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**SINGAPORE FINANCIAL REPORTING STANDARDS  
(INTERNATIONAL)**

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**SFRS(I) 13  
Fair Value Measurement**

This Standard is applicable for annual reporting period beginning on  
1 January 2023.

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*from paragraph***SINGAPORE FINANCIAL REPORTING STANDARD (INTERNATIONAL) 13  
FAIR VALUE MEASUREMENT**

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Singapore Financial Reporting Standard (International) 13 *Fair Value Measurement* (SFRS(I) 13) is set out in paragraphs 1–99 and Appendices A–D. All the paragraphs have equal authority. Paragraphs in **bold type** state the main principles. Terms defined in Appendix A are in *italics* the first time they appear in the SFRS(I). Definitions of other terms are given in the Glossary for Singapore Financial Reporting Standards (International). SFRS(I) 13 should be read in the context of its objective, the *Preface to Singapore Financial Reporting Standards (International)*, the *Conceptual Framework for Financial Reporting*, and the Basis for Conclusions on International Financial Reporting Standards. SFRS(I) 1-8 *Accounting Policies, Changes in Accounting Estimates and Errors* provides a basis for selecting and applying accounting policies in the absence of explicit guidance.

## Preface

Singapore Financial Reporting Standards (International) (SFRS(I)s) are available for entities to apply for annual reporting periods beginning on or after 1 January 2018.

The first volume of SFRS(I)s contains the equivalent of the consolidated text of International Financial Reporting Standards (IFRSs) as issued by the International Accounting Standards Board (IASB) at 31 December 2017 that are applicable for annual reporting period beginning on 1 January 2018.

In this Standard, paragraphs with a prefix 'IFRS' refer to effective date, transition provisions and/or other text that are extracted from IFRSs. An entity that is not a first-time adopter shall apply those requirements, if applicable<sup>1</sup>. Paragraphs that are specific to SFRS(I)s are indicated with a prefix 'SG'.

Notwithstanding the effective date and transition provisions in this Standard, an entity that is a first-time adopter of SFRS(I)s<sup>2</sup> shall:

- (A) Initially apply this Standard in the first annual period in which it adopts SFRS(I)s; and
- (B) Apply SFRS(I) 1 *First-time Adoption of Singapore Financial Reporting Standards (International)* in its first SFRS(I) financial statements. The entity shall also apply SFRS(I) 1 in each interim financial report that it presents in accordance with SFRS(I) 1-34 *Interim Financial Reporting* for any part of the period covered by its first SFRS(I) financial statements.

SFRS(I) 13 *Fair Value Measurement* is equivalent to IFRS 13 *Fair Value Measurement*. An entity that complies with SFRS(I) 13 can simultaneously comply with IFRS 13.

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1 For example, SFRS(I) 1 *First-time Adoption of Singapore Financial Reporting Standards (International)* specifies that the transitional provisions in SFRS(I)s apply to a transitioning entity's transition to SFRS(I)s. SFRS(I) 1 defines a 'transitioning entity' as an entity that presents its first SFRS(I) financial statements, and that presented its annual financial statements in the most recent previous year that contained an explicit and unreserved statement of compliance with IFRSs.

2 SFRS(I) 1 *First-time Adoption of Singapore Financial Reporting Standards (International)* defines a 'first-time adopter' as an entity that presents its first SFRS(I) financial statements. A first-time adopter excludes a transitioning entity.

# Singapore Financial Reporting Standard (International) 13

## *Fair Value Measurement*

### Objective

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- 1 This SFRS(I):
  - (a) defines *fair value*;
  - (b) sets out in a single SFRS(I) a framework for measuring fair value; and
  - (c) requires disclosures about fair value measurements.
- 2 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 (ie an *exit price* at the measurement date from the perspective of a market participant that holds the asset or owes the liability).
- 3 When a price for an identical asset or liability is not observable, an entity measures fair value using another valuation technique that maximises the use of relevant *observable inputs* and minimises 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.
- 4 The definition of fair value focuses on assets and liabilities because they are a primary subject of accounting measurement. In addition, this SFRS(I) shall be applied to an entity's own equity instruments measured at fair value.

