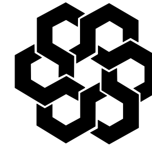

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These notes are based on the staff papers prepared for the IASB and FASB. Paragraph numbers correspond to paragraph numbers used in the joint IASB-FASB papers. However, because these notes are less detailed, some paragraph numbers are not used.

INFORMATION FOR OBSERVERS

IASB/FASB Meeting: **22 October 2007, Norwalk**

Project: **Revenue Recognition**

Subject: **Examples (Agenda paper 5E)**

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1. This paper illustrates the Measurement and Allocation models using the following three examples:
   - A television sold with an extended warranty
   - A house painting arrangement
   - The purchase of a boat.

TELEVISION WITH AN EXTENDED WARRANTY

2. Consider the following facts and assumptions:

> On December 31, 2007, 20 customers purchase the same model of television from an electronics retailing entity (Retailer) for CU2300 cash each. Retailer includes a one-year warranty with the sale of all its televisions, as required by consumer

protection laws in the country in which Retailer operates. However, each of the customers also chooses to buy an extended two-year warranty (i.e. to increase the warranty period to a total of three years).

Retailer normally sells the television (inclusive of the statutory one-year warranty) for CU2000 and the extended two-year warranty for CU400. As part of a year-end sale, however, it offers its customers the option of buying the television and extended warranty at the reduced price of CU2300.

When a warranty claim arises, Retailer processes the claims and repairs or replaces the television itself. Its prior experience with this type of television suggests a 20 percent likelihood that a claim will be filed during the three years of warranty coverage. Hence, Retailer expects four claims to arise from these 20 contracts, with one of these claims being filed in Year 1, another in Year 2, and two of them in Year 3. Actual claims filed during 2008, 2009, and 2010 were one, two, and two, respectively. The total cost of servicing and administering each claim was CU400. All claims were serviced in the same year they were filed and processed.

Retailer incurs various costs for activities to obtain the contracts, including a direct sales commission of CU30 per extended warranty. Retailer also incurs costs in administering the warranties; however, these are not directly attributable to the contracts and are excluded from the illustration. The carrying amount of each television in Retailer's inventory immediately prior to sale was CU1600.

To simplify the example, assume that the customers do not have the right to return the televisions and cannot cancel the warranties. The time value of money is ignored for simplicity. Retailer reports annually.

3. The staff chose this example for the following reasons:

- A warranty is a common feature of many contracts and accounting for warranties is often cited as an example of inconsistency in current revenue recognition guidance.

- A warranty contract is analogous to many other service contracts in that it features a continuous transfer of economic resources to the customer over multiple reporting periods. In other words, the contractual obligation is partly extinguished on a daily basis, which highlights the need for an entity to identify and measure remaining contractual obligations each reporting period.

- Warranties are often long-term contracts and the circumstances surrounding the warranties can change substantially over the contract term. It is important to explore how the two models address these changes in those circumstances.

Measurement Model

Period ended December 31, 2007

4. During the period ended December 31, 2007, Retailer performs various activities to obtain 20 contracts. Shortly after inception of each contract, the customer performs by paying the full amount of consideration (thus extinguishing Retailer's contractual rights). At the same time, Retailer satisfies part of its obligations by delivering the television to the customer. Retailer therefore has a contract liability because the remaining obligations to provide three years of warranty coverage exceed the rights that are fully extinguished upon prepayment by the customer.

5. The contract liability is measured at the amount a market participant would require to assume *all* of Retailer's remaining obligations in the contract. This measurement reflects any attributes of the particular contract. For example, a market participant would require a higher price if Retailer has a higher-than-industry average number of warranty claims because of its poor inventory-handling procedures. Suppose that insurance companies will legally assume Retailer's warranty obligations for CU120 per warranty, so that CU2400 is the current exit price for the portfolio of all 20 warranty contracts.

6. In this example, revenue can be determined as the excess of cash obtained (CU46000, i.e. CU2300 × 20) over the current exit price of Retailer's remaining contract liability (CU2400). This revenue arises from obtaining the contract (in which the rights obtained exceeded the obligations incurred) and from partly satisfying an obligation under the contract (by delivering the television). Given the shortness of time over which the customer performs and Retailer partially performs, however, it is not necessary to determine revenue for these events separately. Revenue can instead be recorded as follows:

	Dr	Cr
Dr Cash	46,000	
Cr Contract liability		2,400
Cr Revenue		43,600

7. Retailer de-recognizes the television inventory when the televisions are transferred to the customer (20 × CU1600 = CU 32000).

	Dr	Cr
Dr Cost of sales (expense)	32,000	
Cr Inventory		32,000

8. Retailer also recognizes the direct selling costs incurred of CU30 per television (20 × CU30 = CU600).

Dr Selling expenses	600	
Cr Cash		600

Period ended December 31, 2008

9. During the period ended December 31, 2008, a single television claim is serviced under warranty. Retailer incurs direct and indirect costs of servicing and administering the claim of CU400.

Dr Warranty servicing expenses	400	
Cr Cash		400

10. To determine revenue for the period, Retailer needs to measure the contract liability at its current exit price. This price is not directly observable because the current prices available from the insurance companies are for warranty coverage on new televisions, not on one-year-old televisions.

