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International Accounting Standards Board

INFORMATION FOR OBSERVERS

Board Meeting: **14 November 2007, London**

Project: **Revenue Recognition**

Subject: **Measurement model—Measurement (Agenda paper 4C)**

PURPOSE OF THIS MEMO

1. This memo explains the measurement principle used in the measurement model and the reasons for selecting the measurement attribute.

INTRODUCTION

2. Memo 96 explained how the rights and obligations in a contract give rise to a contract asset or contract liability.[1] The next issue to consider is how that contract asset or liability should be measured. This is because the amount of revenue that is recognised, and consequently the amount of profit or loss that is reported, depends on how they are measured.

3. The section begins by considering the reasons for developing a revenue recognition model based on explicit measurement of assets and liabilities (paragraphs 4–10). It next explains why current exit price has been selected as the measurement objective in this model (paragraphs 11–40). It then addresses the concerns that are sometimes expressed about exit price measurements (paragraphs 41–76), in particular concerns about the reliability of the measurements when they require use of estimation techniques. Lastly, it explains what is included in an exit price measurement (paragraphs 77–81).

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[1] For ease of exposition, the discussion in the rest of this paper is framed in terms of contracts that do not require the remedy of specific performance. As noted in Memo 96, in contracts that require the remedy of specific performance, the entity's rights should be presented gross as assets and its obligations should be presented gross as liabilities.

THE NEED FOR EXPLICIT MEASUREMENTS

4. Many existing revenue recognition models treat the assets and liabilities arising from contracts with customers as the residuals from the process of recognising and measuring revenue. This is because those models specify various criteria (such as earned and realised, and stage of completion) to evaluate how much performance under the contract has occurred in the reporting period and, therefore, how much of the contract consideration should be recognised as revenue. Having determined how much revenue should be recognised, the contract assets and liabilities then fall out as residuals. Hence, in such models, the recognition and measurement of the contract assets and liabilities is the by-product of the revenue recognition process.

5. However, as explained in Memo 96, revenue should be defined in terms of changes in assets and liabilities. Hence, it is *revenue* that should be the residual, or the by-product, from recognising and measuring changes in assets and liabilities, and not vice versa.

6. One way to achieve this would be to measure the asset or liability that exists at the beginning and end of the reporting period, based on economic attributes of the asset and liability that exist on those days. The measurement model refers to that process as 'explicit measurement'.

7. Proponents of this approach argue that it would provide a more coherent framework than existing revenue recognition models to determine the amount of revenue and profit or loss to be recognised in any reporting period. This is because the approach measures real-world economic phenomena—the entity's assets and liabilities—at each measurement date. In their view, the weakness of existing revenue recognition models that attempt to evaluate performance is that they try to measure directly the *change* in those phenomena. However, a change is best measured by comparing the measurement of the item—in this case the contract asset or liability—before and after the change. Therefore, an approach that is founded on explicit measurement of the assets and liabilities arising from the contractual rights and obligations should provide a more faithful depiction of the changes in the entity's position in the contract over the term of that contract. And, consequently, it should provide a more faithful representation of the amount of revenue and profit or loss that should be recognised over the duration of the contract. This is particularly the case in more complex contracts in which contractual obligations are satisfied over time rather than discretely.

8. In addition, the resulting measurements of the assets and liabilities should be representationally faithful depictions of those assets and liabilities, ie they should faithfully depict what they purport to depict. This is because the measurements would be derived from attributes of those assets and liabilities. Under existing revenue recognition models, because the assets and liabilities are treated as residuals, their measurement can be understood only in terms of their calculation; they are not explicit depictions of the assets and liabilities purportedly being measured.

9. An explicit measurement approach would also eliminate the striking inconsistencies that can arise under IFRSs when an entity has a liability that arises from the contract with the customer, but which is not deemed to be part of the revenue contract. For instance, some liabilities for warranties and refunds arising from the contract with the customer are not measured as a residual (ie at some proportion of the contract consideration). Instead, they are measured explicitly on initial and subsequent recognition based on economic attributes of those liabilities in accordance with IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*. In other words, IFRSs has one accounting model for credits that arise in revenue contracts and another model for credits that do not.

10. It should be emphasised that an approach that is founded on explicitly measuring assets and liabilities should not be taken as suggesting that the statement of financial position is of greater importance than the statement of income or profit or loss. Ultimately, the objective of this model *is* to determine the appropriate amount of revenue and profit or loss. In that sense, the statement of income or profit or loss is at least as important as the statement of financial position. Explicitly measuring the assets and liabilities should simply be viewed as a conceptually coherent means of determining revenue and profit or loss.

MEASUREMENT PRINCIPLE FOR MODEL

11. The objective of explicitly measuring contract assets or liabilities is to provide decision-useful information about the contract to which the entity is a party. To meet this objective, the measurement needs to provide a representationally faithful depiction of the contract asset or liability on the reporting date.

