
Practical guide to IFRS

Fair value measurement – unifying the concept of ‘fair value’

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At a glance

- The IASB released IFRS 13, ‘Fair value measurement’, on 12 May 2011. IFRS 13 consolidates fair value measurement guidance from across various IFRSs into a single standard. IFRS 13 does not change when fair value can or should be used.
- In our view, many of the requirements codified in IFRS 13 are largely consistent with valuation practices that already operate today. As such, IFRS 13 is unlikely to result in substantial change in many cases. However, IFRS 13 introduces a few changes:
 - The introduction of a fair value hierarchy for non-financial assets and liabilities, similar to what IFRS 7 currently prescribes for financial instruments;
 - A requirement for the fair value of all liabilities, including derivative liabilities, to be determined based on the assumption that the liability will be transferred to another party rather than otherwise settled or extinguished;
 - The removal of the requirement to use bid and ask prices for actively-quoted financial assets and financial liabilities respectively. Instead, the most representative price within the bid-ask spread should be used; and
 - The introduction of additional disclosures related to fair value.
- IFRS 13 is effective for annual periods beginning on or after 1 January 2013; earlier application is permitted.
- Management will need to evaluate the impact of the standard on their existing valuation processes.

Introduction

The IASB issued IFRS 13 as a common framework for measuring the fair value when required or permitted by another IFRS.

IFRS 13 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.*” [IFRS 13.9]. The key principle is that fair value is the exit price from the perspective of market participants who hold the asset or owe the liability at the measurement date. It is based on the perspective of market participants rather than just the entity itself, so fair value is not affected by an entity’s intentions towards the asset, liability or equity item that is being fair valued.

PwC observation: This key principle is unlikely to result in significant valuation changes, as most entities should already be applying this principle in practice.

A fair value measurement requires management to determine four aspects: the particular asset or liability that is the subject of the measurement (consistent with its unit of account); the highest and best use for a non-financial asset; the principal (or most advantageous) market; and the valuation technique. [IFRS 13.B2].

IFRS 13 addresses how to measure fair value but does not stipulate when fair value can or should be used.

PwC observation: The issue of when fair value should be used as a measurement basis in IFRS is controversial; hence the IASB did not introduce any new fair value measurement requirements as a result of issuing IFRS 13. On the contrary, the IASB did consider whether each use of the term fair value in IFRS was consistent with an exit price definition. Where this was not the case, the IASB made either scope changes to IFRS 13 or used another measurement basis in other IFRSs as appropriate.

Scope

IFRS 13 applies to all fair value measurements or disclosures that are either required or permitted by other standards, except:

- (a) share-based payments under IFRS 2;
- (b) leases under IAS 17; and
- (c) measures that are similar to but are not fair value, including the net realisable value measure in IAS 2, ‘Inventories’, and the value-in-use measure in IAS 36, ‘Impairment of assets’.

[IFRS 13.6].

IFRS 13 applies to the following items, but the disclosure requirements of IFRS 13 need not be met:

- (a) defined benefit plan assets measured at fair value under IAS 19, ‘Employee benefits’;
- (b) retirement benefit plan investments measured at fair value under IAS 26, ‘Accounting and reporting by retirement benefit plans’; and
- (c) Impaired assets measured at fair value less costs to sell (FVLCTS) under IAS 36.

[IFRS 13.7].

IFRS 13 applies to initial and subsequent measurements at fair value. [IFRS 13.8].

PwC observation: The term ‘fair value’ is used throughout IFRSs; given that there are so few scope exclusions, IFRS 13 is pervasive.

Measurement

IFRS 13 stipulates the following factors that should be considered in fair value measurement:

- (a) the asset or liability,
- (b) the market,
- (c) market participants, and
- (d) the price.

In addition, there are considerations that are specific to:

- (a) non-financial assets,
- (b) liabilities,
- (c) equity, and
- (d) financial instruments.

The asset or liability

Characteristics

A fair value measurement relates to a particular asset or liability. It should therefore incorporate the asset or liability's

specific characteristics if market participants consider these characteristics when pricing the asset or liability. These characteristics could include condition, location and restrictions, if any, on sale or use as of the measurement date. [IFRS 13.11].

Example – Restriction on the sale of an equity instrument [IFRS 13.IE28]

An entity holds an equity instrument (a financial asset) for which sale is legally or contractually restricted for a specified period (for example, such a restriction could limit sale to qualifying investors). The restriction is a characteristic of the instrument and would therefore be transferred to market participants. In this case, the fair value of the instrument would be measured on the basis of the quoted price for an otherwise identical unrestricted equity instrument of the same issuer that trades in a public market, adjusted to reflect the effect of the restriction. The adjustment would reflect the amount market participants would demand because of the risk relating to the inability to access a public market for the instrument for the specified period. The adjustment will vary depending on all the following:

- the nature and duration of the restriction;
- the extent to which buyers are limited by the restriction (for example, there might be a large number of qualifying investors); and
- qualitative and quantitative factors specific to both the instrument and the issuer.

Example – Restrictions on the use of an asset [IFRS 13.IE29]

“A donor contributes land in an otherwise developed residential area to a not-for-profit neighbourhood association. The land is currently used as a playground. The donor specifies that the land must continue to be used by the association as a playground in perpetuity. Upon review of relevant documentation (e.g. legal and other), the association determines that the fiduciary responsibility to meet the donor’s restriction would not be transferred to market participants if the association sold the asset, i.e. the donor restriction on the use of the land is specific to the association. Furthermore, the association is not restricted from selling the land. Without the restriction on the use of the land by the association, the land could be used as a site for residential development. In addition, the land is subject to an easement (i.e. a legal right that enables a utility to run power lines across the land). Following is an analysis of the effect on the fair value measurement of the land arising from the restriction and the easement:

- (a) *Donor restriction on use of land. Because in this situation the donor restriction on the use of the land is specific to the association, the restriction would not be transferred to market participants. Therefore, the fair value of the land would be the higher of its fair value used as a playground (i.e. the fair value of the asset would be maximised through its use by market participants in combination with other assets or with other assets and liabilities) and its fair value as a site for residential development (i.e. the fair value of the asset would be maximised through its use by market participants on a stand-alone basis), regardless of the restriction on the use of the land by the association.*
- (b) *Easement for utility lines. Because the easement for utility lines is specific to (i.e. a characteristic of) the land, it would be transferred to market participants with the land. Therefore, the fair value measurement of the land would take into account the effect of the easement, regardless of whether the highest and best use is as a playground or as a site for residential development.”*

PwC observation: This example illustrates two points:

- (a) Investor-specific restrictions (that is, donor restriction) do not affect fair value; asset-specific restrictions (that

is, easement for utility lines) do affect fair value.

- (b) Restrictions that are easily circumvented (that is, by selling the land) are unlikely to affect fair value.

Unit of account

Under IFRS 13, fair value measurement may be applied to a stand-alone asset or liability (for example, an equity security, investment property or an intangible asset) or a group of related assets and/or liabilities (for example, a business), depending on the circumstances.

The determination of how fair value measurement applies depends on the unit of account. The unit of account is determined based on the level at which the asset or liability is aggregated or disaggregated in accordance with the IFRS requirements applicable to the particular asset or liability being measured; it is not generally determined by IFRS 13 itself. See also 'Fair value at initial recognition' below.

The market

Under IFRS 13, management determines fair value based on a hypothetical transaction that would take place in the principal market or, in its absence, the most advantageous market. [IFRS 13.16].

Principal market

The principal market is the market with the greatest volume and level of activity for the asset or liability. [IFRS 13 Appendix A]. To determine the principal market, management needs to evaluate the level of activity in various different markets. However, the entity does not have to undertake an exhaustive search of all possible markets in order to identify the principal or most advantageous market; it should take into account all information that is readily available. In the absence of evidence to the contrary, the market in which an entity normally transacts is presumed to be the principal market or the most advantageous market in the absence of a principal market. The entity's principal market is the market that it has access to that has the greatest volume and level of activity for the asset or liability, even if the prices in other markets are more advantageous. [IFRS 13.18].

Most advantageous market

The most advantageous market is the market that maximises the amount that would be received to sell the asset or minimises the amount that would be paid to transfer the liability, after taking into account transaction costs and transport costs (definition of 'most advantageous market' in IFRS 13 Appendix A).

To determine the most advantageous market, management evaluates all potential markets in which it could reasonably expect to sell the asset or transfer the liability. For non-financial assets, the identification of potential markets will be based on the 'highest and best use' valuation premise, from the perspective of market participants. [IFRS 13.31]. In order to determine the highest and best use of a non-financial asset, the reporting entity may need to consider multiple markets.

PwC observation: In practice, most non-financial assets are employed in their 'highest and best use', so this requirement is not as onerous as it may seem.

Market accessibility

In evaluating principal or most advantageous markets, IFRS 13 restricts the eligible markets to only those that the entity can access at the measurement date. As different reporting entities may have access to different markets, the principal or most advantageous markets could vary between reporting entities. [IFRS 13.19].

Although an entity must be able to access the market, it 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 [IFRS 13.20]. This is illustrated in the following example.

Example

A commodities trader has a reporting date of 31 December 20X0, which falls on a Saturday. The commodities trader holds commodity X for which it has access to both retail and wholesale markets. The principal market is the wholesale market because that is the market with the greatest volume and level of activity for the commodity; however, the retail market selling prices are usually higher. The wholesale market only trades on weekdays, whereas the retail market trades also on Saturdays.

The commodities trader is not allowed to use the higher retail price as the fair value of the commodities merely because the wholesale (principal) market does not trade on the measurement date.

Transaction costs

IFRS 13 prohibits adjustment of fair value for transaction costs (see ‘The price’ below), but it does require such transaction costs to be considered in the determination of the most advantageous market. Transaction costs are defined as:

“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 an asset or the transfer of a liability and meet both of the following criteria:

- (a) They result directly from and are essential to that transaction.*
- (b) They would not have been incurred by the entity had the decision to sell the asset or transfer the liability not been made (similar to costs to sell, as defined in IFRS 5).”*

[IFRS 13 Appendix].