### Scope

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- 5 This SFRS(I) applies when another SFRS(I) 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 6 and 7.
- 6 The measurement and disclosure requirements of this SFRS(I) do not apply to the following:
  - (a) share-based payment transactions within the scope of SFRS(I) 2 *Share-based Payment*;
  - (b) leasing transactions accounted for in accordance with SFRS(I) 16 *Leases*; and
  - (c) measurements that have some similarities to fair value but are not fair value, such as net realisable value in SFRS(I) 1-2 *Inventories* or value in use in SFRS(I) 1-36 *Impairment of Assets*.
- 7 The disclosures required by this SFRS(I) are not required for the following:
  - (a) plan assets measured at fair value in accordance with SFRS(I) 1-19 *Employee Benefits*;

- (b) retirement benefit plan investments measured at fair value in accordance with SFRS(I) 1-26 *Accounting and Reporting by Retirement Benefit Plans*; and
  - (c) assets for which recoverable amount is fair value less costs of disposal in accordance with SFRS(I) 1-36.
- 8 The fair value measurement framework described in this SFRS(I) applies to both initial and subsequent measurement if fair value is required or permitted by other SFRS(I)s.

## Measurement

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### Definition of fair value

- 9 **This SFRS(I) 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.**
- 10 Paragraph B2 describes the overall fair value measurement approach.

### The asset or liability

- 11 **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.**
- 12 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.
- 13 The asset or liability measured at fair value might be either of the following:
- (a) a stand-alone asset or liability (eg 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 (eg a cash-generating unit or a business).

- 14 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 SFRS(I) that requires or permits the fair value measurement, except as provided in this SFRS(I).

### The transaction

- 15 **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.**
- 16 **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.**

- 17 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.
- 18 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.
- 19 The entity must have access to the principal (or most advantageous) market at the measurement date. Because different entities (and businesses 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 businesses 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.
- 20 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.
- 21 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**

- 22 **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.**
- 23 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**

- 24 **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 (ie an exit price) regardless of whether that price is directly observable or estimated using another valuation technique.**

- 25 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 SFRS(I)s. 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.
- 26 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.

## Application to non-financial assets

### Highest and best use for non-financial assets

- 27 **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.**
- 28 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 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 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.
- 29 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 the value of the asset.
- 30 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

- 31 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:
- (a) 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 a business).

- (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 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.
- (b) 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.

32 The fair value measurement of a non-financial asset assumes that the asset is sold consistently with the unit of account specified in other SFRS(I)s (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.

33 Paragraph B3 describes the application of the valuation premise concept for non-financial assets.

## **Application to liabilities and an entity's own equity instruments**

### **General principles**

34 **A fair value measurement assumes that a financial or non-financial liability or an entity's own equity instrument (eg equity interests issued as consideration in a business 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:**

- (a) **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.**
- (b) **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.**

35 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 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 a corporate bond or a call option on an entity's shares).

- 36 In all cases, an entity shall maximise the use of relevant observable inputs and minimise 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*

- 37 **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.**

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

- (a) using the quoted price in an *active market* for the identical item held by another party as an asset, if that price is available.
- (b) 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.
- (c) if the observable prices in (a) and (b) are not available, using another valuation technique, such as:
  - (i) an *income approach* (eg 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 B10 and B11).
  - (ii) a *market approach* (eg using quoted prices for similar liabilities or equity instruments held by other parties as assets; see paragraphs B5–B7).

- 39 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:

- (a) 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 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.
- (b) 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*

- 40 **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.**

- 41 For example, when applying a present value technique an entity might take into account either of the following:
- (a) 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 B31–B33).
  - (b) 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 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**

- 42 **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 SFRS(I) 7 *Financial Instruments: Disclosures*). Non-performance risk is assumed to be the same before and after the transfer of the liability.**
- 43 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:
- (a) whether the liability is an obligation to deliver cash (a financial liability) or an obligation to deliver goods or services (a non-financial liability).
  - (b) the terms of credit enhancements related to the liability, if any.