12. Proponents of this model decided that the measurement basis that would be most consistent with the above objectives would be current exit price. Therefore, the measurement principle in the model can be stated as follows:

The contract asset or liability (that is, the combination of the entity's remaining contractual rights and obligations) is measured at its current exit price. This is the amount that the entity would expect to receive or pay to transfer its remaining contractual rights and obligations to a market participant at the reporting date.

WHY USE CURRENT EXIT PRICE MEASUREMENT?

13. Apart from providing an unambiguous objective for measuring the contract asset or liability that is based on economic attributes of the underlying rights and obligations, there are four main reasons why current exit price was selected as the measurement attribute:

    1 the measurement reflects the future cash flows associated with the remaining rights and obligations in the contract, no more or less (paragraphs 14–19)

2 the measurement includes a margin at each measurement date for all of the remaining contractual obligations (paragraphs 20–26)

3 the measurement is current (paragraphs 27–36)

4 the measurement enhances comparability (paragraphs 37–40).

Measurement reflects the future cash flows associated with the remaining rights and obligations in the contract, no more or less.

14. A current exit price is the amount that the entity would have to pay a market participant to (a) take over full responsibility for fulfilling the *remaining* obligations in the contract and (b) assume any *remaining* rights in the contract. In other words, it assumes that the contract is 'laid off' to another party. Therefore, the exit price notion explicitly captures *all* the remaining cash flows associated with the remaining rights and obligations, but no more and no less.

15. The particular point to note is that an exit price measurement would not implicitly capture cash outflows relating to activities that have already been completed. This is most relevant when considering the initial measurement of the contract asset or liability. Consider the following example.

> Flooring Co is a company that installs wooden floors in domestic properties. Flooring Co does not have any retail outlets; instead it advertises extensively in newspapers and magazines.
>
> Suppose that on 10 June a potential customer contacts Flooring Co about a new floor. A salesman from Flooring Co visits the customer on 17 June and discusses the various options, measures the room and prepares a quotation. On 30 June, after further discussion between the potential customer and the salesman, Flooring Co and the customer enter into a contract and the customer immediately pays the contract price of CU2,000.
>
> Flooring Co will install the new floor in July. As a result of obtaining the contract, Flooring Co's salesman is due a commission of CU200.

16. As explained in Memo 96, at 30 June Flooring Co has a contract liability from its remaining contractual obligations to provide and install the floor.[2] Most existing revenue recognition models would measure this liability at 30 June at CU2,000. This is because Flooring Co would not be judged to have performed under the contract and hence no revenue could be recognised. That is to say, the measurement of the contract liability is the residual from not recognising any revenue rather than being explicitly measured.

17. However, CU2,000 represents the cash *inflow* from the customer. From Flooring Co's perspective some of these cash inflows relate to aspects of the contract that have already been completed at 30 June. This is because

[2] To simplify the discussion, other obligations are ignored (eg to refund the contract consideration as a result of a failure to perform and warranty obligation for any rectification work required after the floor is installed).

entities sacrifice resources not only to fulfil contracts, but also to obtain contracts. For instance, in this example, Flooring Co sacrificed resources in marketing its products, visiting the potential customer and discussing its requirements, negotiating and finalising the contract, and paying the salesman his commission. Therefore, assuming that Flooring Co is a rational entity, it will set its pricing to customers to recover all of these costs. In other words, an entity charges a customer not only for the amount it requires to *fulfil* the contract, but also the amount it requires to *obtain* the contract.

18. Therefore, all things being equal, a faithful depiction of Flooring Co's *remaining* obligations at 30 June would be expected to be *less* than CU2,000. Said another way, if Flooring Co had the customer and contract in place at 30 June, it would be expected to charge less than CU2,000 just to provide and install the new floor.

19. Hence, in this example, an explicit measurement of the contract liability at 30 June that excludes cash outflows that have already been incurred should result in a more representationally faithful depiction of the *future* cash outflows from the contract than a measurement based on the contract price of CU2,000. Therefore, it should provide more relevant information to users. An exit price measurement achieves this, because in this case it explicitly captures only the price that the entity would have to pay another entity to fulfil the remaining obligations.

Measurement includes a margin at each measurement date on all of the remaining contractual obligations

20. The current exit price of a contract asset or liability includes the margin that a market participant would demand for providing *all* of the remaining goods and services in the contract.

21. A representationally faithful measurement of the remaining contractual obligations requires a margin because entities not only price their contract to recover their expected costs of providing goods and services (ie their cash outflows), but they also require a return for providing those goods and services. Ultimately, profit-orientated entities need to make returns for their owners. Therefore, because entities do not willingly provide goods and services to their customers without recovering a margin, a measurement of an obligation to provide goods and services that excluded a margin would not be a representationally faithful depiction of an entity's obligations to provide goods and services.