Example

An entity has an asset that is sold in two different markets with similar volume of activities but with different prices. The entity enters into transactions in both markets and can access the price in those markets for the asset at the measurement date. There is no principal market for the asset.

	Market A	Market B
Price	27	25
Transport costs	-3	-2
	24	23
Transaction costs	-3	-1
	21	22

In market A, the price that would be received is C27; transaction costs in that market are C3; and the costs to transport the asset to that market are C3 (that is, the net amount that would be received in market A is C21).

In market B, the price that would be received is C25; transaction costs in that market are C1; and the costs to transport the asset to that market are C2 (that is, the net amount that would be received in market B is C22).

If market A had been the principal market for the asset (that is, the market with the greatest volume and level of activity for the asset), the fair value of the asset would be measured using the price that would be received in that market, after taking into account transport costs (C24). The same applies for market B (C23).

(Continued)

Example (continued)

As a principal market for the asset does not exist, the fair value of the asset would be measured using the price in the most advantageous market. The most advantageous market is the market that maximises the amount that would be received to sell the asset, after taking into account transaction costs and transport costs (that is, the net amount that would be received in the respective markets).

The entity would maximise the net amount that would be received for the asset in market B (C22), so the fair value of the asset is measured using the price in that market (C25), less transport costs (C2), resulting in a fair value measurement of C23.

Although transaction costs are taken into account when determining which market is the most advantageous, the price used to measure the fair value of the asset is not adjusted for those costs (although it is adjusted for transport costs).

No observable market

There may be no known or observable market for an asset or liability. For example, there may be no specific market for the sale of a cash-generating unit or intangible asset. In such cases, the management should first identify potential market participants (for example, strategic and financial buyers) and then develop a hypothetical market based on the expected assumptions of those market participants.

Market participants

IFRS 13 emphasises that a fair value measurement should be based on the assumptions of market participants (that is, it is not an entity-specific measurement). [IFRS 13.22]. Market participants are buyers and sellers in the principal (or most advantageous) market for the asset or liability that are:

- Independent – the transaction counterparties are not related parties as defined in IAS 24, 'Related party disclosures'. However, this does not preclude related-party transaction prices from being used as valuation inputs if there is evidence that the transactions were on market terms.
- Knowledgeable – transaction counterparties have 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.

- Able to transact in the asset or liability.
- Willing to transact in the asset or liability – transaction counterparties are motivated but not forced or otherwise compelled to transact.

[IFRS 13 Appendix A].

Market participants seek to maximise the fair value of an asset or minimise the fair value of a liability in a transaction to sell the asset or to transfer the liability in the principal (or most advantageous) market for the asset or liability. [IFRS 13.22].

The entity is not required to identify specific market participants; instead it should develop a profile of potential market participants. The profile should consider factors specific to the asset or liability, the principal (or most advantageous) market for the asset or liability, and market participants with whom the entity would transact in that market.

In the absence of an observable market, fair value is determined by considering the characteristics of market participants who would enter into a hypothetical transaction for the asset or liability. [IFRS 13.23c].

PwC observation: The determination of potential market participants is a critical step in the determination of fair value due to the emphasis on the use of market participant assumptions. The identification of market participants may be straightforward if there is general knowledge of the types of participants in a particular market. In certain other cases, management may need to make assumptions about the type of market participants that may be interested in a particular asset or liability. Market participants can include strategic and financial investors.

Key considerations in developing market participant assumptions may include the specific location, condition and other characteristics of the asset or liability (for example, assumed growth rates, whether certain synergies are available to all market participants, and risk premium assumptions). For example, there may be no apparent exit market for customer relationship intangible assets. In this case, management may consider whether there are strategic buyers in the marketplace that would benefit from the customer relationships that are being valued. Most entities seek to build up their customer base as they grow their businesses, so the entity can look to potential participants in its industry that may be seeking additional growth and from there determine a hypothetical group of market participants

The price

Under IFRS 13, fair value is based on the exit price (the price that would be received to sell an asset or paid to transfer a liability) [IFRS 13.24], not the transaction price or entry price (the price that was paid for the asset or that was received to assume the liability). Conceptually, entry and exit prices are different. The exit price concept is based on current expectations about the sale or transfer price from the perspective of market participants.

PwC observation: The IASB deliberated carefully before arriving at the conclusion to use an exit price. There are arguments against the use of exit prices. For example, one might argue that exit price is not relevant when an entity intends to use rather than sell an asset.

However, even if an entity intends to use the asset, exit price is still appropriate in a fair value measurement. This is because the exit price reflects expectations about future cash flows by selling it to a market participant that would use it in the same way. This is because a market participant will only pay for benefits that it expects to generate from the use or sale of the asset. [IFRS 13.BC39]. A similar logic applies to liabilities, in that a market participant would reflect expectations about cash outflows necessary to fulfil an obligation. [IFRS 13.BC40].

The IASB did a standard-by-standard review to assess whether exit price was the interpretation taken in those circumstances where ‘fair value’ is mentioned in IFRSs. The intention was that if the exit price was not the interpretation, the IASB would change the term ‘fair value’ to something else. [IFRS 13.BC41]. This review led the IASB to conclude that a current entry price and current exit price should be equal if they relate to the same asset or liability on the same date in the same form in the same market. The IASB did not therefore consider it necessary to make a distinction between a current entry price and a current exit price in IFRSs with a market-based measurement objective (that is, fair value); instead it decided to retain the term fair value and define it as a current exit price. [IFRS 13.BC44].

The IASB has scoped out of this guidance those IFRSs where fair value measurement requirements are inconsistent with exit price. [IFRS 13.BC45]. (See ‘Scope’ above.)

IFRS 13 prohibits adjustment of fair value for transaction costs, which are accounted for in accordance with other IFRSs. However, transaction costs do not include transport costs under IFRS 13. Fair value should be adjusted for transport costs if location is a characteristic of the asset (for example, a commodity). [IFRS 13.25].

Considerations specific to non-financial assets: highest and best use

IFRS 13 requires the fair value of a non-financial asset to be measured based on its highest and best use from a market participant's perspective. [IFRS 13.27]. This requirement does not apply to financial instruments, liabilities or equity. This concept of 'highest and best use' is not new to IFRS valuations, although it has not explicitly been part of IFRS literature. Before IFRS 13, the basis of conclusions in IAS 40 – in discussing the fair valuation of investment properties – made reference to the International Valuation Standards (IVS), which include this as a general valuation concept. The specific inclusion of this concept in IFRS therefore aligns IFRS with valuation practices.

Under IFRS 13, the highest and best use takes into account the use of the asset that is:

- *physically possible* – takes into account the physical characteristics that market participants would consider (for example, property location or size);
- *legally permissible* – takes into account the legal restrictions on use of the asset that market participants would consider (for example, zoning regulations); or
- *financially feasible* – takes into account whether a use of the asset generates adequate income or cash flows to produce an investment return that market participants would require. This should incorporate the costs of converting the asset to that use.

[IFRS 13.28].

Highest and best use is determined from the perspective of market participants. [IFRS 13.29]. It does not matter whether the entity intends to use the asset differently. For example, the entity could have made a defensive acquisition of a competing brand that it does not intend to use, in order to maintain or promote the competitive position of its own brand. Despite its intentions, the entity measures the fair value of the competing brand assuming its highest and best use by market participants. [IFRS 13.30].

PwC observation: When determining highest and best use, management should include all costs that market participants would incur in the circumstances.

For example, if a parcel of land is currently used for farming, the fair value (assuming the highest and best use is to continue to use it for farming) should reflect the benefits of continuing to operate the land for farming, including any tax credits that could be realised by market participants.

However, if it is determined that market participants would consider an alternative use for the land to be its highest and best use (for example, commercial or residential use), the fair value should include all costs (for example, legal costs, viability analysis, traffic studies), associated with re-zoning the land to the market participant's intended use. In addition, demolition and other costs associated with preparing the land for a different use should be included in the estimate of fair value. This concept is illustrated in IFRS 13.IE8 (Example 2). An effort to re-zone land contains an element of uncertainty related to whether the proposed re-zoning obtains approval. The fair value of the land should therefore reflect this uncertainty. Re-zoning should not be considered if it is not feasible or it is unlikely to succeed.

However, IFRS 13 allows management to presume that its current use of an asset is the highest and best use unless market or other factors suggest otherwise.

[IFRS 13.29].

PwC observation: The IASB concluded that an entity that seeks to maximise the value of its assets would use those assets at their highest and best use; it would therefore be necessary for management to consider alternative uses of those assets only if there was evidence that the current use of the assets is not their highest and best use. In many cases, it would be unlikely for an asset's current use not to be its highest and best use. The most common examples are described in IE7 to IE9 and include assets being held defensively and land.

The highest and best use of a non-financial asset may be on a stand-alone basis or may be achieved in combination with other assets and/or liabilities. In the latter case:

- Fair value is based on the use of the asset in such an asset/liability group. It is assumed that the asset would be used within such a group and that the other assets and liabilities would be available to market participants.
- The asset/liability group cannot include liabilities that are used to fund assets outside the asset/liability group.
- Assumptions about highest and best use should be consistent for all non-financial assets in such an asset/liability group.
- Such an asset/liability grouping does not have to be consistent with the level of aggregation or disaggregation specified in other IFRSs because the market participant is assumed to have the other assets.

[IFRS 13.31, 32].

When the highest and best use is in an asset/liability group, the synergies associated with the asset/liability group may be factored into the fair value of the individual asset in a number of ways, depending on circumstances.

- Direct adjustments to fair value might be appropriate *“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).”* [IFRS 13.B3b].
- Adjustment to market participant assumptions might be appropriate *“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.”* [IFRS 13.B3c].