11. Because directly observable prices for the warranty obligations are not available, Retailer estimates the amount it would need to pay a market participant to assume those obligations. In this case, that price reflects:

    a. The number of claims expected to arise under the warranty contracts

    b. The direct and indirect costs of satisfying those claims

    c. The direct and indirect costs of administering the warranties (e.g. resolution of customer questions and processing of claims)

    d. The margin required on warranty work

    e. The margin required for bearing uncertainty about the number of claims that might arise and the cost of fulfilling those claims

    f. The likelihood of having to refund the consideration due to non-performance.

12. In concept, Retailer should make its estimates from the perspective of a market participant. In practice, however, Retailer could use its own estimates if it does not have reason to believe they would significantly differ from those of other market participants.

13. Retailer estimates a 15 percent chance of a claim arising over the remaining two years of warranty coverage and expects the total cost per claim to be CU400.[1] The total expected cost per contract is therefore CU60 (CU400 × 15%). The required margin per contract (for the warranty work and for bearing uncertainty), is CU35 per contract. The measurement of each warranty obligation is therefore estimated at CU95 (CU60 + CU35), so that the contract liability for all 20 contracts is measured at CU1900 (CU95 × 20).

14. The decrease in the contract liability from CU2400 at inception to CU1900 at December 31, 2008, is recognized as revenue.

	Dr	Cr
Dr Contract liability	500	
Cr Revenue		500

Period ended December 31, 2009

15. During the period ended December 31, 2009, two television claims are serviced under warranty. The total costs of servicing and administering the claims are CU800.

	Dr	Cr
Dr Warranty servicing expenses	800	
Cr Cash		800

16. At contract inception, Retailer expected to service 4 televisions during the life of these 20 warranty contracts. Retailer serviced three televisions during the first two years which, based on the original expectation, suggests that at the end of 2009 only one claim would be expected to arise in the third year (i.e. there would be a 5 percent probability of a claim arising). However, Retailer determines at December 31, 2009, that the probability of servicing a claim during the third year is 10 percent due to an unexpected increase in the number of claims filed for this particular television model.

17. Hence, in estimating the amount a market participant would now require to assume the remaining obligations, Retailer updates the probability of a claim arising. Since it does not expect the total cost per claim to change, the total cost per contract is CU40 (CU400 × 10%). The required margin per contract (for the warranty work and for bearing uncertainty) decreases to CU20 per contract because there is now only one year of coverage remaining.[2] The measurement of

[1] The cost estimate has been simplified in the example for illustrative purposes. In practice, this estimate would likely use a probability weighted average calculation to reflect the likelihood of different cash flow scenarios. The calculation would also estimate the cash flows associated with administering the warranties and the possibility of having to refund amounts to the customer.

[2] Note that this margin has not reduced proportionately. Although there has been no change in the *price* demanded for bearing risk since December 31, 2008, the *amount* of risk in the contracts does not reduce evenly over the life of the contracts. In other words, there is more uncertainty about the number of claims that might arise in the later periods of the contract than during the earlier periods.

each warranty obligation is therefore CU60 (CU40 + CU20), so that the total contract liability for all 20 contracts is CU1200 (CU60 × 20).

18. The contract liability has therefore decreased from CU1900 at December 31, 2008, to CU1200 at December 31, 2009. The full amount of this decrease (CU700) could be recognized as revenue. However, there are two reasons for the decrease in the contract liability.

19. First, Retailer provided warranty coverage and service repairs in the period (i.e. the obligation was partly extinguished in the period). Secondly, there has been a change in the expected amount of claims and that affects the price a market participant would demand for assuming the remaining obligations. Separately identifying these two effects may provide more useful information to users. For instance, suppose Retailer estimates that the contract liability would have been measured at CU800 if there had been no change in future anticipated repairs. One way in which the decrease in the contract liability could be presented is as follows:

	Dr	Cr
Dr Contract liability	700	
Dr Contract loss	400	
Cr Revenue		1100

20. The income statement would therefore display the loss from the change in circumstances during the period separately from the value of services provided to the customer during the period.

Period ended December 31, 2010

21. During the period ended December 31, 2010, two television claims are serviced under warranty. The total costs of servicing and administering the claims are CU800.

	Dr	Cr
Dr Warranty servicing expenses	800	
Cr Cash		800

22. Retailer measures its remaining contract liability at zero because it has fulfilled its obligations under the 20 contracts. The CU1200 decrease in the contract liability during the period is recognized as revenue.

	Dr	Cr
Dr Contract liability	1,200	
Cr Revenue		1,200

23. Summarizing the above journal entries results in the following:

	Inception	Year 1	Year 2	Year 3	Total
Revenue	43,600	500	1,100	1,200	46,400
Cost of sales (expenses)	(32,000)	-	-	-	(32,000)
Warranty servicing expenses	-	(400)	(800)	(800)	(2,000)
Contract loss	-	-	(400)	-	(400)
Selling expenses	(600)	-	-	-	(600)
Margin	11,000	100	(100)	400	11,400
Cash	45,400	45,000	44,200	43,400	
Inventory	(32,000)	(32,000)	(32,000)	(32,000)	
Contract liability	2,400	1,900	1,200	-	
Retained earnings	11,000	11,100	11,000	11,400	

24. As a result of the remeasurement in 2009 (Year 2), total revenue does not equal the contract consideration. This is because revenue reflects the value of the goods and services provided to the customer at the date they were provided, rather than at contract inception. Various options exist for presenting the changes in the contract liability arising from the changes in price and circumstances. Some of these would result in Retailer reporting revenue of CU46000 (i.e. the amount of the contract consideration). However, illustration of these options goes beyond the objective of this paper.

