or loss in surplus or deficit unless that IPSAS specifies otherwise.
- AG4. When determining whether fair value at initial recognition equals the transaction price, an entity shall take into account factors specific to the transaction and to the asset or liability. For example, the transaction price might not represent the fair value of an asset or a liability at initial recognition if any of the following conditions exist:
- (a) The transaction is between related parties, although the price in a related party transaction may be used as an input into a fair value measurement if the entity has evidence that the transaction was entered into at market terms.
 - (b) The transaction takes place under duress or the seller is forced to accept the price in the transaction. For example, that might be the case if the seller is experiencing financial difficulty.
 - (c) The unit of account represented by the transaction price is different from the unit of account for the asset or liability measured at fair value. For example, that might be the case if the asset or liability measured at fair value is only one of the elements in the transaction (e.g., in a public sector combination), the transaction includes unstated rights and privileges that are measured separately in accordance with another IPSAS, or the transaction price includes transaction costs.
 - (d) The market in which the transaction takes place is different from the principal market (or most advantageous market). For example, those markets might be different if the entity is a dealer that enters into transactions with customers in the retail market, but the principal (or most advantageous) market for the exit transaction is with other dealers in the dealer market.

Valuation techniques

21. **An entity shall use valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs.**
22. The objective of using a valuation technique is to estimate the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants at the measurement date under current market conditions. Three widely used valuation techniques are the market approach, the cost approach and the income approach. The main aspects of those approaches are summarized in paragraphs AG5–AG11. An entity shall use valuation techniques consistent with one or more of those approaches to measure fair value.
23. In some cases a single valuation technique will be appropriate (e.g., when valuing an asset or a liability using quoted prices in an active market for identical assets or liabilities). In other cases, multiple valuation techniques will be appropriate (e.g., that might be the case when valuing a cash-generating unit). If multiple valuation techniques are used to measure fair value, the results (i.e., respective indications of fair value) shall be evaluated considering the reasonableness of the range of values indicated by those results. A fair value measurement is the point within that range that is most representative of fair value in the circumstances.
24. If the transaction price is fair value at initial recognition and a valuation technique that uses unobservable inputs will be used to measure fair value in subsequent periods, the valuation

technique shall be calibrated so that at initial recognition the result of the valuation technique equals the transaction price. Calibration ensures that the valuation technique reflects current market conditions, and it helps an entity to determine whether an adjustment to the valuation technique is necessary (e.g., there might be a characteristic of the asset or liability that is not captured by the valuation technique). After initial recognition, when measuring fair value using a valuation technique or techniques that use unobservable inputs, an entity shall ensure that those valuation techniques reflect observable market data (e.g., the price for a similar asset or liability) at the measurement date.

25. Valuation techniques used to measure fair value shall be applied consistently. However, a change in a valuation technique or its application (e.g., a change in its weighting when multiple valuation techniques are used or a change in an adjustment applied to a valuation technique) is appropriate if the change results in a measurement that is equally or more representative of fair value in the circumstances. That might be the case if, for example, any of the following events take place:
 - (a) New markets develop;
 - (b) New information becomes available;
 - (c) Information previously used is no longer available;
 - (d) Valuation techniques improve; or
 - (e) Market conditions change.
26. Revisions resulting from a change in the valuation technique or its application shall be accounted for as a change in accounting estimate in accordance with IPSAS 3. However, the disclosures in IPSAS 3 for a change in accounting estimate are not required for revisions resulting from a change in a valuation technique or its application.

Market approach

- AG5. The market approach uses prices and other relevant information generated by market transactions involving identical or comparable (i.e., similar) assets, liabilities or a group of assets and liabilities, such as an operation.
- AG6. For example, valuation techniques consistent with the market approach often use market multiples derived from a set of comparables. Multiples might be in ranges with a different multiple for each comparable. The selection of the appropriate multiple within the range requires judgement, considering qualitative and quantitative factors specific to the measurement.
- AG7. Valuation techniques consistent with the market approach include matrix pricing. Matrix pricing is a mathematical technique used principally to value some types of financial instruments, such as debt securities, without relying exclusively on quoted prices for the specific securities, but rather relying on the securities' relationship to other benchmark quoted securities.

Cost approach

- AG8. The cost approach reflects the amount that would be required currently to replace the service capacity of an asset (often referred to as current replacement cost).
- AG9. From the perspective of a market participant seller, the price that would be received for the asset is based on the cost to a market participant buyer to acquire or construct a substitute asset of comparable utility, adjusted for obsolescence. That is because a market participant buyer would not pay more for an asset than the amount for which it could replace the service capacity of that asset.

Obsolescence encompasses physical deterioration, functional (technological) obsolescence and economic (external) obsolescence and is broader than depreciation for financial reporting purposes (an allocation of historical cost) or tax purposes (using specified service lives). In many cases the current replacement cost method is used to measure the fair value of tangible assets that are used in combination with other assets or with other assets and liabilities.

Income approach

AG10. The income approach converts future amounts (e.g., cash flows or income and expenses) to a single current (i.e., discounted) amount. When the income approach is used, the fair value measurement reflects current market expectations about those future amounts.

AG11. Those valuation techniques include, for example, the following:

- (a) Present value techniques (see paragraphs [AG12–AG30](#));
- (b) Option pricing models, such as the Black-Scholes-Merton formula or a binomial model (i.e., a lattice model), that incorporate present value techniques and reflect both the time value and the intrinsic value of an option; and
- (c) The multi-period excess earnings method, which is used to measure the fair value of some intangible assets.

Present value techniques

AG12. Paragraphs [AG13–AG30](#) describe the use of present value techniques to measure fair value. Those paragraphs focus on a discount rate adjustment technique and an expected cash flow (expected present value) technique. Those paragraphs neither prescribe the use of a single specific present value technique nor limit the use of present value techniques to measure fair value to the techniques discussed. The present value technique used to measure fair value will depend on facts and circumstances specific to the asset or liability being measured (e.g., whether prices for comparable assets or liabilities can be observed in the market) and the availability of sufficient data.

The components of a present value measurement

AG13. Present value (i.e., an application of the income approach) is a tool used to link future amounts (e.g., cash flows or values) to a present amount using a discount rate. A fair value measurement of an asset or a liability using a present value technique captures all the following elements from the perspective of market participants at the measurement date:

- (d) An estimate of future cash flows for the asset or liability being measured.
- (e) Expectations about possible variations in the amount and timing of the cash flows representing the uncertainty inherent in the cash flows.
- (f) The time value of money, represented by the rate on risk-free monetary assets that have maturity dates or durations that coincide with the period covered by the cash flows and pose neither uncertainty in timing nor risk of default to the holder (i.e., a risk-free interest rate).
- (g) The price for bearing the uncertainty inherent in the cash flows (i.e., a risk premium).
- (h) Other factors that market participants would take into account in the circumstances.
- (i) For a liability, the non-performance risk relating to that liability, including the entity's (i.e., the obligor's) own credit risk.

General principles

AG14. Present value techniques differ in how they capture the elements in paragraph AG13. However, all the following general principles govern the application of any present value technique used to measure fair value:

- (a) Cash flows and discount rates should reflect assumptions that market participants would use when pricing the asset or liability.
- (b) Cash flows and discount rates should take into account only the factors attributable to the asset or liability being measured.
- (c) To avoid double-counting or omitting the effects of risk factors, discount rates should reflect assumptions that are consistent with those inherent in the cash flows. For example, a discount rate that reflects the uncertainty in expectations about future defaults is appropriate if using contractual cash flows of a loan (i.e., a discount rate adjustment technique). That same rate should not be used if using expected (i.e., probability-weighted) cash flows (i.e., an expected present value technique) because the expected cash flows already reflect assumptions about the uncertainty in future defaults; instead, a discount rate that is commensurate with the risk inherent in the expected cash flows should be used.
- (d) Assumptions about cash flows and discount rates should be internally consistent. For example, nominal cash flows, which include the effect of inflation, should be discounted at a rate that includes the effect of inflation. The nominal risk-free interest rate includes the effect of inflation. Real cash flows, which exclude the effect of inflation, should be discounted at a rate that excludes the effect of inflation. Similarly, after-tax cash flows should be discounted using an after-tax discount rate. Pre-tax cash flows should be discounted at a rate consistent with those cash flows.
- (e) Discount rates should be consistent with the underlying economic factors of the currency in which the cash flows are denominated.

Risk and uncertainty

AG15. A fair value measurement using present value techniques is made under conditions of uncertainty because the cash flows used are estimates rather than known amounts. In many cases both the amount and timing of the cash flows are uncertain. Even contractually fixed amounts, such as the payments on a loan, are uncertain if there is risk of default.

AG16. Market participants generally seek compensation (i.e., a risk premium) for bearing the uncertainty inherent in the cash flows of an asset or a liability. A fair value measurement should include a risk premium reflecting the amount that market participants would demand as compensation for the uncertainty inherent in the cash flows. Otherwise, the measurement would not faithfully represent fair value. In some cases determining the appropriate risk premium might be difficult. However, the degree of difficulty alone is not a sufficient reason to exclude a risk premium.

AG17. Present value techniques differ in how they adjust for risk and in the type of cash flows they use. For example:

- (a) The discount rate adjustment technique (see paragraphs AG18–AG22) uses a risk-adjusted discount rate and contractual, promised or most likely cash flows.
- (b) Method 1 of the expected present value technique (see paragraph AG25) uses risk-adjusted expected cash flows and a risk-free rate.

- (c) Method 2 of the expected present value technique (see paragraph AG26) uses expected cash flows that are not risk-adjusted and a discount rate adjusted to include the risk premium that market participants require. That rate is different from the rate used in the discount rate adjustment technique.

Discount rate adjustment technique

AG18. The discount rate adjustment technique uses a single set of cash flows from the range of possible estimated amounts, whether contractual or promised (as is the case for a bond) or most likely cash flows. In all cases, those cash flows are conditional upon the occurrence of specified events (e.g., contractual or promised cash flows for a bond are conditional on the event of no default by the debtor). The discount rate used in the discount rate adjustment technique is derived from observed rates of return for comparable assets or liabilities that are traded in the market. Accordingly, the contractual, promised or most likely cash flows are discounted at an observed or estimated market rate for such conditional cash flows (i.e., a market rate of return).

