

STAFF PAPER

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Project	Conceptual Framework		
Paper topic	Measurement – Measurement bases		
CONTACT(S)	Rachel Knubley	rknubley@ifrs.org	+44 207 246 6904

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Purpose of paper

1. At the July 2014 meeting, the IASB discussed an initial working draft of the description and discussion of measurement bases for the Exposure Draft (July 2014: AP 10K – *Measurement categories*). At that meeting, you instructed the staff to bring a paper to a future meeting that:
 - (a) groups measurements into a small number of categories;
 - (b) reduces the number of measurement bases described (for example, by combining measurement bases and eliminating the description of little-used measurement bases).
2. Consequently, Appendix A to this paper provides a revised working draft of the description and discussion of measurement bases for the Exposure Draft.
3. Paragraphs 6 - 17 of this paper describe the main changes we have made to the draft presented at the July 2014 meeting.
4. Appendix B to this paper includes a working draft for the description and discussion of cash-flow-based measurement techniques. This working draft is based on the text of the Discussion Paper updated to reflect the tentative decisions made in July 2014 about cash-flow-based measurement techniques.
5. This paper does not discuss the selection of measurement bases. This is discussed in AP 10C – *Selection of a measurement basis*.

Changes made to the July 2014 working draft

6. The staff have made the following changes to the working draft of the description and discussion of measurement bases:
- (a) Categorized measurement bases as entry values or exit values.
 - (b) Combined replacement cost and assumption proceeds into the description of a single measurement basis (current cost). Similarly, we have combined historical cost and historical proceeds into a single measurement basis (historical cost).
 - (c) Removed the description of cost of release.
 - (d) Incorporated the following into the description of the measurement bases:
 - (i) the discussion of the difference between historical and current measurement bases;
 - (ii) the discussion of entity perspective or market perspective.
 - (e) Moved the tables describing the information provided by the different measurement bases to an appendix.
 - (f) Identified situations when the application of different measurement bases result in similar measurements.
7. In the following paragraphs we discuss:
- (a) The decision to categorise measurements bases as entry values or exit values (paragraphs 8 - 12).
 - (b) The number of measurement bases described (paragraphs 13 - 17).

Categorising measurement bases as entry values or exit values

8. We have categorised measurement bases according to whether they provide information about the inputs to an entity's business activities (entry values) or information about the outputs from an entity's business activities (exit values).
9. The staff believe that the distinction between inputs into an entity's business activities and the outputs that the entity generates is an important one:

- (a) Entry values reflect the actual, estimated or deemed:
 - (i) historical or current cost of acquiring an asset;
 - (ii) historical or current proceeds from incurring a liability.
 - (b) Exit values reflect:
 - (i) the value that would be received from an asset either through sale, use or collection;
 - (ii) the value required either to fulfil a liability or release the entity from the liability.
10. The staff believe that considering whether a user is likely to find information about entry values or exit values most useful will help the IASB when selecting a measurement basis. For example, if a user is likely to focus on estimating future margins for goods and services to be provided in the future, the user is likely to want information about the difference between the cost (or current cost) of assets sold in the past and what those assets were sold for (ie the profit margin the entity has realised). Consequently, entry values for that asset are likely to be more relevant than exit values. If, however, a user is interested in the value that could be received from assets held at the reporting date (for example, through sale) then exit values are likely to be more relevant.
11. During the IASB meeting in July, it was suggested that we categorise measurement bases as either current or historical. However, as all the measurement bases described, with the exception of historical cost, are current measurement bases we did not find this categorisation particularly useful. Admittedly, the choice between an entry value or an exit value is often, in effect, a choice between historical and current measurement. This is because when we choose to use cost when setting Standards, we have normally chosen historical cost rather than current cost. However, there may be situations in the future when the IASB decides to use current rather than historical cost.
12. It should be noted that IFRS 13 *Fair Value Measurement* states current entry price and current exit price are equal for the same asset or liability on the same date, in the same form and in the same market. Nevertheless, differences between entry values and exit values can exist, because entities often acquire assets in one market and realise them in another market. One of the key decisions that the IASB

will need to make when selecting a measurement basis, is the point at which an entity should recognise any difference between the value of an item in its entry market and the value of that same item in its exit market. Should the difference be recognised on realisation (implying the use of entry values) or should it be recognised on remeasurement (implying the use of exit values)?