Allocation Model

Period ended December 31, 2007

25. Under the Allocation model, no contract asset or liability is recognized at inception because the measurement of the rights is allocated to the performance obligations. The amount of rights changes throughout the contract according to the contractual billing terms, but it is the satisfaction of the performance obligations that gives rise to revenue.

26. The television and both warranties represent potential performance obligations because they are goods and services capable of separate delivery or benefit to the customer. However, because the statutorily imposed warranty was not negotiated by Retailer and the customer, no revenue is associated with that service under the Allocation model. Instead, the statutorily imposed warranty is recognized in accordance with either FAS 5 or IAS 37.

27. The television and the extended warranty still represent potential performance obligations, and because they are satisfied at different times under the contract, they are both treated as separate performance obligations. The total customer consideration amount is allocated among the separate performance obligations based on observable prices at contract inception. If these prices are not

observable, they may be estimated. However, they are still limited in total to the amount of customer consideration.

28. The observable prices at the time of sale are CU2000 for the television and CU400 for the extended warranty. However, the customer received a CU100 discount for purchasing both during a year-end sale. This discount is allocated to each performance obligation according to their relative prices as follows:

	Base Price	Weighted Average Discount	Allocated Consideration
Television	2,000	(83)	1,917
Extended warranty coverage	400	(17)	383
Total	2,400	(100)	2,300

29. Once the performance obligations are identified and the total customer consideration is allocated to them, revenue is recognized as each obligation is satisfied. For the television, the obligation is satisfied upon delivery to the customer when the rights and benefits associated with the television transfer. For the extended warranty coverage, the performance obligation is an obligation to provide warranty coverage incrementally over time. Each of these increments of time may be quantified differently to better approximate the selling price of each increment based on its relative risk and cost.

Period ended December 31, 2007

30. During the year ended December 31, 2007, Retailer recognizes the cash consideration received from the customers (CU46000). This total amount is then allocated to each performance obligation in the contract. Based on this allocation, CU38340 (CU1917 per television × 20 televisions) is allocated to the obligation to deliver the television and CU7660 (20 × CU383) is allocated to the obligation to provide extended warranty coverage.

	Dr	Cr
Dr Cash	46,000	
Cr Contract liability – televisions		38,340
Cr Contract liability – warranties		7,660

31. At December 31, 2007, Retailer has fulfilled its obligation to deliver the television and recognizes revenue in the amount of consideration originally allocated to that obligation.

	Dr	Cr
Dr Contract liability – televisions	38,340	
Cr Revenue		38,340

32. In practice, the entries shown in paragraphs 30 and 31 are likely combined into a single entry. The entries are shown separately here to illustrate the process of identifying the relevant rights and obligations in an arrangement and allocating the customer consideration to the performance obligations.

33. Retailer also derecognizes the television inventory when the televisions are delivered to its customers.

Dr Cost of sales (expense)	32,000	
Cr Inventory		32,000

34. Upon delivery of the television, Retailer also recognizes its liability for the statutory one-year warranty obligation in accordance with either FAS 5 or IAS 37. Suppose this amount is CU400 (although it could vary depending on the estimates used and the GAAP followed).

Dr Warranty servicing expenses	400	
Cr Statutory warranties liability		400

35. Finally, Retailer recognizes the direct selling costs incurred of CU30 per warranty.

Dr Selling expenses	600	
Cr Cash		600

Period ended December 31, 2008

36. In the period ended December 31, 2008, Retailer does not recognize any revenue for the statutory warranty coverage because that obligation is not a revenue-generating performance obligation.

37. During the period ended December 31, 2008, Retailer incurs direct and indirect costs of CU400 for servicing and administering one television under the statutory warranty. These costs are offset against the statutory warranties liability (that was recognized on delivery of the television).

Dr Statutory warranties liability	400	
Cr Cash		400

Periods ended December 31, 2009 and 2010

38. In these periods, Retailer recognizes extended warranty services revenue of CU2553 and CU5107 based on the satisfaction of the performance obligation to provide warranty coverage during these years. Retailer also incurs actual warranty expenses each year of CU800. The revenue amounts represent the satisfaction of the performance obligation as determined at contract inception by the allocation of customer consideration to each time period. In other words, the consideration allocated to the extended warranty was CU7660, of which one third was recognized in Year 2 and two thirds in Year 3 (due to the original expectation of servicing one of the three additional warranty claims in Year 2 and the remaining two claims in Year 3).