AG19. The discount rate adjustment technique requires an analysis of market data for comparable assets or liabilities. Comparability is established by considering the nature of the cash flows (e.g., whether the cash flows are contractual or non-contractual and are likely to respond similarly to changes in economic conditions), as well as other factors (e.g., credit standing, collateral, duration, restrictive covenants and liquidity). Alternatively, if a single comparable asset or liability does not fairly reflect the risk inherent in the cash flows of the asset or liability being measured, it may be possible to derive a discount rate using data for several comparable assets or liabilities in conjunction with the risk-free yield curve (i.e., using a 'build-up' approach).

AG20. To illustrate a build-up approach, assume that Asset A is a contractual right to receive CU800 in one year (i.e., there is no timing uncertainty). There is an established market for comparable assets, and information about those assets, including price information, is available. Of those comparable assets:

- (a) Asset B is a contractual right to receive CU1,200 in one year and has a market price of CU1,083. Thus, the implied annual rate of return (i.e., a one-year market rate of return) is 10.8 per cent $[(CU1,200/CU1,083) - 1]$.
- (b) Asset C is a contractual right to receive CU700 in two years and has a market price of CU566. Thus, the implied annual rate of return (i.e., a two-year market rate of return) is 11.2 per cent $[(CU700/CU566)^{0.5} - 1]$.
- (c) All three assets are comparable with respect to risk (i.e., dispersion of possible pay-offs and credit).

AG21. On the basis of the timing of the contractual payments to be received for Asset A relative to the timing for Asset B and Asset C (i.e., one year for Asset B versus two years for Asset C), Asset B is deemed more comparable to Asset A. Using the contractual payment to be received for Asset A (CU800) and the one-year market rate derived from Asset B (10.8 per cent), the fair value of Asset A is CU722 $(CU800/1.108)$. Alternatively, in the absence of available market information for Asset B, the one-year market rate could be derived from Asset C using the build-up approach. In that case the two-year market rate indicated by Asset C (11.2 per cent) would be adjusted to a one-year market rate using the term structure of the risk-free yield curve. Additional information and analysis might be required to determine whether the risk premiums for one-year and two-year assets are the same. If it is determined that the risk premiums for one-year and two-year assets are not the same, the two-year market rate of return would be further adjusted for that effect.

AG22. When the discount rate adjustment technique is applied to fixed receipts or payments, the adjustment for risk inherent in the cash flows of the asset or liability being measured is included in the discount rate. In some applications of the discount rate adjustment technique to cash flows that are not fixed receipts or payments, an adjustment to the cash flows may be necessary to achieve comparability with the observed asset or liability from which the discount rate is derived.

Expected present value technique

AG23. The expected present value technique uses as a starting point a set of cash flows that represents the probability-weighted average of all possible future cash flows (i.e., the expected cash flows). The resulting estimate is identical to expected value, which, in statistical terms, is the weighted average of a discrete random variable's possible values with the respective probabilities as the weights. Because all possible cash flows are probability-weighted, the resulting expected cash flow is not conditional upon the occurrence of any specified event (unlike the cash flows used in the discount rate adjustment technique).

AG24. In making an investment decision, risk-averse market participants would take into account the risk that the actual cash flows may differ from the expected cash flows. Portfolio theory distinguishes between two types of risk:

- (a) Unsystematic (diversifiable) risk, which is the risk specific to a particular asset or liability.
- (b) Systematic (non-diversifiable) risk, which is the common risk shared by an asset or a liability with the other items in a diversified portfolio.

Portfolio theory holds that in a market in equilibrium, market participants will be compensated only for bearing the systematic risk inherent in the cash flows. (In markets that are inefficient or out of equilibrium, other forms of return or compensation might be available.)

AG25. Method 1 of the expected present value technique adjusts the expected cash flows of an asset for systematic (i.e., market) risk by subtracting a cash risk premium (i.e., risk-adjusted expected cash flows). Those risk-adjusted expected cash flows represent a certainty-equivalent cash flow, which is discounted at a risk-free interest rate. A certainty-equivalent cash flow refers to an expected cash flow (as defined), adjusted for risk so that a market participant is indifferent to trading a certain cash flow for an expected cash flow. For example, if a market participant was willing to trade an expected cash flow of CU1,200 for a certain cash flow of CU1,000, the CU1,000 is the certainty equivalent of the CU1,200 (i.e., the CU200 would represent the cash risk premium). In that case the market participant would be indifferent as to the asset held.

AG26. In contrast, Method 2 of the expected present value technique adjusts for systematic (i.e., market) risk by applying a risk premium to the risk-free interest rate. Accordingly, the expected cash flows are discounted at a rate that corresponds to an expected rate associated with probability-weighted cash flows (i.e., an expected rate of return). Models used for pricing risky assets, such as the capital asset pricing model, can be used to estimate the expected rate of return. Because the discount rate used in the discount rate adjustment technique is a rate of return relating to conditional cash flows, it is likely to be higher than the discount rate used in Method 2 of the expected present value technique, which is an expected rate of return relating to expected or probability-weighted cash flows.

AG27. To illustrate Methods 1 and 2, assume that an asset has expected cash flows of CU780 in one year determined on the basis of the possible cash flows and probabilities shown below. The applicable

risk-free interest rate for cash flows with a one-year horizon is 5 per cent, and the systematic risk premium for an asset with the same risk profile is 3 per cent.

Possible cash flows	Probability	Probability-weighted cash flows
CU500	15%	CU75
CU800	60%	CU480
CU900	25%	CU225
Expected cash flows		CU780

AG28. In this simple illustration, the expected cash flows (CU780) represent the probability-weighted average of the three possible outcomes. In more realistic situations, there could be many possible outcomes. However, to apply the expected present value technique, it is not always necessary to take into account distributions of all possible cash flows using complex models and techniques. Rather, it might be possible to develop a limited number of discrete scenarios and probabilities that capture the array of possible cash flows. For example, an entity might use realized cash flows for some relevant past period, adjusted for changes in circumstances occurring subsequently (e.g., changes in external factors, including economic or market conditions, industry trends and competition as well as changes in internal factors affecting the entity more specifically), taking into account the assumptions of market participants.

AG29. In theory, the present value (i.e., the fair value) of the asset's cash flows is the same whether determined using Method 1 or Method 2, as follows:

- (a) Using Method 1, the expected cash flows are adjusted for systematic (i.e., market) risk. In the absence of market data directly indicating the amount of the risk adjustment, such adjustment could be derived from an asset pricing model using the concept of certainty equivalents. For example, the risk adjustment (i.e., the cash risk premium of CU22) could be determined using the systematic risk premium of 3 per cent ($CU780 - [CU780 \times (1.05/1.08)]$), which results in risk-adjusted expected cash flows of CU758 ($CU780 - CU22$). The CU758 is the certainty equivalent of CU780 and is discounted at the risk-free interest rate (5 per cent). The present value (i.e., the fair value) of the asset is CU722 ($CU758/1.05$).
- (b) Using Method 2, the expected cash flows are not adjusted for systematic (i.e., market) risk. Rather, the adjustment for that risk is included in the discount rate. Thus, the expected cash flows are discounted at an expected rate of return of 8 per cent (i.e., the 5 per cent risk-free interest rate plus the 3 per cent systematic risk premium). The present value (i.e., the fair value) of the asset is CU722 ($CU780/1.08$).

AG30. When using an expected present value technique to measure fair value, either Method 1 or Method 2 could be used. The selection of Method 1 or Method 2 will depend on facts and circumstances specific to the asset or liability being measured, the extent to which sufficient data are available and the judgements applied.

Inputs to valuation techniques

General principles

27. **Valuation techniques used to measure fair value shall maximize the use of relevant observable inputs and minimize the use of unobservable inputs.**

28. Examples of markets in which inputs might be observable for some assets and liabilities (e.g., financial instruments) include exchange markets, dealer markets, brokered markets and principal-to-principal markets (see paragraph AG34).

AG34. Examples of markets in which inputs might be observable for some assets and liabilities (e.g., financial instruments) include the following:

- (a) Exchange markets. In an exchange market, closing prices are both readily available and generally representative of fair value. An example of such a market is the London Stock Exchange.
 - (b) Dealer markets. In a dealer market, dealers stand ready to trade (either buy or sell for their own account), thereby providing liquidity by using their capital to hold an inventory of the items for which they make a market. Typically bid and ask prices (representing the price at which the dealer is willing to buy and the price at which the dealer is willing to sell, respectively) are more readily available than closing prices. Over-the-counter markets (for which prices are publicly reported) are dealer markets. Dealer markets also exist for some other assets and liabilities, including some financial instruments, commodities and physical assets (e.g., used equipment).
 - (c) Brokered markets. In a brokered market, brokers attempt to match buyers with sellers but do not stand ready to trade for their own account. In other words, brokers do not use their own capital to hold an inventory of the items for which they make a market. The broker knows the prices bid and asked by the respective parties, but each party is typically unaware of another party's price requirements. Prices of completed transactions are sometimes available. Brokered markets include electronic communication networks, in which buy and sell orders are matched, and commercial and residential real estate markets.
 - (d) Principal-to-principal markets. In a principal-to-principal market, transactions, both originations and resales, are negotiated independently with no intermediary. Little information about those transactions may be made available publicly.
29. An entity shall select inputs that are consistent with the characteristics of the asset or liability that market participants would take into account in a transaction for the asset or liability (see paragraphs xx and xx). In some cases those characteristics result in the application of an adjustment, such as a premium or discount (e.g., a control premium or non-controlling interest discount). However, a fair value measurement shall not incorporate a premium or discount that is inconsistent with the unit of account in the IPSAS that requires or permits the fair value measurement (see paragraphs xx and xx). Premiums or discounts that reflect size as a characteristic of the entity's holding (specifically, a blockage factor that adjusts the quoted price of an asset or a liability because the market's normal daily trading volume is not sufficient to absorb the quantity held by the entity, as described in paragraph xx) rather than as a characteristic of the asset or liability (e.g., a control premium when measuring the fair value of a controlling interest) are not permitted in a fair value measurement. In all cases, if there is a quoted price in an active market (i.e., a *Level 1 input*) for an asset or a liability, an entity shall use that price without adjustment when measuring fair value, except as specified in paragraph xx.

Paragraphs on 'inputs based on bid and ask prices' deleted on the grounds that they are specific to financial instruments and should be included in IPSAS 41.

