



Society of Actuaries in Ireland

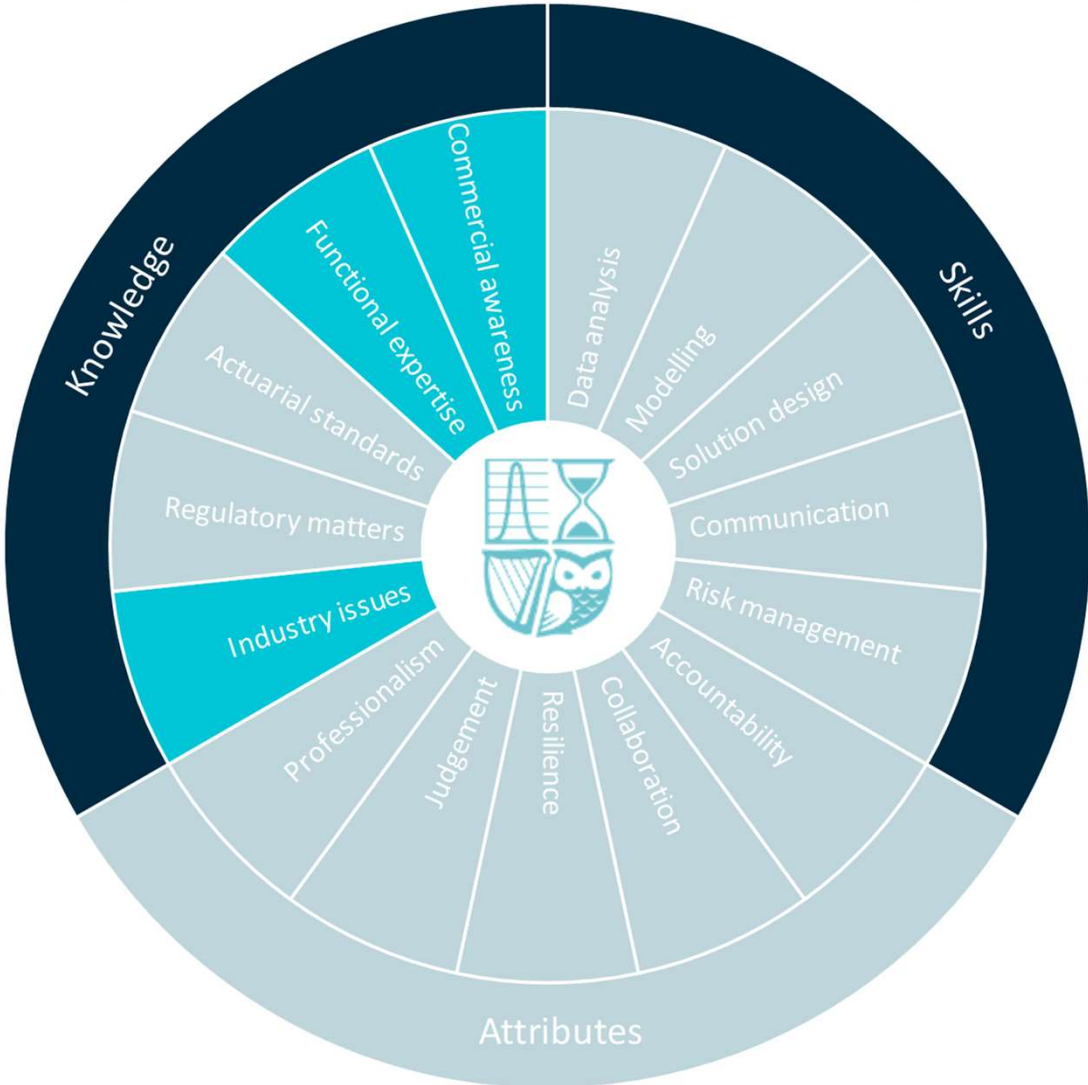
IFRS 17 – VFA and PAA

15 November 2019

Disclaimer

The views expressed in this presentation are those of the presenter(s) and not necessarily of the Society of Actuaries in Ireland or of their employers.

Competency Framework





IFRS 17 working groups – current members

Life WG

Aidan Murphy

Aileen Murphy

Andrew Kay

Caroline Lynch

Ciara Fitzpatrick

David MacCurtain

Francis Furey

Miriam King

Niall Naughton (chair)

Paraic Byrne

Non-life WG

Cecilia Cheuk (chair)

Darragh Pelly

Deirdre O'Brien

Joanne Lonergan



Previously Covered

Slides and podcasts

- Introduction: <https://web.actuaries.ie/events/2018/10/introduction-ifrs17>
- GMM: <https://web.actuaries.ie/events/2019/02/deeper-dive-ifrs17>

Topics

- Scope of IFRS 17
- Contract classification (significant insurance risk transfer)
- Unbundling (distinct components?)
- Aggregation (profitable vs onerous contracts, portfolio groupings)
- Measurement models (Overview of GMM, PAA, VFA)
- GMM (PV of Future Cashflows, Risk Adjustment, Contractual Service Margin, Profit Emergence)
- Reinsurance (inward (“issued”) vs outward (“held”) reinsurance)
- Transition (full retrospective, modified retrospective or fair value approach)
- Presentation and disclosures (amounts, judgements and risks)



Abbreviations

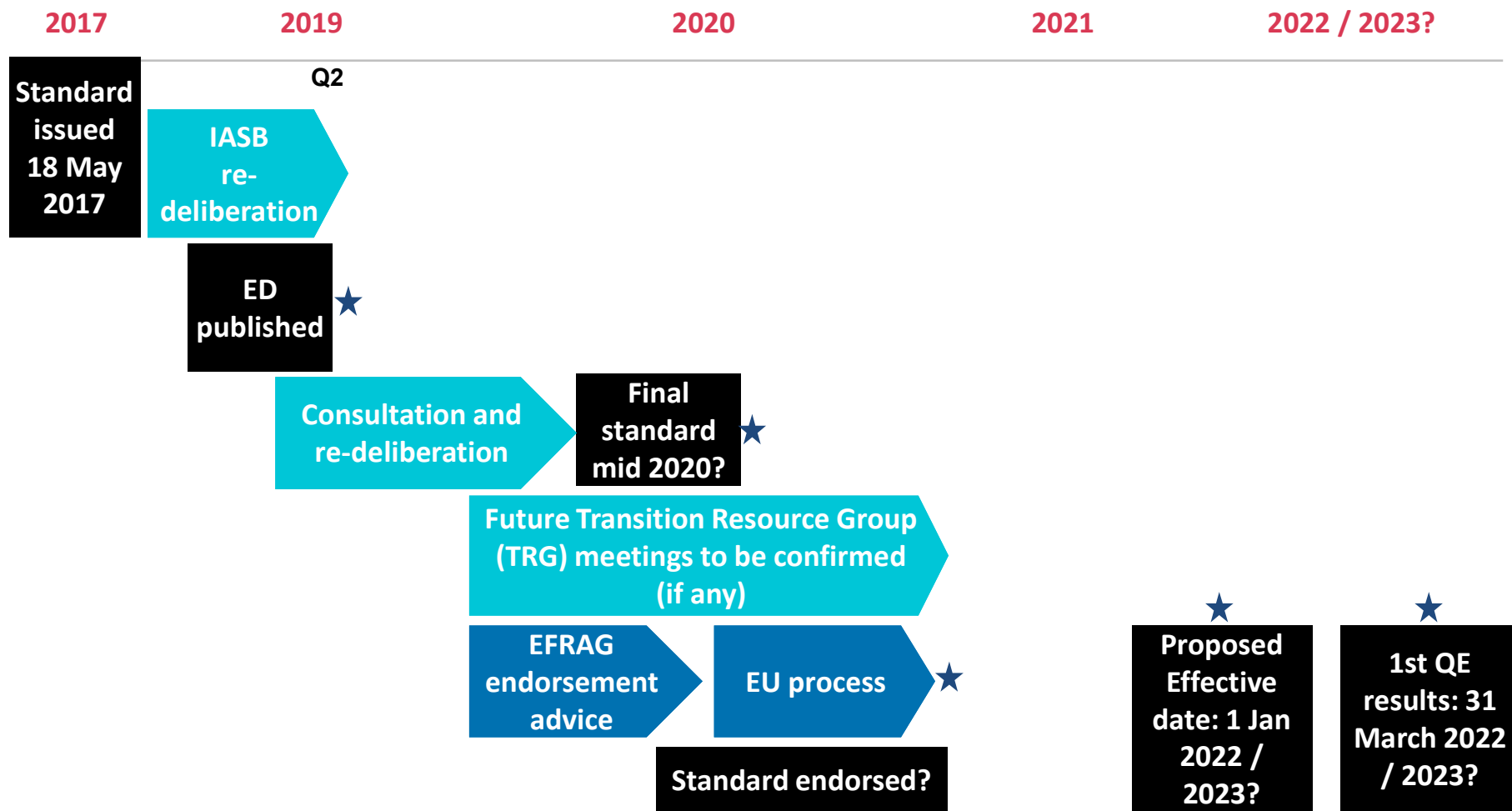
AoC	Analysis of change	IASB	International Accounting Standards Board
BBA	Building Block Approach	MRA	Modified retrospective application (on transition)
BEL	Best estimate liability	OCI	Other comprehensive income
BoP	Beginning of period	PAA	Premium Allocation Approach
CoA	Chart of accounts	RA	Risk Adjustment
CoC	Cost of capital	RM	Risk margin under Solvency II
CSM	Contractual Service Margin	SII	Solvency II
EFRAG	European Financial Reporting Advisory Group	TRG	Transition Resource Group
EoP	End of period	UoA	Unit of account
GMM	General Measurement Model (GMM)	VFA	Variable Fee Approach
FCF	Fulfilment cash flows	YE	Year-end
FRA	Full retrospective application (on transition)		
FVA	Fair value approach (on transition)		

Agenda

- Introduction
 - Timeline
 - Previously covered
 - Recap of Which Measurement Model When
 - Recap of GMM (including concepts not modified for VFA)
- IFRS 17 Variable Fee Approach
- IFRS 17 Premium Allocation Approach



Expected timeline to go-live for IFRS 17



Key: ■ IASB process ■ EU endorsement process



Which Measurement Model When?

IFRS 17 Measurement Models

General Measurement Model

- Default approach
- Used at transition & live/production
- Both life & general insurance
- (aka “BBA”, Building Blocks Approach)

Modifications to the General Measurement Model

Variable Fee Approach (mandatory)

(Ins. Contracts with Direct Participation Features)

MUST be used, if at inception* of contract :

- (i) Policyholder contractually participates in clearly identified pool of underlying items;
- &
- (ii) Policyholder receives substantial share of the returns on the underlying items;
- &
- (iii) Changes in policyholder benefits substantially vary with the change in underlying items.

* For transition business this varies

Premium Allocation Approach (optional)

(Liability for remaining coverage)

MAY be used, if at inception of group:

- (i) not differ materially to GMM
- or
- (ii) coverage period of group is max one year. (Many GI contracts; possibly annual renewable life contracts.)

(Note other preferences may also impact on decision here.)



Which Model When – Likely Product Types

IFRS 17 Measurement Models

General Measurement Model

Long term business

“Life” examples

- Whole of life
- Term assurance
- Protection
- Annuities
- Reinsurance written

“Non-Life” examples

- Multi-year motor
- Warranty cover
- Certain types of Loss Portfolio Transfers / Adverse Development Cover

Modifications to the General Measurement Model

Variable Fee Approach (mandatory)

(Ins. Contracts with Direct Participation Features)

- Unit linked (UL)
- Variable annuity (VA) & equity index-linked contracts
- Continental European 90/10 contracts
- UK with profits contracts
- Unitised with profits

Judgements re possible breaches of VFA requirements:

- For VA, guarantee aspects.
- For UL, if death benefit sufficient to justify insurance contract treatment.
- European “formulaic with profits”

Premium Allocation Approach (optional)

(Liability for remaining coverage)

- Short term general insurance business
- Short term life and certain group contracts

