Purpose of this paper

1. In agenda paper 6G (FASB Memorandum 41G), we discussed the release of the residual margin. We recommended that the insurer should release the residual margin in a systematic way that best reflects the exposure from providing insurance coverage. For this purpose, the insurer should use the expected value of claims and benefits to be incurred over the coverage period. This paper includes examples that illustrate how the residual margin would be released on the basis of staff's proposals in agenda paper 6F (FASB Memorandum 41F).

Examples

2. The examples are highly simplified examples designed to highlight the release of the residual margin. To illustrate how this release of the residual margin could compare to the release of the risk adjustment, the examples also include a separate risk adjustment. Agenda paper 6D (FASB Memorandum 41D) deals with the risk adjustment.

3. The first example we included is a non-life contract with a one-year coverage period and a two-year claims settlement period after the coverage period ends. The second example shows a three-year term life contract. The third example is a three-year traditional endowment contract.

4. The boards agreed during their February 18 meeting to further develop an expanded margin presentation. All the examples use this presentation model.

Example 1

5. The fact pattern for this one-year non-life contract is as follows:

   (a) One thousand contracts with a premium of CU1,000 paid 1 January and covering insured events between 1 January and 31 December of year 1.

   (b) Expected claims (including claims handling costs) of CU900. Claims are incurred evenly over the coverage period (year 1). CU300 is paid at the end of year 1, CU300 is paid at the end of year 2 and CU300 is paid at the end of year 3.

   (c) No other expenses.

   (d) Expected investment return is 8 percent and the risk-free rate used to discount the liability cash flows is 5 percent.

   (e) At inception, the insurer determines the expected present value of the cash outflows as 817 and the risk adjustment as 82 (for the purpose of this example, the risk adjustment is a percentage (10) of expected claims). Therefore, the residual margin at inception is CU101.

      (i) The amount of risk and the risk adjustment decline throughout the claims settlement period as claims are paid.

      (ii) The residual margin is released over the coverage period as a pro rata allocation based on the incurred claims, adjusted for the time value of money (ie interest is accrued). Because all claims are incurred in year 1, the residual margin is fully released in that year. This is consistent with the staff proposal in Agenda paper 41F (FASB Memorandum 41F).

   (f) No differences between actual outcomes and previous estimates.

   (g) No changes in circumstances.

6. We included two variations for presenting the release of the risk adjustment. Example 1A recognises the entire premium (plus accreted interest) as revenue in year 1, the coverage period. Any release of the risk adjustment after year 1 is reported as a release from risk associated with the outstanding claims. Example

1B reports the as revenue in year 1 the premium (plus accreted interest) less any margins that are expected to be released in future periods. Therefore example 1B also shows revenue in year 2 and 3 from the risk adjustment that is released in those years. [We will discuss at a future meeting which of those two variations should be used.]

Example 1A

Expanded Margin presentation
All revenue recognised over the coverage period

	Inception	*Year 1*	*Year 2*	*Year 3*	*Total*
Premium revenue		1.025	0	0	1.025
Policyholder claims		(837)	0	0	(837)
Increase/decrease from risk- claims liabilities		(54)	30	30	6
Insurance margin		134	30	30	194
Actual versus expected		0	0	0	0
Remeasurements	0	0	0	0	0
Acquisition costs	0				
Net gain at inception	0	0	0	0	0
Investment income		80	62	43	186
Interest on insurance liability		(47)	(31)	(16)	(94)
Net interest and investment	0	33	32	28	92
Profit	0	167	62	58	286

Balance sheet

	Inception	*Year 1*	*Year 2*	*Year 3*
Cash	1.000	780	542	286
Insurance liabilities	(1.000)	(614)	(314)	(0)
Equity	0	166	228	286

Margin release and revenue

Release of risk adjustment	-	30	30	30
Release of residual of margin	-	104	-	-
Total release of margin	-	134	30	30
Claims and benefits (expected)	-	837		
Increase/decrease from risk- claims liabilities		54		
Revenue	-	1.025		

7. Example 1A shows that the insurer still recognises a margin in year 2 and 3 through the release of the risk adjustment associated with the outstanding claims liability for those years. At the end of year 1, the whole residual margin has been released.