- Adjustment via the valuation technique might be appropriate *“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.”* [IFRS 13.B3d].
- Allocation of fair value adjustments to individual assets might be appropriate *“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 (i.e. an asset group) is allocated to its component assets (such as land and improvements).”* [IFRS 13.B3e].

Considerations specific to liabilities and equity

Transfer of liabilities

IFRS 13.34 stipulates (underlines added): *“A fair value measurement assumes that a financial or non-financial liability or an entity’s own equity instrument (e.g. 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.”*

PwC observation: The transferral concept for liabilities clarifies the previous IFRS definition of fair value (for example, in IAS 32, IAS 41, IFRS 5), which required fair value for liabilities to be “the amount for which a liability could be settled, between knowledgeable willing parties...” As liabilities could be ‘settled’ by extinguishing them or transferring them to another party, it was not clear whether settlement value referred to transfer value or the extinguishment value. IFRS 13 clarifies that the fair value is the transfer value rather than the extinguishment value.

Extinguishment value is not necessarily the transfer value, as demonstrated in the example in the box below. In some instances, an

additional risk premium above the expected payout may be required because of uncertainty about the ultimate amount of the liability (for example, asbestos liabilities and performance guarantees). The risk premium paid to a third party may differ from the settlement value that the direct counterparty would be willing to accept. In addition, the party assuming a liability may have to incur certain costs to manage the liability or may require a profit margin.

In practice, there may be significant differences between settlement value and transfer value. Among the differences is the impact of credit risk, which is often not considered in the settlement of a liability, as demonstrated in the following example.

Example

A bank holds a debt obligation with a face value of C100,000 and a market value of C95,000. Market interest rates are consistent with the amount in the note; however, there is a C5,000 discount due to market concerns about the risk of non-performance.

Settlement value

Except for in exceptional circumstances, we expect that the counterparty (counterparty A) would be required to pay the full face value of the note to settle the obligation, as the bank may not be willing to discount the note by the market discount or the credit risk adjustment. The settlement value would therefore be equal to the face amount of the note.

Transfer value

In order to calculate the transfer value, counterparty A must construct a hypothetical transaction in which another party (counterparty B), with a similar credit profile, is seeking financing on terms that are substantially the same as the note. Counterparty B could choose to enter into a new note agreement with the bank or receive the existing note from counterparty A in a transfer transaction.

Counterparty B should be indifferent to obtaining financing through a new bank note or assumption of the existing note in transfer for a payment of C95,000. The transfer value would therefore be C95,000; C5,000 less than the settlement value. This amount is the value ascribed by a market participant holding the identical liability as an asset, consistent with the guidance in IFRS 13.37.

Liability and equity instruments held by other parties as assets

In comparison to assets, observable active markets for liabilities and equities are much less likely to exist due to contractual and legal restrictions on liability and equity transfers. Even for quoted debt or equity securities, the market serves as an exit mechanism for the counterparty security holders rather than for the issuer.

As a result the quoted price reflects the exit price for the investor rather than the issuer. IFRS 13 distinguishes such situations from the situation in which an exit market exists directly for the liability or equity instrument. When a quoted transfer price is not available for the issuer but the instrument is held by another investor as an asset, management should measure fair value from the perspective of the investor. [IFRS 13.37].

PwC observation: The IASB decided to use the fair value from the investor's perspective to measure the fair value of the liability when there is no active market for the liability transfer. The IASB believes that the fair value from the viewpoints of investor and issuer should be the same in an efficient market, otherwise arbitrage would result. [IFRS 13.BC89].

The IASB considered whether these different viewpoints could result in different fair values because the asset is liquid but the liability is not. The asset holder could easily sell the asset to another party, whereas the liability issuer will usually find it more difficult to transfer the liability to another party. In the end, the IASB decided that there was no conceptual reason why a different fair value should result, given that both parties are measuring the same instrument with identical contractual terms.

In such cases, the fair value of the liability or equity instrument is derived by:

- (a) using the quoted price in an active market for the identical liability held by another party as an asset (for example, actively-quoted debt security prices);
- (b) using other observable inputs if the price in (a) is not available, such as the quoted price in an inactive market for the identical liability held by another party as an asset (for example, quoted debt security prices in less active markets).
- (c) using another valuation technique if the observable inputs in (b) are not available, such as:
 - (i) an income approach – this approach uses a present value technique that takes into account the future cash outflows that a market participant would expect to receive from holding the liability or equity instrument as an asset; and
 - (ii) a market approach – under this approach, fair value is determined using quoted prices for similar liabilities held by other parties as assets.

Using quoted prices and observable inputs

A quoted asset price may have to be adjusted to derive the fair value of the corresponding liability or equity instrument if there are asset-specific factors that are not applicable to the liability or equity instrument. For example, a quoted debt security may be secured by a third-party guarantee. The quoted price of such a security would reflect the value of the guarantee. The issuer should exclude the effect of the guarantee from the quoted price if the issuer is measuring only the fair value of its own liability and the unit of account excludes the guarantee. [IFRS 13.39b]. If the management uses the quoted price for a similar (but not identical) debt or equity instrument to value its own debt, it would have to adjust for any differences between the debt or equity instruments. [IFRS 13.39a]. The price of the asset used to measure the fair value of the corresponding liability or equity instrument should not reflect the effect of a restriction preventing the sale of the asset. [IFRS 13.39].

Liabilities not held by other parties as assets

There are certain liabilities that are not held by another party as an asset. An example is a decommissioning liability. [IFRS 13.B31]. In such cases, the fair value of the liability would have to be measured from the perspective of the liability issuer. If a market is not available for the liability, a valuation technique is required to measure the fair value from the perspective of the liability issuer. [IFRS 13.40].

These valuation techniques can include a present value technique that considers either:

- 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; or
- the amount that a market participant would receive to enter into or issue an identical liability instrument, using the assumptions that market participants would use when pricing the identical item (for example, having the same

credit characteristics) in the principal (or most advantageous) market for issuing a liability with the same contractual terms.

[IFRS 13.41].

When using such present value calculations, the calculations should reflect the future cash outflows that market participants would expect to incur in fulfilling the obligation. These cash outflows should include:

- market participants' expectations about the costs of fulfilling the obligation; and
- the compensation that a market participant would require, which should include a return for:
 - *undertaking the activity* – the market participant would expect a compensation for fulfilling the obligation, as the participant will use valuable resources for this purpose; and
 - *assuming the risk associated with the obligation* – for assuming the obligations, the market participant would usually require a risk premium to compensate for the risk that actual cash outflows might differ from those expected.

Such risk premiums can be included by adjusting either the cash flows or the discount rate. However, the risk should not be double-counted (for example, by adjusting both cash flows and discount rate for the same risk). [IFRS 13.B33].

Non-financial liabilities may not have a contractual rate of return or an observable market yield. When measuring such liabilities at fair value, the various components of return will sometimes be indistinguishable (for example, when using the price a third-party contractor would charge on a fixed fee basis). In other cases, the various components may require separate estimation (for example, when using the price a third-party contractor would charge on a cost plus basis). [IFRS 13.B32].

PwC observation: The above requirements appear complicated. However, the overriding objective is to determine what a potential market participant would require as compensation to take on the liability.

For example, a factory is built on leased land that has to be returned to the owner in five years' time without the factory building. The decommissioning liability would be the liability associated with the costs of tearing down the factory. The fair value of the decommissioning liability might simply be the market rate that a demolition services provider would charge in order to agree, today, to take down the factory in five years' time. The above requirements are aimed at determining this charge.

Non-performance risk

IFRS 13 requires the fair value of a liability to reflect the effect of non-performance risk, which is the risk that an entity will not fulfil an obligation. Non-performance risk includes the effect of credit risk, as well as any other factors that influence the likelihood of fulfilling the obligation. [IFRS 13.42].

PwC observation: Before IFRS 13, there were different interpretations about how an entity's own credit risk should be reflected in the fair value of a liability using the settlement notion in the previous definition of fair value. It is unlikely that the counterparty would accept an amount different from the contractual amount as settlement of the obligation if the entity's credit standing changed; consequently, those using the counterparty settlement interpretation of fair value did not find a significant impact from changes in their own credit risk when fair valuing their liabilities. This could result in a change for entities that have not included own credit risk in the fair value of their financial liabilities previously (for example, derivative financial liabilities).

IFRS 13 assumes that non-performance risk is the same before and after the transfer of the liability. This concept assumes that the liability would transfer to a credit-equivalent entity. [IFRS 13.42].

PwC observation: The basis for conclusions sets out why this is the case. It states: although such an assumption is unlikely to be realistic for an actual transaction (because in most cases the reporting entity transferor and the market participant transferee are unlikely to have the same credit standing), it is necessary because:

- A market participant taking on the obligation would not enter into a transaction that changes the non-performance risk associated with the liability without reflecting that change in the price.
- Without specifying the credit standing of the entity taking on the obligation, there could be fundamentally different fair values for a liability depending on an entity's assumptions about the characteristics of the market participant transferee.
- Those who might hold the entity's obligations as assets would consider the effect of the entity's credit risk and other risk factors when pricing those assets. [IFRS 13.BC94].

The level of non-performance risk imputed into fair value should be consistent with the unit of account. For example, in determining the fair value of a liability, the effect of third-party credit enhancements should be excluded if the credit enhancement is accounted for separately from the liability. [IFRS 13.44].

PwC observation: The reason for excluding a third-party credit enhancement is that the liability issuer does not get the benefit of the third-party credit enhancement, whereas the asset holder does. The issuer has to pay the entire liability unless it goes bankrupt, irrespective of the third-party credit enhancement. So the asset holder gets to consider the enhancement in its

fair value whereas the liability issuer does not. However, IFRS 13 does not specify whether the credit enhancement should or should not be accounted for separately from the liability. That is determined based on other IFRSs.

Restrictions on transfer of issuer's own liability or equity instrument

There could be contractual or legal restrictions on transfers of liabilities or equity instruments by the issuer. However, management should not make separate adjustments in relation to such restrictions. IFRS 13 assumes that the effect of such a restriction has been implicitly or explicitly included in the initial transaction price on the basis that transaction counterparties have accepted the transaction price with full knowledge of such a restriction. [IFRS 13.45, 46].