The number of measurement bases described

13. As noted above, at the July 2014 meeting you asked the staff to consider whether it would be possible to reduce the number of measurement bases described. Consequently, we have done the following:
- (a) We have combined replacement cost and assumption proceeds into the description of a single measurement basis (current cost). Similarly, we have combined historical cost and historical proceeds into a single measurement basis (historical cost).
 - (b) Removed the description of cost of release. Cost of release is the equivalent of net realisable value for liabilities. Because it is relatively unusual for entities to negotiate release from liabilities, rather than fulfil them, the staff believe that it is unlikely that the IASB would decide to use this measurement basis.
14. However, we have struggled to reduce the number of measurement bases further.
15. Historical cost, fair value, fulfilment value and net realisable value are all measurement bases that are commonly used in our Standards and are often considered as possible measurement bases when the IASB develops Standards. We therefore believe that it is important that these measurement bases are described in the *Conceptual Framework*.
16. This leaves the following measurement bases as possible candidates for removal:
- (a) **Current cost.** Current cost is not currently used in our Standards (although both the existing *Conceptual Framework* and IAS 29 *Financial Reporting in Hyperinflationary Economies* allow for the possibility that a current cost basis of accounting could be used and IFRS 13 states that in some situations current replacement cost can be

used to estimate the fair value of an asset). Consequently, we could remove the discussion of these measurement bases. However, the staff are reluctant to remove the discussion of current cost because:

- (i) There is a large amount of academic literature suggesting that in some situations, information based on current costs may be more useful than information based on historical costs. Consequently, the staff believe that there could be situations in the future when you decide to use current cost rather than historical cost.
- (ii) A current cost basis of accounting would be necessary if a physical capital maintenance concept was used in the financial statements. Although, it seems unlikely the IASB would, in the foreseeable future, adopt current cost accounting, we do not think removing the description of the current cost measurement basis altogether would be appropriate. The IASB may wish to use current cost accounting at some point in the future if, for example, the effect of price changes becomes significant.

(b) **Value in use.** In our existing Standards value in use is only used when an asset measured at cost is impaired. However, the staff do not recommend removing the description of this measurement basis because:

- (i) Although value in use is used to determine recoverable historical cost, it is conceptually a different measurement basis to historical cost.
- (ii) There may be situations in the future when the IASB decides it would like to measure an asset using an entity specific exit value (ie value in use) rather than fair value. The staff note that the IASB already uses entity specific exit values of liabilities (ie fulfilment value).

17. Consequently, the staff believe that all the measurement bases described in Appendix A should be included in the Exposure Draft.

Questions for the IASB

Question 1

Do you agree with the staff's recommendation to categorise measurements as either exit values or entry values? If not what approach do you recommend?

Question 2

Do you agree with the staff's recommendation that all the measurement bases described in Appendix A should be included in the Exposure Draft. If not which measurement bases would you remove?

Question 3

Do you have any other comments on the measurement bases described in Appendix A?

The treatment of amortised cost

18. We have not included a description of the amortised cost basis of measurement for financial assets and financial liabilities in Appendix A. This is because it does not fit neatly into the way in which we have characterised the measurement bases. It is not clearly either an entry value or an exit value and it combines cost-based information about effective interest rates with current estimates of cash flows. However, it is clearly an important measurement basis, we have therefore included a description of amortised cost in the section that describes cash-flow-based measurement techniques (Appendix B).

Appendix A – Description of different measurement bases

This appendix includes a revised working draft for the description and discussion of measurement bases in *Conceptual Framework Exposure Draft*. It is intended to give IASB members an idea of the broad content and level of detail envisaged by the staff. We plan to work further on the drafting. Consequently, we are not seeking detailed drafting comments at this stage.