8. The entire premium (plus accreted interest) is recognised in year 1. The rationale for this presentation is that the insurer performs under the contract by providing coverage. [Agenda paper 41F (FASB Memorandum 41F) explores this notion in more detail, albeit for application to the residual margin]. Claims handling is not considered to be a separate service to the customer, but simply a settlement of claims that arose from a service under the contract (the provision of coverage). Therefore, any margin release from the decline of risk during the claims handling stage (which usually overlaps with the coverage period) is not reported as revenue.

9. In example 1B, all revenue is released during the coverage period. That implies that any amount needed for the risk adjustment associated with the claims liabilities has to be accrued when claims are incurred. This accrual is included on the line ‘increase/decrease form risk-claims liabilities’. The charge to the income statement of CU54 in year one can be broken down into two numbers: (i) an increase (loss) in risk adjustment of CU84 for the risk in the claims

incurred during the coverage period and (ii) a release (profit) of CU 30 for the decline of the remaining amount or risk in the claims liabilities. The decrease for year 2 and 3, both CU30 reflect the release of the risk adjustment during those years.

Example 1B

Expanded Margin presentation
Revenue includes claims settlement period

	Inception	*Year 1*	*Year 2*	*Year 3*	*Total*
Premium revenue		971	30	30	1.031
Policyholder claims		(837)	0	0	(837)
Insurance margin		134	30	30	194
Actual versus expected		0	0	0	0
Remeasurements	0	0	0	0	0
Acquisition costs	0				
Net gain at inception	0	0	0	0	0
Investment income		80	62	43	186
Interest on insurance liability		(47)	(31)	(16)	(94)
Net interest and investment	0	33	32	28	92
Profit	0	167	62	58	286

Balance sheet

	Inception	*Year 1*	*Year 2*	*Year 3*
Cash	1.000	780	542	286
Insurance liabilities	(1.000)	(614)	(314)	(0)
Equity	0	166	228	286

Margin release and revenue

Release of risk adjustment	-	30	30	30	90
Residual of margin	-	104	-	-	104
Total release of margin	-	134	30	30	194
Claims and benefits (expected)	-	837	-	-	837
Revenue	-	971	30	30	1.031

10. Like in example 1A, the insurer recognises a margin in year 2 and 3 through release of the risk adjustment associated with the outstanding claims liability for those years.

11. But in example 1B, the release of the margin in year 2 and 3 is recognised as revenue. The rationale for this presentation is that the insurer has not fully performed before it is released from the risk in the (remaining) cash flows; this may be well after the coverage period. Therefore, any margin release from the decline of risk during the claims handling stage is reported as revenue. Because revenue accretes interest over a longer period, the total reported revenue is slightly higher in example 1B (CU1,031) than under example 1A (CU1,025).

12. The amount of CU837 for policyholder claims and benefits in year 1 is the expense for incurred claims, based on the expected present value of the payments from those claims at the time they are incurred.

Example 2

13. The fact pattern for this three-year term-life contract is as follows:

    (a) One thousand policies with an annual premium of CU1,000, paid each 1 January and covering insured events between 1 January and 31 December (in total CU3,000 over the life of the contract, paid at the beginning of each year).

    (b) Expected death benefits (including claims handling costs): CU700 for year 1, CU900 for year 2 and CU1100 for year 3. All death benefits are incurred on and paid at 31 December of each year.

    (c) No other expenses.

    (d) Expected investment return is 8 percent and the risk-free rate used to discount the liability cash flows is 5 percent.

    (e) At inception, the insurer estimates the expected present value of the premiums (including the first premium payable at inception) at CU2,859. It estimates the cash outflows as CU2,433 and the risk adjustment as CU243 (for the purpose of this example, the risk adjustment is a percentage (10) of expected death benefits). Therefore, the residual margin at inception is CU183.

(i) The amount of risk and the risk adjustment decline throughout the coverage period as claims are incurred and paid.