Considerations specific to financial instruments

Inputs based on bid and ask prices

Bid and ask prices are common within markets for securities, financial instruments and commodities. In these markets, dealers stand ready to buy at the bid price and sell at the ask price. If an input within the fair value hierarchy is based on bid prices and ask prices, the price within the bid-ask spread that is most representative of fair value in the circumstances is used to measure fair value. [IFRS 13.70].

This is one of the changes introduced by IFRS 13. Previously, IFRS required the use of bid prices for asset positions and ask prices for liability positions. These prices can still be used if they are most representative of fair value in the circumstances, but they are no longer required.

IFRS 13 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. Once management has established which convention it is using, it should follow its accounting policy consistently. [IFRS 13.71].

Offsetting positions in market or counterparty credit risk

IFRS 13 allows an exception whereby if an entity manages a group of financial assets and financial liabilities on the basis of its net exposure to either market risks or counterparty risks (as defined in IFRS 7), it can opt to measure the fair value of that group on the basis of the net position (that is, the net position is the unit of account that is being measured at fair value, not the individual financial assets and liabilities). [IFRS 13.48].

Although this exception is new, it was already a common valuation practice prior to IFRS 13. This new exception is not therefore expected to have a significant effect on existing valuation practices.

This exception is permitted only if an entity:

- manages the financial asset/liability group based on its net exposure to market/credit risk in accordance with its documented risk management or investment strategy;
- provides information about the financial asset/liability group on a net basis to key management personnel as defined in IAS 24; and
- measures those financial assets and liabilities at fair value in the statement of financial position on a recurring basis.

[IFRS 13.49]

Other conditions on the use of the exception are that it:

- applies only to financial assets and liabilities within the scope of IAS 39 and IFRS 9. [IFRS 13.52];
- applies only to financial assets and liabilities that are exposed to identical, or at least substantially similar, market risks. If the risks are not identical, the differences should be considered when allocating the group's fair value to component assets and liabilities. [IFRS 13.54]; and
- applies only to exposures of a similar duration. IFRS 13.55 provides the following 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."

If the exception is applied, the fair value of the net position is measured using IFRS 13 principles. For example:

- For market risks, fair value of the net position is the price within the bid-ask spread that is most representative of fair value in the entity's circumstances. [IFRS 13.53].
- For credit risk, fair value of such a group should consider credit enhancements (such as master netting agreements and collateral requirements) and expectations about the legal enforceability of such enhancements. [IFRS 13.56].

The above exception does not permit net presentation of assets and liabilities within the group. Presentation is dealt with in other IFRSs. Where gross presentation is required, the fair value of the group should be allocated to the assets and liabilities within the group on a reasonable and consistent basis (for example, using the relative fair value approach). [IFRS 13.50].

The use of the exception, along with any policies for allocating bid-ask and credit adjustments, is regarded as an accounting policy decision that should be applied consistently from period to period for a given portfolio. [IFRS 13.51].

PwC observation: If an entity has a portfolio of financial assets and liabilities that qualify for the 'portfolio exception' for the purposes of applying IFRS 13 (and only for the purpose of IFRS 13), its unit of account is the portfolio – that is, the net open risk position. This is the unit of account on which you determine what a market participant would pay for it. In other words, the question is: if you were to transfer the net open risk position, how much would you be paid/have to pay. As a result, size would be considered an attribute of what you are valuing.

Valuation techniques

General principles in selection of valuation techniques

The valuation technique should be:

- appropriate based on the circumstances [IFRS 13.61, 62];
- a technique for which sufficient data is available [IFRS 13.61];
- maximise the use of relevant observable inputs and minimise the use of unobservable inputs [IFRS 13.61];
- consistent with the objective of estimating 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 [IFRS 13.62]; and
- the market, income or cost approach [IFRS 13.62].

Examples of markets in which inputs might be observable include exchange markets, dealer markets, brokered markets and principal-to-principal markets, which are explained in IFRS 13.B34:

- a) *“Exchange markets - In an exchange market, closing prices are both readily available and generally representative of fair value. An example of such a market is the London Stock Exchange.*
- b) *Dealer markets - In a dealer market, dealers stand ready to trade (either buy or sell for their own account), thereby providing liquidity by using their capital to hold an inventory of the items for which they make a market. Typically bid and ask prices (representing the price at which the dealer is willing to buy and the price at which the dealer is willing to sell, respectively) are more readily available than closing prices. Over-the-counter markets (for which prices are publicly reported) are dealer markets. Dealer markets also exist for some other assets and liabilities, including some financial instruments, commodities and physical assets (e.g. used equipment).*
- c) *Brokered markets - In a brokered market, brokers attempt to match buyers with sellers but do not stand ready to trade for their own account. In other words, brokers do not use their own capital to hold an inventory of the items for which they make a market. The broker knows the prices bid and asked by the respective parties, but each party is typically unaware of another party’s*

price requirements. Prices of completed transactions are sometimes available. Brokered markets include electronic communication networks, in which buy and sell orders are matched, and commercial and residential real estate markets.

- d) *Principal-to-principal markets - In a principal-to-principal market, transactions, both originations and resales, are negotiated independently with no intermediary. Little information about those transactions may be made available publicly.”*

It may be appropriate to use multiple valuation techniques; in which case, the reasonableness of the results of the various measurement techniques will have to be evaluated, and a point within that range will have to be selected that is most representative of fair value in the circumstances. [IFRS 13.63].

If management determines that the transaction price is fair value at initial recognition (see ‘Fair value at initial recognition’ below) and the valuation technique uses unobservable inputs, the valuation technique should be calibrated so that, at initial recognition, the result of the valuation technique equals the transaction price. This ensures that subsequent usage of this valuation technique does not result in a fair value that is inconsistent with the initial fair value. Subsequently, the entity should continue to ensure that such valuation techniques using unobservable inputs continue to reflect observable market data (for example, the price for a similar asset or liability) at the measurement dates. [IFRS 13.64].

Valuation techniques should be applied consistently unless alternative techniques provide an equally or more representative indication of fair value. This applies as well to the weights given to multiple valuation techniques when multiple techniques are used. Any changes are regarded as changes in accounting estimates, although the IAS 8 disclosures are not required. [IFRS 13.66]. The following events may necessitate changes in techniques/weights:

- new markets develop;
- new information becomes available;
- information previously used is no longer available;
- valuation techniques improve; or
- market conditions change.

[IFRS 13.65].

Types of valuation technique

IFRS 13 describes three classes of valuation technique:

Market approach

IFRS 13 defines this as “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.” Examples are:

- valuation techniques using market multiples derived from comparable transactions [IFRS 13.B6]; and
- matrix pricing – 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. [IFRS 13.B7].

Income approach

IFRS 13 defines this as “Valuation techniques that convert future amounts (e.g. cash flows or income and expenses) to a single current (i.e. discounted) amount. The fair value measurement is determined on the basis of the value indicated by current market expectations about those future amounts.” Examples include:

- **Multi-period excess earnings method (MEEM)**

MEEM is useful where the asset being valued only generates income with a group of other assets. This method isolates the cash flows arising from the assets as illustrated below.

MEEM valuation steps

1. Derive future cash flows for asset group.

2. Subtract tax expenses.

3. Apply contributory asset charges.

4. Calculate present value of future cash flows.

5. Compute the tax amortisation benefit.

6. Result is the MEEM.

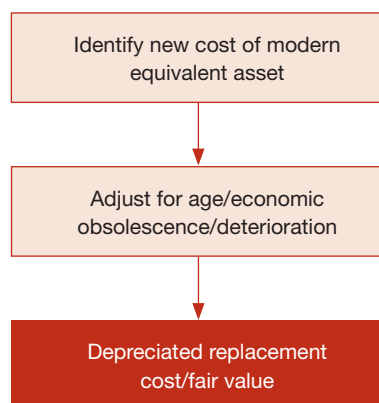
- **Relief-from-royalty (RFR) method**
RFR is commonly used for intangible assets that could be licensed. Fair value under RFR is the present value of licence fees avoided by owning an asset.
- **With-and-without method**
This method is useful where revenue generation is driven by other assets but the asset being valued provides an incremental benefit that increases revenue or decreases cost.
Fair value is the difference between the value of the business with all assets in place, and the value of the business with all assets except the asset being valued.
- **Option pricing models**
These include the Black-Scholes-Merton formula and a binomial

model (that is, a lattice model) that incorporate present value techniques and reflect both the time value and the intrinsic value of an option.

- **Cost approach**

IFRS 13 defines this as “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).” This assumes that fair value is the cost to acquire or construct a substitute asset of comparable utility, adjusted for obsolescence (including physical deterioration, functional (technological) obsolescence and economic (external) obsolescence). [IFRS 13.B9]. The following flowchart illustrates the application of the cost approach.

Application of cost approach



PwC observation: In our view, the cost approach should only be used when the other approaches are not available.

Fair value at initial recognition

Transaction prices may not equal fair value. Fair value under IFRS 13 is based on an exit price concept. Transaction prices are not always representative of exit prices [IFRS 13.57], although in many cases they are. [IFRS 13.58].

In determining whether a transaction price is representative of fair value, management should consider factors specific to the transaction and the asset or liability [IFRS 13.59], as well as whether any of the conditions below are applicable.

- The transaction is between related parties. However, such a transaction may be considered in a fair value measurement if there is evidence that it was conducted at market terms.
- The transaction takes place under duress or the price is forced upon the seller (for example, due to financial difficulty).
- The unit of account in the transaction is different from the asset or liability to be fair valued. For example:
 - the asset or liability being fair valued is only one of the elements in the transaction (for example, in a business combination);
 - the transaction includes unstated rights and privileges that are measured separately in accordance with another IFRS; or
 - the transaction price includes transaction costs.