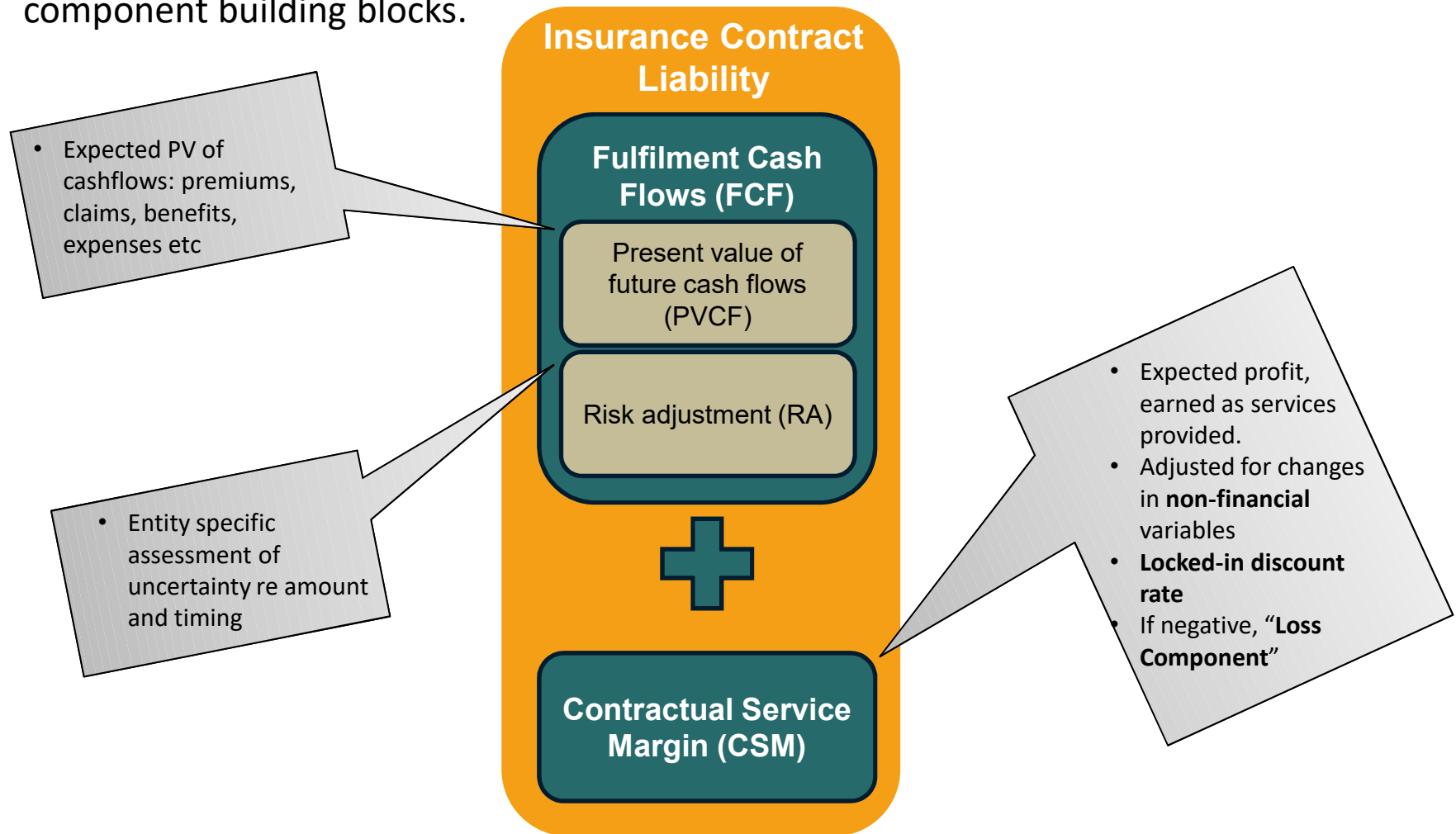
Judgements re possible breaches of PAA requirements:

- For annual renewable business, whether guarantee at renewal date



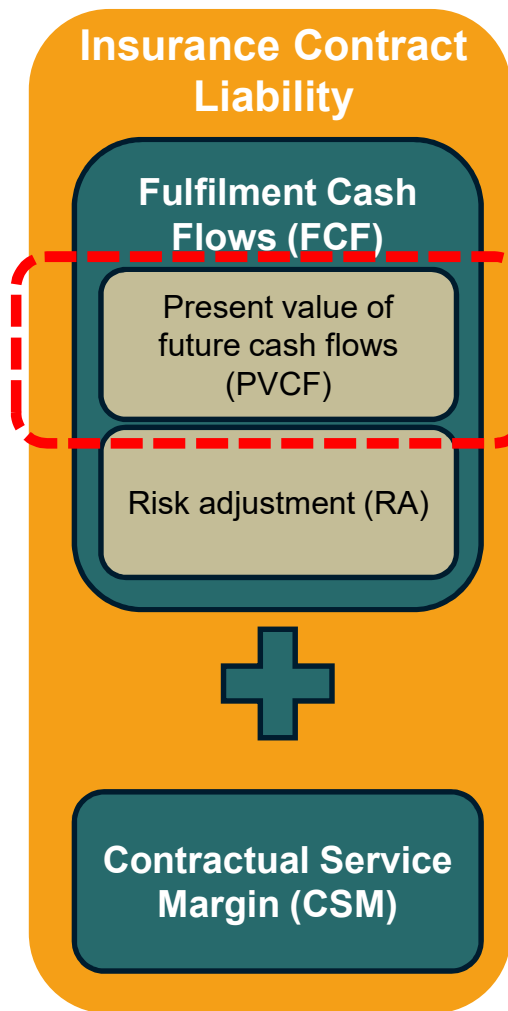
Recap - General Measurement Model

- **General Measurement Model (GMM)** determines the insurance contract liability via component building blocks.





Present Value of Future Cashflows - Overview



Expected Future Cashflows:

- Based on current estimates
- Probability weighted
- Unbiased
- Stochastic modelling where required for financial options and guarantees

Time Value of Money

- Adjustment to convert the expected future cashflows into current values

Expected Future Cashflows should:

- ✓ Be within the boundary of the contract
- ✓ Relate directly to the fulfilment of the contract
- ✓ Include cashflows over which the entity has discretion



Which Cashflows?

Examples of cashflows to include:

- Claims and benefits paid to policyholders, plus associated costs
- Surrender and participating benefits
- Cashflows resulting from options and guarantees
- Costs of selling, underwriting and initiating that can be directly attributable to a portfolio level
- Transaction-based taxes and levies
- Policy administration and maintenance costs
- Some overhead-type costs such as claims software, etc.
- Costs incur in providing an investment-return service or investment-related service
- Adjustment to convert the expected future cashflows into current values

Cashflows excluded:

- Investment returns
- Payments to and from reinsurers
- Cashflows that may arise from future contracts
- Acquisition costs not directly related to obtaining the portfolio of contracts
- Cashflows arising from abnormal amounts of wasted labour
- Other general overhead
- Income tax payments and receipts
- Cashflows from unbundled components



Attributable Acquisition Expenses

- All directly attributable acquisition expenses that can be allocated to the individual insurance contracts (or group) are included in the CSM calculations.
- Includes also costs that cannot be attributed directly to individual insurance contracts (or group) but are in the portfolio – should be allocated on a rational and consistent basis
- Asset / liability set up for costs paid/received before group's coverage period begins

EXAMPLES

- Examples: External Commissions, Sales bonuses, Salary of sales team, Overhead of sales department
- Acquisition costs that are not considered directly attributable to a portfolio of contracts would be expensed when they are incurred in profit or loss.

WHEN RECOVERABILITY TESTING DOES NOT APPLY

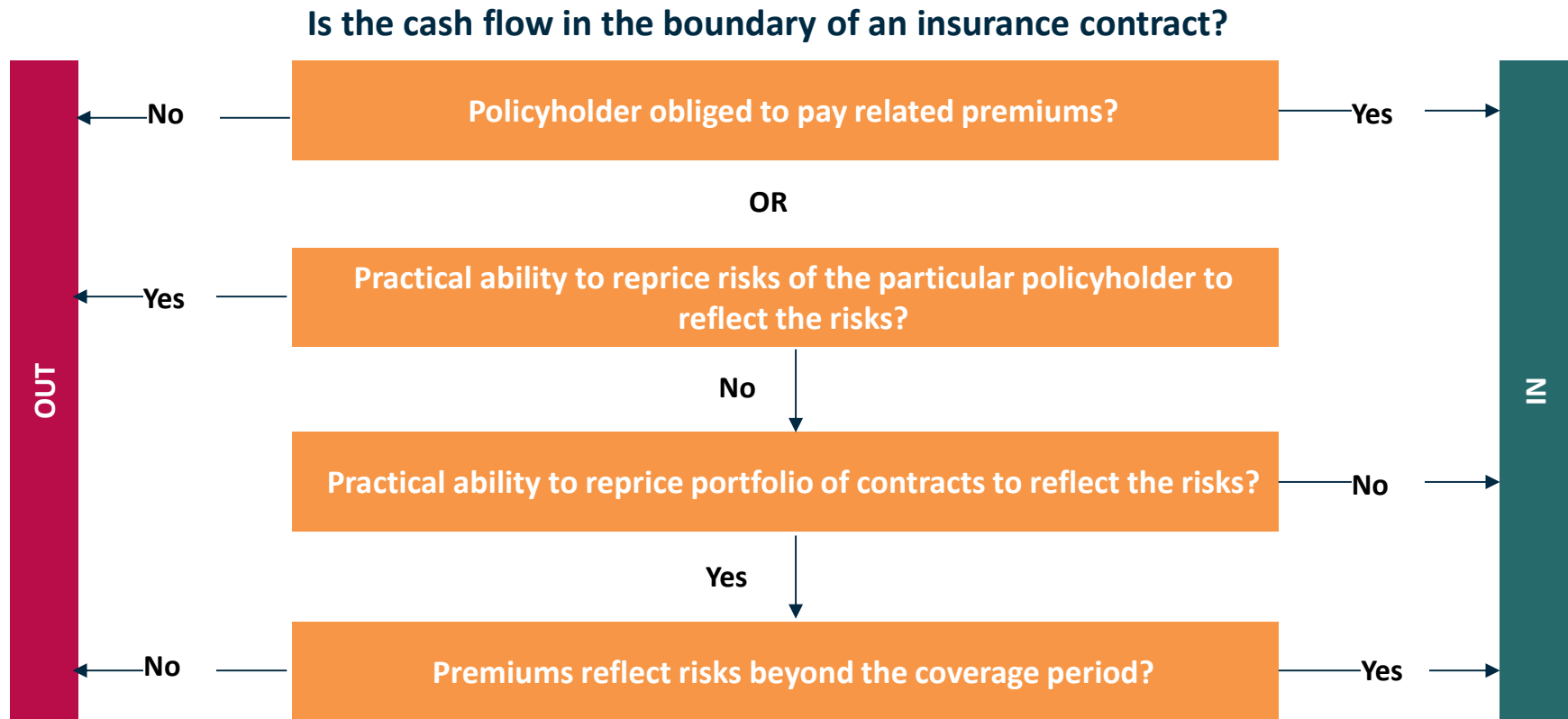
- Generally no recoverability testing before initial recognition of group
- Implicit recovery testing through CSM calculation, if $CSM < 0$ then loss is recognised in P&L.

WHEN RECOVERABILITY TESTING DOES APPLY

- Development from January 2019 IASB – if acquisition costs incurred relate to cash flows outside contract boundary (e.g. future renewals), maintain asset for costs related to future renewals.
- Need to assess recoverability of asset each period until associated renewals recognised.



Contract Boundaries



Criteria differs to Solvency II and hence contract boundary could differ particular instances:

*“Even though Solvency II uses slightly different wording than IFRS 17 to express the objective, one cannot expect material differences to the resulting contract boundaries, other than in circumstances where the insurer has the legal right to reprice the premium for the re-assessed risk, but can reasonably justify the insurer does not have the **practical ability** to reprice.”*
EIOPA’s analysis of IFRS 17 Insurance Contracts, October 2018



Discounting

Market Consistency:

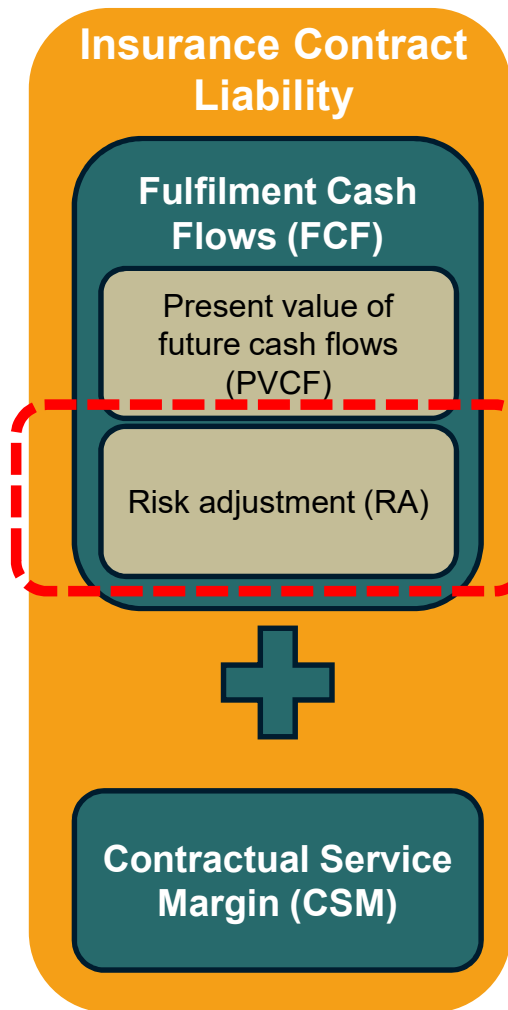
- IFRS 17 requires insurers to use fair value and market-consistent approaches to liability valuations as the basis for reporting their accounts.
- Stochastic modelling approaches may be applicable for certain types of contracts
- Careful consideration required in constructing the discount rates.
- Two approaches:
 - “Top-Down”
 - “Bottom-Up”

Top-Down Approach





Risk Adjustment – Concept



The risk adjustment is the compensation that the entity requires for bearing the uncertainty about the amount and timing of the cash flows that arises from non-financial risk.