Measurement bases

- A1. Measurement bases can be subdivided into entry values and exit values:
- (a) Entry values provide information about items that are inputs into an entity's business activities. They reflect the actual, estimated or deemed:
 - (i) historical or current cost of acquiring an asset;
 - (ii) historical or current proceeds from incurring a liability.
 - (b) Exit values provide information about items that are outputs from an entity's business activities. They reflect:
 - (i) the value that would be received from an asset through either sale, use or collection;
 - (ii) the value required either to fulfil a liability or release the entity from the liability.
- A2. Current entry price and current exit price are equal for the same asset or liability, on the same date in the same form in the same market. However, if the entry and exit markets for an asset or liability are different, entry and exit prices are also likely to be different. For example, a retailer will buy assets in the wholesale market and sell them in the retail market, seeking a profit based (at least in part) on the difference between the amount it paid for the asset (the current entry price) and the amount at which the asset can be sold (the current exit price). Measuring items at their entry values results in the recognition of any difference between exit and entry values on realisation. Measuring items based on their exit

values results in any difference between exit and entry values being recognised on remeasurement.

Measurements based on entry values

- A3. Measurement bases that use entry values can be based on either:
- (a) information about the prices of past transactions (historical measurement bases). Historical information is normally updated, at least partially, to reflect some aspects of current conditions; or
 - (b) information that is updated to reflect the conditions at the measurement date (current measurement bases).
- A4. The following paragraphs describe the following measurement bases:

Measurement bases	Historical or current	Paragraphs
Historical cost	Historical	A6 - A13
Current cost	Current	A14 - A19

- A5. The tables [following paragraph A42] summarise the information provided by these measurement bases in both the statement of financial position and the statement of comprehensive income.

Historical cost

- A6. Under the historical cost basis:
- (a) an asset is initially measured at the time of the asset’s acquisition or construction at an amount equal to the value of the consideration given to acquire the asset;
 - (b) a liability is initially measured at the time the liability is incurred at an amount equal to the value of the consideration received.

A7. The initial measurement of assets measured at historical cost is not adjusted to reflect changes in prices. However, the carrying amount is adjusted over time to reflect:

- (a) depreciation or amortisation - depreciation and amortisation are designed to reflect the consumption of the economic resource that constitutes the asset;
- (b) impairment of assets – impairment is designed to reflect the fact that part of the historical cost of the asset that is no longer recoverable. Remeasuring an impaired asset to its recoverable amount is not a change in measurement basis.

Consequently, the amount reported as the historical cost of an asset represents the recoverable, historical cost of the unconsumed part of the asset.

A8. Similarly, the carrying amount of a liability is not adjusted to reflect changes in prices but is:

- (a) decreased as the entity fulfils the liability;
- (b) increased if a liability has become onerous because of increases in estimated cash outflows.

Consequently, the amount reported as the historical cost of a liability represents the historical proceeds for the unfulfilled part of the liability, increased to reflect the full burden of the liability if the proceeds are inadequate.

A9. Historical cost has both confirmatory value and predictive value:

- (a) It has confirmatory value because it provides information about:
 - (i) proceeds generated for obligations fulfilled during the period, for example proceeds for goods and services supplied during the period;
 - (ii) the cost of assets (including services) consumed during the period (reported as, for example, cost of sales, or depreciation or amortisation).
- (b) It has predictive value because information about the proceeds from supplying goods and services in the past, and about the past

consumption of assets (including services) can be used to help assess an entity's prospects for future cash flows from the future supply of goods and services, and from the future consumption of existing and future assets (including services).

- A10. Information about the historical cost of assets and liabilities may sometimes be less useful than information about their current cost or current value particularly when price changes are significant. Even when annual price changes are not significant, their cumulative effect may sometimes reduce the usefulness of historical information. In addition, reporting income and expenses based on current costs may sometimes be more useful for predicting future margins than information based on historical costs.
- A11. Under the historical cost measurement basis, similar assets that are acquired at different times can be reported in the financial statements at very different amounts. This potentially reduces comparability between reporting entities.
- A12. In many situations, information about historical cost is simpler and less expensive to provide than information using current measurement bases. In addition, the historical cost basis of measurement is generally well understood and in many cases is verifiable.
- A13. However, cost or proceeds can be difficult to determine when there is no observable transaction price for the asset or liability being measured. In addition, estimating depreciation and identifying impairment losses or onerous liabilities can be highly subjective.

Current cost

- A14. Under the current cost basis:
 - (a) assets are measured at their current cost. The current cost of an asset is not the cost of a new asset. It reflects the current cost of replacing the asset with an asset of equivalent service potential. If, for example, an entity owns a machine with an original useful life of eight years and a remaining useful life of five years, the current cost of that machine would be the cost of an equivalent asset with a remaining useful life of five years.