- The transaction does not take place in the principal or most advantageous market – for example, a retail market price would not represent fair value for a dealer if this principal or most advantageous market is the dealer market.

[IFRS 13.B4].

PwC observation: One common criticism of IAS 39 is its treatment of the difference between fair value and transaction price upon initial recognition, commonly referred to as ‘day-one profit or loss’. IAS 39 prohibits immediate recognition of day-one profit or loss in the income statement unless specific criteria are met. Unfortunately, IFRS 13 does not address this criticism. IFRS 13 states that *“If another IFRS 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 IFRS specifies otherwise.”* Entities will therefore still be prohibited from recognising a day-one profit or loss under IAS 39 (or IFRS 9) unless the fair value of that instrument is evidenced by comparison with other observable current market transactions in the same instrument (that is, without modification or repackaging) or based on a valuation technique whose variables include only data from observable markets. [IAS 39.AG76]. This remains a key difference with US GAAP.

Valuation premiums and discounts

Valuation adjustments such as premiums and discounts may be necessary to reflect certain characteristics of the asset or liability being fair valued. Examples are control premiums or non-controlling interest discounts. There are two caveats to consider when using such adjustments:

- Adjustments are not permitted for premiums or discounts that are inconsistent with the unit of account for the asset or liability being measured; and
- Adjustments are permitted only when they reflect a characteristic of an asset or liability (for example, control premium). Adjustments are

not permitted for premiums or discounts that reflect size as a characteristic of the entity's holding. Specifically, IFRS 13 prohibits adjustments for blockage factors that adjust 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 an entity. See also 'unit of account' above.

- In all cases, if there is a quoted price in an active market (that is, a Level 1 input) for an asset or a liability, management should use that price without adjustment when measuring fair value.

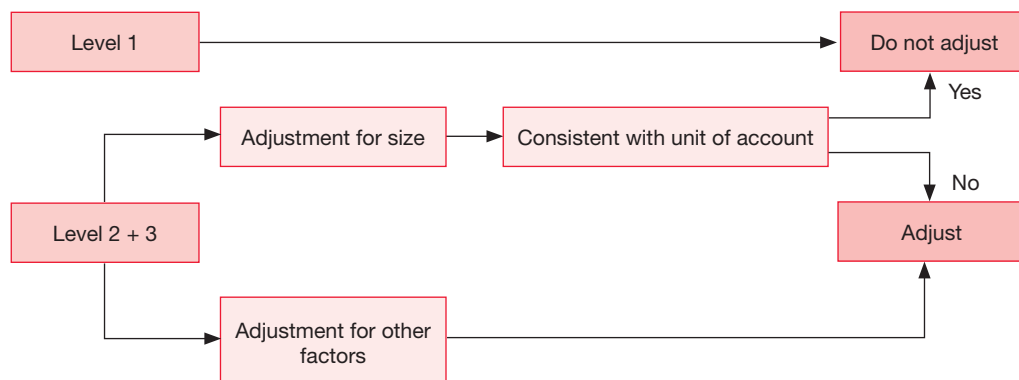
[IFRS 13.69]

Example

An entity holds a position in a single asset that is traded in an active market. If the entity sells its entire holding in a single transaction, the market's normal daily trading volume would not be sufficient to absorb the quantity held. That single transaction would affect the quoted price and result in the entity receiving a lower selling price. Should the entity adjust the fair value of that asset to reflect this?

No. The unit of account is a single share therefore the fair value of the asset or liability should continue to be measured as the product of the quoted price and the quantity held by the entity. The same applies to a liability, or a position comprising a large number of identical assets or liabilities, such as a holding of financial instruments. [IFRS 13.80]. The same answer holds regardless of whether or not it trades in an active market.

The flowchart below illustrates the above requirements.



Example

Investor X holds a 10% investment in private company Y. The investment is classified as an available-for-sale investment under IAS 39. X fair values Y using a market multiple of comparable listed entity Z. Should this valuation be adjusted for:

- illiquidity of Y's shares, as compared to Z?
- the lower price X is likely to get if X sold the entire 10% investment in a single transaction rather than if it sold its shares in Y in smaller batches?

X should adjust for the Y's illiquidity because this is a characteristic of Y's shares. Y's shares are not listed; Z's are listed.

However, X should not adjust the valuation to reflect the likely outcome that if it sold all of Y in a single transaction, it might receive a lower price. This is because the unit of account in IAS 39 is a single instrument. The fair value in IAS 39 therefore reflects the fair value of each financial instrument in Y.

Example

Entity A holds 100% of the shares in an unlisted company B. B is a cash-generating unit that is being tested for impairment under IAS 36 using the fair value less costs to sell (FVLCTS) method. Entity A fair values B using a market multiple of a comparable listed entity.

If A assumes the sale of B's shares in a single transaction, it is likely to receive a different price due to the size of the sale compared to selling the shares in smaller portions (say in units of 1,000 each time). For the purposes of determining FVLCTS, should A assume the sale of B's shares in a single or multiple transactions?

As the unit of account being fair valued is the cash-generating unit under IAS 36, the fair value that should be considered is the aggregate fair value of the CGU. Entity A should therefore assume the sale of B's shares in aggregate.

Example

Entity C holds 100% of the shares in company D, which is a cash-generating unit being tested for impairment under IAS 36 using FVLCTS. C fair values D using a discounted cash flow method based on D's underlying cash inflows (for example, from sales) and outflows (for example, from expenses), and the industry cost of capital. Should C adjust the output of the discounted cash flow valuation model for a control premium?

C should not make this adjustment. The control premium has already been imputed by the use of the business cash flows discounted at the weighted average cost of capital. This method of valuation implicitly assumes control. No further adjustment for control premium is therefore required.

Fair value hierarchy

IFRS 13 contains a fair value hierarchy that is similar to the hierarchy established under IFRS 7. The highest priority is given to Level 1 inputs; Level 3 inputs get the lowest priority. [IFRS 13.72].

A 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. An input is significant if that input can result in a significantly different fair value measurement. [IFRS 13.79]. IFRS 13 requires consideration of factors specific to the asset or liability. [IFRS 13.73].

PwC observation: Determining the significance of a particular input to a fair value measurement is a matter of judgement. A starting point is to have a basic understanding of all of the inputs that factor into the fair value measurement, the relative significance of each of the inputs, and whether those inputs are externally verifiable or are derived through internal estimates.

There are no bright lines for determining significance; two different entities may reach different conclusions in the same fact pattern. We believe management should consider the impact of lower-level inputs on the fair value measurement at the time the measurement is made, as well as their potential impact on future movements in the fair value.

In assessing the significance of unobservable inputs to an asset or liability's fair value, management should: (1) consider the sensitivity of the asset or liability's overall value to changes in the data, and (2) reassess the likelihood of variability in the data over the life of the asset or liability. Additionally, we believe that the assessment should be performed on both an individual and an aggregate basis when more than one item of unobservable data (or more than one parameter) is used to measure the fair value of an asset or liability. This assessment will depend on the facts and circumstances specific to a given asset or liability and will require significant professional judgement.

Given the level of judgement that may be involved, management should document its rationale when the determination of the classification of inputs in the fair value hierarchy is not straightforward. In addition, it should develop and consistently apply a policy for determining significance.

Things that are not part of fair value but for which other literature requires management to include in measurement are not considered when determining the hierarchical level – for example, costs to sell in FVLCTS. [IFRS 13.73].

The fair value hierarchy ranks fair value measurements based on the type of inputs; it does not depend on the type of valuation techniques used. [IFRS 13.74].

Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date. [IFRS 13.76]. IFRS 13 highlights the following points in relation to Level 1 inputs:

- The principal (or if unavailable, the most advantageous) market should be used [IFRS 13.78].
- The transacting entity should be able to transact in the chosen market at measurement date [IFRS 13.78].
- The quoted price should be used without adjustment whenever available [IFRS 13.77], except in the following situations:
 - IFRS 13 provides a practical expedient for the fair value measurement of a large number of similar assets or liabilities (for example, debt securities) for which quoted prices in active markets are available but not readily accessible. A reporting entity may therefore measure fair value by using an alternative pricing method (for example, matrix pricing) instead of obtaining quoted prices for each individual security. If an alternative pricing method is used as a practical expedient, the resulting fair value measurement will be Level 2.
 - In some situations, significant events (for example, principal-to-principal transactions, brokered trades and announcements) may occur after the close of a market but before the measurement date. When that is the case, a quoted market price may not be representative of fair value on the measurement date. Management should establish and consistently apply a policy for identifying and incorporating events that may affect fair value measurements. In addition, if management adjusts the quoted price, the resulting measurement will not be classified in Level 1 but will be a lower-level measurement.

PwC observation: The measurement date, as specified in each accounting standard requiring or permitting fair value measurements, is the ‘effective’ valuation date. A valuation should therefore reflect only facts and circumstances that exist on the specified measurement date (these include events occurring before the measurement date or that were reasonably foreseeable on that date) so that the valuation is appropriate for a transaction that would occur on that date. In addition, changes in fair value after the measurement date are subsequent events and do not adjust the fair value but are only disclosed.

- Consider an entity that is measuring the fair value of its quoted liability or equity instrument using the quoted price for the asset. [IFRS 13.79]. However, the quoted price may reflect factors that do not apply to the liability or equity instrument (see ‘Using quoted prices and observable inputs’ above). In such cases, the fair value should be adjusted for these factors, and the resulting fair value measurement would be classified in a lower level.

PwC observation: In certain situations, management may only have access to a single price source or quote. Apart from where the source is transactions on an exchange, a single source would not generally be a Level 1 input, as a single market-maker would almost by definition suggest an inactive market. However, in some rare cases, a single market-maker dominates the market for a particular security such that trading in that security is active but all the activity flows through that market-maker. In those limited circumstances, a Level 1 determination may be supported if the broker is standing ready to transact at that price.