Inputs based on bid and ask prices

~~If an asset or a liability measured at fair value has a bid price and an ask price (e.g., an input from a dealer market), the price within the bid-ask spread that is most representative of fair value in the circumstances shall be used to measure fair value regardless of where the input is categorised categorized within the fair value hierarchy (ie i.e., Level 1, 2 or 3; see paragraphs 737372–919190). The use of bid prices for asset positions and ask prices for liability positions is permitted, but is not required.~~

~~This IFRSIPSAS does not preclude the use of mid-market pricing or other pricing conventions that are used by market participants as a practical expedient for fair value measurements within a bid-ask spread.~~

Fair value hierarchy

30. To increase consistency and comparability in fair value measurements and related disclosures, this Application Guidance establishes a fair value hierarchy that categorizes into three levels (see paragraphs ~~xx–xx~~) the inputs to valuation techniques used to measure fair value. The fair value hierarchy gives the highest priority to quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1 inputs) and the lowest priority to unobservable inputs (*Level 3 inputs*).
31. In some cases, the inputs used to measure the fair value of an asset or a liability might be categorized within different levels of the fair value hierarchy. In those cases, the fair value measurement is categorized in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement. Assessing the significance of a particular input to the entire measurement requires judgement, taking into account factors specific to the asset or liability. Adjustments to arrive at measurements based on fair value, such as costs to sell when measuring fair value less costs to sell, shall not be taken into account when determining the level of the fair value hierarchy within which a fair value measurement is categorized.
32. The availability of relevant inputs and their relative subjectivity might affect the selection of appropriate valuation techniques (see paragraph ~~xx~~). However, the fair value hierarchy prioritizes the inputs to valuation techniques, not the valuation techniques used to measure fair value. For example, a fair value measurement developed using a present value technique might be categorized within Level 2 or Level 3, depending on the inputs that are significant to the entire measurement and the level of the fair value hierarchy within which those inputs are categorized.
33. If an observable input requires an adjustment using an unobservable input and that adjustment results in a significantly higher or lower fair value measurement, the resulting measurement would be categorized within Level 3 of the fair value hierarchy. For example, if a market participant would take into account the effect of a restriction on the sale of an asset when estimating the price for the asset, an entity would adjust the quoted price to reflect the effect of that restriction. If that quoted price is a *Level 2 input* and the adjustment is an unobservable input that is significant to the entire measurement, the measurement would be categorized within Level 3 of the fair value hierarchy.

Level 1 inputs

34. Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.
35. A quoted price in an active market provides the most faithfully representative evidence of fair value and shall be used without adjustment to measure fair value whenever available, except as specified in paragraph xx.
36. A Level 1 input will be available for many financial assets and financial liabilities, some of which might be exchanged in multiple active markets (e.g., on different exchanges). Therefore, the emphasis within Level 1 is on determining both of the following:
 - (a) The principal market for the asset or liability or, in the absence of a principal market, the most advantageous market for the asset or liability; and
 - (b) Whether the entity can enter into a transaction for the asset or liability at the price in that market at the measurement date.
37. An entity shall not make an adjustment to a Level 1 input except in the following circumstances:
 - (a) When an entity holds a large number of similar (but not identical) assets or liabilities (e.g., debt securities) that are measured at fair value and a quoted price in an active market is available but not readily accessible for each of those assets or liabilities individually (i.e., given the large number of similar assets or liabilities held by the entity, it would be difficult to obtain pricing information for each individual asset or liability at the measurement date). In that case, as a practical expedient, an entity may measure fair value using an alternative pricing method that does not rely exclusively on quoted prices (e.g., matrix pricing). However, the use of an alternative pricing method results in a fair value measurement categorized within a lower level of the fair value hierarchy.
 - (b) When a quoted price in an active market does not represent fair value at the measurement date. That might be the case if, for example, significant events (such as transactions in a principal-to-principal market, trades in a brokered market or announcements) take place after the close of a market but before the measurement date. An entity shall establish and consistently apply a policy for identifying those events that might affect fair value measurements. However, if the quoted price is adjusted for new information, the adjustment results in a fair value measurement categorized within a lower level of the fair value hierarchy.
 - (c) When measuring the fair value of a liability or an entity's own equity instrument using the quoted price for the identical item traded as an asset in an active market and that price needs to be adjusted for factors specific to the item or the asset (see paragraph xx). If no adjustment to the quoted price of the asset is required, the result is a fair value measurement categorized within Level 1 of the fair value hierarchy. However, any adjustment to the quoted price of the asset results in a fair value measurement categorized within a lower level of the fair value hierarchy.
38. If an entity holds a position in a single asset or liability (including a position comprising a large number of identical assets or liabilities, such as a holding of financial instruments) and the asset or liability is traded in an active market, the fair value of the asset or liability shall be measured within Level 1 as the product of the quoted price for the individual asset or liability and the quantity held by the entity. That is the case even if a market's normal daily trading volume is not sufficient to absorb

the quantity held and placing orders to sell the position in a single transaction might affect the quoted price.

Level 2 inputs

39. Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.
40. If the asset or liability has a specified (contractual) term, a Level 2 input must be observable for substantially the full term of the asset or liability. Level 2 inputs include the following:
 - (a) Quoted prices for similar assets or liabilities in active markets.
 - (b) Quoted prices for identical or similar assets or liabilities in markets that are not active.
 - (c) inputs other than quoted prices that are observable for the asset or liability, for example:
 - (i) Interest rates and yield curves observable at commonly quoted intervals;
 - (ii) Implied volatilities; and
 - (iii) Credit spreads.
 - (d) Market-corroborated inputs.
41. Adjustments to Level 2 inputs will vary depending on factors specific to the asset or liability. Those factors include the following:
 - (a) The condition or location of the asset;
 - (b) The extent to which inputs relate to items that are comparable to the asset or liability (including those factors described in paragraph xx); and
 - (c) The volume or level of activity in the markets within which the inputs are observed.
42. An adjustment to a Level 2 input that is significant to the entire measurement might result in a fair value measurement categorized within Level 3 of the fair value hierarchy if the adjustment uses significant unobservable inputs.
43. Paragraph AG35 describes the use of Level 2 inputs for particular assets and liabilities.

AG35. Examples of Level 2 inputs for particular assets and liabilities include the following:

Examples (a) to (d) are deleted on the grounds that they are specific to financial instruments and should be included in IPSAS 41.

- ~~(a) — Receive-fixed, pay-variable interest rate swap based on the interbank offered rate swap rate. A Level 2 input would be the interbank offered rate swap rate if that rate is observable at commonly quoted intervals for substantially the full term of the swap.~~
- ~~(b) — Receive-fixed, pay-variable interest rate swap based on a yield curve denominated in a foreign currency. A Level 2 input would be the swap rate based on a yield curve denominated in a foreign currency that is observable at commonly quoted intervals for substantially the full term of the swap. That would be the case if the term of the swap is 10 years and that rate is observable at commonly quoted intervals for 9 years, provided that any reasonable extrapolation of the yield curve for year 10 would not be significant to the fair value measurement of the swap in its entirety.~~

~~(c) Receive-fixed, pay-variable interest rate swap based on a specific bank's prime rate. A Level 2 input would be the bank's prime rate derived through extrapolation if the extrapolated values are corroborated by observable market data, for example, by correlation with an interest rate that is observable over substantially the full term of the swap.~~

~~(d) Three-year option on exchange-traded shares. A Level 2 input would be the implied volatility for the shares derived through extrapolation to year 3 if both of the following conditions exist:~~

~~(i) Prices for one-year and two-year options on the shares are observable.~~

~~(ii) The extrapolated implied volatility of a three-year option is corroborated by observable market data for substantially the full term of the option.~~

~~In that case the implied volatility could be derived by extrapolating from the implied volatility of the one-year and two-year options on the shares and corroborated by the implied volatility for three-year options on comparable entities' shares, provided that correlation with the one-year and two-year implied volatilities is established.~~

~~(e)~~(a) Licensing arrangement. For a licensing arrangement that is acquired in a public sector combination and was recently negotiated with an unrelated party by the acquired entity (the party to the licensing arrangement), a Level 2 input would be the royalty rate in the contract with the unrelated party at inception of the arrangement.

~~(f)~~(b) Finished goods inventory at a retail outlet. For finished goods inventory that is acquired in a public sector combination, a Level 2 input would be either a price to customers in a retail market or a price to retailers in a wholesale market, adjusted for differences between the condition and location of the inventory item and the comparable (i.e., similar) inventory items so that the fair value measurement reflects the price that would be received in a transaction to sell the inventory to another retailer that would complete the requisite selling efforts. Conceptually, the fair value measurement will be the same, whether adjustments are made to a retail price (downward) or to a wholesale price (upward). Generally, the price that requires the least amount of subjective adjustments should be used for the fair value measurement.

~~(g)~~(c) Building held and used. A Level 2 input would be the price per square meter for the building (a valuation multiple) derived from observable market data, e.g., multiples derived from prices in observed transactions involving comparable (i.e., similar) buildings in similar locations.

~~(h)~~(d) Cash-generating unit. A Level 2 input would be a valuation multiple (e.g., a multiple of earnings or revenue or a similar performance measure) derived from observable market data, e.g., multiples derived from prices in observed transactions involving comparable (i.e., similar) operations, taking into account operational, market, financial and non-financial factors.

Level 3 inputs

44. Level 3 inputs are unobservable inputs for the asset or liability.

45. Unobservable inputs shall be used to measure fair value to the extent that relevant observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset or liability at the measurement date. However, the fair value measurement objective remains the same, i.e., an exit price at the measurement date from the perspective of a market participant that holds the asset or owes the liability. Therefore, unobservable inputs shall reflect the

assumptions that market participants would use when pricing the asset or liability, including assumptions about risk.

46. Assumptions about risk include the risk inherent in a particular valuation technique used to measure fair value (such as a pricing model) and the risk inherent in the inputs to the valuation technique. A measurement that does not include an adjustment for risk would not represent a fair value measurement if market participants would include one when pricing the asset or liability. For example, it might be necessary to include a risk adjustment when there is significant measurement uncertainty (e.g., when there has been a significant decrease in the volume or level of activity when compared with normal market activity for the asset or liability, or similar assets or liabilities, and the entity has determined that the transaction price or quoted price does not represent fair value, as described in paragraphs AG37–AG47).