22. The return that entities require will depend on the nature of the goods and services. For instance, a distributor typically requires a lower margin for providing goods to customers than an engineering company that manufactures high-technology complex machinery for customers. Hence, excluding a margin from the measurements could also result in performance obligations that entail similar cash outflows but different characteristics being reported at the same amount. That is to say, contractual obligations could be depicted as being the same when they are different. For instance, the distributor and the engineering company may have obligations that are

expected to result in the same cash outflows. However, their respective obligations have different characteristics (including different risk profiles). Including a margin ensures that unlike obligations are not depicted similarly.

23. Generally speaking, existing revenue recognition models *implicitly* include a margin in the initial measurement of a contract liability. This is because contract liabilities are normally measured at the amount of the contract consideration, and this consideration would normally be expected to include the margin that the entity requires as compensation for providing the goods and services in the contract. However, because the margin is only *implicitly* included in the measurement, the subsequent measurement of the contract can be inconsistent as to whether a margin is included and whether that margin is representative of the margin required for providing the remaining goods and services. For instance, consider the following example:

> Suppose that on 1 March Engineering Co enters into a contract to deliver and install a piece of specialised machinery to a customer's factory. The customer prepays the contract price of CU1,000 and Engineering Co delivers the machine on 10 March and completes the installation on 31 March. As part of the contract, Engineering Co provides a warranty for its installation work.
>
> Past experience indicates that there is a 30 per cent likelihood of Engineering Co having to perform rectification work in the year following the machine's installation.

24. Under most existing revenue recognition models, the initial measurement of the contract liability would be CU1,000. This amount implicitly includes a margin for all of the goods and services to be provided, assuming that Engineering Co has priced the contract to provide it with adequate compensation for providing the goods and services. Similarly, under those models, the measurement of the contract liability on 10 March (after delivery of the machine but prior to installation) would be based on a proportion of the contract price of CU1,000. That amount might also implicitly include a margin for the services yet to be provided. Although, if too much or too little of the contract price was attributed to providing and delivering the machine, that implicit margin would not be representative of the margin required for providing the remaining services.

25. However, after the machine has been delivered and installed, Engineering Co usually would be judged to have performed in full and all of the revenue recognised. Therefore, the measurement of the contract liability at that point is often based on the expected remaining *costs* to be incurred. As a result, the entire margin that Engineering Co implicitly charged the customer for providing *all* of the goods and services has been recognised once the machine is installed, even though Engineering Co has not fulfilled all of its obligations under the contract.

26. Therefore, a more representationally faithful measure of Engineering Co's contract liability at 31 March also would include the margin required for providing the warranty. In this way, (assuming that the contract is profitable) profit is reported over the entire duration of the contract and not just on provision of the main deliverables. A current exit price measurement

achieves this because the exit price of the contract liability at 31 March would explicitly include a margin if a market participant would require a margin for fulfilling the remaining warranty obligation.

Measurement is current

27. As its name implies, current exit price is a current value measurement. This is because its premise is to consider the price that the entity would expect to receive or pay to transfer its remaining rights and obligations to a market participant *on the reporting date*. That price would therefore explicitly reflect prices and circumstances that exist on the reporting date, rather than, say, at inception of the contract. Hence, the current exit price of the contract asset or liability reflects *current* assessments of the future cash flows and margins required for providing goods and services.

28. Generally speaking, existing revenue recognition models *implicitly* measure a contract liability at the inception of a contract based on current prices and circumstances. This is because the initial measurement is derived from the contract consideration, and, in a fixed-price contract, the amount of the contract consideration typically would reflect the prices and circumstances prevailing at contract inception.

29. However, existing models do not typically update the measurement for changes in prices and circumstances. Hence, the measurements are typically 'locked' or 'frozen' at contract inception. As a result, the subsequent measurements may not correspond with the conditions that exist at the measurement date. This impairs their representational faithfulness and, hence, their relevance for users.

30. In contrast, if the measurements were updated to reflect current conditions, then the financial information would have greater predictive value, because those measurements would represent the most up to date depiction of the contract. This is particularly important in contracts of a longer duration. In addition, the financial information would also provide more feedback about how changes in prices and circumstance (ie past real world events) that occur after contract inception have affected the entity's financial position.

31. The exception to not updating the measurements under existing models is if prices or circumstances change to such an extent that the contract is judged to be onerous (typically when the contract is loss-making), in which case the contract is remeasured. However, this means that the contract is only remeasured by exception. There are four main disadvantages with this approach:

    1 remeasurements are not captured and reported on a timely basis (paragraphs 32 and 33)

    2 similar contractual obligations are measured at different amounts (paragraph 34)

    3 subsequent measurement is not neutral (paragraph 35)

4 margin is used as a cushion to absorb unfavourable changes (paragraph 36).

Remeasurements are not captured and reported on a timely basis

32. If remeasurements are required only by exception, then smaller changes in prices and circumstances are not reported. This can result in large remeasurements eventually being required to be recognised. For users, such losses can come as surprises.