- Range of possible outcomes versus a fixed cashflow with same NPV are equal
- Entity's internal view of non-financial risk



Risk Margin vs. Risk Adjustment

Solvency II Risk Margin		IFRS 17 Risk Adjustment
Market plus regulatory	≠	Entity plus financial statements
Prescribed calibration at 99.5% confidence interval	≠	No prescribed calibration but must be disclosed
Based on the Solvency II cost of capital method	≠	No prescribed method
The cost of capital rate used is prescribed by EIOPA	≠	The cost of capital rate used is not prescribed
No group diversification for solo entity	≠	Group diversification may be permitted for solo entity
Net of reinsurance basis	≠	Separately for primary insurance and reinsurance contracts held
All the NH risks	≠	Only insurance risks, lapse risk and expense risks



Risk Adjustment Approaches

Cost of Capital

- The Risk Adjustment is calculated as the discounted value of future capital for non-financial risk at required confidence interval multiplied by the company's internal cost of capital.

Value at Risk

- Value at Risk (VAR) calculates the expected loss on a portfolio at a specified confidence level. This value less the discounted value of best estimate cashflows gives the Risk Adjustment.

Tail Value at Risk

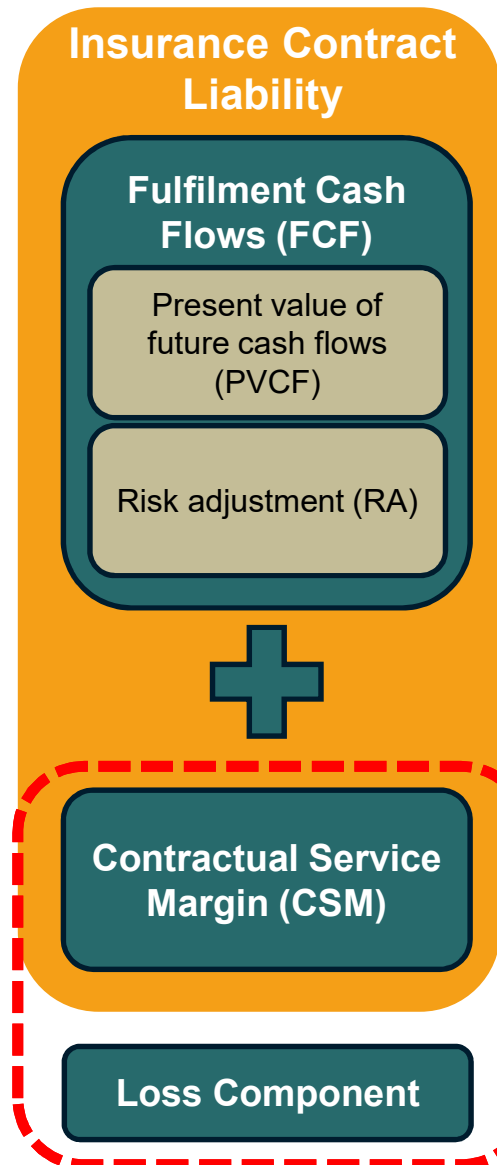
- Tail VaR (TVaR) calculates the average expected loss on a portfolio given the loss has occurred above a specified confidence interval. This value less the discounted value of best estimate cashflows gives the Risk Adjustment.

Provision for Adverse Deviation

- Cashflows revalued using padded non-financial assumptions calibrated to reflect the company's risks and chosen confidence level. The risk adjustment is the difference between this and the best estimate.



Contractual Service Margin – Concept



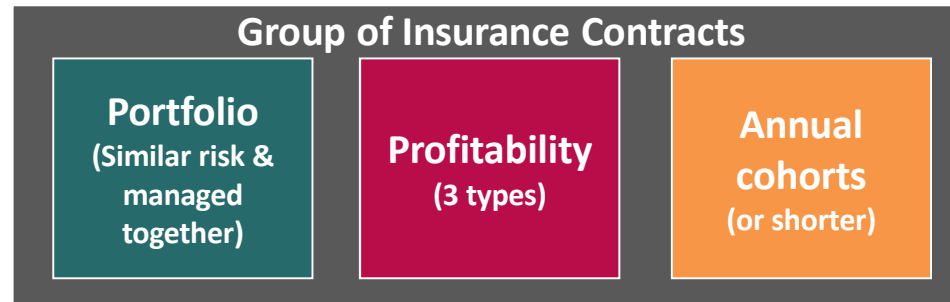
New concept under IFRS 17 – profit deferral mechanism measured at a “group” level

- Requirements of the GMM and the VFA are the **same on initial recognition**
 - Offsets initial risk adjusted profits (excluding non-attributable expenses)
 - Reduced over time to provide steady release of profits into P&L in line with service provided
 - Absorbs changes for group profitability related to future service (e.g. basis changes)
 - Cannot offset losses*, those hit P&L but recorded and tracked by a Loss Component
- *Except for Reinsurance Held



CSM – Not a seriatim calculation

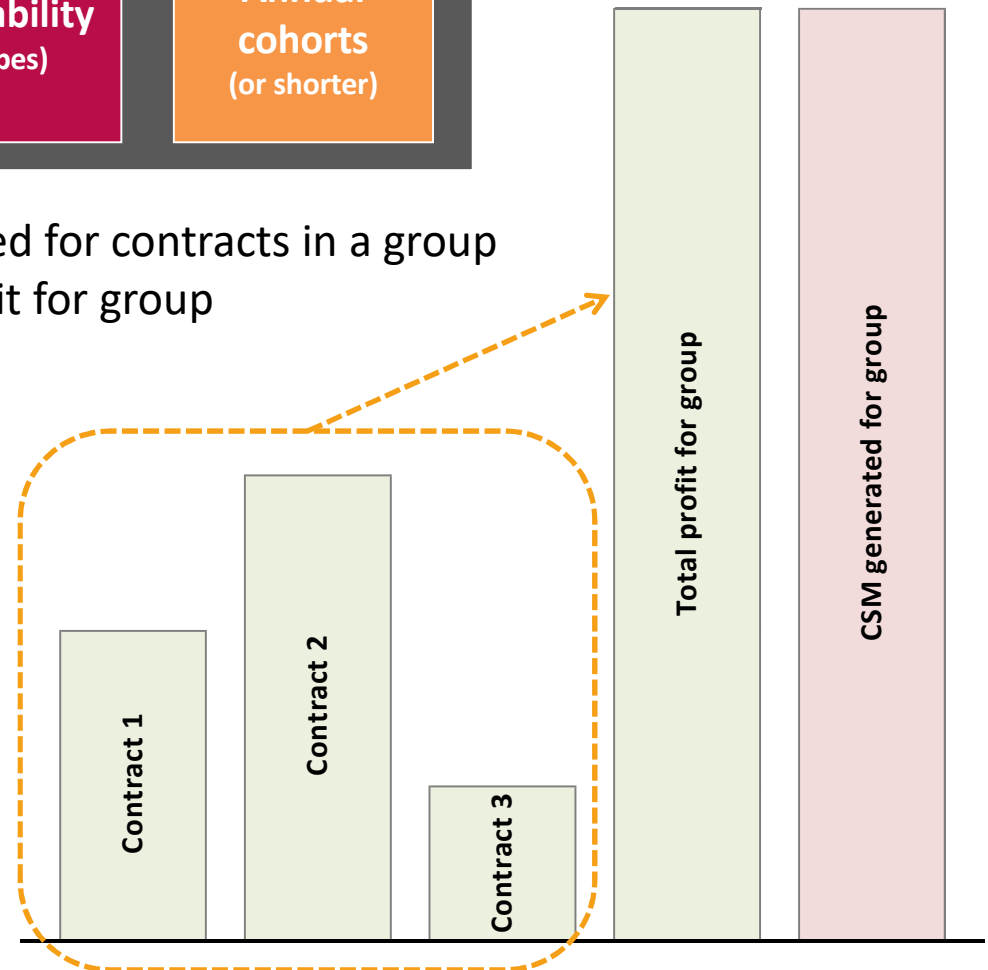
- CSM calculated for a “Group”



- Cash flows and risk adjustment measured for contracts in a group and combined to give risk adjusted profit for group
- CSM generated for the group to offset risk adjusted profit
- Added complexity where products contain guarantees that apply at a multiple group level

Key point: CSM is not a policy level concept. Calculated and measured for a group of contracts, not for a single contract.

➤ Systems development implications



Agenda

- Introduction
- IFRS 17 Variable Fee Approach
 - Eligibility Criteria
 - Contractual Service Margin
 - Profit Emergence & Illustrative Example
 - Risk Mitigation Exception
- IFRS 17 Premium Allocation Approach



Variable Fee Approach – Eligibility Criteria

- Developed to **address concerns of artificial volatility** in the P&L under the GMM approach for insurance (ie contain significant insurance risk) **contracts with payments that vary with return on underlying items**.
- Application is **not optional**, the **requirements to classify an insurance contract as one with direct participation features are prescribed** (more on next slide).

The conditions for VFA eligibility ensure that:

Entity's obligation to the policyholder is the net of:

- (a) Obligation to pay an amount equal to the fair value of the underlying items; &
- (b) A variable fee the entity will deduct from (a) in exchange for future service provided comprising:
 - (i) amount of entity's share of fair value of the underlying items; less
 - (ii) fulfilment cash flows that do not vary based on returns on underlying items

- **Reinsurance** contracts issued or held **cannot be insurance contracts with direct participation features**
- **Risk mitigation provides option** to report changes in embedded guarantees in P&L if certain criteria and documentation requirements are met.
- Some **accounting policy choices** for the presentation of financial statements under VFA and **specific disclosure requirements** including for example fair value of underlying, impact of risk mitigation.
- Note on **IFRS 17 Scope**:
 - IFRS 17 applies to **investment contracts with discretionary participation features**, provided the entity also issues insurance contracts. While assessment of VFA criteria would then be required, may generally expect the nature of such contracts would meet the VFA criteria.



Variable Fee Approach – Eligibility Criteria

Insurance contracts that are substantially investment-related service contracts. Hence, for which:

(i) Policyholder contractually participates in clearly identified pool of underlying items;

(ii) Policyholder receives substantial share of the returns on the underlying items;

and

(iii) Changes in policyholder benefits substantially vary with the change in underlying items.

Underlying items may comprise a portfolio of assets, net assets of the entity or a subset of assets of the entity

Not necessary for insurer to hold the identified pool of underlying items, so long as clearly identified by the contract

Does not preclude entity's discretion to vary amounts paid to policyholder, but link must be enforceable

Entity compensated by a fee determined by reference to underlying items.

Not a contract with direct participation features if the entity can change the items with retrospective effect or no underlying items are identified

For (ii) and (iii) interpret 'substantial' in context of objective that an entity provides investment-related services and is compensated by a fee determined with reference to underlying items

For (ii) and (iii) assess variability over duration of a contract and on a present value probability-weighted average basis

Under (ii) consideration of policyholder share may include fixed charges an entity may deduct from the share in return for providing benefits

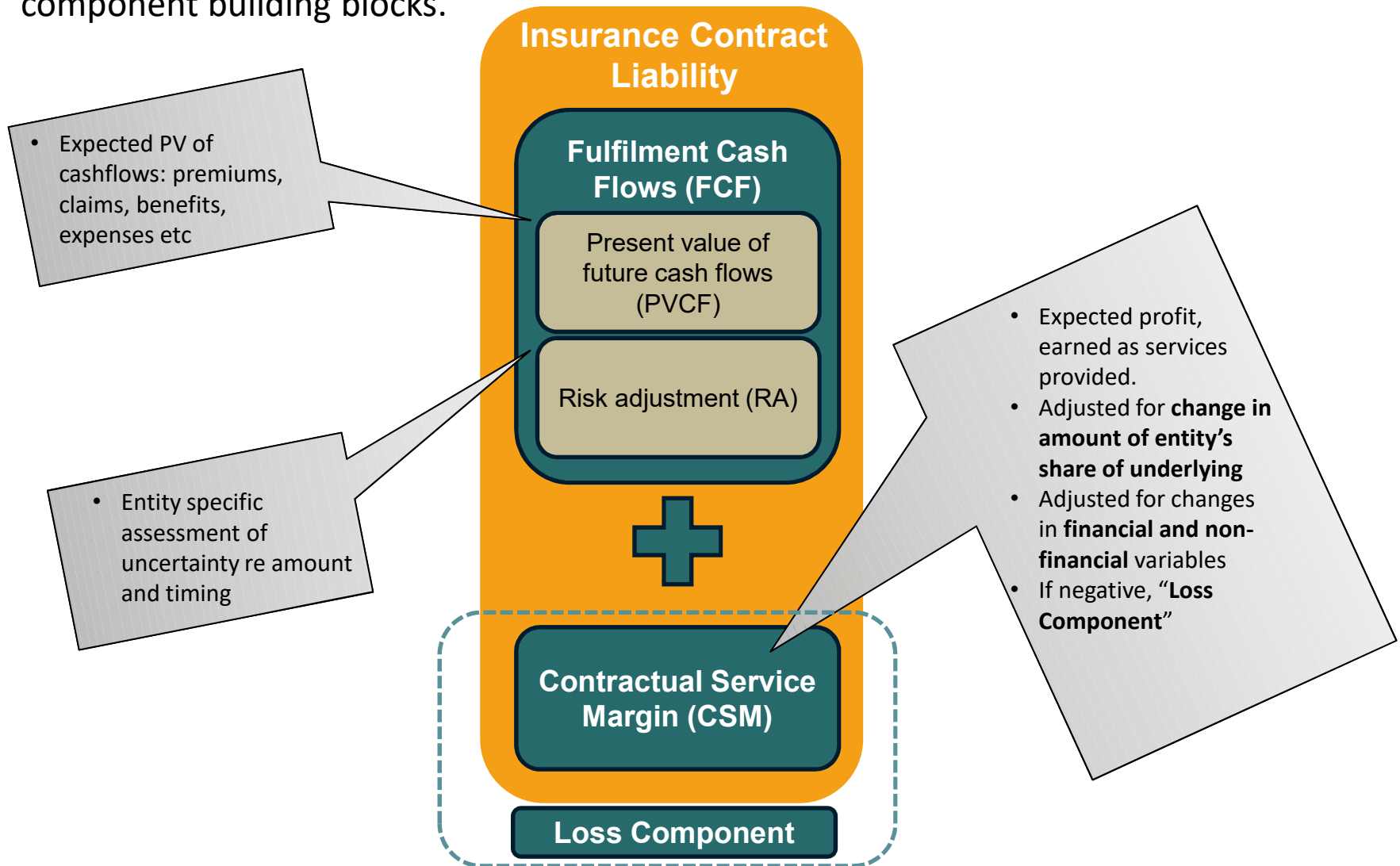
Under (iii) consideration of policyholder benefits may be scenarios where payment would vary and others where it would not (example a minimum return guarantee)

