SOCIETY OF ACTUARIES

IASB Insurance Contracts June 2013 Exposure Draft Review

Tokyo, 4 October 2013

Presented by
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Actuaries
Risk is Opportunity.

Agenda

- Overview of the BBA and PAA models
- Summary of discount rates within the BBA model
- Questions in the ED – what the IASB wants to know
- Presentation
- Disclosures

Overview of the models

Measurement Model Background

Measurement model principles

- Measurement model based on the following principle:
  - Insurance contracts create a bundle of cash flows that work together to create a package of cash inflows and outflows
- Measurement model proposed for all types of insurance (and reinsurance) contracts
  - Model is a current assessment of insurer's rights and obligations under contract
  - Model has three building blocks
- A modified approach for short-duration contracts

Difference between IASB and FASB Guidance
▪ IASB: The Premium Allocation Approach is permitted as a simplification to the Building Blocks Approach. The 2013 IASB ED is revised to permit entities to apply the approach if it would produce measurements that are a reasonable approximation to those that would be produced when applying the requirements of the main approach, or the coverage period is within one year or less; ▪ FASB: The premium allocation approach is a **separate model** and should be applied for all contracts meeting specified criteria, same as the 2012 FASB ED.

Measurement model in IFRS 4 Phase II
Overview of Building Block Approach “BBA”

- One model for all insurance contracts.
- Explicit margins as part of liability. Day 1 loss in income statement, no day 1 gain.
- Combination of rights and obligations (considers cash inflows and outflows).
- Optional simplified model for pre-claim liabilities based on the unearned premium. Applies to short duration contracts (period of cover <= 1 year) or where a reasonable approximation.

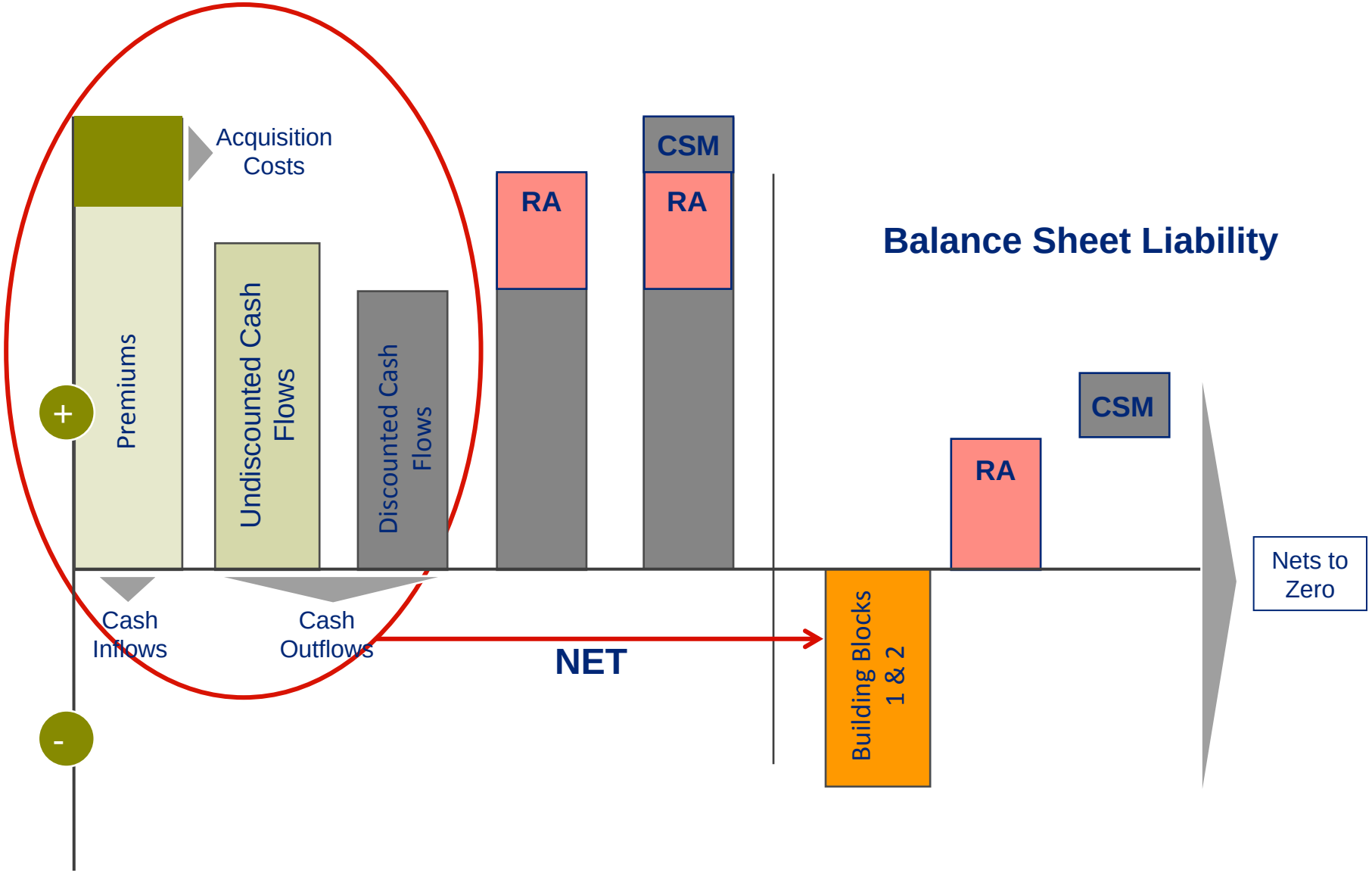
Unearned profits recognised over life of contract

Reflect compensation for uncertainty. Quantifies the value difference between certain and uncertain liability.

