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STAFF PAPER

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REG FASB | IASB Meeting

Project	**Insurance Contracts**		
Paper topic	*Single Margin Education Session*		
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What is this paper about?

1. This paper provides information on the single margin for the April 2012 non-decision making joint board education session.

2. Agenda Paper 3A/73A from the September 2011 joint board meeting includes a summary of tentative decisions reached by the FASB regarding the single margin. FASB staff paper (Memo No. 72B) that was the basis for the FASB's discussions on the single margin is available to IASB members on request from the staff.

International Accounting Standards Board | Financial Accounting Standards Board

Insurance Contracts Project

Single Margin Education Session

The views expressed in this presentation are those of the presenter, not necessarily those of the IASB, the IFRS Foundation, the FASB or the Financial Accounting Foundation. Official positions of the IASB and the FASB are reached only after extensive due process and deliberations.

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What is a single margin?

Premium insurer charges the policyholder
- Present value of expected cash flows
= Expected profit → Single margin

- Single margin represents the entire profit potential for the contract that is at risk based on the uncertainty in net cash flows

- Premium must cover:
  - Contract benefits
  - Selling, operating and maintenance expenses
  - Adequate profit

How is the single margin earned?

- Insurer stands ready to compensate the policyholder when an adverse event occurs during the coverage period
- Insurers exposure to risk (and therefore the profit at risk) is a result of the uncertainty of the specified event:
  - The amount an insurer will need to pay upon settlement (including whether the insurer will have to pay at all)
  - The timing of the uncertain specified future event
- Actual cash flows will differ from expected cash flows and therefore ultimate profit is not known until the risk that the contract is subject to has diminished
- As insurer satisfies its performance obligation it is *released from risk* evidenced by a reduction in the variability of cash outflows

Single margin: release from risk

- An insurer is released from risk depending on the nature of the event:
  1. If variability of the cash flows is primarily due to timing of the event
     - On the basis of the passage of time (i.e. straight-line), or
     - On the basis of reduced uncertainty in the timing of the event if that pattern differs significantly from the passage of time
  2. If variability of the cash flows is primarily due to the frequency (*the adverse event either occurs or does not*) and severity (*the ultimate payout amount is unknown*) of the event
     - Variability in the cash flows is reduced as information about expected cash flows becomes less uncertain (reduction in the variability) throughout the life cycle of the contract

Mechanics of a single margin

- Facts and circumstances to consider when evaluating the variability of cash flows during the lifecycle of the contract:
  - *The entity's relative experience with the types of contracts*
  - *The entity's past experience in estimating expected cash flows*
  - Inherent difficulties in estimating expected cash flows
  - The relative homogeneity of the portfolio and within the portfolio
  - Past experience not being representative of future results

- Minimum points in the life cycle that an insurer should consider to provide evidence of a reduction in the variability of cash flows because the uncertainty in the expectation of cash flows becomes clearer:
  - Claims are incurred
  - Claims are reported
  - Information becomes known
  - Settlement
  - Payment

Mechanics: based on timing

Simplified Assumptions for Normal Life Insurance Contract

Present Value of the Expected Cash Inflows	$1,000,000
Present Value of the Expected Cash Outflows	$940,000
Single Margin	$60,000
Life Expectancy[1]	30 years from date of inception

[1] Change in expectations of life expectancy at the 20 year point = 40 total years for an increase of 10 years from initial expectations

Note: The following examples assume that all premiums are received upfront.

Mechanics: based on timing

Scenario 1: Straight-line
Recognized Profit for First 20 Years

Single Margin	$60,000
Life Expectancy	30 years from date of inception
Recognized Annual Profit[2]	$2,000

[2] Profit recognized on straight-line basis as driver for determining the reduction in the variability of cash flows is assumed to be time

May be appropriate if have a portfolio of contracts where insurer is evenly exposed to risk over the life of the portfolio (based on distribution of risks)

Mechanics: based on timing

Scenario 2: Change in life expectancy
Recognized Profit for After Reassessment

- Assume the insurer reassesses the life expectancy from 30 years from inception to 40 years from inception (an increase in 10 years)
- Increase in life expectancy results in prospective adjustment of profit recognition (i.e. reduction in profit amounts recognized in future periods) to reflect increase in time until the event occurs

Initial Single Margin	$60,000
Portion Already Recognized	$40,000 ($2,000 per year *20 years)
Remaining Profit	$20,000
Remaining Life Expectancy	30 yrs + 10 yrs – 20 yrs = 20 yrs remaining
Recognized Annual Profit	$1,000[3]

[3] Conversely, if the insurer reassessed the life expectancy to a time shorter than originally expected, it adjusts profit recognition accordingly.