Measuring fair value when the volume or level of activity for an asset or a liability has significantly decreased

AG37. The fair value of an asset or a liability might be affected when there has been a significant decrease in the volume or level of activity for that asset or liability in relation to normal market activity for the asset or liability (or similar assets or liabilities). To determine whether, on the basis of the evidence available, there has been a significant decrease in the volume or level of activity for the asset or liability, an entity shall evaluate the significance and relevance of factors such as the following:

- (a) There are few recent transactions.
- (b) Price quotations are not developed using current information.
- (c) Price quotations vary substantially either over time or among market-makers (e.g., some brokered markets).
- (d) Indices that previously were highly correlated with the fair values of the asset or liability are demonstrably uncorrelated with recent indications of fair value for that asset or liability.
- (e) There is a significant increase in implied liquidity risk premiums, yields or performance indicators (such as delinquency rates or loss severities) for observed transactions or quoted prices when compared with the entity's estimate of expected cash flows, taking into account all available market data about credit and other non-performance risk for the asset or liability.
- (f) There is a wide bid-ask spread or significant increase in the bid-ask spread.
- (g) There is a significant decline in the activity of, or there is an absence of, a market for new issues (i.e., a primary market) for the asset or liability or similar assets or liabilities.
- (h) Little information is publicly available (e.g., for transactions that take place in a principal-to-principal market).

AG38. If an entity concludes that there has been a significant decrease in the volume or level of activity for the asset or liability in relation to normal market activity for the asset or liability (or similar assets or liabilities), further analysis of the transactions or quoted prices is needed. A decrease in the volume or level of activity on its own may not indicate that a transaction price or quoted price does not represent fair value or that a transaction in that market is not orderly. However, if an entity determines that a transaction or quoted price does not represent fair value (e.g., there may be transactions that are not orderly), an adjustment to the transactions or quoted prices will be necessary if the entity uses those prices as a basis for measuring fair value and that adjustment

may be significant to the fair value measurement in its entirety. Adjustments also may be necessary in other circumstances (e.g., when a price for a similar asset requires significant adjustment to make it comparable to the asset being measured or when the price is stale).

AG39. This Application Guidance does not prescribe a methodology for making significant adjustments to transactions or quoted prices. See paragraphs **xx-xx** and **AG5-AG11** for a discussion of the use of valuation techniques when measuring fair value. Regardless of the valuation technique used, an entity shall include appropriate risk adjustments, including a risk premium reflecting the amount that market participants would demand as compensation for the uncertainty inherent in the cash flows of an asset or a liability (see paragraph **AG17**). Otherwise, the measurement does not faithfully represent fair value. In some cases determining the appropriate risk adjustment might be difficult. However, the degree of difficulty alone is not a sufficient basis on which to exclude a risk adjustment. The risk adjustment shall be reflective of an orderly transaction between market participants at the measurement date under current market conditions.

AG40. If there has been a significant decrease in the volume or level of activity for the asset or liability, a change in valuation technique or the use of multiple valuation techniques may be appropriate (e.g., the use of a market approach and a present value technique). When weighting indications of fair value resulting from the use of multiple valuation techniques, an entity shall consider the reasonableness of the range of fair value measurements. The objective is to determine the point within the range that is most representative of fair value under current market conditions. A wide range of fair value measurements may be an indication that further analysis is needed.

AG41. Even when there has been a significant decrease in the volume or level of activity for the asset or liability, the objective of a fair value measurement remains the same. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction (i.e., not a forced liquidation or distress sale) between market participants at the measurement date under current market conditions.

AG42. Estimating the price at which market participants would be willing to enter into a transaction at the measurement date under current market conditions if there has been a significant decrease in the volume or level of activity for the asset or liability depends on the facts and circumstances at the measurement date and requires judgement. An entity's intention to hold the asset or to settle or otherwise fulfil the liability is not relevant when measuring fair value because fair value is a market-based measurement, not an entity-specific measurement.

Identifying transactions that are not orderly

AG43. The determination of whether a transaction is orderly (or is not orderly) is more difficult if there has been a significant decrease in the volume or level of activity for the asset or liability in relation to normal market activity for the asset or liability (or similar assets or liabilities). In such circumstances it is not appropriate to conclude that all transactions in that market are not orderly (i.e., forced liquidations or distress sales). Circumstances that may indicate that a transaction is not orderly include the following:

- (a) There was not adequate exposure to the market for a period before the measurement date to allow for marketing activities that are usual and customary for transactions involving such assets or liabilities under current market conditions.
- (b) There was a usual and customary marketing period, but the seller marketed the asset or liability to a single market participant.

- (c) The seller is in or near bankruptcy or receivership (i.e., the seller is distressed).
- (d) The seller was required to sell to meet regulatory or legal requirements (i.e., the seller was forced).
- (e) The transaction price is an outlier when compared with other recent transactions for the same or a similar asset or liability.

An entity shall evaluate the circumstances to determine whether, on the weight of the evidence available, the transaction is orderly.

AG44. An entity shall consider all the following when measuring fair value or estimating market risk premiums:

- (a) If the evidence indicates that a transaction is not orderly, an entity shall place little, if any, weight (compared with other indications of fair value) on that transaction price.
- (b) If the evidence indicates that a transaction is orderly, an entity shall take into account that transaction price. The amount of weight placed on that transaction price when compared with other indications of fair value will depend on the facts and circumstances, such as the following:
 - (i) The volume of the transaction.
 - (ii) The comparability of the transaction to the asset or liability being measured.
 - (iii) The proximity of the transaction to the measurement date.
- (c) If an entity does not have sufficient information to conclude whether a transaction is orderly, it shall take into account the transaction price. However, that transaction price may not represent fair value (i.e., the transaction price is not necessarily the sole or primary basis for measuring fair value or estimating market risk premiums). When an entity does not have sufficient information to conclude whether particular transactions are orderly, the entity shall place less weight on those transactions when compared with other transactions that are known to be orderly.

An entity need not undertake exhaustive efforts to determine whether a transaction is orderly, but it shall not ignore information that is reasonably available. When an entity is a party to a transaction, it is presumed to have sufficient information to conclude whether the transaction is orderly.

Using quoted prices provided by third parties

AG45. This Application Guidance does not preclude the use of quoted prices provided by third parties, such as pricing services or brokers, if an entity has determined that the quoted prices provided by those parties are developed in accordance with this Application Guidance.

AG46. If there has been a significant decrease in the volume or level of activity for the asset or liability, an entity shall evaluate whether the quoted prices provided by third parties are developed using current information that reflects orderly transactions or a valuation technique that reflects market participant assumptions (including assumptions about risk). In weighting a quoted price as an input to a fair value measurement, an entity places less weight (when compared with other indications of fair value that reflect the results of transactions) on quotes that do not reflect the result of transactions.

AG47. Furthermore, the nature of a quote (e.g., whether the quote is an indicative price or a binding offer) shall be taken into account when weighting the available evidence, with more weight given to quotes provided by third parties that represent binding offers.

47. An entity shall develop unobservable inputs using the best information available in the circumstances, which might include the entity's own data. In developing unobservable inputs, an entity may begin with its own data, but it shall adjust those data if reasonably available information indicates that other market participants would use different data or there is something particular to the entity that is not available to other market participants (e.g., an entity-specific synergy). An entity need not undertake exhaustive efforts to obtain information about market participant assumptions. However, an entity shall take into account all information about market participant assumptions that is reasonably available. Unobservable inputs developed in the manner described above are considered market participant assumptions and meet the objective of a fair value measurement.

48. Paragraph AG36 describes the use of Level 3 inputs for particular assets and liabilities.

AG36. Examples of Level 3 inputs for particular assets and liabilities include the following:

- (a) Long-dated currency swap. A Level 3 input would be an interest rate in a specified currency that is not observable and cannot be corroborated by observable market data at commonly quoted intervals or otherwise for substantially the full term of the currency swap. The interest rates in a currency swap are the swap rates calculated from the respective countries' yield curves.
- (b) Three-year option on exchange-traded shares. A Level 3 input would be historical volatility, i.e., the volatility for the shares derived from the shares' historical prices. Historical volatility typically does not represent current market participants' expectations about future volatility, even if it is the only information available to price an option.
- (c) Interest rate swap. A Level 3 input would be an adjustment to a mid-market consensus (non-binding) price for the swap developed using data that are not directly observable and cannot otherwise be corroborated by observable market data.
- (d) Decommissioning liability assumed in a public sector combination. A Level 3 input would be a current estimate using the entity's own data about the future cash outflows to be paid to fulfil the obligation (including market participants' expectations about the costs of fulfilling the obligation and the compensation that a market participant would require for taking on the obligation to dismantle the asset) if there is no reasonably available information that indicates that market participants would use different assumptions. That Level 3 input would be used in a present value technique together with other inputs, e.g., a current risk-free interest rate or a credit-adjusted risk-free rate if the effect of the entity's credit standing on the fair value of the liability is reflected in the discount rate rather than in the estimate of future cash outflows.
- (e) Cash-generating unit. A Level 3 input would be a financial forecast (e.g., of cash) developed using the entity's own data if there is no reasonably available information that indicates that market participants would use different assumptions.

Disclosure

49. **An entity shall disclose information that helps users of its financial statements assess both of the following:**

- (a) **For assets and liabilities that are measured at fair value on a recurring or non-recurring basis in the statement of financial position after initial recognition, the valuation techniques and inputs used to develop those measurements.**
- (b) **For recurring fair value measurements using significant unobservable inputs (Level 3), the effect of the measurements on surplus or deficit or net assets/equity for the period.**

50. To meet the objectives in paragraph 54, an entity shall consider all the following:

- (a) The level of detail necessary to satisfy the disclosure requirements;
- (b) How much emphasis to place on each of the various requirements;
- (c) How much aggregation or disaggregation to undertake; and
- (d) Whether users of financial statements need additional information to evaluate the quantitative information disclosed.

If the disclosures provided in accordance with this IPSAS and other IPSASs are insufficient to meet the objectives in paragraph 54, an entity shall disclose additional information necessary to meet those objectives.