- (b) liabilities are measured at the value of the consideration an entity would currently expect to receive if it undertook obligations identical to its remaining obligations under the liability.
- A15. Current cost can be determined either from an entity perspective or from a market perspective. (If a market perspective is used, and transaction costs are excluded from the measurement of the item, it would be just as accurate to refer to current price).
- A16. Current cost reflects the economic conditions prevailing at the reporting date. Consequently, assets, liabilities, income and expenses reported using this measurement basis are reported in current terms. In some circumstances, information reported in current terms may be more useful for predicting cash flows from future transactions (ie assets yet to be acquired and liabilities yet to be incurred) than is information reported on an historical cost basis, particularly in periods of changing prices.
- A17. In addition, reporting assets and liabilities based on current entry prices provides information about an entity's current operating capability and would be necessary if a physical capital maintenance concept was used in the financial statements.
- A18. In some cases, the current cost of assets and liabilities is observable. However, this will often not be the case and current cost will need to be estimated. These estimation techniques can sometimes be costly and complex to apply, and the outputs from these techniques may be difficult to verify. Determining the current cost of unique assets or liabilities may be particularly challenging. It may also be challenging to explain to users the relevance of the current cost of unique assets or liabilities.
- A19. If similar items within the same entity are measured at current cost, determined from the perspective of that entity, those items will be measured at similar amounts. In addition, an entity-specific amount that focuses on the costs or proceeds that the entity itself incurs or receives might be more relevant than amounts determined from a market perspective. However, using an entity specific amount, similar assets in different entities could be measured differently, thereby reducing comparability.

Measurements based on exit values

A20. Measurement bases that are based on exit values are normally updated to reflect conditions current at the measurement date (that is they are current measurement bases). Information about historical exit values is generally not relevant to the users of financial statements (they reflect past opportunity costs).

A21. The following paragraphs describe the following measurement bases:

Measurement bases	Historical or current	Paragraphs
Fair value	Current	A23 - A30
Value in use (assets) Fulfilment value (liabilities)	Current	A31 - A39
Net realisable value	Current	A40 - A42

A22. The tables following paragraph A42 summarise the information provided by these measurement bases in both the statement of financial position and the statement of comprehensive income.

Fair value

A23. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

A24. Fair value is determined from the perspective of market participants. That is, the asset or liability is measured using the same assumptions that market participants would use when pricing the asset or liability if those market participants act in their economic best interest.

A25. Fair value provides information about the current value of an asset or liability to the entity at the reporting date. It has predictive value because it reflects market participants' expectations about the amount, timing and uncertainty of the cash flows as well as their risk preferences. (However, it does not reflect entity

specific cash flows if those cash flows differ from the cash flows expected by market participants.) Fair value also has confirmatory value in that it can be used to compare previous expectations about market returns to actual market outcomes (or revised market expectations).

- A26. Because fair value reflects the price that an entity could sell an asset for at the reporting date, it may not reflect the cash flows that are expected to result if the asset is realised by a method other than sale.
- A27. The fair value of an asset includes in the measurement of that asset an expectation of profit sufficient to induce market participants to buy the asset at that price. Hence, that profit is recognised on ultimate realisation of the asset. Similarly, the fair value of a liability provides an expectation of profit sufficient to induce market participants to assume the liability.
- A28. Measuring at fair value assets that are held solely for use or collection, or liabilities held solely for fulfilment, will result in gains and losses arising from market movements being recognised in comprehensive income. Gains and losses arising from market movements are not caused solely by changing estimates of cash flows and so, for assets or liabilities that are ultimately held until fully used, collected or fulfilled, may reverse over time. Depending on the item that is being measured and the nature of the entity's business activities, users may not find the recognition of such gains or losses relevant or understandable.
- A29. Because fair value is determined from the perspective of market participants, rather than the perspective of the entity, and is independent of when the asset or liability was acquired or incurred, identical assets will be measured at the same amount. This arguably produces comparability between entities.
- A30. If the fair value of an asset or liability can be observed in an active market, then fair value measurement is simple, normally easy to understand and verifiable. If, however, the fair value of an asset or liability cannot be observed, valuation techniques (sometimes including the use of cash-flow-based measurements) may be needed to estimate the fair value of the item being measured. Depending on the techniques used, this estimation process can be costly and complex. In addition, the verifiability of some techniques used to estimate fair value may be questionable. In extreme cases, the measurement uncertainty associated with

estimates of fair value may be so great that measurement at fair value may not provide relevant information.