39. Summarizing the above journal entries results in the following:

	Inception	Year 1	Year 2	Year 3	Total
Revenue	38,340	-	2,553	5,107	46,000
Cost of sales	(32,000)	-	-	-	(32,000)
Warranty costs	(400)	-	(800)	(800)	(2,000)
Selling expenses	(600)	-	-	-	(600)
Margin	5,340	-	1,753	4,307	11,400
Cash	45,400	45,000	44,200	43,400	
Inventory	(32,000)	(32,000)	(32,000)	(32,000)	
Statutory warranties liability	400	-	-	-	
Contract liability – Extended warranties	7,660	7,660	5,107	-	
Retained earnings	5,340	5,340	7,093	11,400	

Illustration summary

40. Comparing the table above in paragraph 39 to the one in paragraph 23 reveals key differences between the Measurement and Allocation models in this example. The Allocation model does not treat the statutory warranty obligation as a separate unit of account for revenue recognition purposes. Hence, no revenue is attributed to providing warranty coverage in the first year but is instead recognized in full at the same time revenue for the television is recognized. In contrast, the Measurement model treats the statutory warranty obligation as part of the contract liability and recognizes revenue as the obligation is satisfied. If the statutory warranty is measured under the Allocation model based on the expected costs to be incurred, then all of the revenue and margin from selling the television with the statutory warranty is recognized when the television is provided to the customer. In contrast, under the Measurement model, revenue and margin from providing the statutory warranty is reported over the period of that warranty.

41. At inception of the contracts, revenue (and margin) is significantly higher under the Measurement model. One reason for this difference is that the Measurement model recognizes revenue from obtaining the contracts as well as from delivery of the television whereas the Allocation model only recognizes revenue for delivery of the television.

42. Under the Allocation model, the measurement of remaining obligations at each reporting date is based on the original allocation of customer consideration to those obligations. That allocation is therefore unaffected by subsequent changes in circumstances such as an increase in the expected number of claims (as occurs in this example) unless the contract is deemed onerous. In contrast, under the Measurement model, if the change in circumstances results in a change in the current exit price (as occurs in this example), then the change in circumstances is reflected in the measurement of remaining obligations.

43. As a result of the change in circumstances, total revenue under the Measurement model does not equal the contract consideration. Revenue reflects the value of the goods and services provided to the customer at the date they were provided. In contrast, under the Allocation model, total revenue is equal to the contract consideration because the extended warranties obligation was not remeasured for the change in circumstances.

44. The CU100 discount given to each customer for buying the television and the extended warranty is treated differently under the two models. Under the Allocation model, the discount reduces the amount of revenue that otherwise would have been attributed to the obligations to provide the television and the extended warranty. In other words, had Retailer not offered the discount, it would have recognized CU1600 (CU83 × 20) more revenue on providing the television and CU340 (CU17 × 20) more revenue over the term of the extended warranty. Under the Measurement model, however, the discount reduces the revenue that is recognized at contract inception because it does not affect the exit price of the warranty liability.

HOUSE PAINTING

45. Consider the following facts and assumptions:

> PainterCo is a contractor that provides painting services for commercial and private residences. PainterCo contracts with a customer on June 25 to paint the customer's house for CU3000. The price is inclusive of all paint, which PainterCo obtains at a cost of CU800. PainterCo's cost for labor and other painting materials is CU1600. The customer is given the right to obtain its own paint, although the customer does not opt to do so in this example and instead purchases the paint and painting services jointly.
>
> All paint necessary to complete the contract is delivered to the customer's house on June 30. PainterCo renders the painting services continuously from July 1 through July 3. In accordance with the contract terms, the customer pays in full upon completion of the house painting.
>
> The time value of money is ignored for simplicity. PainterCo reports monthly.

46. The staff chose this example for the following reasons:

- Although it is a simple illustration, it is similar to construction type contracts in that the entity provides materials and utilizes those materials in the satisfaction of a subsequent obligation.
- This example highlights the relationship between satisfying obligations in a contract and the derecognition of assets that are transferred to a customer to satisfy those obligations.

Measurement Model

Contract inception

47. Upon contract inception, PainterCo incurs obligations to perform according to the terms of the contract and also obtains rights to consideration from the customer in exchange. These remaining contractual rights and obligations are recognized net as either a contract asset or a contract liability. This contract asset or liability is measured at its current exit price, which is the amount that PainterCo would expect to receive or pay to transfer all of its remaining rights and obligations in the contract to a market participant.

48. In this example, the measurement of the contract asset or liability reflects the following:

    a. The price a market participant (e.g. a subcontractor) would charge for providing the paint and the painting services (which includes its costs and its margin).

    b. The price a market participant would charge to manage the contract (e.g. for engaging the subcontractor and dealing with the customer) and to guarantee a subcontractor's performance.

    c. The expected consideration from the customer (adjusted for risk of non-payment).

49. Assume that at contract inception, PainterCo estimates that a subcontractor would provide the paint and the painting services for CU2800. In addition, PainterCo estimates that a market participant would charge CU100 for managing the contract and providing performance guarantees. Ignoring the risk of non-payment, a contract asset and revenue of CU100 is recognized (rights of CU3000 less obligations of CU2800 and CU100).