51. To meet the objectives in paragraph 54, an entity shall disclose, at a minimum, the following information for each class of assets and liabilities (see paragraph xx for information on determining appropriate classes of assets and liabilities) measured at fair value (including measurements based on fair value within the scope of this Application Guidance) in the statement of financial position after initial recognition:

- (a) For recurring and non-recurring fair value measurements, the fair value measurement at the end of the reporting period, and for non-recurring fair value measurements, the reasons for the measurement. Recurring fair value measurements of assets or liabilities are those that other IPSASs require or permit in the statement of financial position at the end of each reporting period. Non-recurring fair value measurements of assets or liabilities are those that other IPSASs require or permit in the statement of financial position in particular circumstances (e.g., when an entity measures an asset held for sale at fair value less costs to sell in accordance with IFRS 5 Non-current Assets Held for Sale and Discontinued Operations because the asset's fair value less costs to sell is lower than its carrying amount).
- (b) For recurring and non-recurring fair value measurements, the level of the fair value hierarchy within which the fair value measurements are in their entirety (Level 1, 2 or 3).
- (c) For assets and liabilities held at the end of the reporting period that are measured at fair value on a recurring basis, the amounts of any transfers between Level 1 and Level 2 of the fair value hierarchy, the reasons for those transfers and the entity's policy for determining when transfers between levels are deemed to have occurred (see paragraph xx). Transfers into each level shall be disclosed and discussed separately from transfers out of each level.
- (d) For recurring and non-recurring fair value measurements categorized within Level 2 and Level 3 of the fair value hierarchy, a description of the valuation technique(s) and the inputs used in the fair value measurement. If there has been a change in valuation technique (e.g., changing from a market approach to an income approach or the use of an additional valuation technique), the entity shall disclose that change and the reason(s) for making it. For fair value measurements categorized within Level 3 of the fair value hierarchy, an entity shall

provide quantitative information about the significant unobservable inputs used in the fair value measurement. An entity is not required to create quantitative information to comply with this disclosure requirement if quantitative unobservable inputs are not developed by the entity when measuring fair value (e.g., when an entity uses prices from prior transactions or third-party pricing information without adjustment). However, when providing this disclosure an entity cannot ignore quantitative unobservable inputs that are significant to the fair value measurement and are reasonably available to the entity.

- (e) For recurring fair value measurements categorized within Level 3 of the fair value hierarchy, a reconciliation from the opening balances to the closing balances, disclosing separately changes during the period attributable to the following:
 - (i) Total gains or losses for the period recognized in surplus or deficit, and the line item(s) in surplus or deficit in which those gains or losses are recognized.
 - (ii) Total gains or losses for the period recognized in net assets/equity, and the line item(s) in net assets/equity in which those gains or losses are recognized.
 - (iii) Purchases, sales, issues and settlements (each of those types of changes disclosed separately).
 - (iv) The amounts of any transfers into or out of Level 3 of the fair value hierarchy, the reasons for those transfers and the entity's policy for determining when transfers between levels are deemed to have occurred (see paragraph xx). Transfers into Level 3 shall be disclosed and discussed separately from transfers out of Level 3.
- (f) For recurring fair value measurements categorized within Level 3 of the fair value hierarchy, the amount of the total gains or losses for the period in (e)(i) included in surplus or deficit that is attributable to the change in unrealized gains or losses relating to those assets and liabilities held at the end of the reporting period, and the line item(s) in surplus or deficit in which those unrealized gains or losses are recognized.
- (g) For recurring and non-recurring fair value measurements categorized within Level 3 of the fair value hierarchy, a description of the valuation processes used by the entity (including, for example, how an entity decides its valuation policies and procedures and analyses changes in fair value measurements from period to period).
- (h) For recurring fair value measurements categorized within Level 3 of the fair value hierarchy:
 - (i) For all such measurements, a narrative description of the sensitivity of the fair value measurement to changes in unobservable inputs if a change in those inputs to a different amount might result in a significantly higher or lower fair value measurement. If there are interrelationships between those inputs and other unobservable inputs used in the fair value measurement, an entity shall also provide a description of those interrelationships and of how they might magnify or mitigate the effect of changes in the unobservable inputs on the fair value measurement. To comply with that disclosure requirement, the narrative description of the sensitivity to changes in unobservable inputs shall include, at a minimum, the unobservable inputs disclosed when complying with (d).
 - (ii) For financial assets and financial liabilities, if changing one or more of the unobservable inputs to reflect reasonably possible alternative assumptions would change fair value significantly, an entity shall state that fact and disclose the effect of

those changes. The entity shall disclose how the effect of a change to reflect a reasonably possible alternative assumption was calculated. For that purpose, significance shall be judged with respect to surplus or deficit, and total assets or total liabilities, or, when changes in fair value are recognized in net assets/equity, total equity.

- (i) For recurring and non-recurring fair value measurements, if the highest and best use of a non-financial asset differs from its current use, an entity shall disclose that fact and why the non-financial asset is being used in a manner that differs from its highest and best use.

52. An entity shall determine appropriate classes of assets and liabilities on the basis of the following:

- (a) The nature, characteristics and risks of the asset or liability; and
- (b) The level of the fair value hierarchy within which the fair value measurement is categorized.

The number of classes may need to be greater for fair value measurements categorized within Level 3 of the fair value hierarchy because those measurements have a greater degree of uncertainty and subjectivity. Determining appropriate classes of assets and liabilities for which disclosures about fair value measurements should be provided requires judgement. A class of assets and liabilities will often require greater disaggregation than the line items presented in the statement of financial position. However, an entity shall provide information sufficient to permit reconciliation to the line items presented in the statement of financial position. If another IPSAS specifies the class for an asset or a liability, an entity may use that class in providing the disclosures required in this Application Guidance if that class meets the requirements in this paragraph.

53. An entity shall disclose and consistently follow its policy for determining when transfers between levels of the fair value hierarchy are deemed to have occurred in accordance with paragraph xx) and xx. The policy about the timing of recognizing transfers shall be the same for transfers into the levels as for transfers out of the levels. Examples of policies for determining the timing of transfers include the following:

- (a) The date of the event or change in circumstances that caused the transfer.
- (b) The beginning of the reporting period.
- (c) The end of the reporting period.

54. If an entity makes an accounting policy decision to use the exception in paragraph xx, it shall disclose that fact.

55. For each class of assets and liabilities not measured at fair value in the statement of financial position but for which the fair value is disclosed, an entity shall disclose the information required by paragraph xx, xx and xx. However, an entity is not required to provide the quantitative disclosures about significant unobservable inputs used in fair value measurements categorized within Level 3 of the fair value hierarchy required by paragraph xx. For such assets and liabilities, an entity does not need to provide the other disclosures required by this Application Guidance.

56. For a liability measured at fair value and issued with an inseparable third-party credit enhancement, an issuer shall disclose the existence of that credit enhancement and whether it is reflected in the fair value measurement of the liability.

57. An entity shall present the quantitative disclosures required by this Application Guidance in a tabular format unless another format is more appropriate.

Appendix B

Application Guidance

This Appendix is an integral part of [draft] IPSAS [X] (ED 64).

AG1. ~~The judgements applied in different valuation situations may be different. This appendix describes the judgements that might apply when an entity measures fair value in different valuation situations.~~

The fair value measurement approach

Above text deleted as being unnecessary. The paragraph below (old AG2) has been moved to main text in the IPSAS, *Measurement*, Appendix on Fair Value.

AG2. ~~The objective of a fair value measurement is to estimate the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants at the measurement date under current market conditions. A fair value measurement requires an entity to determine all the following:~~

- ~~(a) the The particular asset or liability that is the subject of the measurement (consistently with its unit of account).~~
- ~~(b) for For a non-financial asset, the valuation premise that is appropriate for the measurement (consistently with its highest and best use).~~
- ~~(c) the The principal (or most advantageous) market for the asset or liability.~~
- ~~(d)(a) the The valuation technique(s) appropriate for the measurement, considering the availability of data with which to develop inputs that represent the assumptions that market participants would use when pricing the asset or liability and the level of the fair value hierarchy within which the inputs are categorisedcategorized.~~

The following paragraph (old AG3) has been deleted. It is specific to non-financial assets and is probably better suited to IPSAS 16.

Valuation premise for non-financial assets (paragraphs ~~323231–343433~~)

AG3. ~~When measuring the fair value of a non-financial asset used in combination with other assets as a group (as installed or otherwise configured for use) or in combination with other assets and liabilities (eg e.g., an businessoperation), the effect of the valuation premise depends on the circumstances. For example:~~

- ~~(a) the The fair value of the asset might be the same whether the asset is used on a stand-alone basis or in combination with other assets or with other assets and liabilities. That might be the case if the asset is an business operation that market participants would continue to operate. In that case, the transaction would involve valuing the business operation in its entirety. The use of the assets as a group in an ongoing business operation would generate synergies that would be available to market participants (ie i.e., market~~

~~participant synergies that, therefore, should affect the fair value of the asset on either a stand-alone basis or in combination with other assets or with other assets and liabilities).~~

- ~~(e) an An asset's use in combination with other assets or with other assets and liabilities might be incorporated into the fair value measurement through adjustments to the value of the asset used on a stand-alone basis. That might be the case if the asset is a machine and the fair value measurement is determined using an observed price for a similar machine (not installed or otherwise configured for use), adjusted for transport and installation costs so that the fair value measurement reflects the current condition and location of the machine (installed and configured for use).~~
- ~~(f) an An asset's use in combination with other assets or with other assets and liabilities might be incorporated into the fair value measurement through the market participant assumptions used to measure the fair value of the asset. For example, if the asset is work in progress inventory that is unique and market participants would convert the inventory into finished goods, the fair value of the inventory would assume that market participants have acquired or would acquire any specialisedspecialized machinery necessary to convert the inventory into finished goods.~~
- ~~(g) an An asset's use in combination with other assets or with other assets and liabilities might be incorporated into the valuation technique used to measure the fair value of the asset. That might be the case when using the multi-period excess earnings method to measure the fair value of an intangible asset because that valuation technique specifically takes into account the contribution of any complementary assets and the associated liabilities in the group in which such an intangible asset would be used.~~
- ~~(h)(b) in In more limited situations, when an entity uses an asset within a group of assets, the entity might measure the asset at an amount that approximates its fair value when allocating the fair value of the asset group to the individual assets of the group. That might be the case if the valuation involves real property and the fair value of improved property (ie i.e., an asset group) is allocated to its component assets (such as land and improvements).~~

The following paragraph (old AG4) has been moved to the relevant section in the main text.

Fair value at initial recognition (paragraphs 585857–616160)

~~AG4. When determining whether fair value at initial recognition equals the transaction price, an entity shall take into account factors specific to the transaction and to the asset or liability. For example, the transaction price might not represent the fair value of an asset or a liability at initial recognition if any of the following conditions exist:~~

- ~~(a) The transaction is between related parties, although the price in a related party transaction may be used as an input into a fair value measurement if the entity has evidence that the transaction was entered into at market terms.~~
- ~~(b) The transaction takes place under duress or the seller is forced to accept the price in the transaction. For example, that might be the case if the seller is experiencing financial difficulty.~~
- ~~(c) The unit of account represented by the transaction price is different from the unit of account for the asset or liability measured at fair value. For example, that might be the case if the~~

~~asset or liability measured at fair value is only one of the elements in the transaction (eg e.g., in a business public sector combination), the transaction includes unstated rights and privileges that are measured separately in accordance with another IFRS/IPSAS, or the transaction price includes transaction costs.~~

~~(d) The market in which the transaction takes place is different from the principal market (or most advantageous market). For example, those markets might be different if the entity is a dealer that enters into transactions with customers in the retail market, but the principal (or most advantageous) market for the exit transaction is with other dealers in the dealer market.~~

Valuation techniques (paragraphs ~~626261–676766~~)

Paragraphs (old) AG5 to AG30 have been moved to the Valuation techniques section in the text.

