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**International
Accounting Standards
Board**

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These notes are based on the staff papers prepared for the IASB. Paragraph numbers correspond to paragraph numbers used in the IASB papers. However, because these notes are less detailed, some paragraph numbers are not used.

INFORMATION FOR OBSERVERS

Board Meeting: **September 2006, London**

Project: **Revenue Recognition**

Subject: **Measurement approach under a customer-consideration
model and its interaction with IAS 37 (Agenda Paper 18)**

INTRODUCTION

1. The purpose of this paper is to seek input from the Board about how the approach for accounting for performance obligations in the revenue project interacts with the approach for accounting for non-financial liabilities in the IAS 37 project. Specifically the staff would like to know how, under the customer-consideration model, Board members view performance obligations being measured after initial recognition.
2. The paper explores in outline two approaches:
 - Under Approach A, all estimates about the performance obligation are locked in at inception. Those estimates are not revised until the measurement of the liability is deemed inadequate compared to a direct measure of the liability under IAS 37. In such cases, the liability is remeasured.
 - Under Approach B, customer consideration is viewed largely as a current measurement approach, with only specified aspects of the measurement locked in at inception.
3. To illustrate the discussion, the staff has used a warranty contract. This is because this was the main example that the Board used in developing and explaining the amendments to IAS 37 (eg in the IAS 37 Basis for Conclusions, in *Insight* articles, and in the presentation to the 2005 World Standard Setters conference).

4. In addition, a warranty is a type of service contract in which there is a continuous delivery of utility to the customer over the warranty term. The performance obligation can therefore be viewed as being partly extinguished on a daily basis, thus giving rise to revenue. In other words, unlike in the construction contracts that the Board has considered, there is unlikely to be disagreement that revenue is recognised continually during the warranty contract. The only issue is the pattern of that recognition.
5. The staff also thinks it is a good example, because it requires us to consider how changes in circumstances after initial recognition of a performance obligation are to be dealt with in the revenue project. For example, although an entity may price a warranty contract in the expectation that claims will arise from, say, five per cent of the warranties, circumstances might change such that the entity expects claims from ten per cent of the warranties.
6. In addition, we think that the principles of a warranty contract apply to many other examples of performance obligations that the Board has considered and will need to consider. For instance, the power wash contract considered in October 2005 (in which the customer paid the entity to paint its house and as part of the contract also had the right to have the house power-washed three times over the following three years) and rights of return.

THE ISSUE

7. In the IAS 37 project, we have considered the accounting for the warranty obligation as a liability recognition and measurement issue. In particular, the Exposure Draft emphasises that the issuance of a warranty gives rise to a (stand-ready) obligation and emphasises that the initial *and* subsequent measurement of that obligation is a current measurement: the amount that the entity would have to pay to settle or transfer the obligation at the balance sheet date. The objective of the measurement approach under IAS 37 is therefore to provide *current* information about the amount, timing and uncertainty of the future cash flows resulting from a liability.
8. When the amount to settle or transfer needs to be estimated, IAS 37 articulates a measurement approach that requires an entity to consider directly three attributes of the liability:
 - the future cash flows
 - risks
 - time value of money.
9. Similarly, in the revenue recognition project, the issuance of a warranty gives rise to a stand-ready obligation.¹ However, the initial measurement of the obligation is by reference to the customer consideration and, in examples considered to date, the subsequent measurement is by reference to the revenue recognition. In other words, the subsequent measurement is a residual from recognising revenue in profit or loss.

¹ The new analysis of contingencies in IAS 37, such as warranties, was derived from analysis in the revenue recognition project.

10. The question is how do these two approaches interact? The issue becomes particularly apparent when circumstances change and the contract does not develop as initially expected.

Initial recognition and measurement of a warranty obligation

11. Consider the following example.

On 1 January 2006 a car dealer sells 10 cars to customers. Each customer also buys a warranty contract that provides two years' warranty coverage.²

The customers pay in full for the cars and warranties on 1 January and take delivery of their cars on that day.

The sales price of each car is 40,000 and the price of each additional two-year warranty is 3,200, making a total customer consideration of 43,200.

Customers cannot cancel the warranties, ie the dealer has no refund obligation.

When pricing the warranty contract, the dealer, based on past experience, estimated that four of the ten cars will require warranty work. The expected cost per car of this work is 6,000. The dealer also estimated that one of these four cars is expected to require warranty work in the first year, with the remainder in the second year.