Discounting future cash flows using “top-down” or “bottom-up” approach to reflect characteristics of the liabilities

Best estimate cash flows – explicit, unbiased and probability weighted estimate of fulfilment cash flows

Building Block Approach: Day One Liability (IASB)



Building block 1: Cash flows estimate

A current, unbiased and probability weighted estimate of the contractual cash flows

- Current — re-assessed at each reporting period
- Incorporate, in an unbiased way, all available information about the amount and timing of all cash flows
- Probability weighted cash flows — Stochastic modeling may be required
- If observable market data exists, incorporate in the model to the extent possible
- Non-market variables utilize entity-specific cash flows

Building block 2: Discount rate

Adjusts first building block for time value of money

- Discount rate based on characteristics of the insurance liability:

- Currency - Duration - Liquidity

- Use an **asset based discount rate ONLY** if the amount, timing or uncertainty of the cash flows depend on performance of assets, e.g. **participating contracts**
- Discount rate is a market consistent interest rate based on a **"risk free rate" plus an illiquidity premium** based on the characteristics of liability cash flows ("bottom-up" approach).
  - **Top-down approach**: starting from expected asset returns for a reference portfolio, the entity then removes factors that are not relevant to the insurance contracts (such as market risk premiums for assets included in the reference portfolio) and adjusts for differences between timing of cash flows between the assets and the cash flows of the insurance contracts.
- No further guidance on how to calculate the illiquidity premium
- Disclosures on discount rate, impact of illiquidity and sensitivities
  - Discounting for cash flows is not required for contracts with duration of 1 year or less (duration is determined at issue)

Building block 3: Margins – Risk adjustment

An adjustment to reflect uncertainty in the estimate of fulfillment cash flows

- Explicitly reported as a component of the insurance contract liability, defined as:

  "The compensation that an entity requires for bearing the uncertainty about the amount and timing of the cash flows that arise as the entity fulfills the insurance contract."

- Re-measured at each reporting period; Estimated at portfolio level
- Reflects the degree of diversification benefit that the entity considers when determining the compensation it requires for bearing that uncertainty
  - Reflects both favorable and unfavorable outcomes in a way that reflects the entity's degree of risk aversion
  - No specific technique required under the IASB guidance. Required confidence level disclosure.

Building block 3: Margins – Contractual Service Margin

A margin to eliminate any gain at inception of the contract

- A contractual service margin (known previously as the ‘residual margin’) arises when:

  PV of future cash inflows > PV of future cash outflows + risk adjustment

- Estimated at level of portfolio of insurance contracts, with same inception date and similar coverage duration
- Calculated at initial recognition and amortized in subsequent valuations. In subsequent measurement, changes in the estimates of future cash flows should be reflected in the contractual service margin adjustment
- The pattern for recognizing the contractual service margin over the coverage period shall be on a systematic basis that reflects the remaining transfer of services that are provided under the contract
- Cannot be negative, as a loss must be recognized immediately through income
- Interest accretion required using discount rate locked-in at inception

Building block 3: Margins – Composite Margins

A margin to eliminate any gain at inception of the contract

- A composite margin arises when:
  - PV of future cash inflows > PV of future cash outflows
- Estimated at portfolio level of insurance contracts, with same inception date and similar coverage duration
- Interest accretion required
- No prescribed approach for recognizing the composite margin. Initial margin should be recognized as revenue in net income over the coverage and settlement periods as the entity satisfies its performance obligation

Premium Allocation Approach (PAA)

Application

- An entity may simplify the measurement of the liability for the remaining coverage using the premium-allocation approach if
  - Doing so would produce a measurement that is a reasonable approximation to that which would be produced when applying the building block approach;
  - The coverage period at initial recognition is approximately one year or less.