(ii) The residual margin is released over the coverage period as a pro rata allocation based on the incurred claims, adjusted for the time value of money. This is consistent with the staff proposal in Agenda paper 41F (FASB Memorandum 41F).

(f) No differences between actual outcomes and previous estimates.

14. We included a base case in example 2A, with no changes in circumstances.

15. Example 2B shows a scenario where at the end of year 1 the expected claims for year 2 are increased by CU50 to CU950 and for year 3 by CU 50 to CU1,150, due to an increase in expected mortality. At the end of year 1, the insurer also increases its remaining risk adjustment by CU9 to CU219 because of an increase in the estimated quantity of risk associated with the remaining cash flows

Example 2A

Expanded Margin presentation
Base case

	Inception	*Year 1*	*Year 2*	*Year 3*	*Total*
Premium revenue		798	1,067	1,310	3,175
Polcyholder benefits and claims		(700)	(900)	(1100)	(2700)
Insurance margin		98	167	210	475
Actual versus expected		0	0	0	0
Remeasurements	0	0	0	0	0
Acquisition costs	0				
Net gain at inception	0	0	0	0	0
Investment income		80	110	127	318
Interest on insurance liability		(50)	(63)	(62)	(175)
Net interest and investment	0	30	48	65	143
Profit	0	128	215	275	618

Balance sheet

	Inception	*Year 1*	*Year 2*	*Year 3*
Cash	1,000	380	590	618
Insurance liabilities	(1,000)	(252)	(248)	0
Equity	0	128	343	618

Margin release and revenue

	Inception	*Year 1*	*Year 2*	*Year 3*
Release of risk margin	-	45	99	127
Release of residual margin	-	53	68	83
Total margin release	-	98	167	210
Claims and benefits (expected)	-	700	900	1,100
Revenue	-	798	1,067	1,310

16. The amounts reported as revenue are determined as:

    (a) the margin released for the period, plus

    (b) the expected claims, ie their expected value at the end of the previous reporting period. [This is one way to derive the revenue line under an expanded margin approach. When further developing the expanded margin approach, staff will investigate what the approach is for determining the revenue line].

17. Another way to determine revenue is to allocate the expected present value of premiums at inception of CU2,859 pro rata over the life of the contract based on the death benefit (plus interest accreted). This outcome results, for this fact pattern, in a similar revenue line.

Example 2B

Expanded Margin presentation
Scenario with increased death benefits

	Inception	*Year 1*	*Year 2*	*Year 3*	*Total*
Premium revenue		798	1,066	1,310	3,175
Polcyholder benefits and claims		(700)	(950)	(1150)	(2800)
Release of benefits and expenses accrued in previous periods		0	55	55	110
Insurance margin		98	171	215	485
Actual versus expected		0	0	0	0
Remeasurements	0	(102)	0	0	(102)
Acquisition costs	0				
Net gain at inception	0	0	0	0	0
Investment income		80	110	123	314
Interest on insurance liability		(50)	(68)	(65)	(183)
Net interest and investment	0	30	43	58	131
Profit	0	26	214	274	514

Balance sheet

	Inception	*Year 1*	*Year 2*	*Year 3*
Cash	1,000	380	540	514
Insurance liabilities	(1,000)	(354)	(300)	(0)
Equity	0	26	240	514

Margin release and revenue

	Inception	*Year 1*	*Year 2*	*Year 3*
Release of risk margin	0	45	103	133
Release of residual margin	0	53	68	82
Total margin release	0	98	171	215
Claims and benefits (expected)	0	700	950	1,150
Release of benefits and expenses accrued in previous periods	0	0	(55)	(55)
Revenue	0	798	1,066	1,310

18. The revenue numbers reported for each year are the same as in example 2B. The amounts shown as revenue are determined as:

(a) the margin released for the period, plus

(b) the expected claims (ie their expected value at the end of the previous reporting period), less

(c) the release of benefits and expenses accrued in previous contracts because this does not reflect consideration provided by policyholders but a reversal of the remeasurement made at the end of year 1.