> Suppose that on 1 April a Distributor enters into a contract with a customer (Contract 1) to provide a widget on 30 June for a fixed price of CU100 payable on contract inception. Further suppose that the price of CU100 is determined based on costs of acquiring the contract of CU5, the cost of obtaining a widget from the wholesaler of CU85 and the required margin of CU10. For simplicity, assume that the margin relates to activities that are undertaken between 25 June and 30 June.
>
> Suppose that on 30 April the price at which Distributor can obtain widgets from its wholesaler increases to CU95 and as a result Distributor increases its prices on new contracts to CU110. If, under existing models, Contract 1 is not judged to be onerous (because a loss is not expected to be incurred), the contract liability is not remeasured.
>
> Suppose that on 30 May the price at which Distributor can obtain widgets from its wholesaler increases again to CU105 and as a result Distributor again increases its prices on new contracts to CU120. If, under existing revenue recognition models, Contract 1 is now judged to be onerous (because a loss is expected to be incurred), it is remeasured. Part of this remeasurement on 30 May would relate to the change in price that occurred in April, but which was not reported at that date.

33. Furthermore, since remeasurement is required only by exception, there is inevitably the risk of a required remeasurement being overlooked.

Similar contractual obligations are measured at different amounts

34. Similar contractual obligations can be measured at different amounts simply because the contracts were entered into on different dates.

> Consider again the facts in the first paragraph of the example in paragraph 32. Suppose that during May the price at which Distributor can obtain widgets from its wholesaler decreases to CU80 and as a result Distributor reduces its prices on new contracts to CU95. Under existing revenue recognition models, the contract liability for Contract 1 is not remeasured.
>
> Further suppose that on 31 May Distributor enters into another contract (Contract 2) with a customer to provide a widget on 30 June this time for the fixed price of CU95, again payable on contract inception.

Under existing models, on 31 May Distributor would measure its contract liabilities from Contract 1 and Contract 2 at CU100 and CU95 respectively. Hence, the measurement of the two contract liabilities would depict that the underlying contractual obligations are different at that date, when they are in fact identical.

Subsequent measurement is not neutral

35. The subsequent measurement is not neutral because existing models treat changes in prices and circumstances differently. An unfavourable change of prices or circumstances that causes a contract to become onerous is treated differently from either an unfavourable change that does not cause the contract to become onerous or many favourable changes in prices or circumstances. The first is recognised, but the other two are not. In addition, a favourable change of circumstances is implicitly recognised if it is offset against an unfavourable change in circumstances that would otherwise have caused the contract to become onerous.

In the illustration in paragraph 32, the *adverse* change in circumstances on Contract 1 at 30 April was *not* recognised whilst the cumulative *adverse* change in circumstances at 31 May *was* recognised. In the illustration in paragraph 34, the *favourable* change in circumstance on Contract 1 was *not* recognised.

Margin is used as a cushion to absorb unfavourable changes

36. The initial margin in the contract—the margin demanded for providing the goods and services—is used as a cushion to absorb the unfavourable change in prices until such time as the contract is judged onerous. This can result in the measurement no longer including a margin.

Consider again the facts in the first paragraph of the example in paragraph 32. Suppose that during May the price at which Distributor can obtain widgets from its wholesaler increases to CU90 and as a result Distributor increases its prices on new contracts to CU105.

Suppose that on 31 May Contract 1 is not judged to be onerous, and hence the initial measurement of the contract liability is not updated to reflect the change in price.

In effect, this means that CU5 of the initial margin of CU10 in the pricing of the contract has been used as a cushion to absorb the change in price. Had the price increase not occurred, then Distributor would have reported the margin of CU10 included in the initial measurement of the contract liability in profit or loss when the goods and services were provided in June. However, if the measurement of the contract liability is not updated when the price changes occurs in May, then some of the margin in the contract is implicitly recognised at that point to absorb the change in price. This is because Distributor will now report margin of CU5 in June, even though it required a margin of CU10 to fulfil the contract. Said another way, not recognising the effect of the price change in May results in accelerating or front loading the reporting of the original margin in the contract.

Measurement enhances comparability

37. Using current exit measurements results in economically similar contractual obligations being measured at the same amount regardless of how the entity incurred those obligations.

38. Consider again the example of Flooring Co in paragraph 15.

> Suppose that Flooring Co has entered into a long-term arrangement with a homebuilder under which it will provide and install floors in specified rooms in homebuilder's new houses. Suppose that at the same time it contracts with the customer in the example in paragraph 15, Flooring Co contracts with the homebuilder to provide a floor that is of the same size and design as for the customer in that example. It charges the homebuilder CU1,400.
>
> If, under existing revenue recognition models, Flooring Co measures its contract liability in this example as a residual, then it will measure it at CU1,400. However, in the example in paragraph 15, it measured a similar contract liability at CU2,000.

