



30 Cannon Street, London EC4M 6XH, United Kingdom
Tel: +44 (0)20 7246 6410 Fax: +44 (0)20 7246 6411
Email: iasb@iasb.org Website: www.iasb.org

**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: **October 2008, London**

Project: **Insurance Contracts**

Subject: **Education session: Candidate measurement approaches – example
(Agenda Paper 3D)**

Purpose of this paper

1. Agenda paper 3B provides a list of candidates for selection as a measurement attribute for insurance contracts. This paper provides an example that shows how each candidate works, focussing on risk margins, day one differences and subsequent changes in estimates. The example also demonstrates the interaction between margins and subsequent changes in estimates in the balance sheet and the performance statement.
2. The candidates listed in agenda paper 3B are:
 - (a) 1- Current exit value as proposed by the discussion paper (DP) *Preliminary Views on Insurance Contracts*.
 - (b) 2- Current fulfilment value including a risk margin based on the cost of bearing risk.
 - (c) 3- Current fulfilment value including a risk margin based on the cost of bearing risk and, separate from the risk margin, an additional margin as the difference between the premium and the expected value of the cash flows plus the margin for bearing risk.

(d) 4- Current fulfilment value including a single margin calibrated at inception to the premium.

(a) 5- Unearned Premium for the pre-claims liability of short-duration contracts.

Example - introduction

3. The example illustrates a one-year non-life contract. To focus on how each candidate works for risk margins, day one differences and subsequent changes in estimates, the example is a basic example with a number of significant simplifications, for example:

(a) no differences between entity-specific cash flows and cash flows of market participants, which implies that the expected cash flows will be the same for both a transfer notion and a fulfilment notion.

(b) no 'other services' provided, so no need to consider whether a separate service margin is required.

(c) the risk coverage is spread evenly over the term of the contract.

(d) no own credit risk.

4. The presentation of the income statement is shown for both a premium versus claims presentation and a margin presentation¹. Subsequent changes in estimates (when applicable) are reported in the income statement. For this example, we selected one way of disaggregating the insurance liabilities and the performance statement.

5. We first discuss the candidates based on the building block approach (candidates 1-4) and, after that, look at the candidate based on unearned premium (candidate 5).

Example- candidates 1-4

6. In the following example we demonstrate the main features of risk margins, day one differences and subsequent changes in estimates for candidates 1-4.

¹ Agenda paper 3A briefly explains the premium versus claims presentation and the margin presentation.

At inception (base case)

On 31 December 2007, Insurance Company A enters into a one-year term non-life contract. The premium for the contract is CU1,000 and is received at inception. At contract inception, the expected present value of the future cash outflows associated with the contract is CU700 (only claims for this example). The claims are incurred and paid at 30 June 2008 and 31 December 2008. The relevant acquisition costs are CU50 and are paid at inception. The annual investment return on assets is 6%. The discount rate for the insurance liabilities is 5%.

The total margin implied by the transaction price is CU300 (premium of CU1,000 less expected present value of the future cash flows of CU 700); we refer to this margin as a 'gross day one difference'.

In addition to the expected cash flows, the building block approach requires the insurer to include a margin. In the base case, we explain how each of the candidates 1-4 would deal with the margin at inception.

We first look at the three candidates based on current fulfilment value.

Candidates 2 and 3 estimate the required margin using insurer A's cost of bearing risk. For this example, we assume that the cost of bearing risk for insurer A is CU 150. The cost of bearing risk is considered to be a part of the cost to fulfil the contract. This implies that, at inception, the total costs to fulfil the obligation are CU850 (CU700 + CU150). A difference remains between the premium less acquisition costs (CU950) and the costs to fulfil the obligation (CU850) of CU100. We refer to this as the 'net day one difference'. Candidate 2 would recognise such a difference as a day one profit in the income statement. Candidate 3 recognises the net day one difference as an additional margin within the insurance liabilities

Candidate 4 estimates the initial margin by calibrating the margin directly to the premium less relevant acquisition costs (CU950). Given an expected value of the cash flows of CU700, the margin at inception will be estimated at CU 250. Under this approach, no net day one difference will occur.