In all cases other than the above fact pattern, management should determine if the single broker quote represents a Level 2 or Level 3 input. Key considerations in making this assessment include the following:

- Level 2: a single broker quote may be supported as a Level 2 input if there is observable market information on comparables to support the single broker quote, and/or the broker stood willing to transact in the security at that price.
- Level 3: a single broker quote is frequently a Level 3 input if there are no comparables and the quote was provided as an indicative value with no commitment to actually transact at that price (for example, information obtained under an agreement to provide administrative pricing support to a fund for a security purchased from that broker). Such information will require additional follow-up or due diligence procedures when used in financial reporting.

Management should specifically consider the underlying facts associated with each valuation input in assessing the appropriate classification in the fair value hierarchy.

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. [IFRS 13.81]. Level 2 inputs include:

- quoted prices for similar assets or liabilities in active markets;
- quoted prices for identical or similar assets or liabilities in markets that are not active;
- inputs other than quoted prices are observable for the asset or liability, for example:
 - interest rates and yield curves, observable at commonly quoted intervals,
 - implied volatilities,
 - credit spreads; and
 - market-corroborated inputs.

[IFRS 13.82]

IFRS 13.B35 provides the following examples of level 2 inputs:

“(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.”*

IFRS 13 highlights the following points in relation to Level 2 inputs:

- 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 [IFRS 13.82].
- Adjustments to Level 2 inputs should include factors such as the condition and/or location of the asset or the liability on the measurement date and the volume and level of activity in the markets within which the inputs are observed. Adjustments are also

required to the extent that inputs do not fully relate to items that are comparable to the asset or liability (including those factors in the second and third sets of bullets under 'Inputs based on bid and ask prices' above). An adjustment that is significant to the fair value measurement may place the measurement in Level 3 in the fair value hierarchy.

PwC observation: Certain inputs derived through extrapolation or interpolation may be corroborated by observable market data (for example, extrapolating observable one- and five-year interest rate yields to derive three-year yields) and would be considered a Level 2 input.

For example, assume that the

Argentinean interest rate yield curve is correlated to the Chilean interest rate yield curve. Also assume that the Argentinean yield curve is observable for three years, but the Chilean yield curve is observable for only two years. Management could extrapolate the third year of the Chilean yield curve based on the extrapolation of the Chilean yield curve from years one and two and the correlation of the third-year Argentinean yield curve. In this example, the Chilean yield for year three would be considered a Level 2 input. However, extrapolating short-term data to measure longer term inputs may require assumptions and judgements that cannot be corroborated by observable market data and, therefore, may represent a Level 3 input.

Example

How would the fair value measurement of a foreign exchange contract be classified in the fair value hierarchy if it is based on interpolated information?

Assume that the entity prepares its fair value measurement based on interpolation of observable market data. Key considerations in determining the appropriate classification within the fair value hierarchy include the following:

- A spot foreign exchange (FX) rate that can be observed through market data as being active is a Level 1 input.
- A fair value measurement that can be interpolated using externally quoted sources would generally be a Level 2 valuation. For example, assume that there are forward prices available for 30- and 60-day FX contracts that qualify as Level 1 inputs and the entity is measuring a 50-day contract. If the price can be derived through simple interpolation, the resulting measurement is a Level 2 valuation.

However, if the contract length is three years and prices are only available for the next two years, any extrapolated amount would be considered a Level 3 valuation (on the assumption that this is significant to the valuation) if there was no other observable market information to corroborate the pricing inputs in the third year. Unlike the Chilean interest rates in the previous example, which were corroborated by the Argentinean yield curve, the FX rate for the third year is not corroborated by any observable market information in this case.

Level 3 inputs are unobservable inputs for the asset or liability [IFRS 13.86].

IFRS 13.B36 provides the following examples of level 3 inputs:

“(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, e.g. a current risk-free interest rate or a credit-adjusted risk-free rate if the effect of the entity's credit standing on the fair value of the liability is reflected in the discount rate rather than in the estimate of future cash outflows.*
- (e) *Cash-generating unit. A Level 3 input would be a financial forecast (e.g. of cash 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."*

IFRS 13 highlights the following points in relation to level 3 inputs:

- Used only when observable inputs are not available [IFRS 13.87].
- Fair value measurement objective is to derive an exit price at the measurement date from the perspective of a market participant that holds the asset or owes the liability. Fair value measurements should therefore reflect the assumptions that market participants would use when pricing the asset or liability, including assumptions about risk [IFRS 13.87].
- Both 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 should be considered [IFRS 13.88].
- Level 3 inputs should be developed using the best information available in the circumstances, which might include an entity's own data. However, the entity's own data should be adjusted if reasonably available information indicates that other market participants would use different data. For example, an entity should not factor in entity-specific synergies that are not available to market participants. An entity need not undertake exhaustive efforts to obtain information about market participant assumptions [IFRS 13.89].

IFRS 13 permits the use of prices quoted by third parties (for example, pricing services and brokers), subject to the following:

- The reporting entity should determine that these prices are developed in accordance with IFRS 13 requirements [IFRS 13.B45], including those requirements regarding significant decrease in the volume/level of activity [IFRS 13.B46];
- Less weight is placed on quotes that do not reflect the result of transactions [IFRS 13.B46]; and
- The nature of a quote (for example, whether it is an indicative price or a binding offer) should be considered; more weight is given to binding offers. [IFRS 13.B47].

PwC observation: Many reporting entities obtain information from pricing services – such as Bloomberg, Interactive Data Corporation, Loan Pricing Corporation, Markit's Totem Service, broker pricing information and similar sources – for use as inputs in their fair value measurements. The information provided by these sources could be any level in the fair value hierarchy, depending on the source of the information for a particular security. Classification within the hierarchy is further discussed as follows:

Level 1 inputs

Generally, for a price or other input to qualify as Level 1 in the fair value hierarchy, management should be able to obtain the price from multiple sources. Level 1 inputs relate to items traded on

an exchange or an active index/market location.

Level 2 and Level 3 inputs

In some cases, reporting entities may rely on pricing services or published prices that represent a consensus reporting of multiple brokers. It may not be clear if the prices provided can be transacted upon. In order to support an assertion that a broker quote or information obtained from a consensus pricing service represents a Level 2 input, the management should typically perform due diligence to understand how the price was developed, including understanding the nature and observability of the inputs used to determine that price. Additional corroboration could include:

- Discussions with pricing services, dealers or other companies to obtain additional prices of identical or similar assets to corroborate the price;
- Back-testing of prices to determine historical accuracy against actual transactions; or
- Comparisons to other external or internal valuation model outputs.

The level of due diligence performed is highly dependent on the facts and circumstances, such as the type and complexity of the asset or liability being measured, as well as its observability and liquidity in the marketplace. Generally, the more unique the asset or liability being measured and the less liquid it is, the more due diligence will be necessary to corroborate the price in order to support classification as a Level 2 input.

When performing due diligence, management should clearly document the assessment performed in arriving at its conclusions. Without additional supporting information, prices obtained from a single or multiple broker sources or a pricing service are indicative values or proxy quotes; we believe such information generally represents Level 3 inputs.

Finally, management must have some higher-level (that is, observable) data

to support classification of an input as Level 2. A broker quote for which the broker does not stand ready to transact cannot be corroborated with an internal model populated with Level 3 information, or with additional indicative broker quotes to support a Level 2 classification. However, there may be other instances where pricing information can be corroborated by market evidence, resulting in a Level 2 input.

Other considerations

Ultimately, it is management's responsibility to determine the appropriateness of its fair value measurements and their classification in the fair value hierarchy, including instances where pricing services are used. Therefore, reporting entities that use pricing services will need to understand how the pricing information has been developed and obtain sufficient information to be able to determine where instruments fall within the fair value hierarchy and that it was computed in a manner that represents an exit price.

Examples

A pricing service could provide quoted prices for an actively traded equity security, which would be Level 1 inputs if corroborated by the reporting entity. The same pricing service may also provide a corporate bond price based on matrix pricing, which may constitute a Level 2 or Level 3 input depending on the information used in the model.

In another example, a reporting entity may obtain a price from a broker for a residential mortgage-backed security. The reporting entity may be fully aware of the depth and liquidity of the security's trading in the marketplace based on its historical trading experience. In addition, the pricing methodology for the security may be common and well understood (for example, matrix pricing), and therefore less due diligence may be required. However, a similar conclusion may not be appropriate in all instances (for example, a collateralised debt obligation that is not frequently traded and does not have liquidity in the marketplace).

Inactive markets and non-orderly transactions

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

The flowchart below highlights the considerations in determining the level of reliance on market prices.

The following factors should be considered in determining whether there has been a significant decrease in the volume or level of activity (relative to the normal market activity):

- There are few recent transactions.
- Price quotations are not developed using current information.
- Price quotations vary substantially either over time or among market-makers (for example, some brokered markets).
- Indices that were previously 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.
- 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.

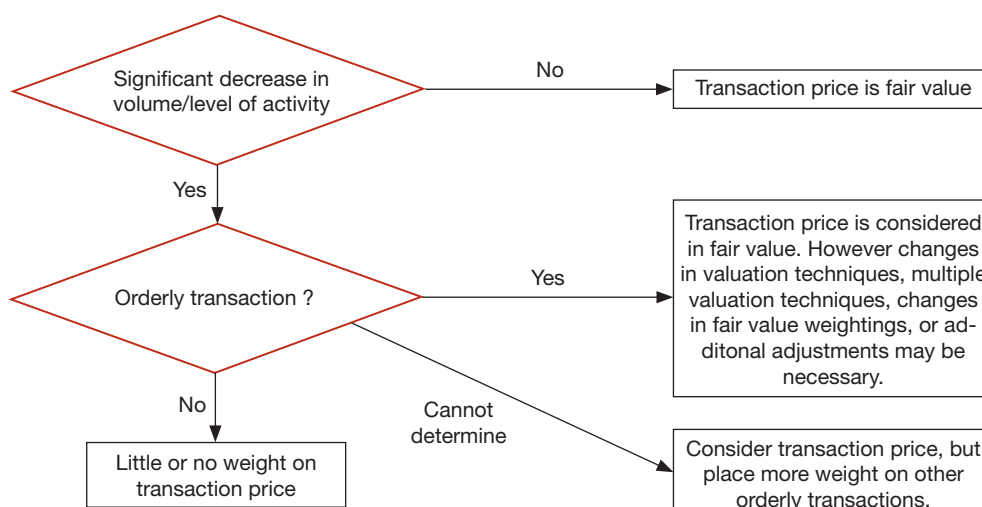
- There is a wide bid-ask spread or significant increase in the bid-ask spread.
- There is a significant decline in the activity of, or there is an absence of, a market for new issues (that is, a primary market) for the asset or liability or similar assets or liabilities.
- Little information is publicly available (for example, for transactions that take place in a principal-to-principal market).