Reinsurance contracts issued or held **cannot be insurance contracts with direct participation features**



Variable Fee Approach – Overview

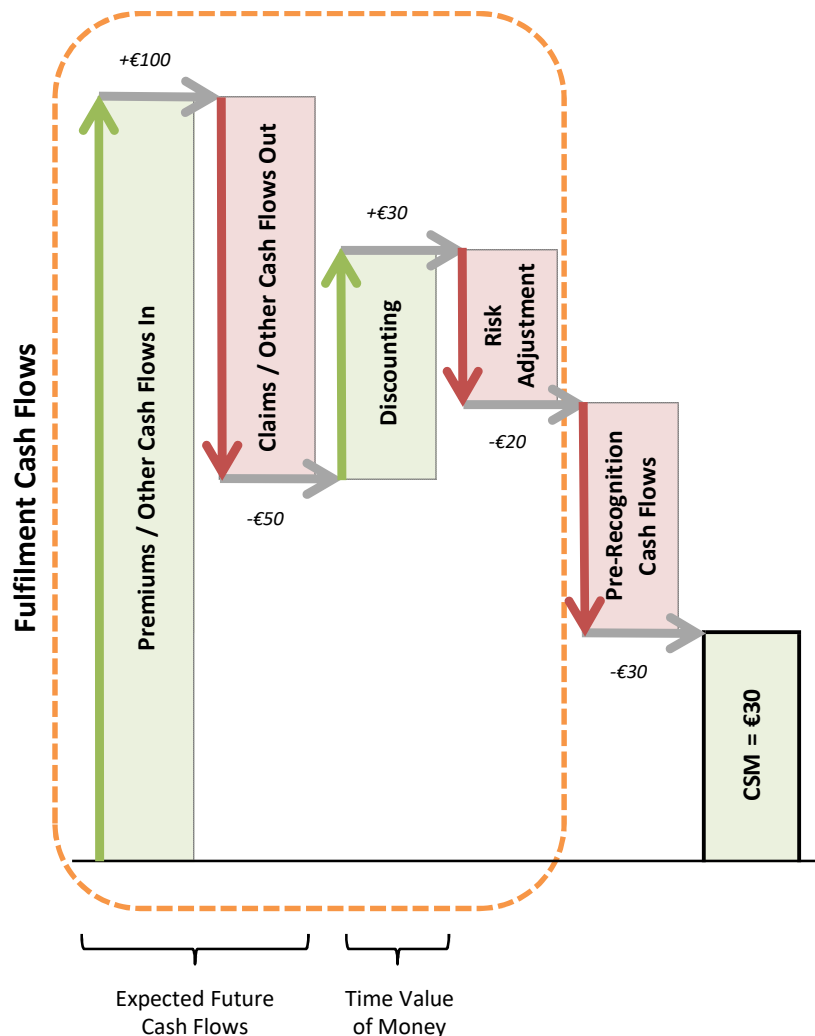
- **Variable Fee Approach (VFA)** determines the insurance contract liability via component building blocks.





CSM – Initial Recognition

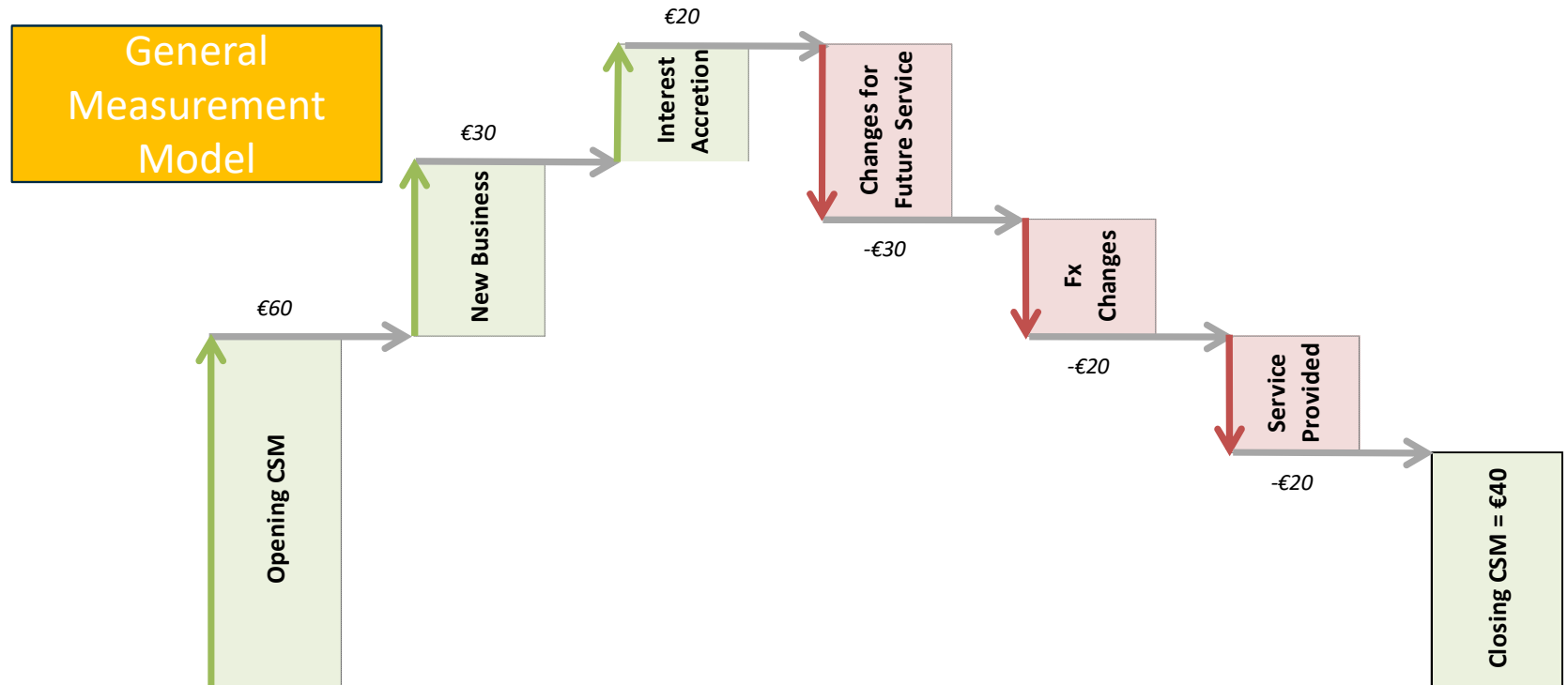
- CSM on initial recognition offsets risk-adjusted profits for the group.



- Expected cashflows @ best estimate assumptions.
 - Total inflows of 100 including entity's expected share of the underlying, outflows of 50.
 - Excluding time value of money.
- Time value calculated @ current discount rates.
 - The impact overall was positive 30.
 - Could be positive / negative depending on the cashflow pattern.
- Risk adjustment calculated using one of the methods described previously.
 - The impact was negative 20.
- Other cashflows not included in the FCFs included such as pre-recognition cashflows:
 - Attributable acquisition cash flows
 - Other day 1 cash flows
- Risk adjusted profit for group = 30, so a CSM of 30 is generated to offset this.



CSM – Subsequent Measurement **GMM**



Graphical illustration of subsequent measurement of CSM over a period under **GMM**:

- New Business - only occurs when group is still forming an annual cohort
- **Interest accretion** on the CSM balance based on a “**locked-in**” rate.
- **Changes for future services:**
 - Do **not** include changes due to **financial risk** or changes for past/current service
 - Are measured at “**locked-in**” rate
- Closing CSM represents the remaining risk-adjusted profits on the group which relates to future service



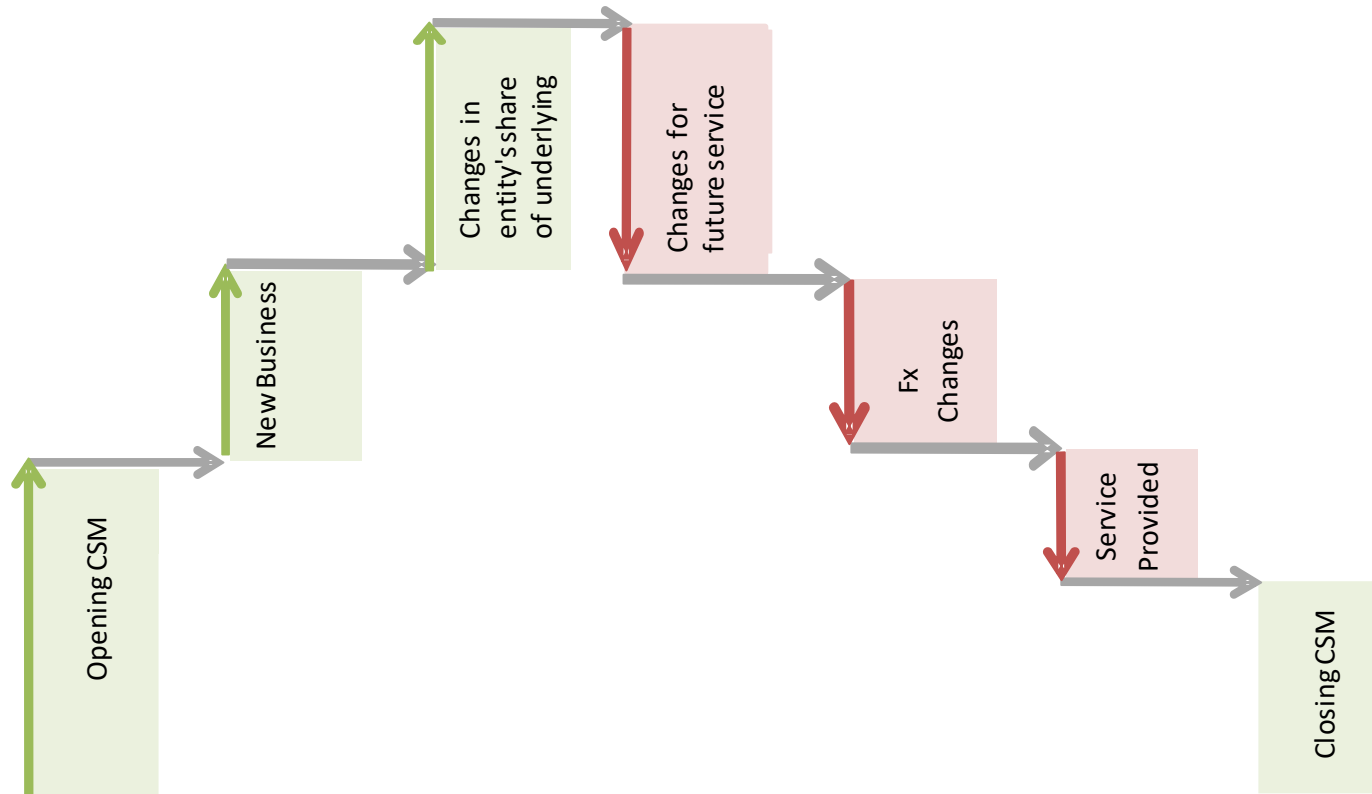
Variable Fee Approach – Subsequent Measurement

- Comparison of subsequent measurement of CSM under GMM vs VFA

Subsequent measurement of CSM	General Measurement Model	V	Variable Fee Approach	Comments
	New Business	✓	New Business	Both models adjust the CSM for new business added in the period
	Exchange Rate Movements	✓	Exchange Rate Movements	Both models adjust the CSM for the impact of changes in exchange rates
	Cannot go negative	✓	Cannot go negative	The CSM cannot go negative for GMM or VFA. Movements in excess of the CSM impact the P&L and are tracked as a loss component
	Amortisation of CSM into P&L	?	Amortisation of CSM into P&L	Both amortise for insurance services. VFA includes “investment-related” vs. GMM “investment return” services. Not clear if these achieve the same result.
	Interest accretion at locked in inception rates	✗	No explicit interest accretion	CSM in GMM is increased for interest at rates locked in from initial recognition. CSM in VFA is adjusted for changes in the effect of discounting on FCFs.
	Changes in FCFs for future service exclude financial	✗	Changes in FCFs for future service include financial	For VFA, changes in FCFs due to discount rates and financial risks relate to future service and adjust the CSM. The GMM does not include these.
	Component movements of CSM reported separately	✗	Some/all of component movements can be combined	Under the GMM, each component of the subsequent measurement of the CSM must be reported separately. Under the VFA some/all of them can be combined.
	No further exceptions for adjustment of CSM for future service	✗	Some exception permitted where risk mitigation in place which affects the P&L	Under the VFA, an exception is permitted to not allocate a change in future service to the CSM where risk mitigation is in place which impacts P&L



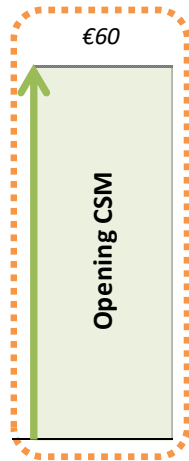
CSM – Subsequent Measurement VFA



- Graphical illustration of subsequent measurement of CSM over a period under VFA.
- Note that an entity is not required to identify the adjustments separately when applying VFA, so may determine a combined amount for some or all adjustments.