We now look at the candidate based on current exit value (candidate 1).

Candidate 1 estimates the margin required by a market participant. To take over the liabilities, a market participant would require an amount that is more than the expected value of the future cash flows, but would not require the portion of the premium related to acquisition costs. This implies that the margin a market participant requires would be somewhere between CU1 and CU250.

For this example, we assume that the margin required by market participants is CU210 [with choosing this margin, we do not intend to imply that a market participant's margin would be different from or equal to any other basis for estimating the margin].

7. The illustration in the previous paragraph shows that all the candidates 1-4 would release some revenue on day one related to the recovery of acquisition costs.
8. For candidates 1 through 3, it is possible to have a net day one difference. Candidates 1 and 2 would recognise such a difference as a day one profit in the income statement. Candidate 3 recognises the net day one difference as an additional margin within the

insurance liabilities; for this example, the additional margin is released to the income statement in line with risk. For candidate 4, a ‘net day one difference’ is not possible.

9. The next illustration shows how the presentation of the insurance liabilities and the income statement at inception would look for the base case as discussed in paragraph 6.

A) Presentation in the income statement at inception				
	Candidate 1	Candidate 2	Candidate 3	Candidate 4
<i>Premiums & Claims approach</i>				
Premiums earned	90	150	50	50
Acquisition costs	(50)	(50)	(50)	(50)
Margin at inception	<u>40</u>	<u>100</u>	<u>-</u>	<u>-</u>
<i>Margin approach</i>				
Release of margins	90	150	50	50
Acquisition costs	(50)	(50)	(50)	(50)
Margin at inception	<u>40</u>	<u>100</u>	<u>-</u>	<u>-</u>
B) Carrying amount of insurance liabilities at inception				
Expected cash flows	700	700	700	700
Risk margin	210	150	150	250
Additional margin	-	-	100	-
Insurance liabilities	<u>910</u>	<u>850</u>	<u>950</u>	<u>950</u>

Subsequent changes in expected cash flows (scenario 1)

10. In the next illustration, scenario 1, we show how the various candidates would react to subsequent changes in estimates of the cash flow.

In the base case, the expected present value of the remaining cash flows at 30 June 2008 would be CU359 (CU700 evenly spread over the year, adjusted for time value of money for at 30 June 2008). Suppose that on 30 June 2008 the expected value of the future of the remaining cash flows increased from CU359 to CU409. All the candidates would recognize the changes in estimates of CU50 in the income statement.

A) Presentation in the income statement at 30 June 2008

	Candidate 1	Candidate 2	Candidate 3	Candidate 4
<i>Premiums & Claims approach</i>				
Premiums earned	461	430	481	481
Claims	(359)	(359)	(359)	(359)
Changes in estimates	(50)	(50)	(50)	(50)
Investment income	29	29	29	29
Interest on insurance liabilities	(17)	(16)	(18)	(18)
Margin	<u>64</u>	<u>34</u>	<u>83</u>	<u>83</u>

Margin approach

Release of margins	102	71	122	122
Changes in estimates	(50)	(50)	(50)	(50)
Investment income	29	29	29	29
Interest on insurance liabilities	(17)	(16)	(18)	(18)
Margin	<u>64</u>	<u>34</u>	<u>83</u>	<u>83</u>

B) Carrying amount of insurance liabilities at 30 June 2008

Expected cash flows	409	409	409	409
Risk margin	108	77	77	128
Additional margin	-	-	51	-
Insurance liabilities	<u>517</u>	<u>486</u>	<u>537</u>	<u>537</u>

11. On the illustration in paragraph 10:

(a) The earned premium is based on:

- (i) the portion of the original cash consideration (premium) received at 31 December 2007 that relates to the risk coverage for the first half of 2008 (for candidate 1: CU455), plus