	Dr	Cr
Dr Contract asset	100	
Cr Revenue		100

50. The contract asset reflects the fact that PainterCo would expect to be compensated by a market participant for obtaining this contract. In other words, a market participant would be prepared to pay PainterCo CU100 for the remaining rights and obligations because it only needs to fulfill the contract and does not need to incur the costs of obtaining the contract.

51. In that regard, note that the revenue recognized at contract inception would not result in the recognition of a corresponding amount of *margin*. This is because PainterCo also incurs costs in obtaining the contract. However, because these costs are unlikely to be direct costs attributable to this particular contract, they are excluded from this illustration.

Period ended June 30

52. PainterCo acquires the paint for CU800 and records it as inventory.

Dr Inventory	800	
Cr Cash		800

53. At June 30, PainterCo measures the contract asset at the amount it would expect to receive on that date if it transferred all of its remaining contractual rights and obligations to a market participant.

54. In this example, it could be argued that PainterCo's remaining obligations at June 30 are to provide painting services only. This is because the paint has already been delivered to the customer's premises and a market participant would be able to use this paint to fulfill the contract. Although in this example the customer would be likely to be able to return the paint if the painting services were not provided, the risk of the paint being returned can be viewed as part of the obligations a market participant would be required to assume on June 30 if the contract was transferred. Furthermore, it could be argued that it is appropriate for PainterCo to derecognize the paint because it could not compel the customer to return the paint. In other words, it no longer controls the paint. (It could not, for instance, use the paint on other contracts).

55. Assume that PainterCo estimates that a subcontractor would provide the painting services for CU2000 (for simplicity, the price for bearing the risk of the paint being returned is ignored). In addition, PainterCo now estimates that a market participant would charge CU75 for managing the contract and for providing performance guarantees. Since there has been no change in the rights, the contract asset is now measured at CU925 (CU3000 – CU2000 – CU75). Therefore, as a result of satisfying obligations in the contract (that is, delivering the paint to customer and providing some contract management services), the contract asset has increased by CU825, which is recognized as revenue.

Dr Contract asset	825	
Cr Revenue		825

56. The revenue recognized reflects the value of the paint provided to the customer as well as the value of the services provided (i.e. obtaining and delivering the paint).

57. PainterCo also recognizes the cost of the paint when it is taken out of inventory and delivered to the customer's premises.

	Dr	Cr
Dr Cost of sales (expense)	800	
Cr Inventory		800

58. PainterCo also incurs other costs associated with delivering the paint; however, these are not separately identified in this illustration.

Period ended July 31

59. During the period ended July 31, PainterCo completes painting the house and receives payment in full for these services. At this point, PainterCo does not have any remaining rights or obligations. The following entry is therefore recorded to reflect the cash payment and to derecognize the contract asset. The difference is recognized as revenue.

	Dr	Cr
Dr Cash	3,000	
Cr Contract asset		925
Cr Revenue		2,075

60. PainterCo also recognizes the costs of providing the painting services:

	Dr	Cr
Dr Cost of sales (expense)	1,600	
Cr Cash		1,600

61. The painting services are provided during a single reporting period. If, however, the services straddled multiple reporting periods, then the revenue recognized in any reporting period would be determined by estimating the amount a market participant would require to complete the painting services.

62. Summarizing the above journal entries results in the following:

	Inception	June 30	July 31	Total
Revenue	100	825	2,075	3,000
Cost of sales	-	(800)	(1,600)	(2,400)
Margin	100	25	475	600
Cash	-	(800)	600	
Inventory	-	-	-	
Contract asset	100	925	-	
Retained earnings	100	125	600	

Allocation Model

63. The Allocation model recognizes revenue when a performance obligation is satisfied by transferring goods or services to a customer. The contract contains

two potential performance obligations—the promise to provide paint and to provide painting services. Both are capable of separate delivery to the customer. However, in this case it is uncertain whether the paint itself is delivered separately from the painting services. Although PainterCo physically delivers the paint to the customer, PainterCo retains control over the paint in that they will utilize the paint in painting the customer's walls. For these reasons, paint is not treated as a performance obligation separate from painting services.

64. Note that the Allocation model would not always preclude the recognition of revenue for the delivery of paint. If the contract (or operation of law) made it clear that the risks and rewards of paint ownership passed to the customer upon physical delivery of the paint, the Allocation model would treat the delivery of paint as a separate performance obligation, the satisfaction of which would give rise to revenue on its own.

Period ended June 30

65. At contract inception, PainterCo has the right to the customer's performance (measured at CU3000) and allocates this entire measurement to a single performance obligation. As discussed above, the paint is not considered a separate performance obligation, which is why the total consideration is assigned to the combined painting services obligation. PainterCo's net position in the contract is zero because the rights and obligations are equal.

66. PainterCo pays CU800 to obtain the paint that is recorded in inventory.

	Dr	Cr
Dr Inventory	800	
Cr Cash		800

Period ended July 31

67. During the reporting period ended July 31, PainterCo completes the house painting services and receives payment in full for those services. The payment of cash satisfies PainterCo's right to the customer's future performance and the completion of the painting service satisfies PainterCo's remaining performance obligation.