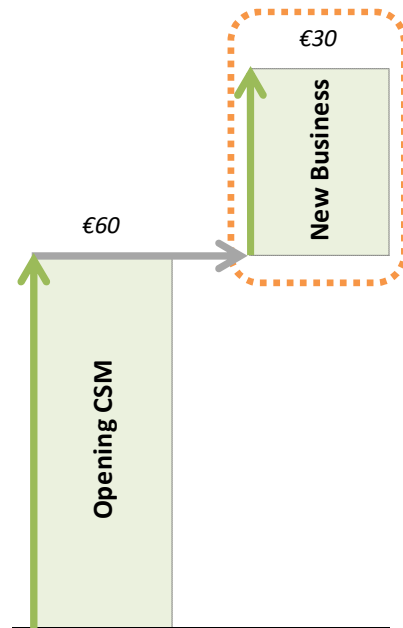
CSM – Subsequent Measurement Example



- The opening CSM balance is the closing CSM balance from the previous reporting period.



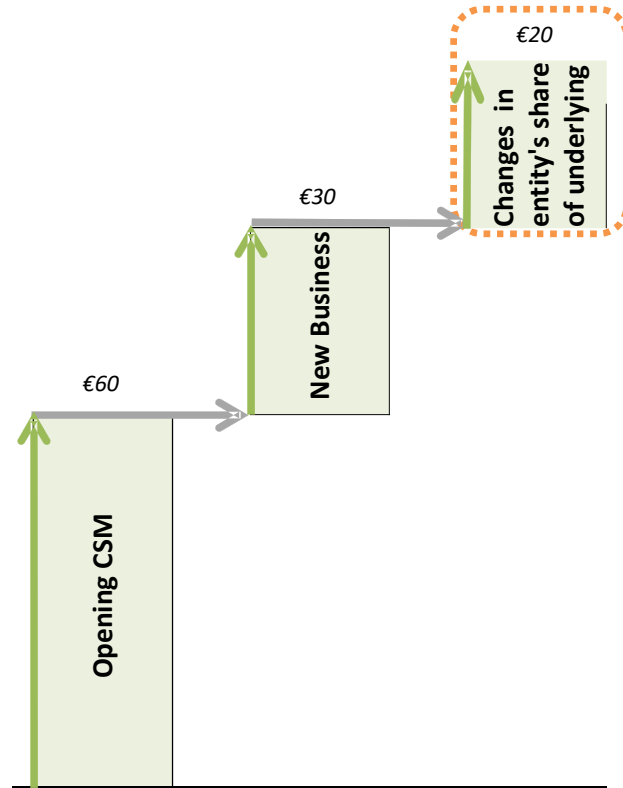
CSM – Subsequent Measurement Example



- The CSM for new business recognised during the period is added.
- This is measured as described previously.
- Only occurs when group is still forming an annual cohort.



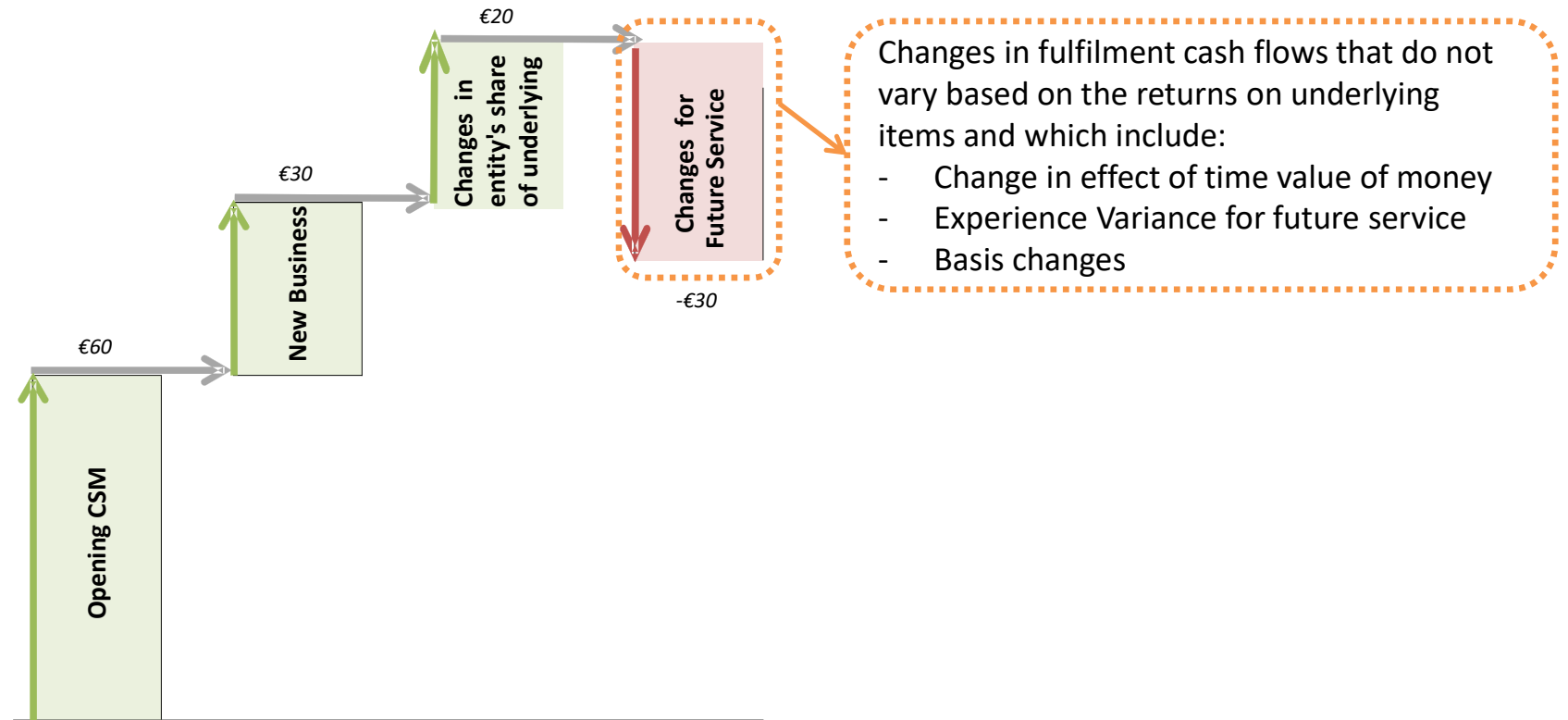
CSM – Subsequent Measurement Example



- The change in the amount of the entity's share of the fair value of the underlying adjusts the CSM (subject to CSM being floored at a minimum of nil).
- The change in the obligation to pay policyholder an amount equal to the fair value of the underlying items does not relate to future service and does not adjust the CSM.



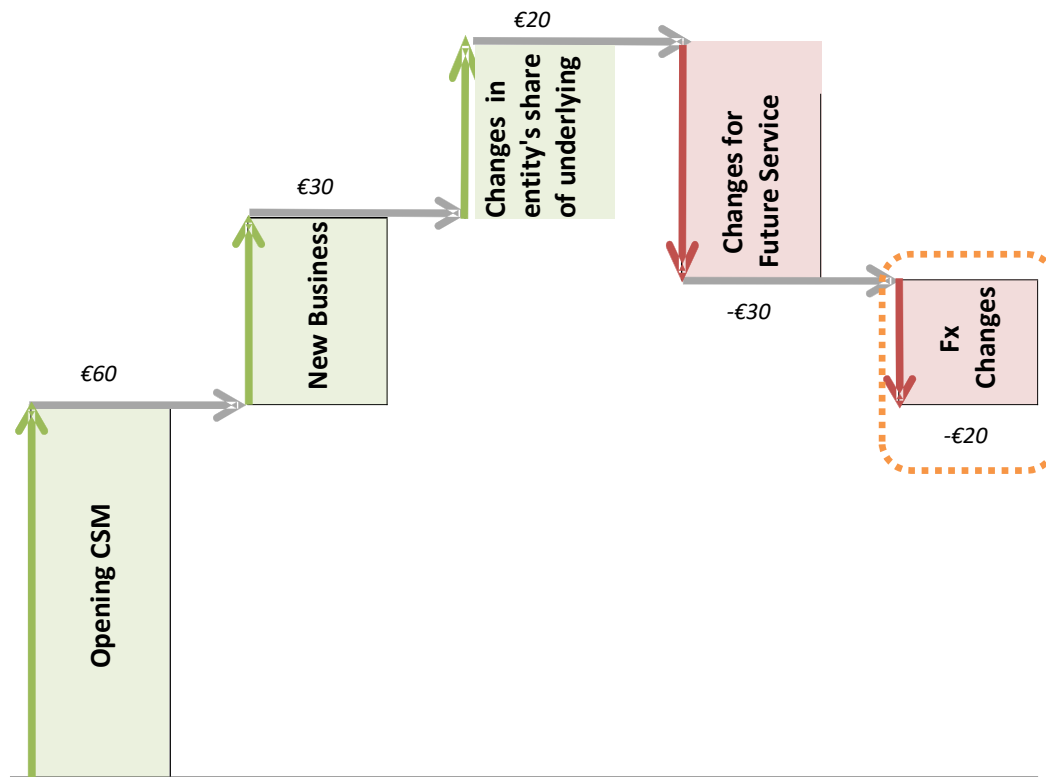
CSM – Subsequent Measurement Example



- The CSM is adjusted for changes in the fulfilment cash flows that relate to future service that don't vary based on the returns on the underlying items.
- This includes changes in effect of time value of money and financial risks (not arising from underlying) as these relate to future service.
- Other changes in the FCFs are assessed similar to the GMM to determine if they relate to future service, but the impact of those changes is measured at current rates.
- This is to reflect the nature of the entity's compensation for these products which is inherently variable.