39. The point to note is that under existing revenue recognition models Flooring Co would measure two similar contract liabilities at different amounts simply on the basis of how it incurred the underlying obligations. However, *how* Flooring Co incurred those obligations should not be relevant to the present accounting for those obligations. What matters is how Flooring Co reports the obligations to which it is a party at the end of the reporting period.

40. Measuring identical contract liabilities at different amounts is potentially harmful to users because it depicts those liabilities as being different, when in fact they are identical. If financial statements are to be useful to users, they should aim to depict the similarities—or differences—between two sets of economic phenomena. In contrast, if Flooring Co measured the two contract liabilities at their current exit price, it would measure them at similar amounts.

WHY NOT USE CURRENT ENTRY PRICE?

41. Specifying an exit price measurement objective is not intended to suggest that the entity will transfer the contract to another party. Indeed, in many cases, the entity either will chose not to transfer the contract or will not be able to do so (for instance, because the customer would not agree to the transfer, or a third party that is willing or able to assume the contract could not be identified, perhaps because of the specialised nature of the goods or services involved). Rather, as noted above, the purpose is to provide an unambiguous *objective* for measuring contract assets and liabilities both on initial recognition and subsequently that will provide decision-useful information.

42. Nonetheless, some argue that an exit price notion places too much emphasis on hypothetical transfers to market participants. Therefore, some argue that the contract should be measured based on the amount an entity charges its

customer for its goods and services, ie actual prices, rather than the price required for laying off the contract. This amount is sometimes described as an entry price.

43. However, proponents of the measurement model observed that if an entry price attribute was adopted, then it should be applied to the *same* contractual rights and obligations that the exit price attribute is applied to. Hence, the objective would to identify the amount the entity would charge a customer for entering into a contract with the same *remaining* rights and obligations. This would exclude any services previously provided, such as those provided by a sales person.

44. Consider again the example in paragraph 15.

> On entering into the contract with the customer, Flooring Co recognised a contract liability for its remaining contractual obligations. The objective of an entry price would be to determine the amount Flooring Co would charge the customer for the *remaining* obligations. This is not CU2,000, ie the contract price. This is because, as explained in paragraph 17, that amount also includes the amounts Flooring Co charged customer for all of the pre-contractual activities. Rather the entry price would be the price it would charge a customer only for fulfilling the contract.

45. The point to note is that, even on initial recognition, an entry price measurement for Flooring Co's obligation to provide and install the floor is also likely to be estimated. This is because the only observable price to a retail customer is likely to be for the floor *and* the contract acquisition activities.

46. In addition, even if a price is available on initial recognition, it is unlikely to be available for subsequent measurement because the entity is unlikely to enter into new contracts with the same remaining rights and obligations.

> Suppose Retailer sells a three-year warranty on a new television for which the customer prepays. Further suppose that Retailer also assumes warranties from other retailers who do not provide warranty coverage themselves. The price Retailer charges these other retailers would be closer to an observable price for the remaining warranty services (ie it would exclude the price of obtaining the retail customer).
>
> How should Retailer measure its remaining warranty obligation at the end of the second year?
>
> The price that Retailer charges other retailers to assume new three-year warranties at that date is not directly relevant because this is the price it charges to assume an obligation that is different from the one being measured. The entry price for the remaining warranty obligation would be the amount that Retailer would charge other retailers to assume a one-year warranty on a television that is two years old. It is unlikely that Retailer assumes such warranties, because typically it would assume them only at the start of the warranty. Hence, there likely would be no observable price for the subsequent measurement of the remaining obligation.

WHY NOT USE ENTITY-SPECIFIC MEASUREMENTS?

47. A current exit price reflects the price a market participant would pay to acquire a contract asset or demand to assume a contract liability. Hence, with respect to the contractual obligations, the measurement reflects the outflow of resources that a *market participant* would expect to incur in fulfilling those obligations and the margin that a market participant would demand for fulfilling those obligations.

48. Some argue that such measurements rely too much on market inputs and that the measurement instead should reflect the outflows of resources that the *entity* expects to incur in fulfilling the contract and the margin that the entity would demand. In other words, they argue that the measurement should be entity-specific.

49. However, measuring the contract using entity-specific inputs may not result in a neutral measurement of the rights and obligations in the contract alone. The resulting measurement may also capture characteristics of the entity that holds the contract. In other words the measurement is not independent of the entity that holds the contract. As a result, the measurement of the rights and obligations in the contract is not comparable with other entities that have the same rights and obligations.

50. For instance, suppose that an entity has some proprietary technology that allows it to provide goods and services at a lower cost than other entities supplying the same goods and services. If the outflow of resources in measuring the contract reflects the specific entity's position, then the measurement is capturing an attribute of that entity's proprietary technology, ie another asset of the entity, rather than only attributes of the contract. In contrast, if the measurement excludes those aspects that would not arise for other entities, then the measurement reflects only attributes of the contract rather than the entity that holds the contract.