	Dr	Cr
Dr Cash	3,000	
Cr Revenue		3,000

68. PainterCo also recognizes the costs of providing the painting service, including the cost of the paint sold.

	Dr	Cr
Dr Cost of sales (expense)	2,400	
Cr Cash		1,600
Cr Inventory		800

69. Summarizing the above journal entries results in the following:

	Inception	June 30	July 31	Total
Revenue	-	-	3,000	3,000
Cost of sales	-	-	(2,400)	(2,400)
Margin	-	-	600	600
Cash	-	(800)	600	
Inventory	-	800	-	
Contract asset	-	-	-	
Retained earnings	-	-	600	

Illustration summary

70. In this example, revenue recognition under the Allocation model (see paragraph 69) differs from revenue under the Measurement model (paragraph 62) in two key regards. First, the Allocation model does not recognize any revenue at contract inception. The Measurement model, on the other hand, recognizes revenue at inception because the obligations are measured at an amount that is less than the rights to the customer's performance. Whether this generates any margin depends on the expenses that PainterCo incurred in obtaining the contract.

71. The second key difference concerns the different conclusions under each model regarding when an obligation has been satisfied. The Allocation model does not recognize any revenue for delivering the paint because it does not consider the paint to have transferred to the customer in satisfaction of an obligation. The Measurement model, however, derecognizes the paint at June 30 because it concludes that PainterCo no longer controls the paint inventory. Hence, the measurement of the contract after this point reflects the price to provide the painting services, but not the paint itself.

72. To be clear, the outcomes of the two models for this example differ both because of the different measurement approaches of the models and because of the different conclusions reached about when PainterCo should derecognize the paint.

BOAT

73. Consider the following facts and assumptions:

> On September 30, 2007, a customer contracts with a boat builder (Entity) for a boat to be delivered to the customer on April 1, 2008, for a fixed price of CU50000. Under the terms of the contract, the customer is not obligated to pay Entity until delivery of the boat, at which point the title to the boat transfers to the customer. If the customer chooses to cancel the contract prior to delivery, payment must be made to Entity for any work completed up to that time.

The boat is a standard design offered by Entity as well as other boat builders. However, Entity does not typically hold boats in inventory (i.e. all boats are built to fulfill specific customer orders).

Entity incurs direct contract acquisition costs of CU1000. Entity also incurs other costs associated with obtaining the customer and the contract, but these costs are ignored in this example because they are not tied directly to the contract. Entity's expected and actual costs to build the boat are CU36000, which consist of raw materials of CU20000 and labor costs of CU16000.

The raw materials are all purchased on October 1, 2007. The labor costs are incurred, and the raw materials are consumed, evenly over the period October 1 to March 31. That is, the boat is 50 percent complete at December 31.

The time value of money is ignored for simplicity and Entity reports quarterly.

74. The staff chose this example for the following reasons:

- This example is similar to construction type contracts in that the entity provides materials and utilizes those materials in the satisfaction of a subsequent obligation. This scenario highlights the difficulty in identifying (for accounting purposes) whether a contract is for the delivery of a good or for a service.

- This example also highlights the relationship between satisfying obligations in a contract and the derecognition of assets as they are transferred to a customer to satisfy those obligations. This example strains this relationship more so than in the paint example because the inventory is being built for the customer on Entity's site (as opposed to the painting example that featured delivery of paint and painting services on the customer's site).

Measurement Model

Period ended September 30, 2007

75. During the period ended September 30, 2007, Entity performs various activities that result in it obtaining a contract with a customer. As a result of the contract, Entity has an obligation to provide the customer with a boat and in exchange has received the promise of cash consideration of CU50000.

76. Assume that Entity estimates that a market participant (i.e. another boat builder) would charge CU45500 on September 30, 2007, to provide a boat on April 1, 2008. In addition, it estimates that the price for managing the contract and the performance guarantee is CU500. In practice, if Entity has no evidence to suggest that its estimates would be inconsistent with market participants, it could use its own inputs.

77. For simplicity, assume that a market participant would not make any adjustments to the consideration due from the customer for the risk of non-payment. Hence, on contract inception, Entity recognizes a contract asset measured at CU4000 (CU50000 rights less obligations of CU45500 and CU500). Entity therefore records the following entry.

	Dr	Cr
Dr Contract asset	4,000	
Cr Revenue		4,000

78. Entity also incurs direct contract acquisition expenses of CU1000.

	Dr	Cr
Dr Contract acquisition expense	1,000	
Cr Cash		1,000

Period ended December 31, 2007

79. On October 1, 2007, Entity purchases all of the materials required to build the boat.

	Dr	Cr
Dr Inventory (raw materials)	20,000	
Cr Cash		20,000

80. Entity begins constructing the boat during this period. In the process, Entity consumes half of the raw materials (CU10000) while incurring labor costs of CU8000. These amounts increase the work-in-process (WIP) boat inventory account.

	Dr	Cr
Dr Boat (WIP)	18,000	
Cr Cash		8,000
Cr Inventory (raw materials)		10,000

81. Entity also remeasures its contract asset at this reporting date by considering the remaining rights and obligations in the contract. Entity still has a right to the customer's promise of cash consideration of CU50000. However, assume that because of increases in the price of raw materials, Entity now estimates that another boat builder would currently require CU46000 rather than CU45500 to provide the boat. Entity's CU500 estimate for contract management and performance guarantees does not change.