- 44 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 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**

- 45 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.
- 46 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**

- 47 The fair value of a financial liability with a demand feature (eg 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.

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

- 48 An entity that holds a group of financial assets and financial liabilities is exposed to market risks (as defined in SFRS(I) 7) and to the credit risk (as defined in SFRS(I) 7) 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 SFRS(I) 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 an asset) for a particular risk exposure or paid to transfer a net short position (ie 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.
- 49 An entity is permitted to use the exception in paragraph 48 only if the entity does all the following:
- (a) 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;
  - (b) provides information on that basis about the group of financial assets and financial liabilities to the entity's key management personnel, as defined in SFRS(I) 1-24 *Related Party Disclosures*; and
  - (c) 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.
- 50 The exception in paragraph 48 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 a SFRS(I) 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 53–56) 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.
- 51 An entity shall make an accounting policy decision in accordance with SFRS(I) 1-8 *Accounting Policies, Changes in Accounting Estimates and Errors* to use the exception in paragraph 48. An entity that uses the exception shall apply that accounting policy, including its policy for allocating bid-ask adjustments (see paragraphs 53–55) and credit adjustments (see paragraph 56), if applicable, consistently from period to period for a particular portfolio.
- 52 The exception in paragraph 48 applies only to financial assets, financial liabilities and other contracts within the scope of SFRS(I) 9 *Financial Instruments* (or SFRS(I) 1-39 *Financial Instruments: Recognition and Measurement*, if SFRS(I) 9 has not yet been adopted). The references to financial assets and financial liabilities in paragraphs 48–51 and 53–56 should be read as applying to all contracts within the scope of, and accounted for in accordance with, SFRS(I) 9 (or SFRS(I) 1-39, if SFRS(I) 9 has not yet been adopted), regardless of

whether they meet the definitions of financial assets or financial liabilities in SFRS(I) 1-32 *Financial Instruments: Presentation*.

### **Exposure to market risks**

- 53 When using the exception in paragraph 48 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 70 and 71).
- 54 When using the exception in paragraph 48, 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 48, 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.
- 55 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 years 2–5) on a gross basis.

### **Exposure to the credit risk of a particular counterparty**

- 56 When using the exception in paragraph 48 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 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**

- 57 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.
- 58 In many cases the transaction price will equal the fair value (eg 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).
- 59 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 B4 describes situations in which the transaction price might not represent the fair value of an asset or a liability at initial recognition.

- 60 If another SFRS(I) 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 recognise the resulting gain or loss in profit or loss unless that SFRS(I) specifies otherwise.

## Valuation techniques

- 61 **An entity shall use valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.**

- 62 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 summarised in paragraphs B5–B11. An entity shall use valuation techniques consistent with one or more of those approaches to measure fair value.

- 63 In some cases a single valuation technique will be appropriate (eg 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 (eg that might be the case when valuing a cash-generating unit). If multiple valuation techniques are used to measure fair value, the results (ie 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.

- 64 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 (eg 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 (eg the price for a similar asset or liability) at the measurement date.

- 65 Valuation techniques used to measure fair value shall be applied consistently. However, a change in a valuation technique or its application (eg 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.

- 66 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 SFRS(I) 1-8. However, the disclosures in SFRS(I) 1-8 for a change in accounting estimate are not required for revisions resulting from a change in a valuation technique or its application.

## Inputs to valuation techniques

### General principles

- 67 **Valuation techniques used to measure fair value shall maximise the use of relevant observable inputs and minimise the use of unobservable inputs.**
- 68 Examples of markets in which inputs might be observable for some assets and liabilities (eg financial instruments) include exchange markets, dealer markets, brokered markets and principal-to-principal markets (see paragraph B34).
- 69 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 11 and 12). In some cases those characteristics result in the application of an adjustment, such as a premium or discount (eg 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 SFRS(I) that requires or permits the fair value measurement (see paragraphs 13 and 14). 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 80) rather than as a characteristic of the asset or liability (eg 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 (ie 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 79.