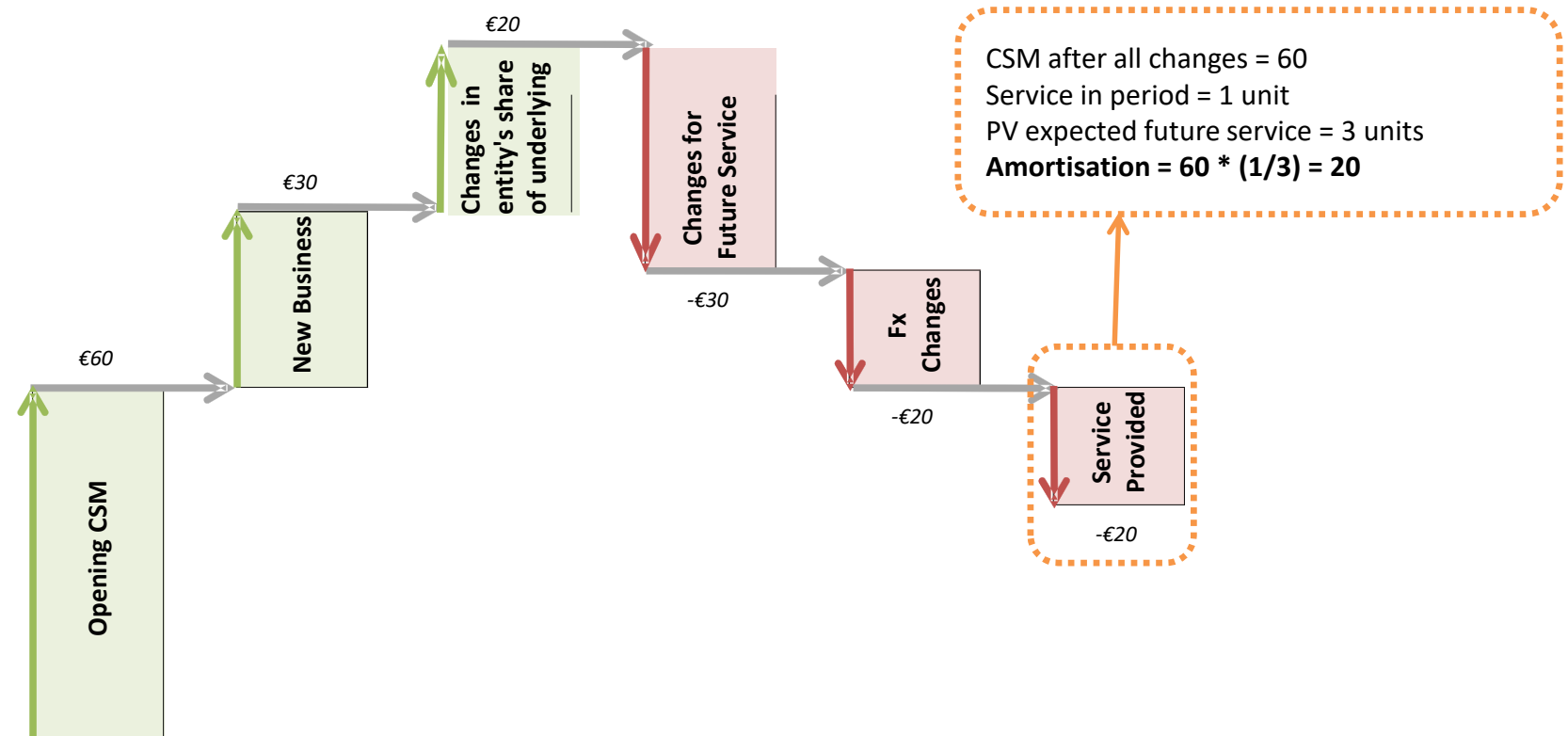
CSM – Subsequent Measurement Example



- Update for the effect of any currency exchange differences on the CSM



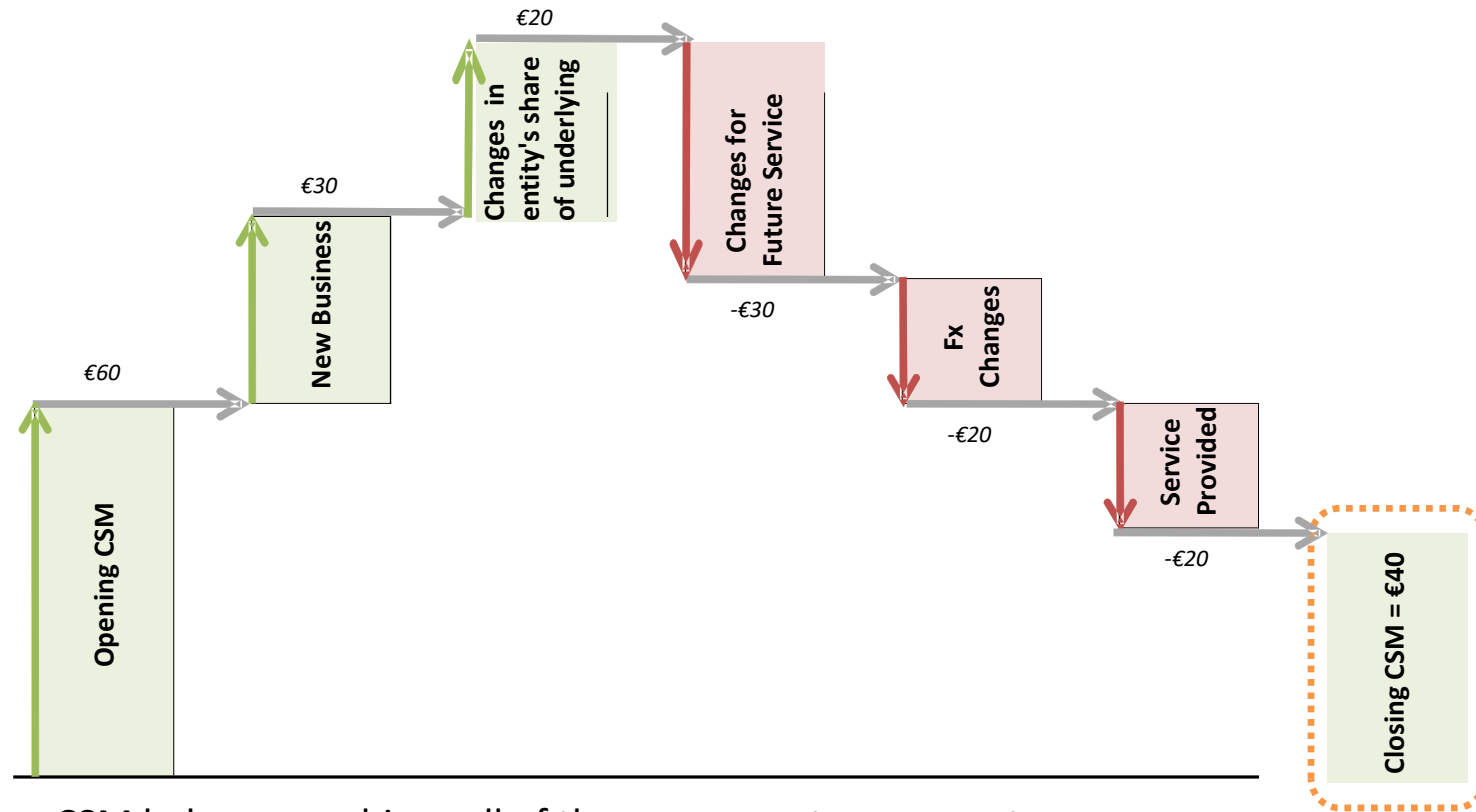
CSM – Subsequent Measurement Example



- The total CSM after all changes is aggregated. This balance is then amortised for insurance and investment-related services provided in the period. The amount amortised is released into the P&L as profits recognised.
- Different methods can be used to recognised service provided, e.g.:
 - Reflect policyholder benefits e.g. could be max of account value and sum insured now vs future (investment-related services)
 - Policy count in period vs. all future expected policy counts
 - Can be discounted or undiscounted



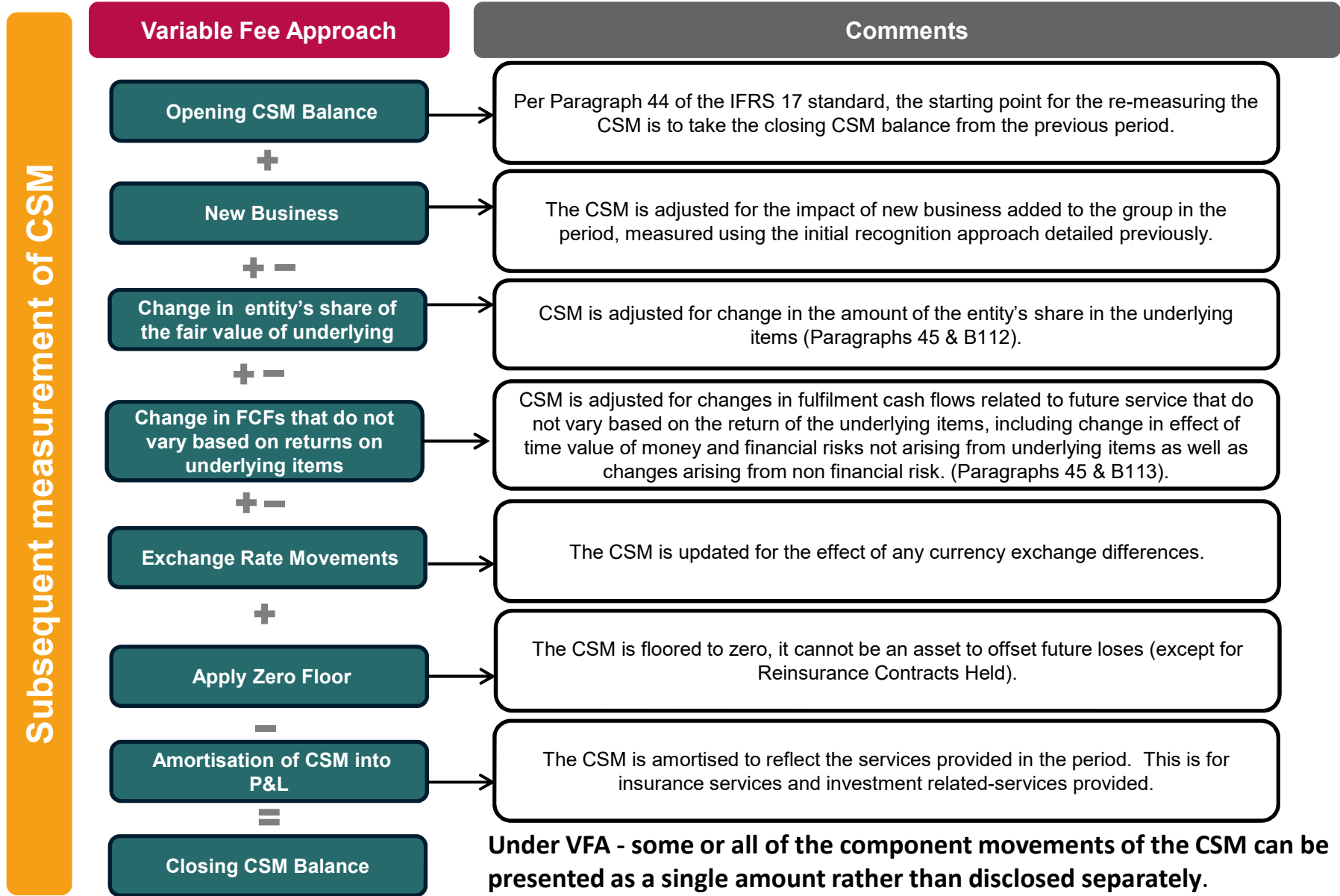
CSM – Subsequent Measurement Example



- Closing CSM balance combines all of the component movements.
- This represents the remaining risk-adjusted profits on the group which relates to future service
- This will be released as profit in the future as the service is provided.



CSM – Subsequent Measurement Summary



Subsequent measurement of CSM



Loss Component

- CSM only for deferral of future risk adjusted profits.
- If losses identified, they are immediately recognised in P&L.
- These losses are tracked as a “loss component”. Group can only have a CSM or a Loss Component at any one point in time, but can move between both regularly.

When is Loss Component generated?

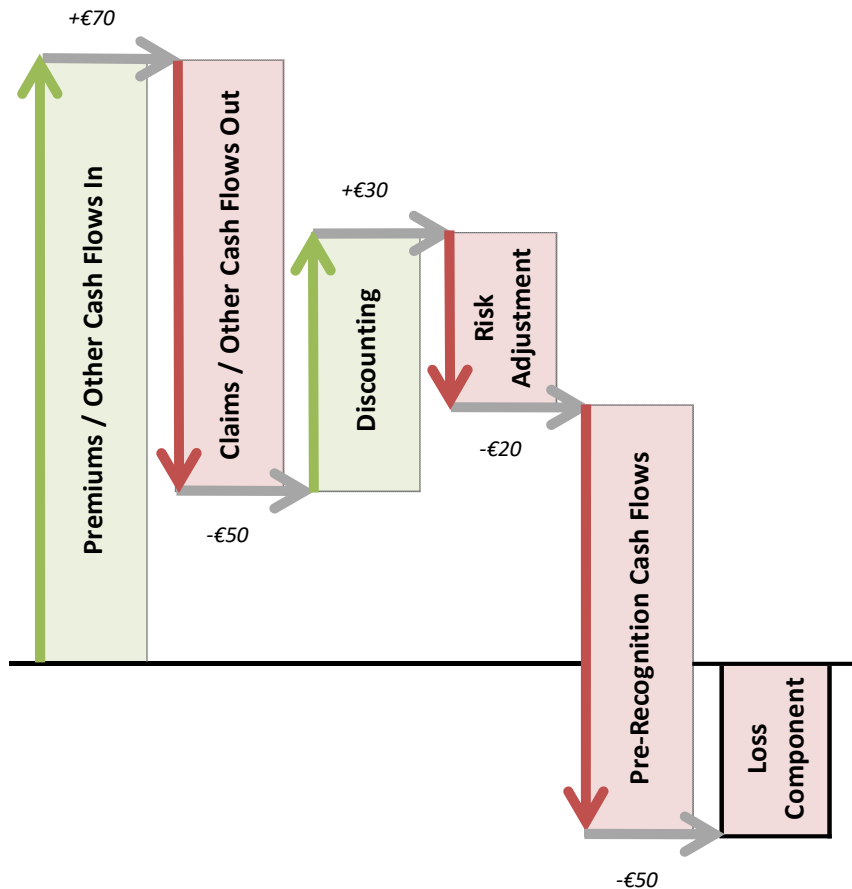
- On initial recognition: Group FCFs + pre-recognition cashflows are negative. This would likely form an “onerous group”
- On subsequent measurement: Group had CSM, but due to adjustments, e.g. a significant negative basis change, now viewed as loss making. This could be for an “onerous” or “non-onerous” group.

Note: Loss component not necessarily negative equity impact. The risk adjustment also represents unearned profit (compensation for risk) and when released without any adverse experience, may exceed the loss component.