[IFRS 13.B37]

PwC observation: Many of the factors noted above that are indicative of significant decreases in market volume and activity levels are also listed in a non-authoritative Expert Advisory Panel published by the IASB in October 2008. The whitepaper describes practices for measuring the fair value of financial instruments when markets are no longer active and the fair value disclosures that could be made in those situations.

If there has been a significant decrease in the volume or level of activity, further analysis is needed. The entity may conclude that:

- The transaction or quoted price still represents fair value. A decline in



volume/activity, on its own, may not indicate that the quoted price does not represent fair value.

- The transaction or quoted price does not represent fair value. In such cases, an adjustment is required if:
 - those prices are still used as the basis for measuring fair value and the adjustment may be significant to the fair value measurement; and
 - other circumstances necessitate the adjustment – for example, 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.
- The transaction is not orderly. [IFRS 13.B38].

When the decrease in volume/activity necessitates an adjustment, IFRS 13 requires the following:

- Appropriate risk adjustments should be included for the uncertainty inherent in the cash flows, even when such adjustments are difficult to determine. [IFRS 13.B39].
- A change in valuation technique or the use of multiple valuation techniques may be appropriate in such situations. When multiple techniques result in a wide range of fair values resulting, further analysis may be required. [IFRS 13.B40].
- The objective of a fair value measurement remains the same – that is, to determine 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 under current market conditions [IFRS 13.B41].

However, IFRS 13 does not specify a methodology for making such adjustments [IFRS 13.B39].

An entity's intention to hold an asset or settle a liability is not considered in measuring fair value, as fair value is a market-based measurement, not an entity-specific measurement. [IFRS 13.B42].

Identifying transactions that are not orderly

It is not appropriate to conclude that all transactions in a market are not orderly simply due to a significant decrease in volume/level of activity. Indications that transactions are not orderly include:

- There was inadequate 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.
- There was a usual and customary marketing period, but the seller marketed the asset or liability to a single market participant.
- The seller is in or near bankruptcy or receivership (that is, the seller is distressed).
- The seller was required to sell to meet regulatory or legal requirements (that is, the seller was forced).
- The transaction price is an outlier when compared with other recent transactions for the same or a similar asset or liability.

[IFRS 13.B43].

IFRS 13 does not require exhaustive efforts to determine whether a transaction is orderly, but reasonably available information should not be ignored. If the entity is a party to a transaction, it is presumed to have sufficient information to conclude whether the transaction is orderly. [IFRS 13.B44].

Little, if any, weight is given to transactions that are not orderly. The amount of weight placed on an orderly transaction price will depend on transaction volume, comparability of the transaction to the asset or liability being measured, proximity of the transaction to the measurement date, and other facts and circumstances. If there is insufficient information to conclude whether or not a transaction is orderly, the transaction price is considered but given a lower weighting than other, orderly, transactions. [IFRS 13.B44].

Disclosures

Disclosure objectives

IFRS 13 requires disclosure of sufficient information to help financial statement users to assess:

- valuation techniques and inputs used to develop both recurring and non-recurring measurements of assets and liabilities carried at fair value after initial recognition; and
- the effect on profit or loss or other comprehensive income of recurring level 3 fair value measurements.

[IFRS 13.91].

Recurring fair value measurements of assets or liabilities are those that other IFRSs require or permit in the statement of financial position at the end of each reporting period (for example, financial instruments in IAS 39 or biological assets in IAS 41).

Non-recurring fair value measurements of assets or liabilities are those that other IFRSs require or permit in the statement of financial position in particular circumstances (for example, when an entity measures an asset held for sale at fair value less costs to sell in accordance with IFRS 5).

Additional disclosures beyond the minimum requirements may be required to meet these objectives. The reporting entity should also consider:

- the level of detail necessary;
- the level of emphasis on each requirement;
- the degree of aggregation or disaggregation; and
- whether or not additional information is needed to evaluate the quantitative disclosures.

[IFRS 13.92].

'Classes' of asset and liability

Similar to IFRS 7, IFRS 13 requires disclosures by 'classes of assets and liabilities'. Grouping assets and liabilities into classes is a judgemental exercise based on:

- the nature, characteristics and risks of the asset or liability; and
- the level of the fair value hierarchy within which the fair value measurement is categorised.

[IFRS 13.94]

In addition, IFRS 13 states that:

- More classes may be required for Level 3 fair value measurements as those fair values are exposed to more uncertainty and subjectivity.
- IFRS 13 classes will often be more disaggregated than balance sheet line items.
- Sufficient information should be provided to permit reconciliation to balance sheet line items.
- If another IFRS specifies the classes, those classes may be used if they meet the above requirements (for example, IFRS 7).

[IFRS 13.94].

Minimum disclosures

The following are the minimum disclosures for each class of asset and liability measured at fair value after initial recognition [IFRS 13.93]:

- (a) for recurring and non-recurring fair value measurements, the fair value measurement at the end of the reporting period (see table 'Fair value measurements at the end of the reporting period' below);

Example – Fair value measurements at the end of the reporting period

Description	31/12/X9	Fair value measurements at the end of the reporting period using			Total gains (losses)
		Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	
Recurring fair value measurements					
Trading equity securities ^(a) :					
Real estate industry	93	70	23		
Oil and gas industry	45	45			
Other	15	15			
Total trading equity securities	153	130	23		
Other equity securities ^(a) :					
Financial services industry	150	150			
Healthcare industry	163	110			53
Energy industry	32				32
Private equity fund investments ^(b)	25				25
Other	15	15			
Total other equity securities	385	275			110
Debt securities:					
Residential mortgage-backed securities	149		24		125
Commercial mortgage-backed securities	50				50
Collateralised debt obligations	35				35
Risk-free government securities	85	85			
Corporate bonds	93	9	84		
Total debt securities	412	94	108		210
Hedge fund investments:					
Equity long/short	55		55		
Global opportunities	35		35		
High-yield debt securities	90				90
Total hedge fund investments	180		90		90
Derivatives:					
Interest rate contracts	57		57		
Foreign exchange contracts	43		43		
Credit contracts	38				38
Commodity futures contracts	78	78			
Commodity forward contracts	20		20		
Total derivatives	236	78	120		38
Investment properties:					
Commercial – Asia	31				31
Commercial – Europe	27				27
Total investment properties	58				58
Total recurring fair value measurements	1,424	577	341		506
Non-recurring fair value measurements					
Assets held for sale ^(c)	26		26		(15)
Total non-recurring fair value measurements	26		26		(15)

(a) On the basis of its analysis of the nature, characteristics and risks of the securities, the entity has determined that presenting them by industry is appropriate.

(b) (b) On the basis of its analysis of the nature, characteristics and risks of the investments, the entity has determined that presenting them as a single class is appropriate.

(c) (c) In accordance with IFRS 5, assets held for sale with a carrying amount of CU35 million were written down to their fair value of CU26 million, less costs to sell of CU6 million (or CU20 million), resulting in a loss of CU15 million, which was included in profit or loss for the period.

(Note: A similar table would be presented for liabilities unless another format is deemed more appropriate by the entity.)

- (b) for non-recurring fair value measurements, the reasons for the measurement;
- (c) for recurring and non-recurring fair value measurements, the level in which they are categorised in the fair value hierarchy;
- (d) 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, reasons for those transfers and the policy for determining when those transfers occur. Transfers into each level should be disclosed and discussed separately from transfers out of each level. For this disclosure and in (h) below, the policy for determining timing of transfers between fair value levels should be consistently followed and disclosed. The policy should be consistent between transfers into and out of each level. Such transfers could be deemed to occur on the date of the event or change in circumstances that caused the transfer, the beginning of the reporting period or the end of the reporting period. [IFRS 13.95].
- (e) for recurring/non-recurring Level 2 and 3 fair value measurements, a description of the valuation techniques and the inputs used;
- (f) changes in valuation technique (for example, changing from market to income approach, or using additional valuation techniques) and reasons for the change;
- (g) quantitative information about significant unobservable inputs used in Level 3 fair values, unless those inputs are not developed by the reporting entity when measuring fair value (for example, when an entity uses unadjusted prices from prior transactions or third-party pricing information) and are not reasonably available to the reporting entity;

Example – Valuation techniques and inputs [IFRS 13.IE63-IE64]

An entity might disclose the information in the table below for assets to comply with the requirement above to disclose the significant unobservable inputs used in the fair value measurement:

Quantitative information about fair value measurements using significant unobservable inputs (Level 3)

(CU in millions)