51. In addition, if the entity is explicitly measuring its contract assets and liabilities (ie not treating the measurement as a residual) and the entity reflects its proprietary technology in the initial measurement of its contract assets and liabilities, then the entity would reflect all of its efficiencies compared to the market at contract inception. Similarly, if the entity had no proprietary technology and was in fact less efficient compared to the market, then it would reflect all of its inefficiencies at contract inception.

52. To illustrate this point, consider the following example.

> Manufacturing Co makes widgets using a proprietary technology not available to any other manufacturer. Manufacturing Co has an obligation to produce and deliver a widget to a customer. If the costs of obtaining a contract are ignored, most manufacturers will charge CU600 for producing and delivering a widget. This is composed of CU450 for the typical cost to produce and deliver a widget and CU150 for the required margin.
>
> Because of its proprietary technology, Manufacturing Co can produce and deliver a widget for CU350. It also charges its customers CU600 for a widget.

On 1 January, Manufacturing Co contracts with a customer to deliver a completed widget and the customer prepays.

If Manufacturing Co measures that liability at CU600, then its measurement is comparable to other market participants who have similar liabilities. This measurement ignores Manufacturing Co's competitive advantage of producing and delivering widgets more efficiently than its competitors. In essence, because Manufacturing Co's competitive advantage has not yet arisen (it has not yet produced the widget) in this contract, that advantage is not reflected in the measurements.

On 30 June, Manufacturing Co completes the widget and delivers it to the customer. At that time, Manufacturer Co reports margin of CU250 as a result of extinguishing its liability of CU600 and recognising its manufacturing and delivery costs of CU350. In contrast, all other manufacturers in a similar arrangement would have recognised margin of CU150. Manufacturing Co's comparative efficiency is thus recognised when it arises.

Note that had Manufacturing Co measured its liability at CU500 (ie reflecting its propriety technology), then it would have effectively recognised margin of CU100 from manufacturing and delivering prior to those activities being undertaken.

Conversely, suppose that Manufacturing Co has no proprietary technology and is actually quite inefficient relative to its competitors, producing and delivering widgets at a cost of CU550. If Manufacturing Co measured its liability at CU700 (ie reflecting its expected inefficiencies) rather than CU600, then it would have recognised a loss from manufacturing and delivering prior to those activities being undertaken. Furthermore, the margin it would report on 30 June—CU150—would suggest that it was as efficient as other market participants, when this is not the case.

53. Proponents of the measurement model think it is more useful to users if the effects of an entity's efficiencies and inefficiencies compared to market participants are reported when they arise, ie as the goods and services are provided. This is because this is relevant information for users that provides feedback about the entity's performance relative to other market participants. In other words, if the entity is more efficient than the market, its profit will be greater than the market return; if it is less efficient, its profit will be less.

54. Measurements that are based on market inputs are also less subjective than those based on an entity's own inputs. And because users are typically aware of market information, the resulting measurements provide a more understandable basis for users to evaluate the entity's performance.

55. Nonetheless, whilst the objective is that the inputs into the measurements should be consistent with those that other market participants would make, some inputs will not be able to be derived from market prices. In such cases, the entity will use its own inputs so the distinction between entity-specific and market inputs may have little practical significance.

USE OF ESTIMATES

56. Proponents of the measurement model acknowledge that the current exit price of the bundle of goods and services that the entity is obliged to provide to the customer will very often not be directly observable. Specifically, there will rarely be a Level 1 or Level 2 estimate for that bundle as described in FASB Statement No. 157 *Fair Value Measurements* (and as discussed by the IASB in its 2006 discussion paper of the same name). In such cases, the measurements may require the use of unobservable inputs and subjective judgements.

57. As a result, some argue that explicit measurements should be limited to Level 1 or 2 estimates, ie estimates that are either based on quoted prices or are derived from observable market data. In the absence of Level 1 or Level 2 inputs, the estimates are considered insufficiently 'reliable' for use in the financial statements.

What does reliability mean?

58. FASB Concepts Statement No. 2 *Qualitative Characteristics of Accounting Information* defines reliability as 'the quality of information that assures that information is reasonably free from error or bias and faithfully represents what it purports to represent'.[3] The IASB *Framework* contains a similar notion.[4] With respect to measurement, Concepts Statement 2 states that the 'reliability of a measure rests on the faithfulness with which it represents what it purports to represent, coupled with an assurance for the user, which comes through verification, that it has that representational quality'.[5]

59. Hence, in the FASB's conceptual framework there are two components of reliability: representational faithfulness and verifiability. The objective of representational faithfulness is for the selected measurement to result in a depiction of the asset or liability that corresponds to the economic phenomenon it purports to represent. The objective of verification is to provide assurance about that correspondence. Although the IASB's framework does not explicitly discuss 'verifiability', that notion is inherent in the IASB's notion that the information can be depended upon to represent what it purports to represent.