Onerous contract test

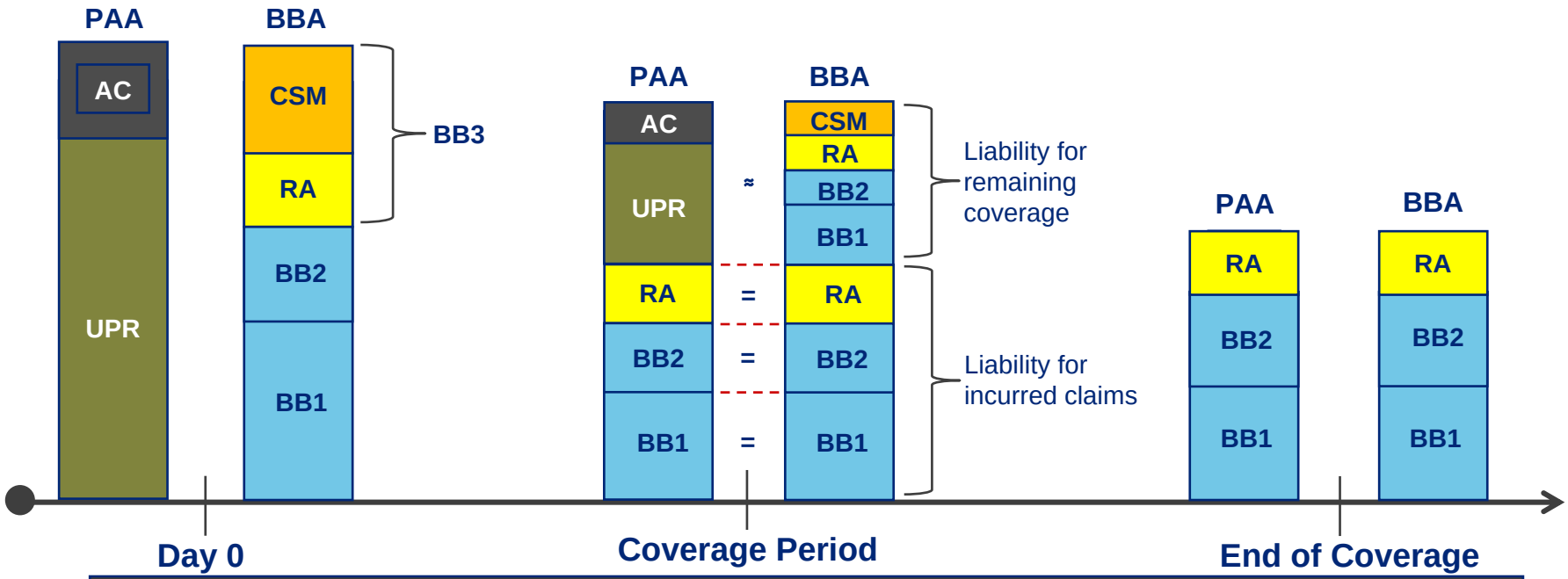
- When an entity uses the simplified approach, it shall recognize an **onerous contract liability** (the difference between the liability and the fulfillment cash flow), if, at initial recognition or subsequently, the portfolio of the contracts containing the contract is onerous.

PPA subsequent measurement

Measurement

- The pre-claims liability at initial recognition is the premium received at initial recognition, less the directly attributable acquisition costs and plus any onerous liability.
- Premium is recognized over the coverage period in like with timing of incurred claims, usually in a straight line.
- Consistent with the BBA, a current market discount rate would be used in discounting the pre-claims liability (but not necessary of claims are paid in one year).
  - Lock in SOCI to contract inception rate
  - Unlock SOFP rate in subsequent measurements

IASB Measurement Model



LEGEND

AC
Acquisition Costs

BB
Building Block

BBA
Building Block Approach

PAA
Premium Allocation Approach

RA
Risk Adjustment

CSM*
Contractual Service Margin

UPR
Unearned Premium Reserve, or PAA Pre-Claims Liability

** CSM can be unlocked for favorable and unfavorable changes, resulting in a CSM that can increase and decrease.*

Summary of discount rates within the BBA model

Discount rate components

- Basic BBA rate
  - Curve, not a flat rate
  - Market data for durations where this is a market
  - Long term averages where there is no market
  - Liquidity does not mean policyholder optionality to the IASB
- Asset dependent cash flows
  - Use a rate that reflects the dependency, possibly a single rate
- Mirrored assets (IASB)
  - No rate, just mirror the balance for the mirrored portion
  - BBA discount rate for the fixed cash flows
  - May also have asset dependent cash flows
- Subsequent measurement
  - Lock in BBA rate where it is used for the SOCI but change it for the SOFP
  - Discount rates in SOCI are updated for changes in asset dependent cash flows so that there is no net impact for FASB
- Mirrored products subsequent measurement
  - Change the asset dependent rate gets updated in both the SOCI and SOFP
  - BBA rates are treated the same as the regular model

Different treatments

Cash flows	Day 1	Day 2 updates
Fixed	Market for risk free rate or credit rate	Every valuation period for SOFP / lock-in SOCI
	Liquidity/unexpected defaults and long term rates	Update for the SOFP but may not change that much
Asset dependent	Same as the asset	Every valuation period for SOFP / lock-in SOCI
Mirrored	Mirror: Balance sheet for asset	Just like the assets are updated
	Indirect: Use asset rate	Run through both SOPF and SOCI
	Fixed: same as above	Same as above

Discount rate example

- Four year unit linked product with certain fixed guarantees. Assume we use risk neutral rates for the indirectly related cash flows
- Initial valuation rates:

Cash flow	1	2	3	4
Account value	*Just hold the asset value*			
Fees	1%	1.5%	1.8%	2%
Fixed	1.2%	1.8%	2.1%	2.3%