12. To simplify the analysis, the time value of money is ignored throughout this paper.
13. On 1 January, the dealer has sold 10 cars and 10 extended warranties. The obligation to provide the cars has been extinguished. The dealer's outstanding performance obligation is therefore to provide warranty coverage for the two years starting 1 January 2006.
14. Under the customer-consideration model that the Boards have developed, the accounting on initial recognition would be:
- | | | |
|---------|---|---------|
| Dr cash | 432,000 | |
| | Cr obligation to provide warranty cover | 32,000 |
| | Cr revenue | 400,000 |
- To recognise revenue from the sale of ten cars and to recognise the obligation to provide warranty coverage on ten cars*

15. [Paragraph omitted from observer note]

SUBSEQUENT MEASUREMENT OF THE WARRANTY OBLIGATION

Application of April joint decision

16. In its discussion to date, the Board has considered the subsequent measurement of a performance obligation as a revenue recognition question. In other words, it has considered how the liability is (partly) extinguished by the entity's performance.

² To simplify the analysis, the example assumes that there is no standard manufacturer's warranty.

17. In April, the Board decided that an entity should recognise revenue when it has obtained an unconditional right to at least some consideration for its performance to date. In the examples illustrating this decision in July, the Board considered the entity's right to consideration assuming that the entity would fulfil its performance obligation.
18. [Paragraph omitted from observer note]
19. [Paragraph omitted from observer note]

What is performance in a warranty contract?

20. The customers paid the dealer to provide the service of warranty coverage—in other words, to stand ready to repair the car. The service that the dealer is providing is risk protection, because it is bearing the risk of a fault developing in the car. Accordingly, revenue from servicing the extended warranty is 'earned' as the dealer provides that risk protection and is released from risk.

APPROACH A: estimates locked in subject to a liability adequacy test

Measuring performance

21. Traditionally, revenue from the provision of a warranty contract might have been recognised evenly over the two years of the contract, reflecting that the entity was providing a service continuously throughout that period. So under that approach in the above example, the dealer might recognise revenue of 16,000 in 2006 and 16,000 in 2007.
22. However, given the nature of the entity's service—providing warranty coverage—revenue recognition based on the passage of time may not be a faithful representation of the entity's performance. For instance, in the above example, if we unbundle the contract into two one-year components (ie a one-year warranty contract for the year to 31 December 2006 and a one-year warranty contract for the year to 31 December 2007) we find that the expected costs in the first year component are 600 per warranty (ie $6000 \times 40\% \times 25\%$) and 1,800 in the second year component (ie $6000 \times 40\% \times 75\%$). In addition, if the dealer sold the two one-year warranty contracts separately, it would be expected to charge more for the second year's warranty cover than the first year's.
23. Hence, a revenue recognition profile that reflects the pattern of claims may be a better representation of the entity's performance than one based on the passage of time.
24. For instance, consider the above example at 31 December 2006 (ie one year into the warranty). Assume that the dealer has incurred one claim, as expected, that has cost 6,000, also as expected. Also assume that the dealer has no information to suggest that the amount of expected future claims will change.

25. In this case, the dealer might recognise revenue of 8,000 based on actual claims incurred to date as a proportion of total expected claims.
26. The journal entries for 2006 would therefore be:

Dr warranty obligation	8,000	
Cr revenue		8,000

To recognise revenue for servicing the warranties in 2006 and partial extinguishment of the warranty obligation

Dr warranty expense	6,000	
Cr cash		6,000

To recognise the warranty claim expense (ie cost of repairing one car)

27. This means that the income statement and movement on the warranty obligation would be as follow:

<i>Income statement</i>	
	2006
Revenue from servicing warranties	8,000
Warranty expenses	(6,000)
	<hr/>
Profit from servicing of warranties	2,000
	<hr/> <hr/>
<i>Analysis of movement on the warranty obligation</i>	
Warranty obligation b/f	32,000
Partial extinguishment	(8,000)
	<hr/>
Warranty obligation c/f	24,000
	<hr/> <hr/>

28. We could attempt to refine this pattern of revenue recognition. For instance, the pattern of revenue recognition could reflect both the pattern of claims and the expiry of risk. For example, assume that the dealer expects that no claims will be incurred in the first year of the warranty and expects four claims in 2007. Using the approach in paragraph 23 would result in no revenue being recognised in 2006. However, if the pattern of expected costs and risks were considered separately, some revenue might be recognised in 2006, reflecting that the dealer bore the risk of claims arising in 2006.
29. But this type of approach is limited in the type of changes in circumstances that it can capture and convey. It captures only changes in the *pattern* of claims and risk. It does not address changes in the *amount* of claims and risk. In other words, it cannot reflect changes in the initial estimates.