Representational faithfulness

60. Proponents of the measurement model think that concerns about the reliability of explicit measurements tend to place more emphasis on the verifiability component of reliability rather than the representational faithfulness component. This is because measurements that are derived from the contract consideration are often regarded as more verifiable simply because the contract consideration is directly observable and therefore verifiable. In contrast, an explicit measurement of an asset or liability that is not directly observable in the market is more difficult to directly verify.

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[3] Concepts Statement 2, Glossary of terms.
[4] *Framework*, paragraph 31.
[5] Concepts Statement 2, paragraph 59.

61. However, as the discussion in previous sections has shown, using measures that are directly derived from the contract consideration can result in a measurement of an asset or liability that may not be a faithful depiction of the asset or liability that it purports to depict. For instance, if Flooring Co's contract liability in the example in paragraph 15 is initially measured at CU2,000, then the measurement includes amounts that relate to the sacrifice of resources required to obtain the contract. In other words, the liability effectively includes deferred credits that are not representative of Flooring Co's liability. Similarly, the discussion in paragraphs 27–36 highlights that subsequent measurements of contractual obligations that are derived from the contract consideration may not be faithful representations of the entity's actual obligations. If there has been a change in circumstances, only by chance would the measurements correspond to the actual obligations that exist on the reporting date.

Verifiability

62. Proponents of the measurement model acknowledge that the greater the use of unobserved inputs into the measurement of the asset or liability, or the more adjustments that need to be made to observed inputs, then the greater the difficulty of directly verifying the measurement.

63. Nonetheless, they also observe that the verifiability of measurements that are derived from the contract consideration may be less than is assumed. Although the contract consideration may be readily verifiable, it does not follow that a measurement that is derived from that amount is itself verifiable.

> Suppose Retailer contracts to sell two products A and B on 30 June. Product A is delivered on 31 July and Product B on 31 August. The customer prepays.
>
> Suppose that Retailer sells Product A and Product B individually for CU45 and CU65 respectively, but sells them together for CU100.
>
> If Retailer's contract liability is measured as a residual from measuring revenue, then its liability at 31 July is likely to be measured at CU65/CU110 × CU100 = CU59 (ie at a proportion of the contract consideration based on the relative selling prices of Products A and B).

64. The point to note in the above example is that that the resulting *measurement* of CU59 is the output of a calculation process and is not directly verifiable.

65. In that regard, proponents of the measurement model think that concerns about verifiability are sometimes confused with observations about the precision of estimates of the exit prices. In other words, some are concerned whether exit prices could be determined with the same degree of precision as measures based on the contract consideration.

66. It is true that in the above example, given all of the inputs and the calculation method, any accountant would arrive at the same measurement of CU59 for the obligation to deliver Product B. This gives a reassuringly precise feel to the measurement, and perhaps limits the latitude in judgement

management might exercise when reporting revenue on Product A. However, precision in these scenarios relates only to the accuracy of the *computational* process. The resulting output of that process, however, may be a very imprecise depiction of the asset or liability that actually exists at the reporting date. In other words, the measurement may lack representational faithfulness.

Measurement error

67. One of the perceived drawbacks of using estimates of current exit values is that any error in the estimation will have a corresponding effect on the amount of revenue and profit or loss that is reported.

> Consider again the example in paragraph 63.
>
> Suppose that the current exit price for the obligation to provide both Product A and B is CU80 and to provide Product B CU50. However, suppose Retailer measures its obligations incorrectly and estimates the current exit price of its obligation to provide Products A and B to be CU75 and Product B to be CU48.
>
> In this case, Retailer would understate its contract liability on 30 June and hence overstate profit or loss by CU5. Similarly it would understate its contract liability on 31 July and understate its profit or loss by CU3. Profit or loss in August would then be understated by CU2. Therefore, measurement errors have affected profit or loss in June, July and August.

68. However, it is important to note that the methods of calculating the measurements in current practice are rarely as precise as indicated in the example in paragraph 63. Entities already have to make use of subjective estimates as part of the process of determining how much revenue to recognise.

69. For instance, suppose that Retailer in paragraph 63 does not sell Products A and B separately. In order to determine the measurement of its obligation at the reporting date to provide Product B, the entity may need to estimate the standalone prices of Products A and B.[6] That process would not be that different from estimating an explicit measurement. In addition, if Retailer determines the standalone price for Product B based on competitors' 'similar' products, significant judgements may be required to determine whether the product is similar and whether adjustments are required.

70. In that regard, it is important to note that measurements that are derived from allocations of the contract consideration based on estimated selling prices also have the risk of error in those measurements affecting revenue and profit or loss.

[6] It should be noted that some existing revenue recognition models would not allow an entity to estimate a standalone price. The entity could only use an observable price.