Market approach

~~AG5. The market approach uses prices and other relevant information generated by market transactions involving identical or comparable (ie i.e., similar) assets, liabilities or a group of assets and liabilities, such as an businessoperation.~~

~~AG6. For example, valuation techniques consistent with the market approach often use market multiples derived from a set of comparables. Multiples might be in ranges with a different multiple for each comparable. The selection of the appropriate multiple within the range requires judgement, considering qualitative and quantitative factors specific to the measurement.~~

~~AG7. Valuation techniques consistent with the market approach include matrix pricing. Matrix pricing is a mathematical technique used principally to value some types of financial instruments, such as debt securities, without relying exclusively on quoted prices for the specific securities, but rather relying on the securities' relationship to other benchmark quoted securities.~~

Cost approach

~~AG8. The cost approach reflects the amount that would be required currently to replace the service capacity of an asset (often referred to as current replacement cost).~~

~~AG9. From the perspective of a market participant seller, the price that would be received for the asset is based on the cost to a market participant buyer to acquire or construct a substitute asset of comparable utility, adjusted for obsolescence. That is because a market participant buyer would not pay more for an asset than the amount for which it could replace the service capacity of that asset. Obsolescence encompasses physical deterioration, functional (technological) obsolescence and economic (external) obsolescence and is broader than depreciation for financial reporting purposes (an allocation of historical cost) or tax purposes (using specified service lives). In many cases the current replacement cost method is used to measure the fair value of tangible assets that are used in combination with other assets or with other assets and liabilities.~~

Income approach

~~AG10. The income approach converts future amounts (eg e.g., cash flows or income and expenses) to a single current (ie i.e., discounted) amount. When the income approach is used, the fair value measurement reflects current market expectations about those future amounts.~~

~~AG11. These valuation techniques include, for example, the following:~~

- ~~(a) — present Present value techniques (see paragraphs AG12–AG30);~~
- ~~(b) — option Option pricing models, such as the Black–Scholes–Merton formula or a binomial model (ie i.e., a lattice model), that incorporate present value techniques and reflect both the time value and the intrinsic value of an option; and~~
- ~~(c) — the The multi-period excess earnings method, which is used to measure the fair value of some intangible assets.~~

Present value techniques

~~AG12. Paragraphs AG13–AG30 describe the use of present value techniques to measure fair value. These paragraphs focus on a discount rate adjustment technique and an expected cash flow (expected present value) technique. Those paragraphs neither prescribe the use of a single specific present value technique nor limit the use of present value techniques to measure fair value to the techniques discussed. The present value technique used to measure fair value will depend on facts and circumstances specific to the asset or liability being measured (eg e.g., whether prices for comparable assets or liabilities can be observed in the market) and the availability of sufficient data.~~

The components of a present value measurement

~~AG13. Present value (ie i.e., an application of the income approach) is a tool used to link future amounts (eg e.g., cash flows or values) to a present amount using a discount rate. A fair value measurement of an asset or a liability using a present value technique captures all the following elements from the perspective of market participants at the measurement date:~~

- ~~(a) — an An estimate of future cash flows for the asset or liability being measured.~~
- ~~(b) — expectations Expectations about possible variations in the amount and timing of the cash flows representing the uncertainty inherent in the cash flows.~~
- ~~(c) — the The time value of money, represented by the rate on risk-free monetary assets that have maturity dates or durations that coincide with the period covered by the cash flows and pose neither uncertainty in timing nor risk of default to the holder (ie i.e., a risk-free interest rate).~~
- ~~(d) — the The price for bearing the uncertainty inherent in the cash flows (ie i.e., a risk premium).~~
- ~~(e) — other Other factors that market participants would take into account in the circumstances.~~
- ~~(f) — for For a liability, the non-performance risk relating to that liability, including the entity's (ie i.e., the obligor's) own credit risk.~~

General principles

~~AG14. Present value techniques differ in how they capture the elements in paragraph AG13. However, all the following general principles govern the application of any present value technique used to measure fair value:~~

- ~~(a) — Cash flows and discount rates should reflect assumptions that market participants would use when pricing the asset or liability.~~

- ~~(b) Cash flows and discount rates should take into account only the factors attributable to the asset or liability being measured.~~
- ~~(c) To avoid double counting or omitting the effects of risk factors, discount rates should reflect assumptions that are consistent with those inherent in the cash flows. For example, a discount rate that reflects the uncertainty in expectations about future defaults is appropriate if using contractual cash flows of a loan (ie i.e., a discount rate adjustment technique). That same rate should not be used if using expected (ie i.e., probability-weighted) cash flows (ie i.e., an expected present value technique) because the expected cash flows already reflect assumptions about the uncertainty in future defaults; instead, a discount rate that is commensurate with the risk inherent in the expected cash flows should be used.~~
- ~~(d) Assumptions about cash flows and discount rates should be internally consistent. For example, nominal cash flows, which include the effect of inflation, should be discounted at a rate that includes the effect of inflation. The nominal risk-free interest rate includes the effect of inflation. Real cash flows, which exclude the effect of inflation, should be discounted at a rate that excludes the effect of inflation. Similarly, after-tax cash flows should be discounted using an after-tax discount rate. Pre-tax cash flows should be discounted at a rate consistent with those cash flows.~~
- ~~(e) Discount rates should be consistent with the underlying economic factors of the currency in which the cash flows are denominated.~~

Risk and uncertainty

~~AG15. A fair value measurement using present value techniques is made under conditions of uncertainty because the cash flows used are estimates rather than known amounts. In many cases both the amount and timing of the cash flows are uncertain. Even contractually fixed amounts, such as the payments on a loan, are uncertain if there is risk of default.~~

~~AG16. Market participants generally seek compensation (ie i.e., a risk premium) for bearing the uncertainty inherent in the cash flows of an asset or a liability. A fair value measurement should include a risk premium reflecting the amount that market participants would demand as compensation for the uncertainty inherent in the cash flows. Otherwise, the measurement would not faithfully represent fair value. In some cases determining the appropriate risk premium might be difficult. However, the degree of difficulty alone is not a sufficient reason to exclude a risk premium.~~

~~AG17. Present value techniques differ in how they adjust for risk and in the type of cash flows they use. For example:~~

- ~~(a) The discount rate adjustment technique (see paragraphs AG18–AG22) uses a risk-adjusted discount rate and contractual, promised or most likely cash flows.~~
- ~~(b) Method 1 of the expected present value technique (see paragraph AG25) uses risk-adjusted expected cash flows and a risk-free rate.~~
- ~~(c) Method 2 of the expected present value technique (see paragraph AG26) uses expected cash flows that are not risk-adjusted and a discount rate adjusted to include the risk premium that market participants require. That rate is different from the rate used in the discount rate adjustment technique.~~

Discount rate adjustment technique

AG18. The discount rate adjustment technique uses a single set of cash flows from the range of possible estimated amounts, whether contractual or promised (as is the case for a bond) or most likely cash flows. In all cases, those cash flows are conditional upon the occurrence of specified events (eg e.g., contractual or promised cash flows for a bond are conditional on the event of no default by the debtor). The discount rate used in the discount rate adjustment technique is derived from observed rates of return for comparable assets or liabilities that are traded in the market. Accordingly, the contractual, promised or most likely cash flows are discounted at an observed or estimated market rate for such conditional cash flows (ie i.e., a market rate of return).

AG19. The discount rate adjustment technique requires an analysis of market data for comparable assets or liabilities. Comparability is established by considering the nature of the cash flows (eg e.g., whether the cash flows are contractual or non-contractual and are likely to respond similarly to changes in economic conditions), as well as other factors (eg e.g., credit standing, collateral, duration, restrictive covenants and liquidity). Alternatively, if a single comparable asset or liability does not fairly reflect the risk inherent in the cash flows of the asset or liability being measured, it may be possible to derive a discount rate using data for several comparable assets or liabilities in conjunction with the risk-free yield curve (ie i.e., using a 'build-up' approach).

AG20. To illustrate a build-up approach, assume that Asset A is a contractual right to receive CU8001 in one year (ie i.e., there is no timing uncertainty). There is an established market for comparable assets, and information about those assets, including price information, is available. Of those comparable assets:

(a) Asset B is a contractual right to receive CU1,200 in one year and has a market price of CU1,083. Thus, the implied annual rate of return (ie i.e., a one-year market rate of return) is 10.8 per cent $[(CU1,200/CU1,083) - 1]$.

(a) Asset C is a contractual right to receive CU700 in two years and has a market price of CU566. Thus, the implied annual rate of return (ie i.e., a two-year market rate of return) is 11.2 per cent $[(CU700/CU566)^{0.5} - 1]$.

(b) All three assets are comparable with respect to risk (ie i.e., dispersion of possible pay-offs and credit).

AG21. On the basis of the timing of the contractual payments to be received for Asset A relative to the timing for Asset B and Asset C (ie i.e., one year for Asset B versus two years for Asset C), Asset B is deemed more comparable to Asset A. Using the contractual payment to be received for Asset A (CU800) and the one-year market rate derived from Asset B (10.8 per cent), the fair value of Asset A is CU722 $(CU800/1.108)$. Alternatively, in the absence of available market information for Asset B, the one-year market rate could be derived from Asset C using the build-up approach. In that case the two-year market rate indicated by Asset C (11.2 per cent) would be adjusted to a one-year market rate using the term structure of the risk-free yield curve. Additional information and analysis might be required to determine whether the risk premiums for one-year and two-year assets are the same. If it is determined that the risk premiums for one-year and two-year assets are not the same, the two-year market rate of return would be further adjusted for that effect.