30. For instance, consider the following scenario.

Assume that during 2006 one claim arises as expected. However, on 31 December 2006, the dealer revises its estimate of the total number of claims that it expects to incur from four to five (ie it expects that four claims will arise in 2007).

31. If revenue is recognised based on the pattern of claims (as in paragraph 25), the income statement and movement on the warranty obligation would be as follows:

Income statement

	<i>2006</i>
Revenue	6,400
Warranty expenses	(6,000)
Profit from servicing of warranties	<u>400</u>

Analysis of movement on the warranty obligation

Warranty obligation b/f	32,000
Partial extinguishment	(6,400)
Warranty obligation c/f	<u>25,600</u>

Measurement under IAS 37

32. Now consider the measurement of the above scenario in paragraph 30 (ie in which the initial expectations about the number of claims has changed) under IAS 37.
33. If we were measuring the liability at 31 December 2006 in accordance with IAS 37, the objective would be to depict the amount required to settle or transfer the performance obligation (the obligation to provide one year's warranty cover on a one-year old car). That measurement would reflect current estimates based on current information. In particular, it would reflect that, at 31 December 2006, warranty work is expected to be required on four cars. It would, in theory, also reflect any changes in the risk profile of warranty obligation.
34. As noted in paragraph 8, an IAS 37 measurement incorporates three components:
- future cash flows
 - risks
 - time value of money (ignored in the analysis in this paper).

35. IAS 37 explains that the risk component is the amount that a third party would demand for bearing the uncertainty associated with the expected cash flows. In this case, the price that is demanded for bearing the risk that actual claims and their costs will be more or less than expected.
36. Assume that at 31 December 2006, the IAS 37 measure of the warranty obligations would be made up of the following components:
- | | | |
|-------------------------------|---------------|-------------------------------------|
| Estimate of future cash flows | 24,000 | (based on 4 expected claims × 6000) |
| Risk adjustment, say | 7,000 | |
| | <u>31,000</u> | |

Comparing the two measures

37. Thus, in this scenario, the warranty obligation measured at 31 December 2006 by reference to an allocation of the customer consideration is 25,600 (see paragraph 31) and measured directly by reference to revised estimates of future cash flows and risks is 31,000 (see paragraph 36).
38. [Paragraph omitted from observer note]
39. [Paragraph omitted from observer note]
40. Accordingly, one way in which the customer consideration approach could interface with IAS 37 is to specify that the performance obligation is measured at the higher of the allocated customer-consideration amount and the direct IAS 37 measure.
41. [Paragraph omitted from observer note]
42. So under Approach A, at 31 December 2006, the warranty obligation in this example would be measured at 31,000 (ie the measurement under IAS 37 as described in paragraph 36). This might be analysed as consisting of the customer-consideration amount of 25,600 and an additional liability of 5,400. The reason for viewing the 5,400 as an additional liability becomes clear when we consider revenue recognition in 2007.

Revenue recognition after remeasurement for change in circumstances

43. Assume that the four claims arise as predicted in 2007 and that the warranty obligation has been extinguished in full at 31 December 2007.³ If extinguishment of the revised warranty obligation of 31,000 results in revenue in 2007 of 31,000, then the total revenue for warranty servicing recognised in 2006 and 2007 would be 37,400 (ie 6,400 in 2006 plus 31,000 in 2007). This is 5,400 more than the customer-consideration for the warranties of 32,000.
44. Hence, the staff thinks that under this approach, the additional liability of 5,400 might be treated as a separate part of the warranty obligation. For example:

³ For simplicity, the example assumes that the obligation is extinguished on 31 December 2007. In reality, the entity is likely to have an obligation beyond 2007 for claims that arise in 2007 but are not reported until 2008.