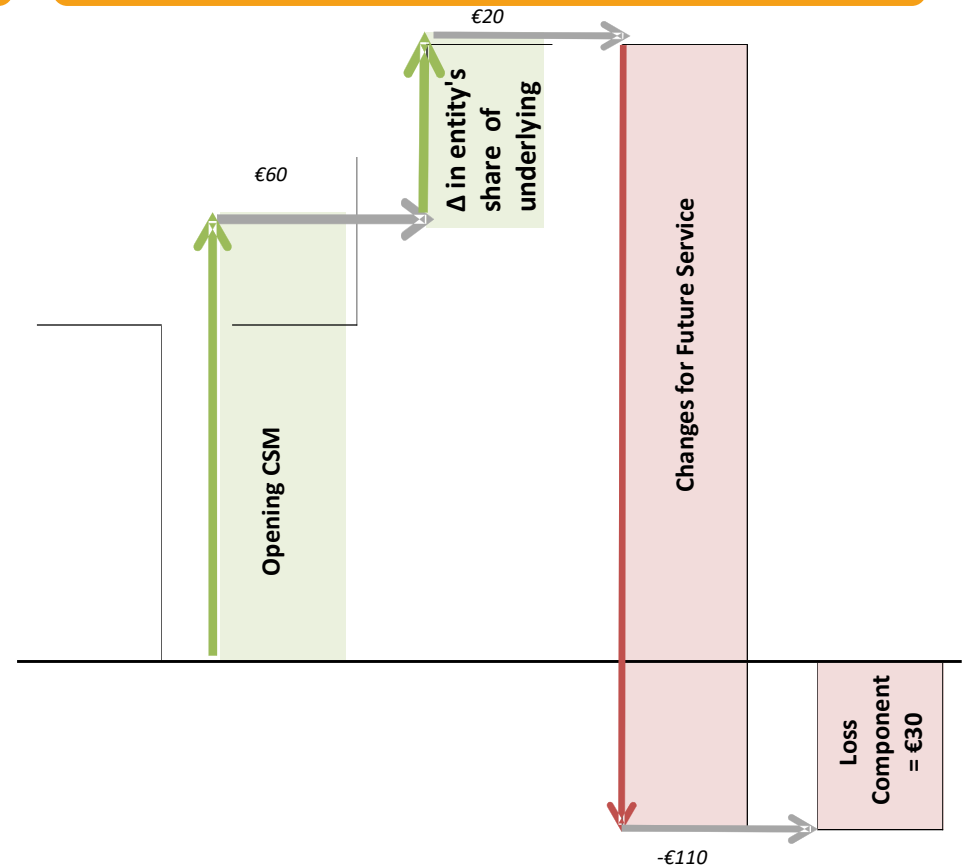


Loss Component - Examples

Loss Component on Initial Recognition



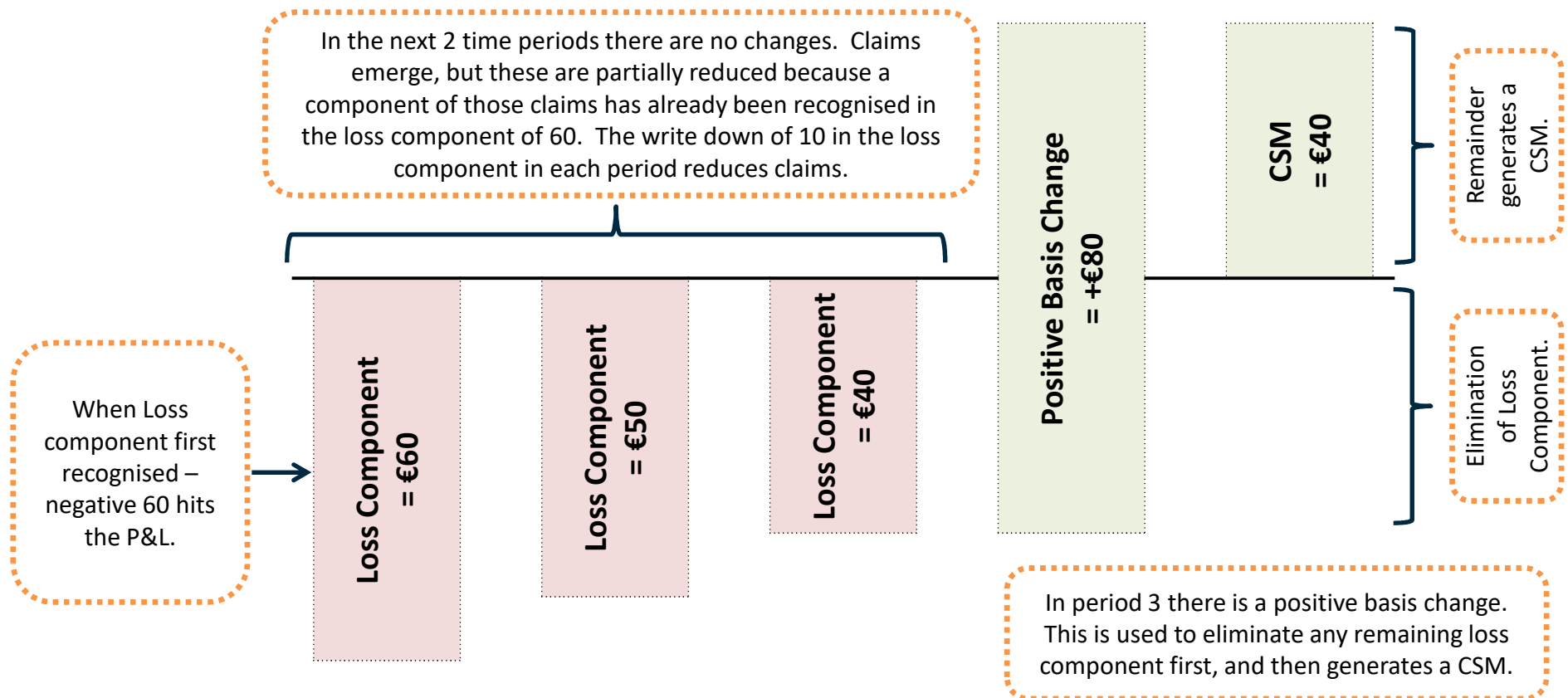
Loss Component on Subsequent Measurement





Tracking the Loss Component

- Once recognised, the loss component is tracked over time:
 - To monitor potential subsequent positive developments and know if/when to (re-)establish a CSM
 - Presentation of revenue and expenses in the P&L needs to be adjusted for any losses already recognised
 - Loss component needs to be allocated in each period for presentation of revenue and expenses in the financial statements.
 - This can follow a similar method to CSM, or use other methods





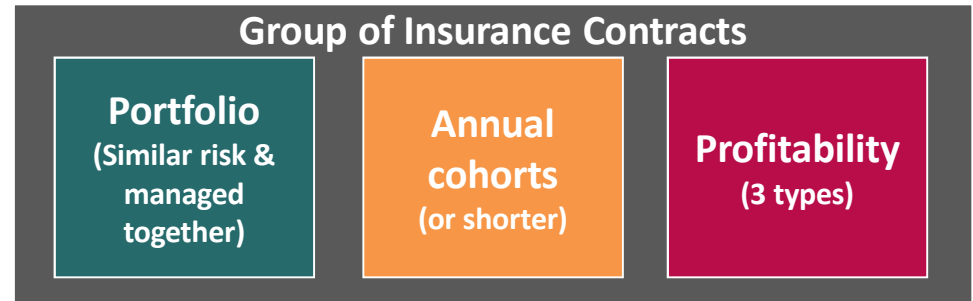
Profit Emergence under IFRS 17

- Profit emergence for a group of contracts under IFRS 17 comes from several sources including
 - Release of risk adjustment – the “entity’s compensation for accepting non financial risk”
 - Release of CSM – the remaining risk-adjusted profit on the portfolio
 - Experience variance “noise”
- An illustrative example of VFA compared to GMM follows.
- The following slides provide a summary of impact of level of aggregation and coverage units. More detailed examples of impact of level aggregation and choice of coverage units were provided in the Deeper Dive IFRS 17 at April 2019.



CSM – Level of Aggregation impact

- The CSM is measured for a group of insurance contracts.
- Once recognised the risk-adjusted profitability (excluding non-attributable expenses) in that group establishes a CSM and is released into the P&L over the period services are provided **for the group collectively**.
- Different products in a group may have significantly different profitability per coverage unit
 - **The profit release profile may not look sensible.**
- IFRS 17 permits an entity to create groups more granular than specified above (criteria in Paragraph 21)
 - Forming more groups may improve profit emergence, but it will also have systems and data storage impacts as well.



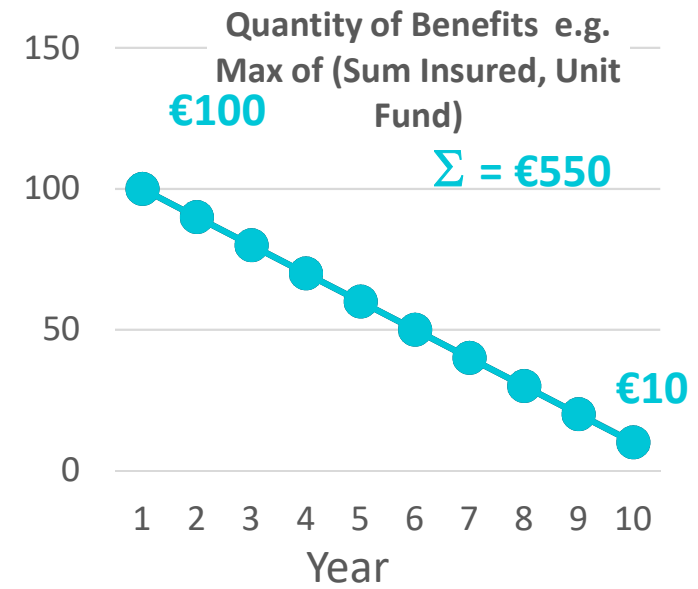


CU – Identification & Quantification

“Coverage units” establish the amount of the CSM recognised in P&L in the period for a group.

Key Aim?	Measure “service”	<ul style="list-style-type: none"> • “Service” is the insurer standing ready to pay claims. • Challenge is the variety of benefit types, benefit amounts, remaining term, claim likelihood, profitability ... etc within a <u>group</u> of contracts. • Judgement and estimates, applied systematically and rationally. • CSM amount is allocated equally to each coverage unit • Not expected average claims cost or claim likelihood!
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How?	Quantity of Benefit	<ul style="list-style-type: none"> • Amount that can be claimed by a policyholder • Variability across periods e.g. if max benefit decreases over time.
	Expected coverage duration	<ul style="list-style-type: none"> • Term of remaining coverage, adjusted for expected decrements.





CU – Other Considerations

<p>Not Valid</p>	<p>Some notable aspects likely not appropriate</p>	<ul style="list-style-type: none">• Cashflows – unless demonstrate that reflective of service rather than expected claims.• Premiums – not allowed unless reasonable proxy for service in period. <p>(For example not ok if: timing difference premium versus service; premiums more reflect different probability of claims; premiums more reflect different profitability.)</p>• Entity’s asset performance influence (if no investment component).• Any approach where no allocation of CSM to a period where entity is standing ready to meet claims.
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CU – Recognition of CSM in P&L

Ongoing	Re-assessment	<ul style="list-style-type: none">• At end each period (before any CSM allocation for the period), reassess the expected coverage units and duration.• Re-allocate CSM equally to each coverage unit (in current period and future periods).
P&L	Recognise CSM	<ul style="list-style-type: none">• For each period, recognise the amount of CSM (for the group) for coverage units allocated to that period.
Disclosure	Coverage units relevant	<ul style="list-style-type: none">• Explanation of when entity expects to recognise the CSM in the future (either via time bands, or qualitative info)• General requirement to disclose significant judgements, proposed amendment to ED includes approach to relative weighting of insurance and investment-related service.



Illustrative Example – GMM vs VFA

- **Illustrative example** showing explicit interest accretion under GMM vs. implicit interest accretion under VFA and the impact of a financial market variance on CSM. Assumes entity accounting fair value through P&L.
- To simplify illustration and does not include all elements required for VFA eligibility criteria.
 - 10 year wealth management product investing €105,000, GMDB 105% of premium.
 - Policy will mature at end of 10 years and be paid fund value.
 - Allocation to fund €100,000, fund grows at expected rate of 5%.
 - Market consistent valuation and all cash flows are fund related (or vary with markets), so discounted at 5% (MC stochastic valuation for GMBD).
 - Charge of 2% per annum in arrears, expected deaths 1% per annum in arrears.
 - Coverage units assume equal service each period.
 - CSM = €14,020.