### Inputs based on bid and ask prices

- 70 If an asset or a liability measured at fair value has a bid price and an ask price (eg 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 within the fair value hierarchy (ie Level 1, 2 or 3; see paragraphs 72–90). The use of bid prices for asset positions and ask prices for liability positions is permitted, but is not required.
- 71 This SFRS(I) 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

- 72 To increase consistency and comparability in fair value measurements and related disclosures, this SFRS(I) establishes a fair value hierarchy that categorises into three levels (see paragraphs 76–90) 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*).
- 73 In some cases, the inputs used to measure the fair value of an asset or a liability might be categorised within different levels of the fair value hierarchy. In those cases, the fair value measurement is categorised 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 categorised.

- 74 The availability of relevant inputs and their relative subjectivity might affect the selection of appropriate valuation techniques (see paragraph 61). However, the fair value hierarchy prioritises 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 categorised 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 categorised.
- 75 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 categorised 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 categorised within Level 3 of the fair value hierarchy.

### Level 1 inputs

- 76 Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.
- 77 A quoted price in an active market provides the most reliable evidence of fair value and shall be used without adjustment to measure fair value whenever available, except as specified in paragraph 79.
- 78 A Level 1 input will be available for many financial assets and financial liabilities, some of which might be exchanged in multiple active markets (eg 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.
- 79 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 (eg 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 (ie 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 (eg matrix pricing). However, the use of an alternative pricing method results in a fair value measurement categorised 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 categorised 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 39). If no adjustment to the quoted price of the asset is required, the result is a fair value measurement categorised within Level 1 of the fair value hierarchy. However, any adjustment to the quoted price of the asset results in a fair value measurement categorised within a lower level of the fair value hierarchy.

- 80 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**

- 81 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.

- 82 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*.

- 83 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 39); and
- (c) the volume or level of activity in the markets within which the inputs are observed.

- 84 An adjustment to a Level 2 input that is significant to the entire measurement might result in a fair value measurement categorised within Level 3 of the fair value hierarchy if the adjustment uses significant unobservable inputs.

- 85 Paragraph B35 describes the use of Level 2 inputs for particular assets and liabilities.

### Level 3 inputs

- 86 Level 3 inputs are unobservable inputs for the asset or liability.
- 87 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, ie 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.
- 88 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 (eg 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 B37–B47).
- 89 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 (eg 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.
- 90 Paragraph B36 describes the use of Level 3 inputs for particular assets and liabilities.

### Disclosure

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- 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 profit or loss or other comprehensive income 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 SFRS(I) and other SFRS(I)s 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 SFRS(I)) 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 SFRS(I)s 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 SFRS(I)s require or permit in the statement of financial position in particular circumstances (eg when an entity measures an asset held for sale at fair value less costs to sell in accordance with SFRS(I) 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 categorised 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 95). 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 categorised 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 (eg 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 categorised 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 (eg 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 categorised 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 recognised in profit or loss, and the line item(s) in profit or loss in which those gains or losses are recognised.
    - (ii) total gains or losses for the period recognised in other comprehensive income, and the line item(s) in other comprehensive income in which those gains or losses are recognised.
    - (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 95). Transfers into Level 3 shall be disclosed and discussed separately from transfers out of Level 3.
- (f) for recurring fair value measurements categorised within Level 3 of the fair value hierarchy, the amount of the total gains or losses for the period in (e)(i) included in profit or loss that is attributable to the change in unrealised gains or losses relating to those assets and liabilities held at the end of the reporting period, and the line item(s) in profit or loss in which those unrealised gains or losses are recognised.
- (g) for recurring and non-recurring fair value measurements categorised 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 categorised 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 profit or loss, and total assets or total liabilities, or, when changes in fair value are recognised in other comprehensive income, 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 categorised.