Mechanics: based on timing

Scenario 3: Ratable pattern other than straight-line
Changes in Assumptions

- If an insurer can establish that uncertainty in the timing of the event is reduced in a ratable pattern, it should be permitted to recognize profit differently from straight-line depending on the change in the variability of the cash flows

Age	# of Years in Age Band	Likelihood of Death	Single Margin	Recognized Margin	Recognized Margin per Year
20-45	25	10%	60,000	$6,000*	$240**
45-65	20	30%	60,000	$18,000	$900
65-80	15	60%	60,000	$36,000	$2,400

* Calculated as $60,000 * 10% = $6,000
** Calculated as $6,000 / 25 years = $240

Mechanics: based on timing

Other Margin Patterns

- Potential indicators for when an insurer is released from risk:
  1. Net amount at risk[1]
  2. Total claims (benefits for insured event and lapses)
  3. Benefits for insured event (e.g., death benefit)

[1] Amount at risk is sometimes defined as the face value of a contract less the accumulated policyholder account value or premiums received in the current year (depending on type of contract)

Mechanics: based on frequency/severity

- Scenario A or Base Scenario
  - No changes in expected cash outflows with a reduction in variability of cash outflows
- Scenario B
  - Increase in expected cash outflows with an immediate reduction in variability of cash outflows
- Scenario C
  - Increase in expected cash outflows with no immediate reduction in variability of cash flows

Mechanics: based on frequency/severity

Assumptions for Scenario A/Base Scenario

Coverage period	1 year
Claims handling period	5 years
Premium[1]	$1,200 received upfront
Liability for incurred claims	$960
Range of cash outflows	$900 to $1020
Initial standard deviation[2] (variability)	$60

[1] Revenue recognition of premium received: straight-line over the coverage period

[2] A measure of dispersion of a set of data from its mean; calculated as the square root of the variance

Note: the standard deviation is used in these examples as a simplified means to indicate the distribution curve has narrowed resulting in a reduction in the uncertainty of expected cash flows

Mechanics: based on frequency/severity

Risk over time – *Scenario A*

Time	Initial	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Yr 2	Yr 3	Yr 4	Yr 5
Ending Risk (Std deviation)	60	30	20	10	5	0	0	0	0
% Remaining (beginning)	100%	100%	50%	33%	17%	8%	0%	0%	0%
% Remaining (ending)	100%	50%	33%	17%	8%	0%	0%	0%	0%
Change in Risk	0%	50%	17%	17%	8%	8%	0%	0%	0%

Claims – *Scenario A*

Time	Initial	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Yr 2	Yr 3	Yr 4	Yr 5
% Loss Ratio	0%	80%	80%	80%	80%	80%	80%	80%	80%
Total Claims Expected (ending)	960	960	960	960	960	960	960	960	960
Total Claims Incurred (ending)	0	240	480	720	960	960	960	960	960

- Claims develop evenly over time and there are no changes in expected cash flows
- Total Claims Incurred (ending) would represent the liability for incurred claims at the end of the period
- Variability is remaining at the end of the coverage period

Mechanics: based on frequency/severity

Partial Balance Sheet – *Scenario A*

Time	Initial	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Yr 2	Yr 3	Yr 4	Yr 5
Liability for Remaining Coverage	1,200	900	600	300	-	-	-	-	-
Liability for Incurred Claims	-	240	480	720	960	960	960	960	960
Single Margin	-	30	40	30	20	-	-	-	-

Partial Income Statement – *Scenario A*

Time	Initial	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Yr 2	Yr 3	Yr 4	Yr 5
Earned Premium[1]	-	300	300	300	300	-	-	-	-
Release of Single Margin	-	30	50	70	70	20	-	-	-
Claims Expense[2]	-	(240)	(240)	(240)	(240)	-	-	-	-
Increases in Exposure To Variability[3]	-	(60)	(60)	(60)	(60)	-	-	-	-
Profit	-	30	50	70	70	20	-	-	-

[1] Earned premium – the premium is earned on the basis of time over the coverage period

[2] Claims expense – booked to an expected loss ratio; the difference between the expected loss ratio and the actual claims incurred is recorded as incurred but not reported (IBNR)

[3] Increase in exposure to variability – difference between the earned premium and the liability for incurred claims. Note: this amount would be earned as profit under current GAAP in most jurisdictions.

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Mechanics: based on frequency/severity

Risk over time – *Scenario B*

- Increase in expected cash outflows with an immediate reduction in variability of cash flows
- Note: such an increase may provide information or clarity surrounding remaining cash flows

Time	Initial	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Yr 2	Yr 3	Yr 4	Yr 5
Ending Risk (Std deviation)	60	60	30	20	10	5	0	0	0
% Remaining (beginning)	100%	100%	100%	50%	33%	17%	8%	0%	0%
% Remaining (ending)	100%	100%	50%	33%	17%	8%	0%	0%	0%
Change in Risk	0%	0%	50%	17%	17%	8%	8%	0%	0%

Claims – *Scenario B*

Time	Initial	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Yr 2	Yr 3	Yr 4	Yr 5
% Loss Ratio	0%	80%	90%	90%	90%	90%	90%	90%	90%
Total Claims Expected (ending)	960	960	1,080	1,080	1,080	1,080	1,080	1,080	1,080
Total Claims Incurred (ending)	0	240	540	810	1,080	1,080	1,080	1,080	1,080