- (ii) interest accrued to this portion of the premium during the first half of 2008 (for candidate 1: CU6).
 - (b) The claims paid on 30 June 2008 reflect the nominal amounts of these cash outflows.
 - (c) The insurance liability only includes a pre-claims obligation since all the claims for the first half of 2008 are paid out by 30 June 2008. The expected cash flows include the increase in present value of the expected claims (CU50). This increase is reported in the income statement on the line 'Changes in estimates'.
 - (d) Interest is accrued on the insurance liabilities relates to
 - (i) the premium earned during the first half of 2008.
 - (ii) the carrying amount of the insurance liabilities at 30 June 2008.
 - (e) Since risk coverage is spread evenly over the term of the contract, half of the estimated margin at inception is reported to income.
12. The illustration in paragraph 11 shows that, arguably, the margin presentation provides a more convenient presentation in the case of a measurement approach based on building blocks. In the case of such a presentation, information on actual cash flows could be obtained through the cash flow statement or disclosures.
13. However, some might favour a presentation that shows premiums and claims on the face of the balance sheet, including adjustments for time value of money.
14. In the next illustration we show how the performance statement would look for the remaining period of the contract.

For the second half of 2008, all estimates are realised as expected at 30 June 2008.

A) Presentation in the income statement for the period June 30 2008 to 31 December 2008

	Candidate 1	Candidate 2	Candidate 3	Candidate 4
<i>Premiums & Claims approach</i>				
Premiums earned	472	441	493	493
Other changes in insurance liabilities	51	51	51	51
Claims	(419)	(419)	(419)	(419)
Investment income	18	18	18	18
Interest on insurance liabilities	(6)	(6)	(7)	(7)
Margin	<u>116</u>	<u>85</u>	<u>136</u>	<u>136</u>
<i>Margin approach</i>				
Release of margins	104	73	125	125
Investment income	18	18	18	18
Interest on insurance liabilities	(6)	(6)	(7)	(7)
Margin	<u>116</u>	<u>85</u>	<u>136</u>	<u>136</u>

15. On the illustration in paragraph 14:

- (a) All the claims are paid out at 31 December 2008. Therefore, all the insurance obligations are satisfied at that date and no insurance liability will be recorded in the balance sheet.
- (b) As explained in paragraph 11, the earned premium shows the allocated part of the originally paid premium adjusted for time value of money.
- (c) The line 'Other changes in insurance liabilities' shows the release of the part of the insurance liability that relates to the changes in estimates of cash flows.

Subsequent changes in price of risk (scenario 2)

16. In the next illustration, scenario 2, we show how the various candidates would react to subsequent changes in the estimated price of risk.

Suppose that on 30 June 2008 the price of risk increases. For candidates 1 through 3, the cost of bearing the risk per unit has increased, resulting in an increase of the margin at that date of CU 25; this means that the risk margin would increase from CU108 to CU133 for candidate 1 and from CU77 to CU102 for candidates 2 and 3 [with this example we do not intend to imply that the changes in the cost of bearing risk are similar or different for all of the candidates]. The change in the price of risk will be recognised in the income statement. At 30 June 2008, the expected present value of the remaining cash flows is the same as in the base case (CU359). Candidate 4 does not consider subsequent changes in the price of risk

A) Presentation in the income statement at 30 June 2008

	Candidate 1	Candidate 2	Candidate 3	Candidate 4
<i>Premiums & Claims approach</i>				
Premiums earned	461	430	481	481
Claims	(359)	(359)	(359)	(359)
Changes in estimates	(25)	(25)	(25)	-
Investment income	29	29	29	29
Interest on insurance liability	(17)	(16)	(18)	(18)
Margin	<u>89</u>	<u>59</u>	<u>108</u>	<u>133</u>
<i>Margin approach</i>				
Release of margins	102	71	122	122
Changes in estimates	(25)	(25)	(25)	-
Investment income	29	29	29	29
Interest on insurance liability	(17)	(16)	(18)	(18)
Margin	<u>89</u>	<u>59</u>	<u>108</u>	<u>133</u>