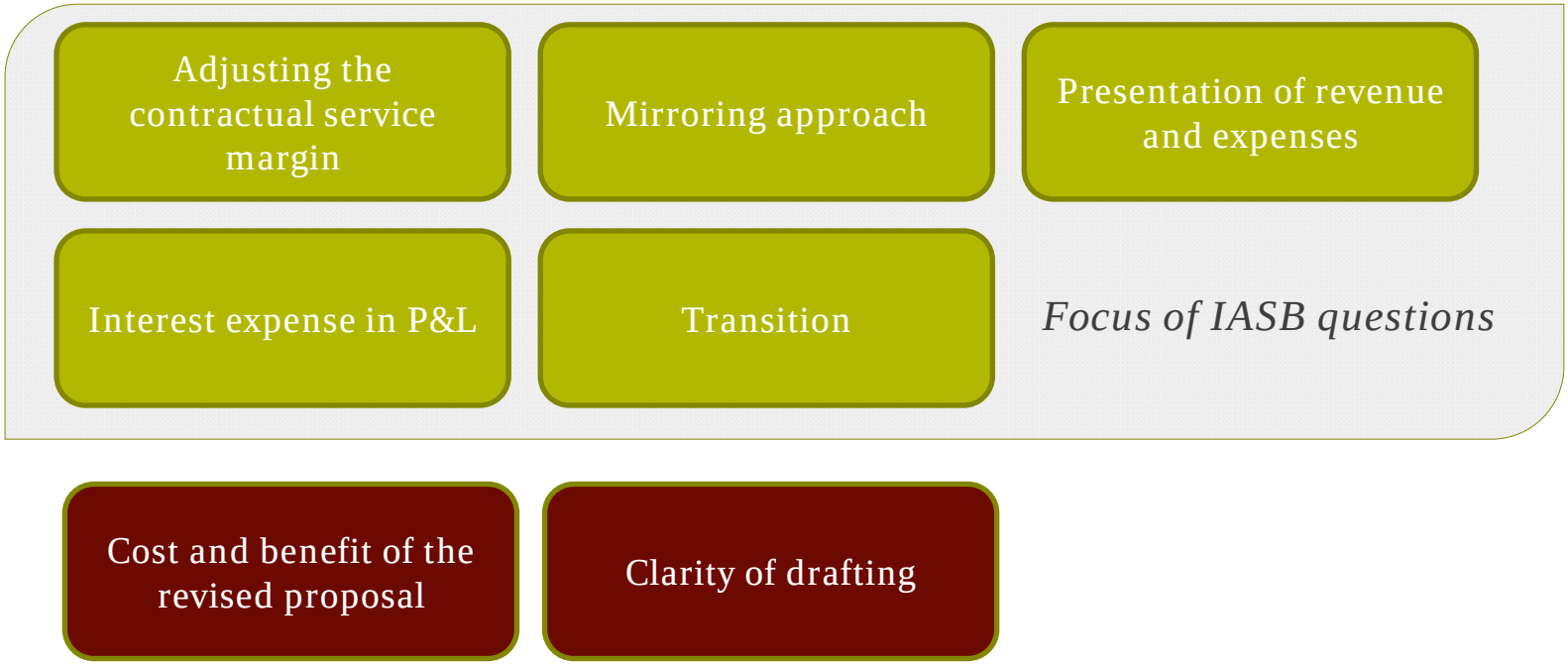
- At end of year 1, all rates increase by 1%:

	Cash flow	1	2	3	4
SOCI/SOFP	Account value	*Just hold the asset value*			
SOCI/SOFP	Fees	NA	2.5%	2.8%	3%
SOCI	Fixed	NA	1.8%	2.1%	2.3%
SOFP	Fixed	NA	2.8%	3.1%	3.3%

Questions posed by the IASB

What is next?

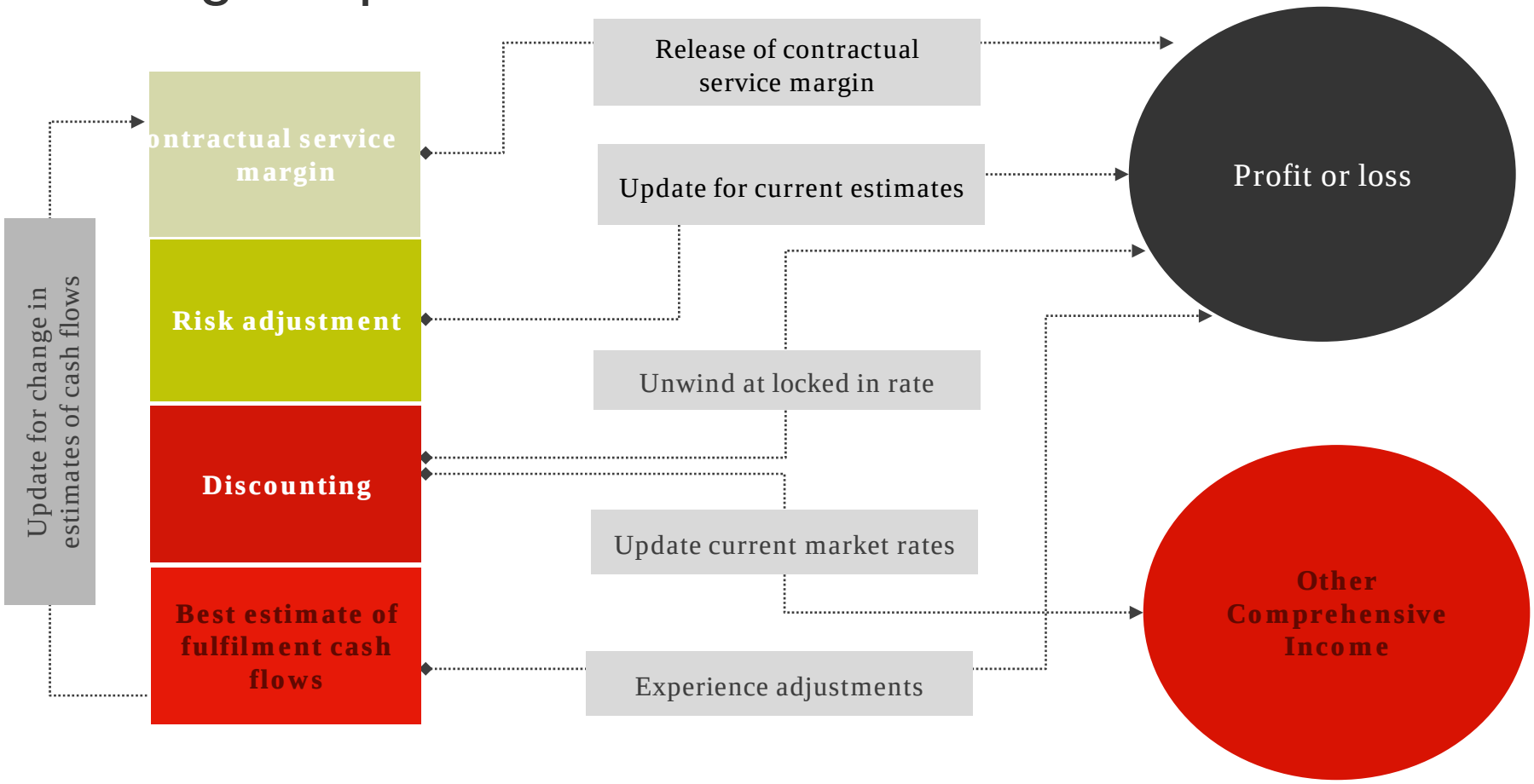
- Comments by 25 October 2013
- IASB will re-deliberate in 2014
- Invitation to comment will focus on smaller number of questions