- Management changed loss ratio in second quarter indicating that ultimate profitability will be lower than initial expectations
- Increase in expected cash outflows in second quarter provided more certainty around the ultimate outcome thereby reducing variability and making profit recognition appropriate in the second quarter

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Mechanics: based on frequency/severity

Partial Balance Sheet – *Scenario B*

Time	Initial	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Yr 2	Yr 3	Yr 4	Yr 5
Liability for Remaining Coverage	1,200	900	600	300	-	-	-	-	-
Liability for Incurred Claims	-	240	540	810	1,080	1,080	1,080	1,080	1,080
Single Margin	-	60	45	40	25	13	-	-	-

Partial Income Statement – *Scenario B*

Time	Initial	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Yr 2	Yr 3	Yr 4	Yr 5
Earned Premium	-	300	300	300	300	-	-	-	-
Release of Single Margin	-	-	45	35	45	13	12	-	-
Change in Reserve	-	-	(30)						
Claims Expense	-	(240)	(270)	(270)	(270)	-	-	-	-
Increases in Exposure To Variability	-	(60)	(30)	(30)	(30)	-	-	-	-
Profit	-	-	15	35	45	13	12	-	-

- Total amount of profit ($120) recognized reflects new estimates of profitability ($60 for Q1 based on an 80% loss ratio, $30 for Q2-Q4 based on a 90% loss ratio)
- *Note the 'Change in reserve' represents the immediate expense taken for change in cash flow estimates in second quarter*

Mechanics: based on frequency/severity

Risk over time – *Scenario C*

- Increase in expected cash outflows with no immediate reduction in variability of cash flows
- This scenario delays recognition of the margin into the claims handling period

Time	Initial	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Yr 2	Yr 3	Yr 4	Yr 5
Ending Risk (Std deviation)	60	60	50	50	40	30	20	10	0
% Remaining (beginning)	100%	100%	100%	83%	83%	67%	50%	33%	17%
% Remaining (ending)	100%	100%	83%	83%	67%	50%	33%	17%	0%
Change in Risk	0%	0%	17%	0%	17%	17%	17%	17%	17%

Claims – *Scenario C*

Time	Initial	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Yr 2	Yr 3	Yr 4	Yr 5
% Loss Ratio	0%	80%	90%	95%	95%	95%	95%	95%	95%
Total Claims Expected (ending)	960	960	1,080	1,140	1,140	1,140	1,140	1,140	1,140
Total Claims Incurred (ending)	0	240	540	855	1,140	1,140	1,140	1,140	1,140

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Mechanics: based on frequency/severity

Partial Balance Sheet – *Scenario C*

Time	Initial	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Yr 2	Yr 3	Yr 4	Yr 5
Liability for Remaining Coverage	1,200	900	600	300	-	-	-	-	-
Liability for Incurred Claims	-	240	540	855	1,140	1,140	1,140	1,140	1,140
Single Margin	-	60	75	88	80	60	40	20	-

Partial Income Statement – *Scenario C*

Time	Initial	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Yr 2	Yr 3	Yr 4	Yr 5
Earned Premium	-	300	300	300	300	-	-	-	-
Release of Single Margin	-	-	15	3	23	20	20	20	20
Change in Reserve	-	-	(30)	(30)	-	-	-	-	-
Claims Expense	-	(240)	(270)	(285)	(285)	-	-	-	-
Increases in Exposure To Variability	-	(60)	(30)	(15)	(15)	-	-	-	-
Profit	-	-	(15)	(28)	23	20	20	20	20

- Total amount of profit ($120) recognized reflects new estimates of profitability ($60 for Q1 based on an 80% loss ratio, $30 for Q2 based on a 90% loss ratio and $15 for Q3 and Q4 based on a 95% loss ratio.)
- Margin is recognized over a longer period here, which represents uncertainty and that the portfolio must wait until a later point to see reduction in variability

Mechanics of single margin: summary

- Single margin is the difference between the premium charged and the present value of expected cash outflows
- *Recognize in a pattern that reflects the insurer's release* from risk (i.e., reduction in the variability of cash flows)
  - When portfolios are subject to time, consider passage of time (i.e. straight-line) or another ratable pattern
  - When portfolios are subject to frequency and severity, consider life cycle of claims and key points in time

Other topics related to the single margin

- Amortization pattern is adjusted prospectively such that the balance reflects the risk (uncertainty) remaining
- Single margin is not remeasured or recalibrated to recapture the previously recognized margin
  - Not consistent with the notion of a potential profit at risk
  - Not consistent with a current value model that would update the income *statement for changes in assumptions (acts as a "buffer" for potentially* smoothing either favorable or unfavorable results (e.g., locking in the income statement impact)
  - *Could become new "black box"*
  - Said simply, the single margin is reduced, but not increased
- Onerous contracts – to be discussed with the board
  - Staff recommendation is that remaining single margin should be written off once the insurer determines the contract is onerous