B) Carrying amount of insurance liabilities at 30 June 2008

Expected cash flows	359	359	359	359
Risk margin	133	102	102	128
Additional margin	-	-	51	-
Insurance liability	<u>492</u>	<u>461</u>	<u>512</u>	<u>487</u>

17. On the illustration in paragraph 16:

- (a) The comments listed in paragraph 11 are equally applicable, with the exception that
- (i) in this example, the expected cash flows have not changed from the estimates at inception.
 - (ii) for candidates 1-3, the risk margin includes the increase in the estimated price of risk (CU25); this increase is reported in the income statement on the line 'Changes in estimates'.

18. In the next illustration we show how the performance statement would look for the remaining period of the contract.

For the second half of 2008, all estimates are realised as expected at 30 June 2008.				
A) Presentation in the income statement for the period June 30 2008 to 31 December 2008				
	Candidate 1	Candidate 2	Candidate 3	Candidate 4
<i>Premiums & Claims approach</i>				
Premiums earned	472	441	493	493
Other changes in insurance liabilities	25	25	25	-
Claims	(368)	(368)	(368)	(368)
Investment income	18	18	18	18
Interest on insurance liability	(6)	(6)	(6)	(6)
Margin	<u>141</u>	<u>110</u>	<u>162</u>	<u>137</u>
<i>Margin approach</i>				
Release of margins	129	98	150	125
Investment income	18	18	18	18
Interest on insurance liability	(6)	(6)	(6)	(6)
Margin	<u>141</u>	<u>110</u>	<u>162</u>	<u>137</u>

19. On the illustration in paragraph 18:

- (a) The comments listed in paragraph 15 are equally applicable, with the exception that:
- (i) in this example, the expected cash flows have not changed from the estimates at inception.
 - (ii) the line 'Other changes in insurance liabilities' shows the release of the part of the insurance liability that relates to the changes in the price of risk.

Example- unearned premium approach

20. This section shows the unearned premium approach (candidate 5), both at contract inception and subsequent measurement. The unearned premium approach does not have an explicit margin. Therefore, only the premium versus claims presentation is applicable for presentation in the income statement.

The example is similar to the base case in paragraph 6. At inception, the pre-claims liability is measured at the unearned premium less relevant acquisition costs.

A) Presentation in the income statement at inception

Premiums earned	50
Acquisition costs	(50)
	—
Margin	-

B) Carrying amount of insurance liabilities at inception

Unearned premium	950
	—
Insurance liability	950

21. As explained in paper 3B, for subsequent measurement the unearned premium liability is remeasured only when onerous. The next illustration shows how the unearned premium works for subsequent measurement. For the purpose of this example, we only consider scenario 1.

Suppose that on 30 June 2008 the expected present value of the remaining cash flows increased from CU359 to CU409 (scenario 1). However, estimates are locked-in for the unearned premium approach; the insurance liability will not be remeasured unless onerous.

At 30 June 2008, the contract is not deemed to be onerous as the contract still includes a positive margin.

A) Presentation in the income statement at 30 June 2008

Premiums earned	475
Claims	(359)
Investment income	29
Margin	<u>145</u>

B) Carrying amount of insurance liabilities at 30 June 2008

Unearned premium	475
Insurance liability	<u>475</u>

22. On the illustration in paragraph 21:

- (a) The insurance liability only includes a pre-claims obligation since all the claims for the first half of 2008 are paid out by 30 June 2008.
- (b) The claims paid at 30 June 2008 are nominal amounts of the cash outflows.

23. In the next illustration we show how the performance statement would look for the remaining period of the contract.

For the second half of 2008, all estimates are realised as expected at 30 June 2008.

A) Presentation in the income statement for the period June 30 2008 to 31 December 2008

Premiums earned	475
Claims	(419)
Investment income	18
Margin	<u>74</u>

24. In the illustration in paragraph 23, all the claims are paid out at 31 December 2008.

Therefore, all the insurance obligations are satisfied at that date and no insurance liability will be recorded in the balance sheet.