Consider again the example in paragraph 63.

Suppose that the separate standalone prices for the Products A and B are CU45 and CU65, respectively. However, suppose Retailer incorrectly estimates these standalone selling prices to be CU50 and CU60.

In this case the individual obligations for Products A and B would be misstated at 30 June. However, the contract liability for both obligations would still be measured at CU100 on 30 June, hence the estimation error has no effect on profit or loss.

However, on 31 July the contract liability is measured at CU55 (ie CU60/CU110 × 100) when it should have been measured at CU59 (ie CU65/CU110 × 100). Therefore, the error in estimating the standalone selling price has resulted in profit or loss being overstated by CU4 in July and understated by the same amount in August.

71. The above examples illustrate that when assets and liabilities are measured explicitly, profit or loss at contract inception will include the effects of any errors in the measurement of the remaining rights and obligations. In contrast, existing revenue recognition models that derive the measurement of the assets and liabilities from allocations based on estimated selling prices would not typically reveal any errors in their measurement approach at contract inception. However, after contract inception, profit or loss will include the effects of any errors in explicit measurement and estimated selling prices that are used as the basis for allocations.

72. There are also other examples of using estimates in existing revenue recognition, including the following:

- estimates of returns, rebates, credits, and allowances.
- estimates of contract consideration and costs to complete in construction-type contracts under the percentage-of-completion method. (That is to say, an entity may determine the amount of performance that has occurred by determining the proportion of costs incurred to date compared with total *expected* costs. This would involve predicting future costs, which are inherently uncertain, and that estimate is not directly verifiable.)
- estimates of credit losses on accounts receivable.
- estimates of warranty provisions.

73. The point to note is that current revenue recognition guidance already uses uncertain estimates that cannot be verified directly, but which also affect revenue and profit recognition in similar ways as explicit measurements of contract assets and liabilities.

Conclusions

74. Proponents of the measurement model conclude that reliability in the existing conceptual frameworks is neither limited to verifiability nor does it mean precision. Rather, it means faithful representation of the real-world economic phenomenon it purports to represent.

75. They also note that rejecting explicit measurement due to concerns about reliability would be likely to result in the continued use of measures that are based on allocations or proportions of the contract consideration. Their view is that such measures lack the same degree of representational faithfulness as explicit measurements, because the measures are not attempts to depict directly the economic phenomenon that exists on the reporting date. And proponents of this model do not think that financial reporting would be improved if a measurement is selected that reduces the faithfulness with which the resulting information represents the underlying economics.

76. Proponents of the measurement model acknowledge that using estimates means that there could a range for the resulting measurements. Nonetheless, they observe that existing revenue recognition models already require the use of subjective estimates and that such estimates affect the amount of revenue and profit or loss recognised. They further observe that explicit measurement of assets and liabilities arising from contracts with customers may be more verifiable, and hence more reliable, than some other explicit measurements that are required under existing standards. This is because the exit price of a contract liability would typically be bounded by two amounts that are likely to be directly verifiable—namely the contract consideration and the entity's costs to fulfil the obligation. In contrast, estimates of liabilities such as asset retirement obligations, liabilities stemming from litigation etc would not fall within such a narrow range.

WHAT IS INCLUDED IN THE MEASUREMENT

77. If the customer has prepaid in full, the measurement of the contract liability reflects the price that the entity would have to pay to transfer its remaining contractual obligations to a market participant at the reporting date. In other words, it is the amount that the entity would have to pay to lay off its obligations. Said simply, it is the price a market participant would charge to fulfil *all* of the remaining obligations in the contract with no anticipated payments from the customer. This price would reflect any express or implied rights of return and refund, allowances, rebates, discounts, and credits, etc.

78. The exit price will not typically be observable, so it will need to be estimated. The objective is to arrive at the price a market participant would charge, so inputs into the estimate should be consistent with that objective. However, an entity could use its own inputs if it has no evidence to suggest that they would be inconsistent with those that a market participant would use.

79. For example, in some cases, the amount may be derived from the price a subcontractor would currently charge for providing the goods and services

underlying the obligations in the contract. This price would then need to be adjusted for the estimated amount a market participant would demand for managing the contract and the price for guaranteeing the performance of the subcontractor.

80. The exit price can also be estimated by using a 'building block' approach. In this approach, the price is estimated by considering the following three components:

- the cash flows a market participant would expect to incur in providing all of the goods and services in the contract (ie the direct and indirect costs involved in fulfilling the obligations). When there is uncertainty about the cash flows, the estimate reflects the full range of possible outcomes, weighted by their respective probabilities.

- the margins a market participant would demand for providing the goods and services (including the margin for bearing uncertainty about future cash flows).

- the time value of money.

81. If the customer has not prepaid, the measurement of the contract asset (or liability) also reflects the enforceable expected cash flows from the customer, taking into account the effects of credit risk and the time value of money.