19. The income statement for year 1 shows changes in estimates (remeasurements) of in total CU102 from the expected increases in expected claims (CU93) and risk adjustment (CU9) at the end of year 1. Both year 2 and year 3 include a release of those benefits accrued in year 1, CU55 for each year. This reversal is made then for two reasons:

(a) to avoid double counting of CU93 of policyholder benefits already accrued in year1, but included in the liability measurement (and reported as an expense) in year 2 and year 3.

(b) to report the release of an additional risk adjustment of CU9 recognised in year 1 but for which no customer consideration was received.

20. Another way to determine revenue is to allocate the expected present value of premiums at inception of CU2,859 pro rata over the life of the contract based on the death benefit (plus interest accreted). This outcome results, for this fact pattern, in a similar revenue line.

Example 3

21. This example is a three-year traditional endowment policy with the following fact pattern:

(a) One thousand policies with a premium of CU5,000, paid each 1 January and covering insured events between 1 January and 31 December (in total CU15,000 over the life of the contract, paid at the beginning of each year).

(b) Expected death benefits (including claims handling costs): CU700 for year 1, CU900 for year 2 and CU1,100 for year 3. All death benefits are incurred on and paid at 31 December of each year.

(c) Expected maturity benefits: CU13,000 to be paid on 31 December of year 3.

(d) No other expenses.

(e) Expected investment return is 8 percent and the risk-free rate used to discount the liability cash flows is 5 percent.

(f) At inception, the insurer determines the expected present value of the premiums (including the first premium payable at inception) at CU14,297. It estimates total cash outflows as CU13,663 and the risk adjustment as CU243 (for the purpose of this example, the risk adjustment is a percentage (10) of expected death benefits of CU2,433). Therefore, the residual margin at inception is CU364.

    (i) The amount of risk and the risk adjustment decline throughout the coverage period as claims are incurred and paid.

    (ii) The residual margin is released over the coverage period as a pro rata allocation based on the incurred claims, adjusted for the time value of money. This is consistent with the staff proposal in Agenda paper 41F (FASB Memorandum 41F).

(g) No differences between actual outcomes and previous estimates.

(h) The example has significant simplifications, for example no lapses. Furthermore, the example assumes that the effect of mortality experience on the total amount of the maturity benefits is not material.

22. For this example we only illustrate a base case.

Expanded Margin presentation

	Inception	*Year 1*	*Year 2*	*Year 3*	*Total*
Premium revenue		878	1.134	1.392	3.404
Policyholder benefits and claims		(700)	(900)	(1100)	(2700)
Insurance margin		178	234	292	704
Actual versus expected		0	0	0	0
Remeasurements	0	0	0	0	0
Acquisition costs	0				
Net gain at inception	0	0	0	0	0
Investment income		400	776	1.166	2.342
Interest on insurance liability		(250)	(469)	(685)	(1.404)
Net interest and investment	0	150	307	481	938
Profit	0	328	541	773	1.642

Balance sheet

	Inception	*Year 1*	*Year 2*	*Year 3*
Cash	5.000	4.700	9.576	1.642
Insurance liabilities	(5.000)	(4.372)	(8.707)	0
Equity	0	328	869	1.642

Revenue

	Inception	*Year 1*	*Year 2*	*Year 3*
Release of risk margin	-	74	99	127
Release of residual margin	-	105	135	165
Total margin release	-	178	234	292
Claims and benefits (expected)	-	700	900	1.100
Revenue	-	878	1.134	1.392

23. The amounts shown as revenue are determined as:

    (a) the margin released for the period, plus

    (b) the expected claims (ie their expected value at the end of the previous reporting period).

24. The maturity benefits of CU13,000 paid at the end of year 3 are treated as repayments to the policyholders and are therefore not reported in the income statement.

25. Another way to determine revenue is to allocate the expected present value of the part of the premium that the policyholder pays for insurance coverage over the life of the contract. This customer consideration amount is CU3,067; the premiums at inception of CU14,297 less the expected maturity benefit of CU11,230. If this customer consideration is allocated pro rata over the life of the contract based on the death benefit (plus interest accreted), the revenue line would be similar for this fact pattern.