Value in use and fulfilment value

- A31. The value in use of an asset is the present value of the cash flows estimated to arise from the continuing use of the asset and from its disposal at the end of its useful life.
- A32. The equivalent measurement basis for liabilities is fulfilment value. Fulfilment value is the present value of the cash flows estimated to arise from fulfilling the liability.
- A33. Value in use and fulfilment value are entity specific exit values. They cannot be directly observed and are determined using discounted cash flow techniques that:
- (a) reflect the price for bearing the uncertainty inherent in the cash flows (ie a risk premium) and, if applicable, a profit margin;
 - (b) for liabilities, do not normally reflect the risk of non-performance by the reporting entity.
- A34. Value in use provides information about the estimated cash flows from the continued use of an asset and from its disposal at the end of its useful life. Consequently, it has predictive value and can be used to assess the prospects for future cash flows to an entity. It can also be used to confirm previous expectations about value in use. However, value in use is unlikely to provide relevant information for assets that will be sold by the entity rather than used by it (unless value in use reflects a disposal that is expected to take place shortly after the measurement date).
- A35. Fulfilment value provides information about the estimated cash flows to fulfil an obligation and, consequently, has predictive value. However, if a liability will be transferred, or if settlement will be negotiated with the counterparty, fulfilment value is likely to be less relevant than fair value. However, entities normally fulfil liabilities, rather than transfer them or settle them through negotiation with the counter-party.

- A36. As noted above, value in use and fulfilment value are determined using discounted cash flow techniques. These techniques can sometimes be costly and complex to apply, and the resulting numbers may be difficult to verify.
- A37. For many assets that are used in combination with other assets, value in use cannot be determined meaningfully for individual assets. Instead the value in use of a group of assets must be determined and the result allocated to individual assets. Consequently, value in use may not be a practical measurement basis for periodic remeasurements of assets used in combination with other assets. However, it may be useful for one-off remeasurements of assets (for example, when the carrying amount of an asset measured using a cost based measurement is no longer fully recoverable – that is the asset is impaired).
- A38. In addition, estimates of value in use and fulfilment value may inadvertently reflect synergies with other assets and liabilities and so may not measure only the item that they purport to measure.
- A39. Value in use and fulfilment value are entity specific values. Consequently, similar assets and liabilities in different entities could be measured differently, thereby reducing comparability. However, for unique items, measurement from a market perspective and measurement from the entity’s perspective are likely to be similar. This is because in most cases there is little reason to assume that market participants would use estimates different from those used by the entity.

Net realisable value

- A40. The net realisable value of an asset is an entity specific selling price that is reduced by estimated transaction costs. In determining net realisable value, it is necessary to deduct both any profit margin and any risk adjustment that relate to activities and risks that would remain inherent in the asset after its transfer.
- A41. If the sale of an asset is likely to take place shortly after the end of a reporting period, then net realisable value is likely to provide a better indication of the actual net cash inflows or outflows associated with the item than fair value. This is because net realisable value is reduced by the present value of the costs of realising the asset. However, the net realisable value of an asset may be less relevant than either fair value or value in use if the asset can realise more value through use rather than through sale.

- A42. Net realisable value and value in use are likely to be similar for assets that are expected to be sold shortly after the measurement date. In addition, if the highest and best use for an asset is for it to be realised through sale (rather than through use by the entity), then net realisable value will in most cases equal the fair value of the asset less transaction costs.

Information provided by different measurement bases

	Statement of financial position	Statement of comprehensive income
Entry value measurement bases		
Historical cost: Assets	<ul style="list-style-type: none"> Recoverable cost of (the unconsumed part of) an asset 	<ul style="list-style-type: none"> Historical cost of the economic resources consumed in the period (through cost of sales, depreciation, amortisation etc) Gains or losses on sales of assets during the period Impairment losses (compared with previous historical cost)
Historical cost: Liabilities	<ul style="list-style-type: none"> Historical proceeds for undertaking the unfulfilled part of a liability, plus any excess of the present value of the estimated cash flows over the historical proceeds 	<ul style="list-style-type: none"> Consideration provided by customers (or others) for obligations fulfilled by the entity during the period Gains or losses on settlement/transfers of liabilities in the period Losses on liabilities that have become (more) onerous during the period