The number of classes may need to be greater for fair value measurements categorised 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 SFRS(I) specifies the class for an asset or a liability, an entity may use that class in providing the disclosures required in this SFRS(I) 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 93(c) and (e)(iv). The policy about the timing of recognising 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 48, 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 93(b), (d) and (i). However, an entity is not required to provide the quantitative disclosures about significant unobservable inputs used in fair value measurements categorised within Level 3 of the fair value hierarchy required by paragraph 93(d). For such assets and liabilities, an entity does not need to provide the other disclosures required by this SFRS(I).
- 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 SFRS(I) in a tabular format unless another format is more appropriate.

## Appendix A

### Defined terms

*This appendix is an integral part of the SFRS(I).*

<b>active market</b>	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.
<b>cost approach</b>	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).
<b>entry price</b>	The price paid to acquire an asset or received to assume a liability in an exchange transaction.
<b>exit price</b>	The price that would be received to sell an asset or paid to transfer a liability.
<b>expected cash flow</b>	The probability-weighted average (ie mean of the distribution) of possible future cash flows.
<b>fair value</b>	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.
<b>highest and best use</b>	The use of a non-financial asset by market participants that would maximise the value of the asset or the group of assets and liabilities (eg a business) within which the asset would be used.
<b>income approach</b>	Valuation techniques that convert future amounts (eg cash flows or income and expenses) to a single current (ie discounted) amount. The fair value measurement is determined on the basis of the value indicated by current market expectations about those future amounts.
<b>inputs</b>	<p>The assumptions that market participants would use when pricing the asset or liability, including assumptions about risk, such as the following:</p> <ul style="list-style-type: none"> <li>(a) the risk inherent in a particular valuation technique used to measure fair value (such as a pricing model); and</li> <li>(b) the risk inherent in the inputs to the valuation technique.</li> </ul> <p>Inputs may be observable or unobservable.</p>
<b>Level 1 inputs</b>	Quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.
<b>Level 2 inputs</b>	Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.
<b>Level 3 inputs</b>	Unobservable inputs for the asset or liability.
<b>market approach</b>	A valuation technique that uses prices and other relevant information generated by market transactions involving identical or comparable (ie similar) assets, liabilities or a group of assets and liabilities, such as a business.

<b>market-corroborated inputs</b>	Inputs that are derived principally from or corroborated by observable market data by correlation or other means.
<b>market participant</b>	<p>Buyers and sellers in the principal (or most advantageous) market for the asset or liability that have all of the following characteristics:</p> <ul style="list-style-type: none"> <li>(a) They are independent of each other, ie they are not related parties as defined in SFRS(I) 1-24, 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.</li> <li>(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.</li> <li>(c) They are able to enter into a transaction for the asset or liability.</li> <li>(d) They are willing to enter into a transaction for the asset or liability, ie they are motivated but not forced or otherwise compelled to do so.</li> </ul>
<b>most advantageous market</b>	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.
<b>non-performance risk</b>	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.
<b>observable inputs</b>	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.
<b>orderly transaction</b>	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 (eg a forced liquidation or distress sale).
<b>principal market</b>	The market with the greatest volume and level of activity for the asset or liability.
<b>risk premium</b>	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'.
<b>transaction costs</b>	<p>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:</p> <ul style="list-style-type: none"> <li>(a) They result directly from and are essential to that transaction.</li> <li>(b) They would not have been incurred by the entity had the decision to sell the asset or transfer the liability not been made (similar to costs to sell, as defined in SFRS(I) 5).</li> </ul>

<b>transport costs</b>	The costs that would be incurred to transport an asset from its current location to its principal (or most advantageous) market.
<b>unit of account</b>	The level at which an asset or a liability is aggregated or disaggregated in a SFRS(I) for recognition purposes.
<b>unobservable inputs</b>	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.

## Appendix B

### Application guidance

*This appendix is an integral part of the SFRS(I). It describes the application of paragraphs 1–99 and has the same authority as the other parts of the SFRS(I).*

- B1 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

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- B2 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 categorised.