	<i>2006</i>	<i>2007</i>	<i>Total</i>
Revenue	6,400	25,600	32,000
Gain on extinguishment of additional liability		5,400	5,400
Expense for recognition of additional liability	(5,400)		(5,400)
Warranty expenses	(6,000)	(24,000)	(30,000)
	<hr/>	<hr/>	<hr/>
(Loss)/profit from servicing of warranties	(5,000)	7,000	2,000
	<hr/>	<hr/>	<hr/>

Some observations on Approach A

- 45. [Paragraph omitted from observer note]
- 46. [Paragraph omitted from observer note]
- 47. [Paragraph omitted from observer note]

Approach B: current estimate of the cash flows

- 48. As noted above, the initial measurement of the performance obligation based on the customer consideration is a current measurement of the performance obligation. This is because the price that the dealer charges the customer would be expected to reflect current estimates of the expected costs to service the warranties (ie the expected claim profile) and the risks associated with the warranty. Put another way, the customer-consideration amount represents the amount that the dealer required to assume the warranty obligation in January 2006.
- 49. Hence, the customer-consideration amount implicitly reflects the building blocks of the IAS 37 measurement approach discussed in paragraph 8.
- 50. Consider again the example in paragraph 30, when one year of the warranty has expired and the expectation of claims under the warranty has changed. If the performance obligation at 31 December 2006 is to be measured consistently with how it was measured on 1 January 2006, it would need to reflect the amount that the dealer would require on 31 December 2006 to assume that performance obligation. (Note that we are not trying to find the amount that the dealer would charge for a two-year extended warranty on a new car at 31 December 2006. Rather, we are looking for the amount the dealer would rationally charge for a one-year warranty on a one-year old car, ie the price it would now charge for assuming the remaining amount of the performance obligation.) We would expect that amount to reflect the change in estimate about the number of claims.
- 51. The dealer may not sell such warranties, so the amount that it would require for assuming such an obligation may not be directly observable. Observable information is likely to be available only on inception of the warranty. Accordingly, the amount needs to be estimated. However, one of the reasons

for adopting the customer-consideration model was because of concerns about the reliability of direct measures. Therefore Board members might be reluctant, under a customer-consideration model, to conclude that sufficient information is available to measure subsequently the performance obligation directly, when such an approach was rejected for initial measurement.

52. So the question is: how can the initial measurement based on the customer consideration provide a consistent basis for subsequent measurement?
53. The staff thinks that the answer can be found in one of the approaches that the Board has considered in the insurance project (Implementation A). This is because that approach is a current value measurement but deals with the concern about directly measuring the performance obligation by calibrating the initial measurement to the customer-consideration. In other words, the initial measure of the performance obligations equals the observable customer-consideration amount (ie insurance premium). Subsequently, the measurement of the performance obligation reflects current estimates of future cash flows (and discount rates) but ‘locks in’ or ‘freezes’ the risk margin. This is because it uses the margin implied by the customer-consideration.⁴
54. Similarly, an IAS 37 measurement approach could be calibrated to the customer-consideration amount. In other words, one of the building blocks in the IAS 37 measurement approach could be derived from the customer-consideration amount and then locked in.
55. The staff suspects that the most difficult component of the warranty obligation to measure directly under IAS 37 is the margin. Therefore, this is the component with the most risk of measurement error. Accordingly, one approach would be to derive the margin from the initial customer consideration amount as follows:

Customer consideration amount per warranty	3,200	
Less: direct estimate of future cash flows	(2,400)	(ie 40% × 6000)
	800	
Implied margin	800	
56. The margin comprises two main components. First, it includes the margin that the dealer demands on any warranty work that it performs (ie the mark-up on its costs). Secondly, it includes a component for risk. That is, it includes the price that the dealer has charged the customer for assuming the uncertainty inherent in the warranty obligation. Specifically, for assuming the risk that more or fewer than four out of ten cars will require warranty work and that the costs of that work will be more or less than 6,000.
57. On subsequent measurement, the liability would consist of two components: a revised estimate of future cash flows plus an allocation of the implied margin.
58. A simple way of allocating the implied margin might be to mark-up the revised estimate of the future cash flows using the implied margin.

⁴ In fact as articulated in the insurance project, the methodology it is more sophisticated than this, because it freezes only the margin per unit of risk. Hence the subsequent measure reflects changes in the *amount* of risk in the performance obligation (ie it is a current estimate of the amount of risk) but prices the revised amount of risk using the margin derived from the premium.