	Statement of financial position	Statement of comprehensive income
Current cost: Assets	<ul style="list-style-type: none"> • Current cost of (the unconsumed part of) an asset 	<ul style="list-style-type: none"> • Current cost of the economic resources consumed in the period (through cost of sales, depreciation, amortisation etc) • Changes during the period in the cost of replacing the service potential of assets held. Those changes might be caused by changes in factors such as: general price levels, prices for specific assets, technology, passage of time • Impairment losses (compared with previous current cost)
Current cost: Liabilities	<ul style="list-style-type: none"> • The value of the consideration an entity would currently expect to receive if it assumed (the unfulfilled part of) an identical liability on the measurement date 	<ul style="list-style-type: none"> • The consideration, for obligations fulfilled by the entity during the period, that the entity would have required customers (or others) to provide at the time of fulfilment if it had undertaken those obligations at that time • Changes during the period in the price that would be charged for undertaking the obligations inherent in the liability. Those changes might be caused by changes in factors such as: the estimated cost of fulfilling the obligations, the margin the entity would require for undertaking the obligations, the willingness of customers to pay for the goods and services provided, the competitiveness of the market for the goods and services, passage of time

	Statement of financial position	Statement of comprehensive income
Exit value measurement bases		
Fair value: Assets	<ul style="list-style-type: none"> • Price that would be received to transfer an asset 	<ul style="list-style-type: none"> • Fair value, at the time of consumption, of economic resources consumed during the period • Fair value gains and losses on assets held during the period. Those gains and losses could arise from: changes in estimates of cash flows, changes in interest rates or changes in both the amount and price of risk required by market participants¹ • Transaction costs incurred for assets acquired or transferred during the period • Unwind of discount

¹ These fair value gains and losses may sometimes be disaggregated into components, for example, interest income and interest expense, release of risk premiums etc.

	Statement of financial position	Statement of comprehensive income
Fair value: Liabilities	<ul style="list-style-type: none"> • Price that would be paid to transfer a liability 	<ul style="list-style-type: none"> • Fair value, at the time of performance, of performance obligations fulfilled during the period • Fair value gains and losses on liabilities held during the period. Those gains and losses could arise from: changes in estimates of cash flows, changes in interest rates or changes in both the amount and price of risk required by market participants² • Transaction costs incurred for liabilities incurred or transferred during the period • Unwind of discount • Changes in the premium required by market participants for the risk of non-performance by the reporting entity

² These fair value gains and losses may sometimes be disaggregated into components, for example, interest income and interest expense, release of risk premiums etc.

	Statement of financial position	Statement of comprehensive income
Value in use	<ul style="list-style-type: none"> • Present value of cash flows expected to arise from the continuing use of the asset and from its disposal at the end of its useful life 	<ul style="list-style-type: none"> • Value in use, at the time of performance, of economic resources consumed during the period • Gains and losses arising from remeasurement. Those gains and losses could arise from: changes in estimates of cash flows, changes in interest rates or changes in both the amount and price of risk³ • Unwind of discount
Fulfilment value	<ul style="list-style-type: none"> • Present value of cash flows expected to arise in fulfilling the liability 	<ul style="list-style-type: none"> • Consideration for performance obligations fulfilled during the period • Cost of economic resources (including services) consumed during the period • Gains and loss arising from changes in fulfilment value. Those gains and losses could arise from changes in: estimates of cash flows, changes in interest rates, changes in risk premiums required by the entity • Unwind of discount

³ These fair value gains and losses may sometimes be disaggregated into components, for example, interest income and interest expense, release of risk premiums etc.

Appendix B – Cash-flow-based measurement techniques

This appendix includes a working draft for the description and discussion of cash-flow-based measurement techniques in *Conceptual Framework* Exposure Draft. It is intended to give IASB members an idea of the broad content and level of detail envisaged by the staff. We plan to work further on the drafting. Consequently, we are not seeking detailed drafting comments at this stage.

This working draft is based on the text of the Discussion Paper updated to reflect the tentative decisions made in July 2014 about cash-flow-based measurements.