### Valuation premise for non-financial assets (paragraphs 31–33)

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- B3 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 a business), the effect of the valuation premise depends on the circumstances. For example:
- (a) 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 a business that market participants would continue to operate. In that case, the transaction would involve valuing the business in its entirety. The use of the assets as a group in an ongoing business would generate synergies that would be available to market participants (ie 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).
  - (b) 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).
  - (c) 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 specialised machinery necessary to convert the inventory into finished goods.

- (d) 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.
- (e) 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 an asset group) is allocated to its component assets (such as land and improvements).

### **Fair value at initial recognition (paragraphs 57–60)**

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- B4 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 in a business combination), the transaction includes unstated rights and privileges that are measured separately in accordance with another SFRS(I), 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 61–66)**

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#### **Market approach**

- B5 The market approach uses prices and other relevant information generated by market transactions involving identical or comparable (ie similar) assets, liabilities or a group of assets and liabilities, such as a business.
- B6 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.

- B7 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

- B8 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).
- B9 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

- B10 The income approach converts future amounts (eg cash flows or income and expenses) to a single current (ie discounted) amount. When the income approach is used, the fair value measurement reflects current market expectations about those future amounts.
- B11 Those valuation techniques include, for example, the following:
- (a) present value techniques (see paragraphs B12–B30);
  - (b) option pricing models, such as the Black-Scholes-Merton formula or a binomial model (ie 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

- B12 Paragraphs B13–B30 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 (eg 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

- B13 Present value (ie an application of the income approach) is a tool used to link future amounts (eg 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 (ie a risk-free interest rate).
- (d) the price for bearing the uncertainty inherent in the cash flows (ie 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 (ie the obligor's) own credit risk.

### *General principles*

B14 Present value techniques differ in how they capture the elements in paragraph B13. 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 a discount rate adjustment technique). That same rate should not be used if using expected (ie probability-weighted) cash flows (ie 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*

B15 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.

B16 Market participants generally seek compensation (ie 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.

- B17 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 B18–B22) 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 B25) uses risk-adjusted expected cash flows and a risk-free rate.
  - (c) Method 2 of the expected present value technique (see paragraph B26) 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*

- B18 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 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 a market rate of return).
- B19 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 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 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 using a 'build-up' approach).
- B20 To illustrate a build-up approach, assume that Asset A is a contractual right to receive CU800<sup>1</sup> in one year (ie 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 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 (ie 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 (ie dispersion of possible pay-offs and credit).

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<sup>1</sup> In this SFRS(I) monetary amounts are denominated in 'currency units (CU)'.

B21 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 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.

B22 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*

B23 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 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).

B24 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.)

B25 Method 1 of the expected present value technique adjusts the expected cash flows of an asset for systematic (ie market) risk by subtracting a cash risk premium (ie 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 the CU200 would represent the cash risk premium). In that case the market participant would be indifferent as to the asset held.

B26 In contrast, Method 2 of the expected present value technique adjusts for systematic (ie 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 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.

- B27 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

- B28 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 cash flows for some relevant past period, adjusted for changes in circumstances occurring subsequently (eg 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.
- B29 In theory, the present value (ie 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 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 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 the fair value) of the asset is CU722 ( $CU758/1.05$ ).
- (b) Using Method 2, the expected cash flows are not adjusted for systematic (ie 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 the 5 per cent risk-free interest rate plus the 3 per cent systematic risk premium). The present value (ie the fair value) of the asset is CU722 ( $CU780/1.08$ ).
- B30 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.

## Applying present value techniques to liabilities and an entity's own equity instruments not held by other parties as assets (paragraphs 40 and 41)

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- B31 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 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 the activity (ie the value of fulfilling the obligation; eg by using resources that could be used for other activities); and
  - (b) assuming the risk associated with the obligation (ie a risk premium that reflects the risk that the actual cash outflows might differ from the expected cash outflows; see paragraph B33).
- B32 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 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 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).
- B33 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 adjusting the cash flows (ie as an increase in the amount of cash outflows); or
  - (b) by adjusting the rate used to discount the future cash flows to their present values (ie 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.