Presentation

Measurement model in IFRS 4 Phase II

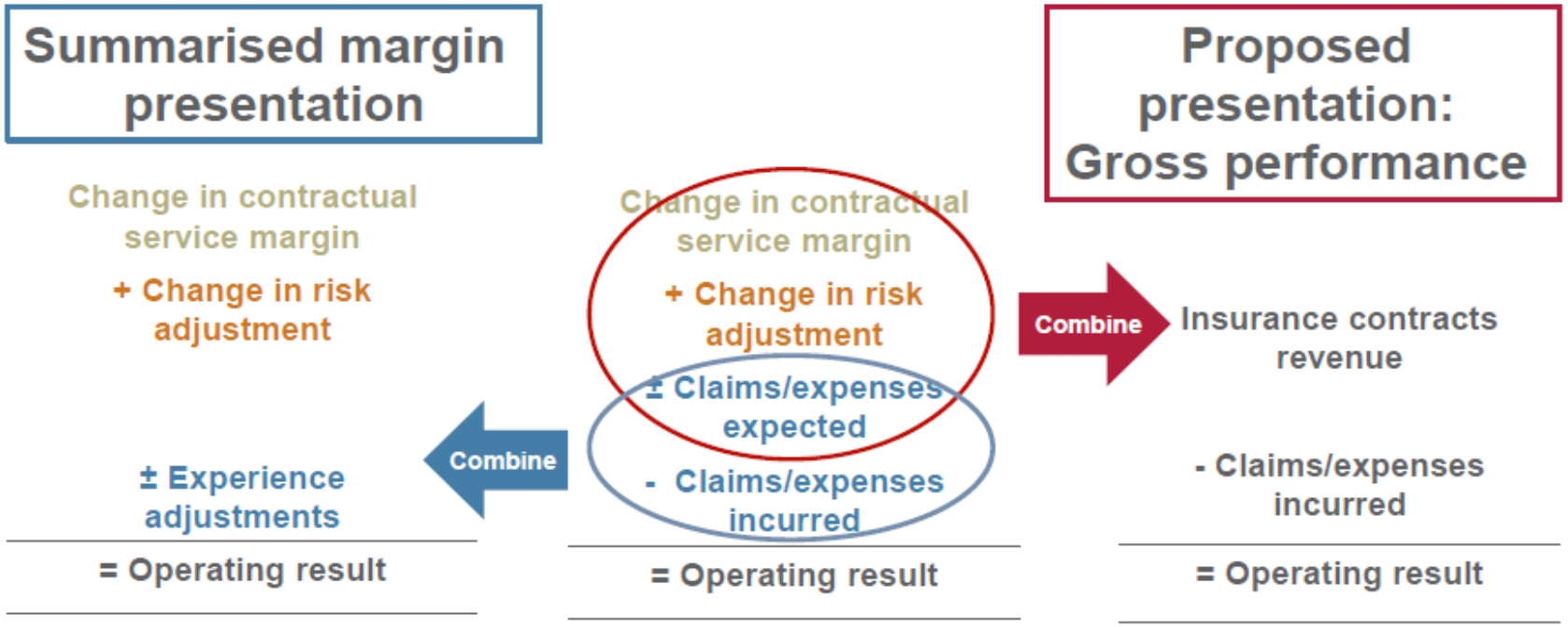
Linkage to presentation



Income statement presentation

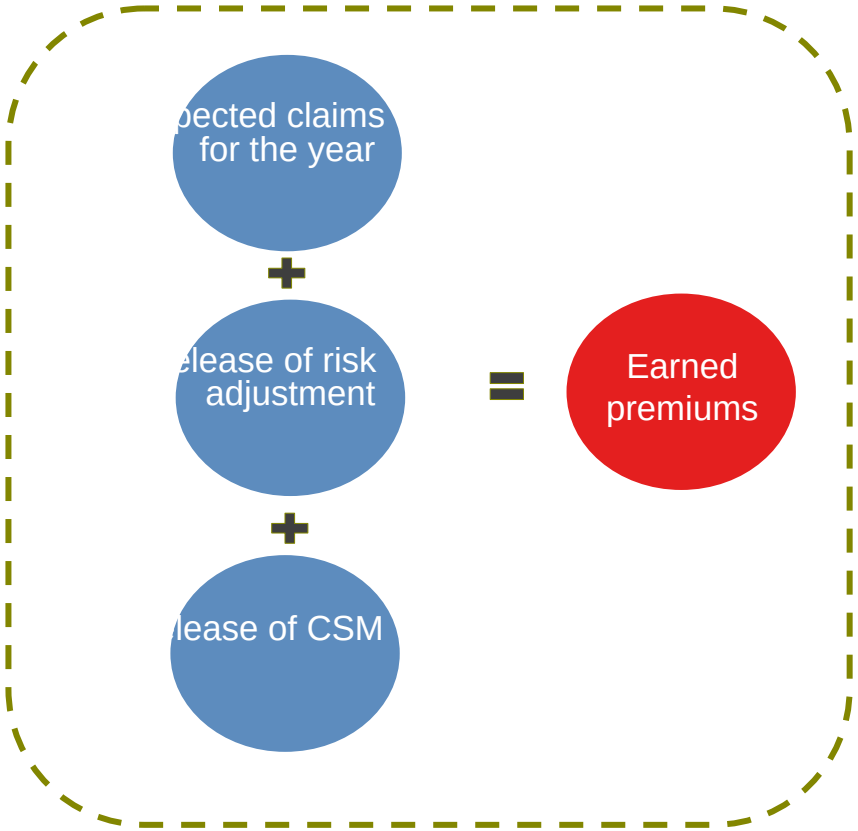
Insurance contract revenue

- No longer summarised margin approach (as in 2010 Exposure Draft)
- “Earned premium” approach to insurance revenue with non-distinct investment components excluded
- The change does not affect the final operating result



Presentation – Earned Premium

- IASB developed ‘earned premium’ method for determining and presenting premiums
- Aims to be a measure similar to ‘revenue’ presented by other industries
- Model tries to allocate premiums to reporting periods based on expected pattern of claims / benefits
- Calculation closely linked to pattern of release of CSM margin



- ***Universal lobbying against this proposal on a “cost versus benefit” grounds***

Presentation – Earned Premium Example

- The table below contains the IASB's example illustration of the earned premium

Expected cash flows and margin release pattern

	Period 1	Period 2	Period 3	Total
Cash inflows (premiums)	800	400	0	1200
Cash outflows (claims/benefits)	-200	-350	-500	-1050
Cash flows that arise in fulfilling contract	600	50	-500	150
Change in risk adjustment	32	30	28	90
Release of residual margin	23	19	18	60
Net profit or loss (underwriting result)	**55**	**49**	**46**	**150**

+

Earned premium presentation

	Period 1	Period 2	Period 3	Total
Premiums earned	255.0	399.0	546.0	1200.0
Claims and benefits	-200.0	-350.0	-500.0	-1050.0
Underwriting result	**55.0**	**49.0**	**46.0**	**150.0**

=