82. Therefore, the contract asset is now measured at CU3500 (CU50000 rights less obligations of CU46000 and CU500). In other words, a market participant would now be willing to pay CU500 less than at September 30 for the remaining rights and obligations in the contract. The CU500 decrease in the contract asset is recognized as a contract loss.[3]

Dr Contract loss	500	
Cr Contract asset		500

Period ended March 31, 2008

83. Entity completes the construction of the boat, using the remainder of the raw materials (CU10000) and incurring labor costs of CU8000. These amounts increase the work-in-process (WIP) boat inventory account.

Dr Boat (WIP)	18,000	
Cr Cash		8,000
Cr Inventory (raw materials)		10,000

84. Assume that the contract asset is measured at the same amount as it was for the previous quarter.

Period ended June 30, 2008

85. Entity transfers the boat to the customer on April 1 and therefore derecognizes the boat from inventory.

Dr Cost of sales (expense)	36,000	
Cr Boat (WIP)		36,000

86. Upon delivery of the boat, Entity also satisfies its contractual obligation of CU46500, which increases the contract asset and therefore results in the recognition of revenue.

Dr Contract asset	46,500	
Cr Revenue		46,500

87. The net contract asset of CU50000 then comprises only the right to the customer's performance, which is settled upon payment from the customer.

Dr Cash	50,000	
Cr Contract asset		50,000

[3] An alternative approach might treat this as negative revenue but discussion of this approach is outside the objective of this paper.

88. Summarizing the above journal entries results in the following:

	Inception	Dec 31	Mar 31	Jun 30	Total
Revenue	4,000	-	-	46,500	50,500
Cost of sales (expense)	-	-	-	(36,000)	(36,000)
Direct contract acquisition costs	(1,000)	-	-	-	(1,000)
Contract loss	-	(500)	-	-	(500)
Margin	3,000	(500)	-	10,500	13,000
Cash	(1,000)	(29,000)	(37,000)	13,000	
Inventory (raw materials)	-	10,000	-	-	
Boat (WIP)	-	18,000	36,000	-	
Contract asset	4,000	3,500	3,500	-	
Retained earnings	3,000	2,500	2,500	13,000	

89. Revenue arises from obtaining the contract and then from satisfying the contractual obligations. Note that the revenue recognized from satisfying these obligations represents the value of the goods and services provided to the customer at the date they were provided, rather than the amount the customer was implicitly charged in the contract for those goods and services.

Extending the model

90. The boat example highlights the two issues noted in paragraphs 44 and 45 of the Measurement Model Summary memo.

- First, profit or loss for the period ended December 31, 2007, gives an incomplete depiction of how the increase in raw materials prices has affected the entity's assets and liabilities. This is because the contract loss reflects how that increase has affected the price a market participant would demand for fulfilling the obligation to provide a boat. However, profit or loss does not reflect how that increase may affect the price of the raw materials in inventory or how it might increase the amount the entity would demand from a market participant for the partially completed boat on that date. Said more simply, the contract loss depicts Entity as if it had not started building the boat.

- Secondly, because the boat is measured at accumulated cost, profit or loss does not reflect the increase in the value of Entity's assets from producing the boat until it is transferred to the customer.

91. Suppose that Entity could sell the partially completed boat to a market participant for CU20000 and CU46000 at December 31, 2007 and March 31, 2008 respectively. If the WIP was measured at these amounts, and the amount that exceeded the costs incurred was recognized in profit or loss as production income, then the above summary would be as follows:

	Inception	Dec 31	Mar 31	Jun 30	Total
Revenue	4,000	-	-	46,500	50,500
Production income		2,000	8,000		
Cost of sales (expense)	-	-	-	(46,000)	(46,000)
Direct contract acquisition expense	(1,000)	-	-	-	(1,000)
Contract loss	-	(500)	-	-	(500)
Margin	3,000	1,500	8,000	500	13,000
Cash	(1,000)	(29,000)	(37,000)	13,000	
Inventory (raw materials)	-	10,000	-	-	
Boat (WIP)	-	20,000	46,000	-	
Contract asset	4,000	3,500	3,500	-	
Retained earnings	3,000	4,500	12,500	13,000	

92. The point to note is that in comparison to the previous table, the margin attributable to building the boat is recognized as the boat is constructed. This more faithfully depicts the changes in a broader set of the entity's assets and liabilities *throughout* the contract.[4]

Allocation Model

93. Revenue arises when the contractual performance obligation is satisfied through a transfer of goods or services to the customer. In this case, a performance obligation arises for the construction and delivery of a boat. The contract must be reviewed to determine whether this particular contract is in the form of the delivery of a finished good, the boat, or is in the nature of a contract to provide boat constructing services. The boat (or the "good") would not transfer until it is completed and delivered; the services obligation would be satisfied continuously.