## Inputs to valuation techniques (paragraphs 67–71)

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- B34 Examples of markets in which inputs might be observable for some assets and liabilities (eg 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 (eg 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.

## Fair value hierarchy (paragraphs 72–90)

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### Level 2 inputs (paragraphs 81–85)

B35 Examples of Level 2 inputs for particular assets and liabilities include the following:

- (a) *Receive-fixed, pay-variable interest rate swap based on the London Interbank Offered Rate (LIBOR) swap rate.* A Level 2 input would be the LIBOR 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) *Licensing arrangement.* For a licensing arrangement that is acquired in a business 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) *Finished goods inventory at a retail outlet.* For finished goods inventory that is acquired in a business 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 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) *Building held and used.* A Level 2 input would be the price per square metre for the building (a valuation multiple) derived from observable market data, eg multiples derived from prices in observed transactions involving comparable (ie similar) buildings in similar locations.
- (h) *Cash-generating unit.* A Level 2 input would be a valuation multiple (eg a multiple of earnings or revenue or a similar performance measure) derived from observable market data, eg multiples derived from prices in observed transactions involving comparable (ie similar) businesses, taking into account operational, market, financial and non-financial factors.

### Level 3 inputs (paragraphs 86–90)

B36 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 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 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 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 (eg 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.

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

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- B37 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 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 a primary market) for the asset or liability or similar assets or liabilities.
  - (h) Little information is publicly available (eg for transactions that take place in a principal-to-principal market).
- B38 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 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 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).
- B39 This SFRS(I) does not prescribe a methodology for making significant adjustments to transactions or quoted prices. See paragraphs 61–66 and B5–B11 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 B17). 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.

- B40 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 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.
- B41 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 not a forced liquidation or distress sale) between market participants at the measurement date under current market conditions.
- B42 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**

- B43 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 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 the seller is distressed).
  - (d) The seller was required to sell to meet regulatory or legal requirements (ie 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.

- B44 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 (ie 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**

- B45 This SFRS(I) 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 SFRS(I).
- B46 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.
- B47 Furthermore, the nature of a quote (eg 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.

## Appendix C

### Effective date and transition

*This appendix is an integral part of the SFRS(I) and has the same authority as the other parts of the SFRS(I).*

- IFRS.  
C1 An entity shall apply [IFRS 13 *Fair Value Measurement* (issued by IASB in May 2011)] for annual periods beginning on or after 1 January 2013. Earlier application is permitted. If an entity applies this IFRS for an earlier period, it shall disclose that fact.
- IFRS.  
C2 This IFRS shall be applied prospectively as of the beginning of the annual period in which it is initially applied.
- IFRS.  
C3 The disclosure requirements of this IFRS need not be applied in comparative information provided for periods before initial application of this IFRS.
- IFRS.  
C4 *Annual Improvements Cycle 2011–2013* issued in December 2013 amended paragraph 52. An entity shall apply that amendment for annual periods beginning on or after 1 July 2014. An entity shall apply that amendment prospectively from the beginning of the annual period in which IFRS 13 was initially applied. Earlier application is permitted. If an entity applies that amendment for an earlier period it shall disclose that fact.
- IFRS.  
C5 IFRS 9, as issued in July 2014, amended paragraph 52. An entity shall apply that amendment when it applies IFRS 9.
- C6 SFRS(I) 16 *Leases* [IFRS 16 *Leases*, issued by IASB in January 2016] amended paragraph 6. An entity shall apply that amendment when it applies SFRS(I) 16.

## **Appendix D**

### **Amendments to other SFRS(I)s**

*IFRS. This appendix sets out amendments to other IFRSs that are a consequence of the Board issuing IFRS 13. An entity shall apply the amendments for annual periods beginning on or after 1 January 2013. If an entity applies IFRS 13 for an earlier period, it shall apply the amendments for that earlier period. Amended paragraphs are shown with new text underlined and deleted text struck through.*

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*The amendments contained in this appendix have been incorporated into the relevant SFRS(I)s.*