Reconciliation of underwriting result (disclosures)

	Period 1	Period 2	Period 3	*Total*
Change in risk adjustment	32.0	30.0	28.0	90.0
Change in residual margin	23.0	19.0	18.0	60.0
	55.0	**49.0**	**46.0**	**150.0**

Assumes no experience variances.

Premiums = expected claims / benefits + change in risk adjustment + release of contractual service margin

Incurred claims / benefits recognised when incurred

Detailed income statement considerations

IASB view of income statement format

Statement of comprehensive income

	20XX
Premium revenue	x
Incurred claims and expenses	(x)
Underwriting result	X
Investment income	x
Interest on insurance liability, based on locked in discount rate	x
Net interest and investment	X
Profit or loss	x
Effect of discount rate changes in insurance contract liability	x
Total comprehensive income	x

- IASB produced indicative income statement format.
- Premium revenue under Phase II will reflect “Premiums earned”
- Need to consider availability of data in right level of detail to populate
- Currently collect incurred claims and expenses and investment income data
- Under Phase II data challenges likely for premium revenue, interest on insurance liabilities and the effect of discounting
- Likely to be actuarially driven; however it is unclear what level of granularity of data will be required in these areas, especially for premium revenue

Presentation example

Illustrative example

- 10 year level premium endowment
- Death benefit = the endowment amount
- Stated account values for each year
- Assume flat BBA discount rate = 2% and actual earned rate = 5%
- $1,000 deferred acquisition cost