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

~~AG22. When the discount rate adjustment technique is applied to fixed receipts or payments, the adjustment for risk inherent in the cash flows of the asset or liability being measured is included in the discount rate. In some applications of the discount rate adjustment technique to cash flows that are not fixed receipts or payments, an adjustment to the cash flows may be necessary to achieve comparability with the observed asset or liability from which the discount rate is derived.~~

~~Expected present value technique~~

~~AG23. The expected present value technique uses as a starting point a set of cash flows that represents the probability-weighted average of all possible future cash flows (ie i.e., the expected cash flows). The resulting estimate is identical to expected value, which, in statistical terms, is the weighted average of a discrete random variable's possible values with the respective probabilities as the weights. Because all possible cash flows are probability-weighted, the resulting expected cash flow is not conditional upon the occurrence of any specified event (unlike the cash flows used in the discount rate adjustment technique).~~

~~AG24. In making an investment decision, risk-averse market participants would take into account the risk that the actual cash flows may differ from the expected cash flows. Portfolio theory distinguishes between two types of risk:~~

~~(a) unsystematic Unsystematic (diversifiable) risk, which is the risk specific to a particular asset or liability.~~

~~(a) systematic Systematic (non-diversifiable) risk, which is the common risk shared by an asset or a liability with the other items in a diversified portfolio.~~

~~Portfolio theory holds that in a market in equilibrium, market participants will be compensated only for bearing the systematic risk inherent in the cash flows. (In markets that are inefficient or out of equilibrium, other forms of return or compensation might be available.)~~

~~AG25. Method 1 of the expected present value technique adjusts the expected cash flows of an asset for systematic (ie i.e., market) risk by subtracting a cash risk premium (ie i.e., risk-adjusted expected cash flows). Those risk-adjusted expected cash flows represent a certainty equivalent cash flow, which is discounted at a risk-free interest rate. A certainty equivalent cash flow refers to an expected cash flow (as defined), adjusted for risk so that a market participant is indifferent to trading a certain cash flow for an expected cash flow. For example, if a market participant was willing to trade an expected cash flow of CU1,200 for a certain cash flow of CU1,000, the CU1,000 is the certainty equivalent of the CU1,200 (ie i.e., the CU200 would represent the cash risk premium). In that case the market participant would be indifferent as to the asset held.~~

~~AG26. In contrast, Method 2 of the expected present value technique adjusts for systematic (ie i.e., market) risk by applying a risk premium to the risk-free interest rate. Accordingly, the expected cash flows are discounted at a rate that corresponds to an expected rate associated with probability-weighted cash flows (ie i.e., an expected rate of return). Models used for pricing risky assets, such as the capital asset pricing model, can be used to estimate the expected rate of return. Because the discount rate used in the discount rate adjustment technique is a rate of return relating to conditional cash flows, it is likely to be higher than the discount rate used in Method 2 of the expected present value technique, which is an expected rate of return relating to expected or probability-weighted cash flows.~~

~~AG27. To illustrate Methods 1 and 2, assume that an asset has expected cash flows of CU780 in one year determined on the basis of the possible cash flows and probabilities shown below. The~~

applicable risk-free interest rate for cash flows with a one-year horizon is 5 per cent, and the systematic risk premium for an asset with the same risk profile is 3 per cent.

Possible cash flows	Probability	Probability-weighted cash flows
CU500	15%	CU75
CU800	60%	CU480
CU900	25%	CU225
Expected cash flows		CU780

AG28. In this simple illustration, the expected cash flows (CU780) represent the probability-weighted average of the three possible outcomes. In more realistic situations, there could be many possible outcomes. However, to apply the expected present value technique, it is not always necessary to take into account distributions of all possible cash flows using complex models and techniques. Rather, it might be possible to develop a limited number of discrete scenarios and probabilities that capture the array of possible cash flows. For example, an entity might use realised realized cash flows for some relevant past period, adjusted for changes in circumstances occurring subsequently (eg e.g., changes in external factors, including economic or market conditions, industry trends and competition as well as changes in internal factors affecting the entity more specifically), taking into account the assumptions of market participants.

AG29. In theory, the present value (ie i.e., the fair value) of the asset's cash flows is the same whether determined using Method 1 or Method 2, as follows:

(a) Using Method 1, the expected cash flows are adjusted for systematic (ie i.e., market) risk. In the absence of market data directly indicating the amount of the risk adjustment, such adjustment could be derived from an asset pricing model using the concept of certainty equivalents. For example, the risk adjustment (ie i.e., the cash risk premium of CU22) could be determined using the systematic risk premium of 3 per cent ($CU780 - [CU780 \times (1.05/1.08)]$), which results in risk-adjusted expected cash flows of CU758 ($CU780 - CU22$). The CU758 is the certainty equivalent of CU780 and is discounted at the risk-free interest rate (5 per cent). The present value (ie i.e., the fair value) of the asset is CU722 ($CU758/1.05$).

(a) Using Method 2, the expected cash flows are not adjusted for systematic (ie i.e., market) risk. Rather, the adjustment for that risk is included in the discount rate. Thus, the expected cash flows are discounted at an expected rate of return of 8 per cent (ie i.e., the 5 per cent risk-free interest rate plus the 3 per cent systematic risk premium). The present value (ie i.e., the fair value) of the asset is CU722 ($CU780/1.08$).

AG30. When using an expected present value technique to measure fair value, either Method 1 or Method 2 could be used. The selection of Method 1 or Method 2 will depend on facts and circumstances specific to the asset or liability being measured, the extent to which sufficient data are available and the judgements applied.

Paragraphs AG31 to AG33 have been deleted on the grounds that the main text, which is specific, has been deleted

~~Applying present value techniques to liabilities and an entity's own equity instruments not held by other parties as assets (paragraphs 414140 and 424241)~~

~~AG31. When using a present value technique to measure the fair value of a liability that is not held by another party as an asset (eg e.g., a decommissioning liability), an entity shall, among other things, estimate the future cash outflows that market participants would expect to incur in fulfilling the obligation. Those future cash outflows shall include market participants' expectations about the costs of fulfilling the obligation and the compensation that a market participant would require for taking on the obligation. Such compensation includes the return that a market participant would require for the following:~~

- ~~(a) undertaking Undertaking the activity (ie i.e., the value of fulfilling the obligation; eg e.g., by using resources that could be used for other activities); and~~
- ~~(a) assuming Assuming the risk associated with the obligation (ie i.e., a risk premium that reflects the risk that the actual cash outflows might differ from the expected cash outflows; see paragraph AG33).~~

~~AG32. For example, a non-financial liability does not contain a contractual rate of return and there is no observable market yield for that liability. In some cases the components of the return that market participants would require will be indistinguishable from one another (eg e.g., when using the price a third party contractor would charge on a fixed fee basis). In other cases an entity needs to estimate those components separately (eg e.g., when using the price a third party contractor would charge on a cost plus basis because the contractor in that case would not bear the risk of future changes in costs).~~

~~AG33. An entity can include a risk premium in the fair value measurement of a liability or an entity's own equity instrument that is not held by another party as an asset in one of the following ways:~~

- ~~(a) by By adjusting the cash flows (ie i.e., as an increase in the amount of cash outflows); or~~
- ~~(a) by By adjusting the rate used to discount the future cash flows to their present values (ie i.e., as a reduction in the discount rate).~~

~~An entity shall ensure that it does not double-count or omit adjustments for risk. For example, if the estimated cash flows are increased to take into account the compensation for assuming the risk associated with the obligation, the discount rate should not be adjusted to reflect that risk.~~

Paragraphs (old) AG34 to AG36 have been moved to the relevant sections in the text.

~~Inputs to valuation techniques (paragraphs 686867–727271)~~

~~AG34. Examples of markets in which inputs might be observable for some assets and liabilities (eg e.g., financial instruments) include the following:~~

- ~~(a) Exchange markets. In an exchange market, closing prices are both readily available and generally representative of fair value. An example of such a market is the London Stock Exchange.~~

- ~~(a) Dealer markets. In a dealer market, dealers stand ready to trade (either buy or sell for their own account), thereby providing liquidity by using their capital to hold an inventory of the items for which they make a market. Typically bid and ask prices (representing the price at which the dealer is willing to buy and the price at which the dealer is willing to sell, respectively) are more readily available than closing prices. Over-the-counter markets (for which prices are publicly reported) are dealer markets. Dealer markets also exist for some other assets and liabilities, including some financial instruments, commodities and physical assets (eg e.g., used equipment).~~
- ~~(b) Brokered markets. In a brokered market, brokers attempt to match buyers with sellers but do not stand ready to trade for their own account. In other words, brokers do not use their own capital to hold an inventory of the items for which they make a market. The broker knows the prices bid and asked by the respective parties, but each party is typically unaware of another party's price requirements. Prices of completed transactions are sometimes available. Brokered markets include electronic communication networks, in which buy and sell orders are matched, and commercial and residential real estate markets.~~
- ~~(c) Principal-to-principal markets. In a principal-to-principal market, transactions, both originations and resales, are negotiated independently with no intermediary. Little information about those transactions may be made available publicly.~~

Fair value hierarchy (paragraphs ~~737372~~ 919190)

Level 2 inputs (paragraphs ~~828281~~ 868685)

AG35. Examples of Level 2 inputs for particular assets and liabilities include the following:

- ~~(a) Receive fixed, pay variable interest rate swap based on the interbank offered rate London Interbank Offered Rate (LIBOR) swap rate. A Level 2 input would be the interbank offered rate LIBOR swap rate if that rate is observable at commonly quoted intervals for substantially the full term of the swap.~~
- ~~(a) Receive fixed, pay variable interest rate swap based on a yield curve denominated in a foreign currency. A Level 2 input would be the swap rate based on a yield curve denominated in a foreign currency that is observable at commonly quoted intervals for substantially the full term of the swap. That would be the case if the term of the swap is 10 years and that rate is observable at commonly quoted intervals for 9 years, provided that any reasonable extrapolation of the yield curve for year 10 would not be significant to the fair value measurement of the swap in its entirety.~~
- ~~(b) Receive fixed, pay variable interest rate swap based on a specific bank's prime rate. A Level 2 input would be the bank's prime rate derived through extrapolation if the extrapolated values are corroborated by observable market data, for example, by correlation with an interest rate that is observable over substantially the full term of the swap.~~
- ~~(c) Three-year option on exchange-traded shares. A Level 2 input would be the implied volatility for the shares derived through extrapolation to year 3 if both of the following conditions exist:

 - ~~(i) Prices for one-year and two-year options on the shares are observable.~~~~

- (ii) ~~The extrapolated implied volatility of a three-year option is corroborated by observable market data for substantially the full term of the option.~~

~~In that case the implied volatility could be derived by extrapolating from the implied volatility of the one-year and two-year options on the shares and corroborated by the implied volatility for three-year options on comparable entities' shares, provided that correlation with the one-year and two-year implied volatilities is established.~~