94. This contract states that Entity is entitled to payment if the customer cancels the contract prior to delivery of the boat. The Allocation model assumes that this guaranteed payment of compensation for the WIP indicates that the boat is essentially the customer's throughout the contract. Thus, entity is providing a service on the customer's boat. The performance obligation is satisfied as the benefit of the service transfers to the customer (i.e. as the rights to the WIP continuously transfer to the customer in satisfaction of a performance obligation).

Period ended September 30, 2007

95. At contract inception, Entity identifies and measures its rights and obligations under the contract. Entity has a right to the customer's future performance measured at CU50000. Entity also has an obligation for boat construction services that is measured at the same amount as the consideration promised from the customer. The amount of rights and obligations are equal, so no contract asset or liability is recognized at inception

[4] Note that the raw material inventory was not remeasured at December 31, 2007. However, discussion of this accounting mismatch is outside the objective of this paper.

96. Entity also incurs direct contract acquisition expenses of CU1000 that are expensed as incurred.

	Dr	Cr
Dr Contract acquisition expense	1,000	
Cr Cash		1,000

Period ended December 31, 2007

97. On October 1, 2007, Entity purchases all of the materials required to build the boat.

	Dr	Cr
Dr Inventory (raw materials)	20,000	
Cr Cash		20,000

98. Entity begins constructing the boat during this period. In the process, Entity consumes half of the raw materials (CU10000) while incurring labor costs of CU8000. These amounts increase the WIP boat inventory account

	Dr	Cr
Dr Boat (WIP)	18,000	
Cr Cash		8,000
Cr Inventory (raw materials)		10,000

99. Based on the work completed to date, Entity determines that half of the performance obligation has been satisfied by transferring ownership rights to the WIP to the customer. The total performance obligation was measured at CU50000 at inception and this amount is not subsequently remeasured. The satisfaction of half this obligation is measured in the amount of CU25000. This transfer thereby reduces the performance obligation for the same amount and generates revenue. Reducing the contract obligations while the rights remain unchanged gives rise to a contract asset.

	Dr	Cr
Dr Contract asset	25,000	
Cr Revenue		25,000

100. If the ownership rights to the boat have transferred to the customer, then the WIP boat balance must be derecognized.

	Dr	Cr
Dr Cost of sales (expense)	18,000	
Cr Boat (WIP)		18,000

Period ended March 31, 2008

101. Entity completes the construction of the boat, using the remainder of the raw materials (CU10000) and incurring labor costs of CU8000. These amounts increase the WIP boat inventory account.

Account	Dr	Cr
Dr Boat (WIP)	18,000	
Cr Cash		8,000
Cr Inventory (raw materials)		10,000

102. Based on the work completed to date, Entity also determines that the remaining CU25000 of the performance obligation has been satisfied as ownership rights to the boat have transferred to the customer. This transfer of rights reduces the performance obligation and generates revenue.

Account	Dr	Cr
Dr Contract asset	25,000	
Cr Revenue		25,000

103. As the ownership rights to the boat have transferred to the customer, the remaining boat balance is derecognized.

Account	Dr	Cr
Dr Cost of sales (expense)	18,000	
Cr Boat (WIP)		18,000

Period ended June 30, 2008

104. Upon delivery of the boat, no entry is required to derecognize the boat because this model assumes that the customer already had full ownership rights while the boat was constructed. The satisfaction of the performance obligation, while the rights have remained unchanged, has given rise to a contract asset equal to the measurement of the rights at inception (CU50000). The contract rights are satisfied on payment by the customer and the contract asset is derecognized.

Account	Dr	Cr
Dr Cash	50,000	
Cr Contract asset		50,000

105. Summarizing the above journal entries results in the following:

	Inception	Dec 31	Mar 31	Jun 30	Total
Revenue	-	25,000	25,000	-	50,000
Cost of sales (expense)	-	(18,000)	(18,000)	-	(36,000)
Direct contract acquisition expense	(1,000)	-	-	-	(1,000)
Contract loss	-	-	-	-	-
Margin	(1,000)	7,000	7,000	-	13,000
Cash	(1,000)	(29,000)	(37,000)	13,000	
Inventory (raw materials)	-	10,000	-	-	
Boat (WIP)	-	-	-	-	
Contract asset	-	25,000	50,000	-	
Retained earnings	(1,000)	6,000	13,000	13,000	

Illustration summary

106. In this example, total revenue under the Allocation model (see paragraph 105) is less than total revenue under the Measurement model (paragraph 88). This difference arises because total revenue under the Allocation model is equal to the customer consideration while total revenue under the Measurement model represents the value of the goods and services provided to the customer at the time they are provided.

107. Another difference concerns derecognition of the boat. The Allocation model derecognizes the boat as it is built because it concludes that the boat would be the customer's if they attempted to cancel the contract and then had to pay damages. Thus, the obligation to provide boat-building services on the customer's boat is satisfied as those services are rendered. The Measurement model, however, does not derecognize the boat inventory because Entity controls the boat and does not satisfy the related obligation until the boat is delivered. The measurement of the contract at current exit price therefore reflects the price a market participant would require to take on the obligation to construct and deliver a boat.

108. To be clear, just as in the painting example, the outcomes of the two models here differ both because of the different measurement approaches of the models and because of the different conclusions reached about when the boat actually becomes the customer's.