Year	Premium	Face	SurBen	ExpPrem	ExpDB	ExpSB	ExpExp
1	1,250	10,000	-	1,250	100	-	1,050
2	1,250	10,000	500	1,151	138	27	45
3	1,250	10,000	1,000	1,066	170	42	42
4	1,250	10,000	1,500	992	198	46	39
5	1,250	10,000	2,000	929	223	43	36
6	1,250	10,000	2,500	874	245	51	34
7	1,250	10,000	3,500	818	262	66	31
8	1,250	10,000	5,000	762	274	87	29
9	1,250	10,000	7,000	705	282	113	27
10	1,250	10,000	10,000	650	286	4,915	25

Traditional P&L and B/S

Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Premium	1250	1,151	1,066	992	929	874	818	762	705	650
Investment income	10	61	107	149	189	227	263	296	327	355
Total Revenue	**1,260**	**1,212**	**1,172**	**1,141**	**1,118**	**1,101**	**1,081**	**1,058**	**1,033**	**1,005**
Benefits	100	165	212	245	266	295	328	361	395	5,201
Change in benefit reserve	752	657	585	532	494	452	405	353	299	(4,530)
Change in DAC	(879)	114	108	103	99	97	94	91	88	85
Expenses	1,050	45	42	39	36	34	31	29	27	25
Total Expenses	**1,023**	**982**	**947**	**919**	**896**	**878**	**858**	**834**	**809**	**780**
Net income	**237**	**230**	**225**	**223**	**222**	**222**	**223**	**223**	**224**	**225**
Invested assets	110	1,111	2,029	2,887	3,702	4,474	5,196	5,864	6,475	2,254
DAC	879	765	657	554	455	358	264	173	85	(0)
Total assets	**989**	**1,876**	**2,687**	**3,441**	**4,157**	**4,832**	**5,460**	**6,036**	**6,559**	**2,254**
Reserves	752	1,409	1,995	2,527	3,021	3,473	3,878	4,231	4,530	-
Total liabilities	**752**	**1,409**	**1,995**	**2,527**	**3,021**	**3,473**	**3,878**	**4,231**	**4,530**	**-**
Equity	**237**	**467**	**692**	**915**	**1,137**	**1,359**	**1,582**	**1,806**	**2,030**	**2,254**

New presentation – B/S or SOFP

Existing GAAP

Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Invested assets	110	1,111	2,029	2,887	3,702	4,474	5,196	5,864	6,475	2,254
DAC	879	765	657	554	455	358	264	173	85	(0)
Total assets	**989**	**1,876**	**2,687**	**3,441**	**4,157**	**4,832**	**5,460**	**6,036**	**6,559**	**2,254**
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New presentation

Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Invested assets	110	1,111	2,029	2,887	3,702	4,474	5,196	5,864	6,475	2,254
Insurance contract assets	726	-	-	-	-	-	-	-	-	-
Total assets	**836**	**1,111**	**2,029**	**2,887**	**3,702**	**4,474**	**5,196**	**5,864**	**6,475**	**2,254**
Insurance contract liabilities	-	222	1,059	1,807	2,488	3,099	3,636	4,094	4,473	-
RM	264	222	181	143	105	70	39	15	0	0
CSM	459	412	364	315	265	214	162	109	55	0
Total liabilities	**724**	**856**	**1,604**	**2,265**	**2,858**	**3,383**	**3,837**	**4,218**	**4,528**	**0**
Equity	**112**	**255**	**425**	**622**	**844**	**1,091**	**1,359**	**1,646**	**1,946**	**2,254**

New presentation – P&L or SOCI

- Premium is not used directly
- Only the portion of premium used for expected benefits and expenses
- Acquisition expenses are amortized in a manner similar to the CSM but only for the purposes of the SOCI
  - The 1,000 acquisition costs are spread as follows:

Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
DAC Amortization	91	93	95	97	99	101	103	105	107	109

New presentation – P&L or SOCI

New presentation

Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Change in CSM and RM (excl interest)	106	104	101	99	96	94	89	81	71	56
Expected Claims and Expense	241	304	349	380	401	430	462	495	529	5,334
Revenue	**348**	**408**	**450**	**479**	**497**	**524**	**551**	**577**	**600**	**5,391**
Actual Claims and Maint Expense	241	304	349	380	401	430	462	495	529	5,334
Expenses	**241**	**304**	**349**	**380**	**401**	**430**	**462**	**495**	**529**	**5,334**
Underwriting Result	**106**	**104**	**101**	**99**	**96**	**94**	**89**	**81**	**71**	**56**
Investment Income	10	61	107	149	189	227	263	296	327	355
Interest expense	4	22	38	51	63	74	83	91	98	103
Investment Profit	**6**	**39**	**69**	**98**	**126**	**153**	**180**	**205**	**229**	**252**
Net Profit	**112**	**142**	**170**	**197**	**222**	**247**	**268**	**286**	**300**	**308**
OCI	-	-	-	-	-	-	-	-	-	-
Comprehensive Profit	**112**	**142**	**170**	**197**	**222**	**247**	**268**	**286**	**300**	**308**

Remove deposit elements

- Need to remove all deposit or “returnable” amounts from the income statement (“SOCI”)
- Year 1: surrender value = 0
  - therefore no returnable amount within the death benefit
- Year 5: surrender value = 2,000
  - therefore 20% of the death benefit needs to be removed from the SOCI
- All surrender benefits are removed as well