In July 2014, you tentatively decided that:

- (a) the purpose of cash flow-based measurement techniques is normally to implement one of the measurement bases that will be described in the *Conceptual Framework*. However, if the IASB decides in a particular Standard to use a cash flow-based measurement technique to implement a measurement basis that is not one of those described in the *Conceptual Framework*, the Basis for Conclusions on that Standard should explain why.
- (b) the Exposure Draft should include additional guidance on:
 - (i) the different approaches to dealing with uncertain cash flows;
 - (ii) the use of discount rates. This guidance would state, among other things, that if an entity measures an item using a cash flow-based measurement technique, and the effect of the time value of money is significant for the cash flows associated with that item, then the entity should discount those cash flows to reflect the time value of money; and
 - (iii) how to decide when the measurement of a liability should include the effect of a reporting entity's own credit standing.

Cash-flow-based measurement techniques

- B1. The purpose of cash-flow-based measurement techniques is normally to implement one of the measurement bases described in paragraphs [A1 - A42]. For example:
- (a) The value in use of an asset and the fulfilment value of a liability can only be determined using cash-flow-based measurement techniques.
 - (b) When fair value or current cost cannot be observed directly, it may be necessary to estimate these amounts using a cash flow-based measurement technique or other technique. This appendix does not discuss how to use cash-flow based measurement techniques to produce such estimates.
- B2. However, the IASB may sometimes decide in a particular standard to use cash-flow-measurement techniques to design a customised measurement basis for a particular asset or liability. A customised measurement basis may result in more relevant information to the users of financial statements. However, when deciding whether to use a customised measurement basis, the IASB would need to consider whether it will be understandable for users of financial statements. If the IASB decides to use a cash-flow-based measurement in this way, the Basis for Conclusions on that Standard should explain why.
- B3. One customised measurement basis is the amortised cost measurement basis for financial assets and financial liabilities. It uses cash-flow-based measurement techniques to provide information about the expected cash flows and the effective return on a financial asset or financial liability. Amortised cost measurement combines current estimates of cash flows with a single discount rate that is determined at initial measurement of the asset or liability.⁴
- B4. The following paragraphs discuss the factors to be considered when using cash-flow-based measurement techniques.

⁴ For a variable rate financial instrument, the variable rate used to discount the cash flows reflects the interest spread at initial measurement.

Factors considered in other cash-flow-based measurements

- B5. When using a cash-flow-based measurement technique, the following factors should be considered:
- (a) the estimated amount, timing and uncertainty of future cash flows for the asset or liability being measured. Those estimates should reflect possible variations in the amount and timing of the cash flows (paragraphs B7 - B13);
 - (b) the time value of money (paragraphs B14 - B15);
 - (c) the price for bearing the uncertainty inherent in the cash flows (ie a risk premium) (paragraphs B16);
 - (d) other factors, such as liquidity, that market participants would take into account in the circumstances (paragraphs B17); and
 - (e) for a liability, the risk that the reporting entity may fail to fulfil the liability (credit risk) (paragraphs B18 - B20).
- B6. Not all of the factors listed in paragraph B5 are considered in every cash-flow-based measurement. However, if a cash-flow-based measurement technique is used to estimate fair value, it should capture all of the elements and should adopt the perspective of market participants.

Uncertainty

- B7. Uncertainties about the amount of any cash flows are important characteristics of assets and liabilities. When measuring an asset or liability by reference to uncertain future cash flows, it is necessary to represent the range of possible cash flows by selecting a single amount. The most relevant amount is usually one from the centre of the range (a central estimate).
- B8. Different central estimates provide different information. For example:
- (a) Expected values (probability-weighted averages or mean values) are used in estimating a value of an asset or liability at the measurement date. They are not intended to predict the ultimate inflow or outflow of cash (or other economic benefits) arising from that asset or liability.

- (b) Measurements based on the maximum amount that is more likely than not to occur (similar to the statistical median) indicate that the probability of a subsequent loss is no more than 50 per cent and that the probability of a subsequent gain is no more than 50 per cent.
- (c) Measurements based on the most likely outcome (the statistical mode) attempt to predict the ultimate inflow or outflow arising from an asset or liability, rather than estimate a value of that asset or liability at the measurement date.