Description	Fair value at 31/12/X9	Valuation technique(s)	Unobservable input	Range (weighted average)
Other equity securities:				
Healthcare industry	53	Discounted cash flow	Weighted average cost of capital Long-term revenue growth rate Long-term pre-tax operating margin Discount for lack of marketability ^(a) Control premium ^(a)	7%-16% (12.1%) 2%-5% (4.2%) 3%-20% (10.3%) 5%-20% (17%) 10%-30% (20%)
		Market-comparable companies	EBITDA multiple ^(b) Revenue multiple ^(b) Discount for lack of marketability ^(a) Control premium ^(a)	10-13 (11.3) 1.5-2.0 (1.7) 5%-20% (17%) 10%-30% (20%)
Energy industry	32	Discounted cash flow	Weighted average cost of capital Long-term revenue growth rate Long-term pre-tax operating margin Discount for lack of marketability ^(a) Control premium ^(a)	8%-12% (11.1%) 3%-5.5% (4.2%) 7.5%-13% (9.2%) 5%-20% (10%) 10%-20% (12%)
		Market-comparable companies	EBITDA multiple ^(b) Revenue multiple ^(b) Discount for lack of marketability ^(a) Control premium ^(a)	6.5-12 (9.5) 1.0-3.0 (2.0) 5%-20% (10%) 10%-20% (12%)
Private equity fund investments	25	Net asset value ^(c)	n/a	n/a
Debt securities:				
Residential mortgage-backed securities	125	Discounted cash flow	Constant prepayment rate Probability of default Loss severity	3.5%-5.5% (4.5%) 5%-50% (10%) 40%-100% (60%)
Commercial mortgage-backed securities	50	Discounted cash flow	Constant prepayment rate Probability of default Loss severity	3%-5% (4.1%) 2%-25% (5%) 10%-50% (20%)
Collateralised debt obligations	35	Consensus pricing	Offered quotes Comparability adjustments (%)	20-45 -10% to +15% (+5%)
Hedge fund investments:				
High-yield debt securities	90	Net asset value ^(c)	n/a	n/a
Derivatives:				
Credit contracts	38	Option model	Annualised volatility of credit ^(d) Counterparty credit risk ^(e) Own credit risk ^(e)	10%-20% 0.5%-3.5% 0.3%-2.0%
Investment properties:				
Commercial – Asia	31	Discounted cash flow	Long-term net operating income Cap rate	18%-32% (20%) 0.08-0.12 (0.10)
		Market-comparable approach	Price per square metre (USD) (\$4,500)	\$3,000-\$7,000
Commercial – Europe	27	Discounted cash flow	Long-term net operating income margin Cap rate	15%-25% (18%) 0.06-0.10 (0.80)
		Market comparable approach	Price per square metre (EUR)	4,000-12,000 (8,500)

- a) Represents amounts used when the entity has determined that market participants would take into account these premiums and discounts when pricing the investments.
b) Represents amounts used when the entity has determined that market participants would use such multiples when pricing the investments.
c) The entity has determined that the reported net asset value represents fair value at the end of the reporting period.
d) Represents the range of the volatility curves used in the valuation analysis that the entity has determined market participants would use when the pricing contracts
e) Represents the range of the credit default swap spread curves used in the valuation analysis that the entity has determined market participants would use when pricing the contracts.

(Note: A similar table would be presented for liabilities unless another format is deemed more appropriate by the entity.)

(Continued)

(Continued)

In addition, an entity should provide additional information that will help users of its financial statements to evaluate the quantitative information disclosed. An entity might disclose some or all the following to comply with IFRS 13.92:

- The nature of the item being measured at fair value, including the characteristics of the item being measured that are taken into account in the determination of relevant inputs. For example, for residential mortgage-backed securities, an entity might disclose the following: (i) the types of underlying loans (for example, prime loans and sub-prime loans); (ii) collateral; (iii) guarantees or other credit enhancements; (iv) seniority level of the tranches of securities; (v) the year of issue; (vi) the weighted-average coupon rate of the underlying loans and the securities; (vii) the weighted-average maturity of the underlying loans and the securities; (viii) the geographical concentration of the underlying loans; and (ix) information about the credit ratings of the securities.
- How third-party information such as broker quotes, pricing services, net asset values and relevant market data was taken into account when measuring fair value.

- (h) for recurring Level 3 fair values, a reconciliation from the opening to the closing balances, disclosing separately the following changes during the period:
 - i. total gains/losses in profit or loss, and the line items in which they are recognised;
 - ii. total gains/losses in other comprehensive income, and the line items in which they are recognised;
 - iii. purchases, sales, issues and settlements (each disclosed separately);
 - iv. amounts of any transfers into and out (inward and outward transfers separately disclosed) of Level 3, the reasons for those transfers, and the entity's policy for determining when transfers between levels are deemed to have occurred;

Example – Reconciliation of fair value measurements categorised within Level 3 of the fair value hierarchy [IFRS 13.IE61-62]

An entity might disclose the following for assets to comply with the above requirement to disclose the reconciliation:

Gains and losses included in profit or loss for the period (above) are presented in financial income and in non-financial income as follows:

	Other equity securities			Debt securities			Hedge fund investments	Derivatives	Investment properties		Total
	Healthcare industry	Energy industry	Private equity fund	Residential mortgage-backed securities	Commercial mortgage-backed securities	Collateralised debt obligations	High-yield debt securities	Credit contracts	Asia	Europe	
Opening balance:	49	28	20	105	39	25	145	30	28	26	495
Transfers into Level 3				60 ^{(a)/(b)}							60
Transfers out of Level 3				(5) ^{(b)/(c)}							5
Total gains or losses for the period											
– Included in profit or loss			5	(23)	(5)	(7)	7	5	3	1	(14)
– Included in other comprehensive income	3	1									4
Purchases, issues, sales and settlements:											
– Purchases	1	3				16	17		18		55
– Issues											
– Sales				(12)				(62)			(74)
– Settlements									(15)		(15)
Closing balance:	53	32	25	125	50	35	90	38	31	27	506
Change in unrealised gains or losses for the period included in profit or loss for assets held at the end of the reporting period			5	(3)	(5)	(7)	(5)	2	3	1	(9)

(a) Transferred from Level 2 to Level 3 because of a lack of observable market data, resulting from a decrease in market activities for the securities.

(b) The entity's policy is to recognise transfers into and transfers out of Level 3 as of the date of the event or change in circumstances that caused the transfer.

(c) Transferred from Level 3 to Level 2 because observable market data became available for the securities.

(Note: A similar table would be presented for liabilities unless another format is deemed more appropriate by the entity.)

(C in millions)	Financial income	Non-financial income
Total gains or losses for the period included in profit or loss	(18)	4
Change in unrealised gains or losses for the period included in the profit or loss for assets held at the end of the reporting period	(13)	4

(Note: A similar table would be presented for liabilities unless another format is deemed more appropriate by the entity.)

(i) for recurring Level 3 fair values, amount of unrealised gains/losses in profit or loss, and the line items in which those unrealised gains/losses are recognised;

(j) for recurring and non-recurring Level 3 fair values, a description of valuation processes (including how an entity decides its valuation policies and procedures and analyses periodic changes in fair value measurements);

Example – Valuation processes [IFRS 13.IE65]

An entity might disclose the following to comply with the requirement to disclose a description of the valuation processes used by the entity:

- for the group within the entity that decides the entity’s valuation policies and procedures: (i) its description; (ii) to whom that group reports; and (iii) the internal reporting procedures in place (for example, whether and, if so, how pricing, risk management or audit committees discuss and assess the fair value measurements);
- the frequency and methods for calibration, back-testing and other testing procedures of pricing models;
- the process for analysing changes in fair value measurements from period to period;
- how the entity determined that third-party information, such as broker quotes or pricing services, used in the fair value measurement was developed in accordance with the IFRS; and
- the methods used to develop and substantiate the unobservable inputs used in a fair value measurement.

(k) for recurring Level 3 fair values:

- i. a narrative description of the sensitivity to unobservable inputs that significantly affect the fair value;
- ii. description of interrelationships between unobservable inputs and how these affect the sensitivity;
- iii. if changing unobservable inputs to reasonably possible alternatives would change the fair values of financial assets and financial

liabilities significantly, disclose:

- that fact;
- the effect of those changes; and
- how the effect of a change to reflect a reasonably possible alternative assumption was calculated.

Significance is 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;

Example – Information about sensitivity to changes in significant unobservable inputs [IFRS 13.IE66]

An entity might disclose the following about its residential mortgage-backed securities to comply with the above requirement (that is, to provide a narrative description of the sensitivity of the fair value measurement to changes in significant unobservable inputs and a description of any interrelationships between those unobservable inputs):

“The significant unobservable inputs used in the fair value measurement of the entity’s residential mortgage-backed securities are prepayment rates, probability of default and loss severity in the event of default. Significant increases (decreases) in any of those inputs in isolation would result in a significantly lower (higher) fair value measurement. Generally, a change in the assumption used for the probability of default is accompanied by a directionally similar change in the assumption used for the loss severity and a directionally opposite change in the assumption used for prepayment rates.”

- (l) the fact that the highest and best use of a non-financial asset differs from current use, if this is the case, and the reason for such difference;
- (m) an accounting policy decision to fair value financial assets and liabilities with offsetting positions on a net basis (see 'Offsetting positions in market or counterparty credit risk' above) [IFRS 13.96];
- (n) for each class of assets and liabilities not measured at fair value but for which fair value is disclosed, the information required by above paragraphs (c), (e), (f) and (l) only [IFRS 13.97];
- (o) when a liability measured at fair value is issued with an inseparable third-party credit enhancement, the existence of that credit enhancement and whether it is reflected in the fair value of the liability [IFRS 13.98]; and
- (p) the quantitative disclosures required above are presented in a tabular format unless another format is more appropriate. [IFRS 13.99].

Effective date

IFRS 13 has an effective date of 1 January 2013 and is applied prospectively. Early application is permitted but should be disclosed. IFRS 13 disclosures for

comparative information relating to periods before initial application are not required.

Potential business impacts

In many cases, entities should not experience significant measurement changes as a result of IFRS 13, because most of IFRS 13 is a codification of existing valuation practices. However, where an entity is affected, the change to fair value amounts could impact both the recognised amounts in profit and loss (for example, revenues and expenses), as well as the balance sheet presentation.

IFRS 13 introduces significant increases in disclosure requirements. Reporting entities need to examine the additional disclosure requirements and put in place systems and processes to capture the required information for such disclosures.

More information

The final standard, illustrative examples and basis of conclusions, as well as a summary of all decisions reached by the board throughout the project, can be found on the IASB website at www.iasb.org/home.