- (d) ~~Licensing arrangement. For a licensing arrangement that is acquired in a business public sector combination and was recently negotiated with an unrelated party by the acquired entity (the party to the licensing arrangement), a Level 2 input would be the royalty rate in the contract with the unrelated party at inception of the arrangement.~~
- (e) ~~Finished goods inventory at a retail outlet. For finished goods inventory that is acquired in a business public sector combination, a Level 2 input would be either a price to customers in a retail market or a price to retailers in a wholesale market, adjusted for differences between the condition and location of the inventory item and the comparable (ie i.e., similar) inventory items so that the fair value measurement reflects the price that would be received in a transaction to sell the inventory to another retailer that would complete the requisite selling efforts. Conceptually, the fair value measurement will be the same, whether adjustments are made to a retail price (downward) or to a wholesale price (upward). Generally, the price that requires the least amount of subjective adjustments should be used for the fair value measurement.~~
- (f) ~~Building held and used. A Level 2 input would be the price per square metre metre for the building (a valuation multiple) derived from observable market data, eg e.g., multiples derived from prices in observed transactions involving comparable (ie i.e., similar) buildings in similar locations.~~
- (g) ~~Cash-generating unit. A Level 2 input would be a valuation multiple (eg e.g., a multiple of earnings or revenue or a similar performance measure) derived from observable market data, eg e.g., multiples derived from prices in observed transactions involving comparable (ie i.e., similar) businesses~~operations~~, taking into account operational, market, financial and non-financial factors.~~

Level 3 inputs (paragraphs ~~878786~~ 919190)

~~AG36. Examples of Level 3 inputs for particular assets and liabilities include the following:~~

- (a) ~~Long-dated currency swap. A Level 3 input would be an interest rate in a specified currency that is not observable and cannot be corroborated by observable market data at commonly quoted intervals or otherwise for substantially the full term of the currency swap. The interest rates in a currency swap are the swap rates calculated from the respective countries' yield curves.~~
- (b) ~~Three-year option on exchange-traded shares. A Level 3 input would be historical volatility, ie i.e., the volatility for the shares derived from the shares' historical prices. Historical volatility typically does not represent current market participants' expectations about future volatility, even if it is the only information available to price an option.~~

- ~~(c) Interest rate swap. A Level 3 input would be an adjustment to a mid-market consensus (non-binding) price for the swap developed using data that are not directly observable and cannot otherwise be corroborated by observable market data.~~
- ~~(d) Decommissioning liability assumed in a business public sector combination. A Level 3 input would be a current estimate using the entity's own data about the future cash outflows to be paid to fulfil the obligation (including market participants' expectations about the costs of fulfilling the obligation and the compensation that a market participant would require for taking on the obligation to dismantle the asset) if there is no reasonably available information that indicates that market participants would use different assumptions. That Level 3 input would be used in a present value technique together with other inputs, eg e.g., a current risk-free interest rate or a credit-adjusted risk-free rate if the effect of the entity's credit standing on the fair value of the liability is reflected in the discount rate rather than in the estimate of future cash outflows.~~
- ~~(e)(c) Cash-generating unit. A Level 3 input would be a financial forecast (eg e.g., of cash flows or profit or loss) developed using the entity's own data if there is no reasonably available information that indicates that market participants would use different assumptions.~~

Paragraphs (old) AG37 to AG47 have been moved to the relevant sections in the text.

~~Measuring fair value when the volume or level of activity for an asset or a liability has significantly decreased~~

~~AG37. The fair value of an asset or a liability might be affected when there has been a significant decrease in the volume or level of activity for that asset or liability in relation to normal market activity for the asset or liability (or similar assets or liabilities). To determine whether, on the basis of the evidence available, there has been a significant decrease in the volume or level of activity for the asset or liability, an entity shall evaluate the significance and relevance of factors such as the following:~~

- ~~(a) There are few recent transactions.~~
- ~~(b) Price quotations are not developed using current information.~~
- ~~(c) Price quotations vary substantially either over time or among market-makers (eg e.g., some brokered markets).~~
- ~~(d) Indices that previously were highly correlated with the fair values of the asset or liability are demonstrably uncorrelated with recent indications of fair value for that asset or liability.~~
- ~~(e) There is a significant increase in implied liquidity risk premiums, yields or performance indicators (such as delinquency rates or loss severities) for observed transactions or quoted prices when compared with the entity's estimate of expected cash flows, taking into account all available market data about credit and other non-performance risk for the asset or liability.~~
- ~~(f) There is a wide bid-ask spread or significant increase in the bid-ask spread.~~
- ~~(g) There is a significant decline in the activity of, or there is an absence of, a market for new issues (ie i.e., a primary market) for the asset or liability or similar assets or liabilities.~~

(h) ~~Little information is publicly available (eg e.g., for transactions that take place in a principal-to-principal market).~~

~~AG38. If an entity concludes that there has been a significant decrease in the volume or level of activity for the asset or liability in relation to normal market activity for the asset or liability (or similar assets or liabilities), further analysis of the transactions or quoted prices is needed. A decrease in the volume or level of activity on its own may not indicate that a transaction price or quoted price does not represent fair value or that a transaction in that market is not orderly. However, if an entity determines that a transaction or quoted price does not represent fair value (eg e.g., there may be transactions that are not orderly), an adjustment to the transactions or quoted prices will be necessary if the entity uses those prices as a basis for measuring fair value and that adjustment may be significant to the fair value measurement in its entirety. Adjustments also may be necessary in other circumstances (eg e.g., when a price for a similar asset requires significant adjustment to make it comparable to the asset being measured or when the price is stale).~~

~~AG39. This IFRSIPSAS does not prescribe a methodology for making significant adjustments to transactions or quoted prices. See paragraphs 626261–676766 and AG5–AG11 for a discussion of the use of valuation techniques when measuring fair value. Regardless of the valuation technique used, an entity shall include appropriate risk adjustments, including a risk premium reflecting the amount that market participants would demand as compensation for the uncertainty inherent in the cash flows of an asset or a liability (see paragraph AG17). Otherwise, the measurement does not faithfully represent fair value. In some cases determining the appropriate risk adjustment might be difficult. However, the degree of difficulty alone is not a sufficient basis on which to exclude a risk adjustment. The risk adjustment shall be reflective of an orderly transaction between market participants at the measurement date under current market conditions.~~

~~AG40. If there has been a significant decrease in the volume or level of activity for the asset or liability, a change in valuation technique or the use of multiple valuation techniques may be appropriate (eg e.g., the use of a market approach and a present value technique). When weighting indications of fair value resulting from the use of multiple valuation techniques, an entity shall consider the reasonableness of the range of fair value measurements. The objective is to determine the point within the range that is most representative of fair value under current market conditions. A wide range of fair value measurements may be an indication that further analysis is needed.~~

~~AG41. Even when there has been a significant decrease in the volume or level of activity for the asset or liability, the objective of a fair value measurement remains the same. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction (ie i.e., not a forced liquidation or distress sale) between market participants at the measurement date under current market conditions.~~

~~AG42. Estimating the price at which market participants would be willing to enter into a transaction at the measurement date under current market conditions if there has been a significant decrease in the volume or level of activity for the asset or liability depends on the facts and circumstances at the measurement date and requires judgement. An entity's intention to hold the asset or to settle or otherwise fulfil the liability is not relevant when measuring fair value because fair value is a market-based measurement, not an entity-specific measurement.~~

Identifying transactions that are not orderly

AG43. ~~The determination of whether a transaction is orderly (or is not orderly) is more difficult if there has been a significant decrease in the volume or level of activity for the asset or liability in relation to normal market activity for the asset or liability (or similar assets or liabilities). In such circumstances it is not appropriate to conclude that all transactions in that market are not orderly (ie i.e., forced liquidations or distress sales). Circumstances that may indicate that a transaction is not orderly include the following:~~

- ~~(a) There was not adequate exposure to the market for a period before the measurement date to allow for marketing activities that are usual and customary for transactions involving such assets or liabilities under current market conditions.~~
- ~~(b) There was a usual and customary marketing period, but the seller marketed the asset or liability to a single market participant.~~
- ~~(c) The seller is in or near bankruptcy or receivership (ie i.e., the seller is distressed).~~
- ~~(d) The seller was required to sell to meet regulatory or legal requirements (ie i.e., the seller was forced).~~
- ~~(e) The transaction price is an outlier when compared with other recent transactions for the same or a similar asset or liability.~~

~~An entity shall evaluate the circumstances to determine whether, on the weight of the evidence available, the transaction is orderly.~~

AG44. ~~An entity shall consider all the following when measuring fair value or estimating market risk premiums:~~

- ~~(a) If the evidence indicates that a transaction is not orderly, an entity shall place little, if any, weight (compared with other indications of fair value) on that transaction price.~~
- ~~(a) If the evidence indicates that a transaction is orderly, an entity shall take into account that transaction price. The amount of weight placed on that transaction price when compared with other indications of fair value will depend on the facts and circumstances, such as the following:~~
 - ~~(i) the The volume of the transaction.~~
 - ~~(ii) the The comparability of the transaction to the asset or liability being measured.~~
 - ~~(iii) the The proximity of the transaction to the measurement date.~~
- ~~(a) If an entity does not have sufficient information to conclude whether a transaction is orderly, it shall take into account the transaction price. However, that transaction price may not represent fair value (ie i.e., the transaction price is not necessarily the sole or primary basis for measuring fair value or estimating market risk premiums). When an entity does not have sufficient information to conclude whether particular transactions are orderly, the entity shall place less weight on those transactions when compared with other transactions that are known to be orderly.~~

~~An entity need not undertake exhaustive efforts to determine whether a transaction is orderly, but it shall not ignore information that is reasonably available. When an entity is a party to a transaction, it is presumed to have sufficient information to conclude whether the transaction is orderly.~~

Using quoted prices provided by third parties

~~AG45. This IFRS¹IPSAS does not preclude the use of quoted prices provided by third parties, such as pricing services or brokers, if an entity has determined that the quoted prices provided by those parties are developed in accordance with this IFRS¹IPSAS.~~

~~AG46. If there has been a significant decrease in the volume or level of activity for the asset or liability, an entity shall evaluate whether the quoted prices provided by third parties are developed using current information that reflects orderly transactions or a valuation technique that reflects market participant assumptions (including assumptions about risk). In weighting a quoted price as an input to a fair value measurement, an entity places less weight (when compared with other indications of fair value that reflect the results of transactions) on quotes that do not reflect the result of transactions.~~

~~AG47. Furthermore, the nature of a quote (eg e.g., whether the quote is an indicative price or a binding offer) shall be taken into account when weighting the available evidence, with more weight given to quotes provided by third parties that represent binding offers.~~