Each of these central estimates is illustrated in the following example:

Example

Probability	Cash flow (CU)
40%	100
30%	200
30%	500

In this example:

- (a) The expected value (the mean) is CU250 (40% X CU100 + 30% X CU200 + 30% X CU500).
- (b) The maximum amount that is more likely than not to occur (the median) is CU200 (The probability that the cash flow will be more than CU200 is less than 50% and the probability that the cash flow will be less than CU200 is less than 50%).
- (c) The most likely outcome (the mode) is CU100. It is the outcome with the highest probability.

B9. Expected values are additive. In other words, the expected value of a portfolio equals the sum of the expected values of the items within the portfolio. However, medians and modes are not usually additive.

B10. For a large portfolio of items whose outcomes are independent of each other, the expected value for the portfolio is likely to be close to the most likely outcome

for the portfolio, although it may differ materially from the sum of the most likely outcomes for each individual item.

- B11. For a large portfolio of items whose outcomes are correlated, the expected value for the portfolio may differ materially from the most likely outcome for the portfolio.
- B12. When the probability distribution for the possible outcomes is distributed more or less symmetrically around its centre, the expected value, median and mode are more or less identical.
- B13. No one central estimate gives complete information about the range of possible outcomes. To provide complete information, disclosure may be needed.

The time value of money

- B14. A payment of CU100 to be received tomorrow is more valuable than the same payment to be received in 10 years. This difference arises because of the time value of money. Discounting the cash flow to be received in 10 years reflects the time value of money and provides useful information about the different values of these payments. Consequently, if the effect of the time value of money is significant for the cash flows associated with an item, those cash flows should be discounted.
- B15. If discounting is being used to reflect only the time value of money, then a rate that reflects only the passage of time and excludes other factors (for example, credit risk, liquidity, etc) should be used. In practice, an entity may adjust the discount rate used to address other factors (for example, credit risk, liquidity, etc) associated with the cash flows. If the rate used to discount the cash flows is adjusted to reflect these other factors, then, to avoid double counting, the cash flows should exclude the effect of these factors.

Risk premium

- B16. Possible variations in the amount and timing of the cash flows affect not only the central estimate of the cash flows but also the price that entities and individuals generally charge for bearing the risk that the cash may ultimately differ from the central estimate. Two assets with expected cash flows of CU100 can have very different ranges of possible outcomes. One might have only two possible

outcomes—CU0 or CU200—each with a 50 per cent probability. The other might have two possible outcomes—CU99 and CU101—each with a 50 per cent probability. Most investors would pay less for the first asset, because its outcomes are more uncertain. That difference constitutes the price for bearing that additional uncertainty (ie a risk premium).

Other factors (including liquidity)

- B17. Estimates of current market prices (such as fair value) may need to include other factors that affect the price of an asset or liability such as the liquidity of the item. However, the effect of liquidity, or similar factors, on an asset or liability may be unidentifiable or difficult to quantify. Consequently, in some cases, including them in measurement (other than an estimate of, for example, fair value) may not provide relevant information.

Credit risk in liabilities

- B18. The transaction price of liabilities reflects the possibility that the entity will not be able to settle its liabilities when they are due. Consequently, if initial measurement is based on a transaction price, that possibility is automatically reflected in the initial measurement of those liabilities.
- B19. Updating the measure of a liability for changes in both the likelihood of default and the market price for credit risk helps users to distinguish between liabilities with similar face values or original proceeds but with different amounts and timings of payments. Uncertainty about the ability of an entity to settle its liabilities when they are due is reflected in the market price of liabilities. Consequently, if a cash-flow-based measurement is used to estimate a market price for a liability of the reporting entity (for example, a level 3 estimate of fair value), that estimate should reflect the entity's own credit standing.
- B20. However, including the effect of changes in own credit on the measurement of a liability may not always provide useful information to users of financial statements because:
- (a) Unless the entity defaults on the liability or re-negotiates it, the effects of changes in own credit are likely to reverse over time and, hence, may not be relevant to users of financial statements;

- (b) The recognition of gains or losses arising on changes in own credit can have a counter-intuitive effect on the financial performance of an entity (gains are recognised when the financial position of the entity has deteriorated and losses are recognised when its financial position has improved). This effect may make the financial statements less understandable.

Consequently, if a cash-flow-based measurement technique is not being used to estimate a market price, the IASB might consider selecting a measurement basis that excludes the effect of own credit.