59. For example, at 31 December 2006, the revised expectation of future cash flows for the 10 warranties is 24,000 (ie 4 claims at a cost of 6,000). If we use the same margin as at inception, the measurement of the warranty obligation would be 32,000 (ie $24,000 \times 3,200/2,400$).
60. This means that the measurement of the warranty obligation at 31 December 2006 reflects current estimates about the future cash flows that will be required to settle the obligation (24,000) and also a margin (8,000).
61. The Board will note that this methodology is not as sophisticated as that articulated in the insurance project because it has not explicitly tried to capture any changes in the amount of risk in the warranty obligation between 1 January 2006 and 31 December 2006. [Remainder of paragraph omitted from observer note]
62. [Paragraph omitted from observer note]

Liability adequacy test

63. The Board should note that under this approach, an initial liability adequacy test is required. This is because the approach assumes that the customer-consideration amount represents the amount that the dealer would rationally charge for assuming the warranty obligation. However, there may be instances where the customer consideration amount is not a representationally faithful measure of the obligation and, hence, a liability adequacy test is required.

Revenue recognition after remeasurement for a change in circumstances

64. The final issue to consider under this approach is the accounting for the remeasurement due to changes in estimates and its effect on subsequent revenue recognition.
65. Assume, for simplicity, that the dealer makes its revised assessment of the total number of claims on 31 December 2006.
66. Using the measurement approach in paragraph 61, before the change in circumstances, the warranty obligation would be measured as follows:
- | | |
|---|---------------------------|
| Estimated future cash flows (ie 3 claims \times 6000) | 18,000 |
| Margin | 6,000 |
| | <u>⁵24,000</u> |
67. Hence, revenue recognition in 2006 might be 8,000 (ie change in the warranty from obligation from amount initially recognised, 32,000 to 24,000).
68. Following the change in circumstances, the warranty obligation is remeasured from 24,000 to 32,000 (see paragraph 59). This gives rise to an expense of 8,000. This expense represents the loss to the dealer that arises because of the increase in the warranty obligation that it has to assume and for which it receives no consideration from its customers.

⁵ ie $18,000 \times 3,200/2,400$

69. Assuming there are no further changes in circumstances in 2007, the remaining issue is whether the revenue in 2007 is 32,000 (ie from extinguishment of the remeasured warranty obligation) or 24,000 (ie from extinguishment of the remaining portion of the customer-consideration amount). In other words, whether the income statement is as follows:

Case I			
	<i>2006</i>	<i>2007</i>	<i>Total</i>
Revenue	8,000	32,000	40,000
Expense for recognition of additional liability	(8,000)		(8,000)
Warranty expenses	(6,000)	(24,000)	(30,000)
	<hr/>	<hr/>	<hr/>
(Loss)/profit from servicing of warranties	(6,000)	8,000	2,000
	<hr/>	<hr/>	<hr/>

or as follows:

Case II			
	<i>2006</i>	<i>2007</i>	<i>Total</i>
Revenue	8,000	24,000	32,000
Gain on extinguishment of additional liability		8,000	8,000
Expense for recognition of additional liability	(8,000)		(8,000)
Warranty expenses	(6,000)	(24,000)	(30,000)
	<hr/>	<hr/>	<hr/>
(Loss)/profit from servicing of warranties	(6,000)	8,000	2,000
	<hr/>	<hr/>	<hr/>

70. [Paragraph omitted from observer note]

71. [Paragraph omitted from observer note]

Conclusion

72. The objective of this paper was to explore what a customer-consideration model might mean more generally for subsequent measurement of a performance obligation. Although the paper has explored some different approaches to revenue recognition, the staff is primarily interested in views about the measurement approach for the performance obligation.
73. [Paragraph omitted from observer note]

74. The staff recognises that both approaches would require more development. However, the staff view is that Approach B merits further consideration. This is because it offers the possibility of developing a consistent measurement approach for initial and subsequent measurement of a performance obligation. The staff thinks that this approach can reflect more current information about the future cash flows resulting from the performance obligation on a more timely basis than Approach A and would be more consistent with developments in the IAS 37 project.
75. Furthermore, having an explicit approach for subsequent measurement of performance obligations would provide a stronger foundation for determining revenue recognition. For instance, in the above warranty example, the revenue recognition question becomes a question of how the change in the warranty obligation should be disaggregated and reported in profit or loss.
76. Does the Board agree with exploring Approach B?