Remove deposit elements

Original

Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Change in CSM and RM (excl interest)	106	104	101	99	96	94	89	81	71	56
Expected Claims and Expense	241	304	349	380	401	430	462	495	529	5,334
Revenue	**348**	**408**	**450**	**479**	**497**	**524**	**551**	**577**	**600**	**5,391**
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Underwriting Result	**106**	**104**	**101**	**99**	**96**	**94**	**89**	**81**	**71**	**56**

Remove deposit elements

Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Change in CSM and RM (excl interest)	106	104	101	99	96	94	89	81	71	56
Expected Claims and Expense	241	270	290	304	313	318	304	271	218	134
Revenue	**348**	**373**	**392**	**403**	**409**	**412**	**393**	**352**	**290**	**190**
Actual Claims and Maint Expense	241	270	290	304	313	318	304	271	218	134
Expenses	**241**	**270**	**290**	**304**	**313**	**318**	**304**	**271**	**218**	**134**
Underwriting Result	**106**	**104**	**101**	**99**	**96**	**94**	**89**	**81**	**71**	**56**

OCI impact

- Remove the impact of interest rate changes from the SOCI
- At the end of year 3, rates increase from 5%, 2% to 6%, 3%
- Liability decreases from 1,059 to 829
  - This amount hits the SOFP but is removed from the SOCI
  - Following assumes assets are not affected (as if they were 1 year investments)
  - For analysis on interaction see the most recent financial reporter
- Interest rate change impacts on the Risk adjustment varies on the nature of the risk adjustment calculation

OCI impact

Before rate change

Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Net Profit	**112**	**142**	**170**	**197**	**222**	**247**	**268**	**286**	**300**	**308**
OCI	-	-	-	-	-	-	-	-	-	-
Comprehensive Profit	**112**	**142**	**170**	**197**	**222**	**247**	**268**	**286**	**300**	**308**
Insurance contract liabilities	-	222	**1,059**	**1,807**	**2,488**	**3,099**	**3,636**	**4,094**	**4,473**	**-**
RM	264	222	181	143	105	70	39	15	0	0
CSM	459	412	364	315	265	214	162	109	55	0
Total liabilities	**724**	**856**	**1,604**	**2,265**	**2,858**	**3,383**	**3,837**	**4,218**	**4,528**	**0**

After rate change

Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Net Profit	**112**	**142**	**176**	**230**	**265**	**299**	**330**	**358**	**382**	**399**
OCI	-	-	229	(13)	(21)	(27)	(34)	(40)	(45)	(50)
Comprehensive Profit	**112**	**142**	**405**	**217**	**244**	**272**	**296**	**318**	**337**	**350**
Insurance contract liabilities	-	222	**829**	**1,591**	**2,292**	**2,931**	**3,501**	**4,000**	**4,424**	**-**
RM	264	222	176	139	103	69	38	15	0	0
CSM	459	412	364	315	265	214	162	109	55	0
Total liabilities	**724**	**856**	**1,370**	**2,046**	**2,661**	**3,214**	**3,702**	**4,123**	**4,479**	**0**

Disclosures

Disclosures

Summary of requirements

Amounts

- *Detailed roll forward schedules and reconciliations.*
- *Reconciliation of sources of profit.*
- *Contracts written in the period.*
- *Relationship between interest and investment return.*

Significant judgements

- *Processes to estimate inputs to methods.*
- *Effect of changes in methods and inputs.*
- *Confidence level for determining risk adjustment.*
- *Yield curve(s) used to discount cash flows.*

Nature and extent of risks

- *Nature and extent of risks.*
- *Insurance risk on gross/net basis.*
- *Concentrations of insurance risk and claims development.*
- *Quantitative disclosures about non-insurance risks.*

Disclosures

Explanation of recognized amounts

Reconciliation 1:

An annual reconciliation of the liabilities and reinsurance movements from one period to the next. It should split out the carrying value of contracts that are in an asset position and those in a liability position.

The liabilities (reinsurance) position would be the sum of liabilities incurred over the period, liabilities outstanding and liability movement recognized in the P&L accounts

Reconciliation 2:

Capturing the movement of:

- Expected present value of future cash flows
- Risk adjustments
- Contractual service margin
- Acquisition costs allocated to the period

This applies only to non-mirroring business

Reconciliation 2 (Mirroring)

Total amounts being allocated under this approach

Reconciliation 3:

For each of the above reconciliations you should show:

- Premiums received and incurred
- Claim paid
- Changes or purchases of blocks of business
- Other data feeding into P&L

For all reconciliations separate out returns linked to interest rates assumed and investment returns earned

Disclosures

Significant judgment

- The discloses should at a minimum capture detail on the methods and inputs used for calculating:
- The Risk adjustment
- Discount rates
- The pattern of recognition for the CSM
- Investment components that are not separated out
- Any changes to the methods and assumptions
- The yield curve / curves used to derive the liabilities

Disclosures

Nature and extent of risks

- Exposures to risk and how they arise
- Policies and processes in place to manage the risks

- Regulatory environment
- Minimum capital requirements

- Management of liquidity risk
- Maximum claims payable on demand
- Analysis of liquidity profile

- Risks disclosed net and gross of risk mitigation
- Sensitivity analysis to highlight impact on P&L
- Concentrations

Insurance contracts

- Actual vs Expected claims development

Market risks

- Credit exposures, including quality of reinsurance