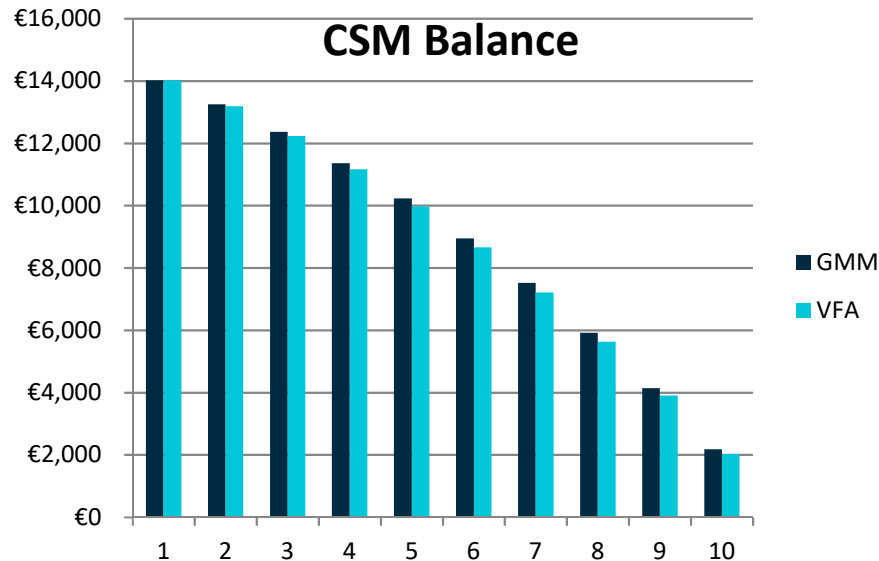
Initial Recognition	
Premium	€ 105,000
Allocation to Fund	-€ 100,000
Acquisition Expense	-€ 1,000
NPV Charges	€ 17,520
GMDB liability	-€ 5,000
Establish Risk Adjustment	-€ 2,500
CSM	€ 14,020

Unit Fund at initial recognition	
Unit Liability	-€ 100,000
Asset Value	€ 100,000



Illustrative Example – GMM vs VFA

Projected CSM profile expected to be similar if experience emerges as expected



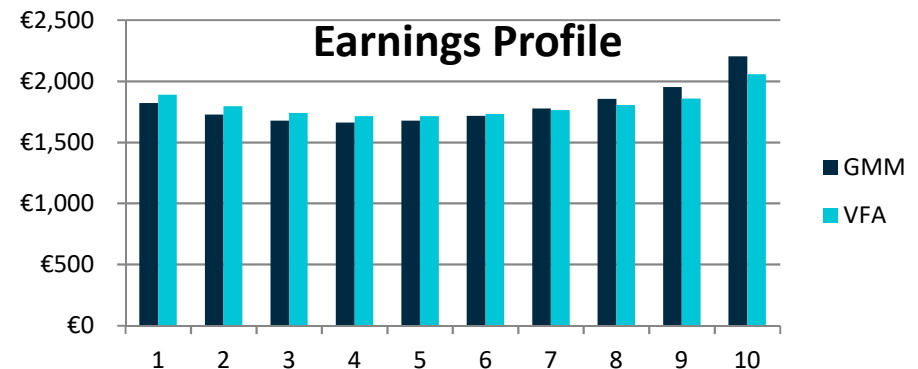
CSM balance run off differs slightly due to assumptions as:

Interest accretion applied to opening CSM balance under GMM, vs
Impact of change in entity's share (PV charges) and time value of money on FCFs on VFA.

Aggregate earnings of the life of the contracts must be equal.

Broadly similar recognition profile over the 10 years.

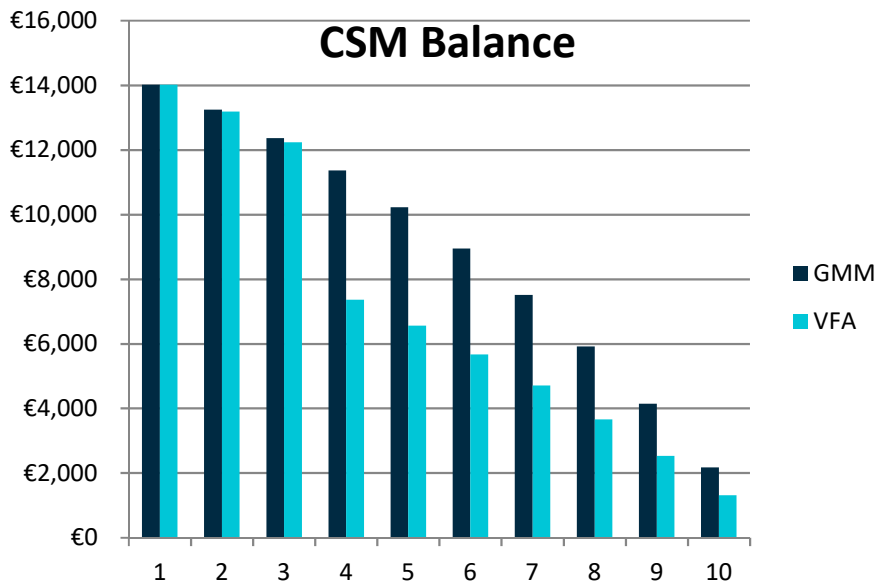
Expected earnings include a risk adjustment release which is equal under both models.





Illustrative Example – GMM vs VFA

- In year 3, the return on the underlying items is -10%, whereas we expected +5%.
- Assume that the entity does not hedge/reinsure financial risk.

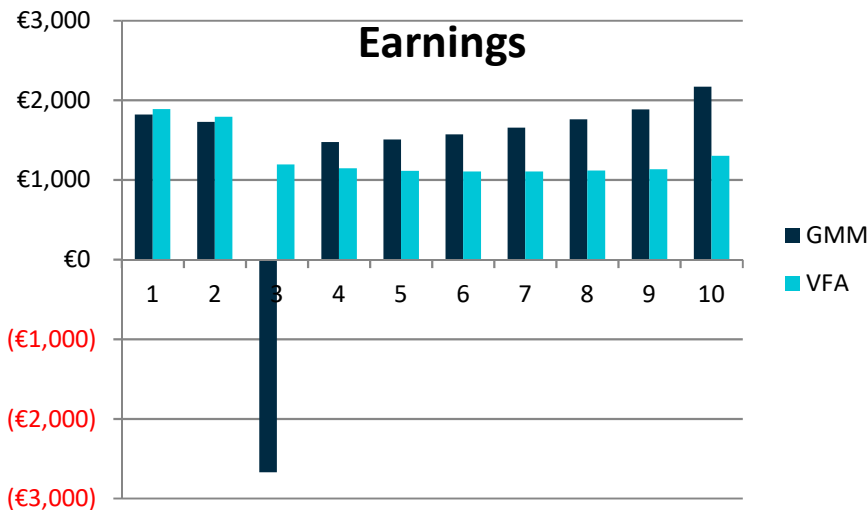


GMM approach:

- 1) CSM run off is not affected by financial risk (same run off profile as base scenario).
- 2) Year 3 earnings loss driven by impact of market risk on liabilities.

VFA approach:

- 1) CSM balance drops as it absorbs impact of market risk on liabilities.
- 2) Earnings drop reflecting lower CSM balance to be amortised, but remain relatively stable over the remaining term.



...but what if the entity has hedged/reinsured financial risk?



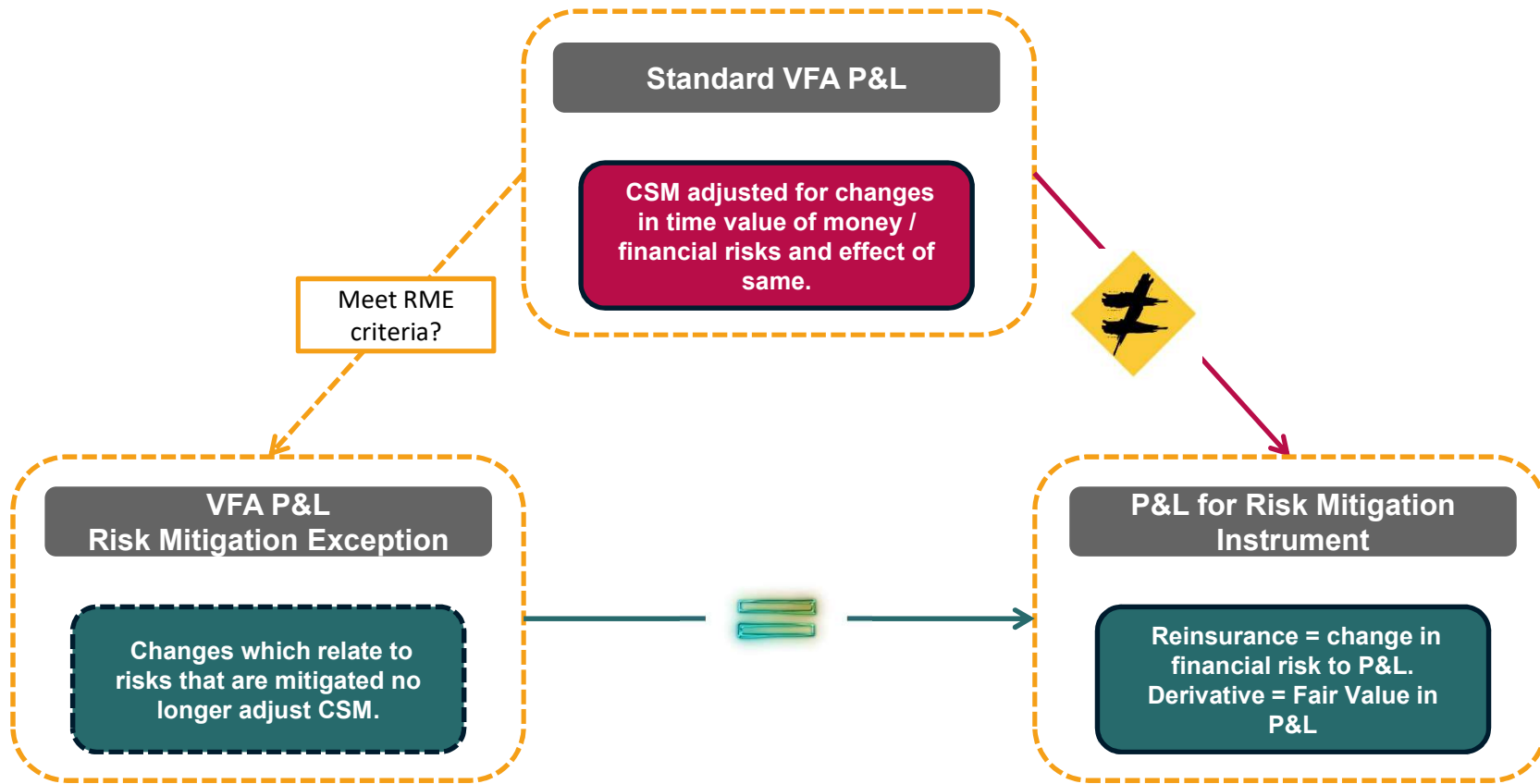
Variable Fee Approach – Risk Mitigation Exception

- **Risk Mitigation Exception:** In general, as we have seen changes related to future service adjust the CSM including changes in financial risk and the effect of time value of money.
- If an entity is hedging or reinsuring some of those risks, an accounting mismatch may be introduced.
 - Reinsurance cannot be measured using the VFA. Its CSM is not adjusted for changes in time value of money or financial risk – these changes hit P&L
 - Derivatives shown as fair value through P&L will hit P&L
 - Corresponding movements in underlying liability will affect CSM if VFA and do not hit P&L.
- VFA permits an entity to not adjust the CSM for some changes in future service under certain conditions
 - Risk mitigation must be a derivative or reinsurance held contract (proposed June 2019)
 - Previously documented risk management objective & strategy for products
 - Needs to be an economic offset
 - Credit risk isn't the main risk mitigated.
- In addition to proposed extension to reinsurance held, the June 2019 ED proposes:
 - Risk mitigation may be applied prospectively on or after transition date (if eligible)
 - Allows entity to apply fair value transition approach to VFA groups if entity chooses to apply risk mitigation option at transition date and meets risk mitigation eligibility criteria by transition date.



Variable Fee Approach – Risk Mitigation Exception

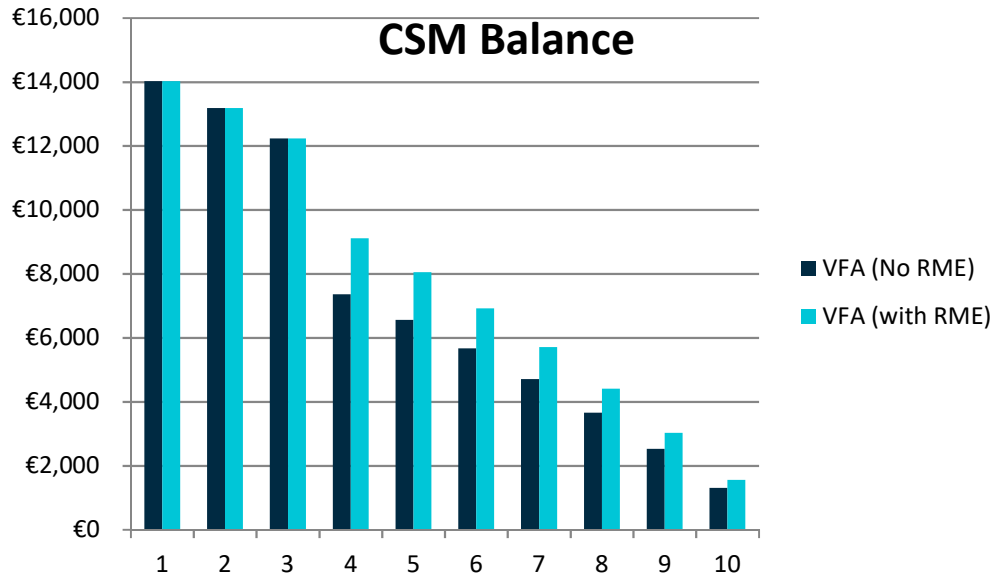
- Risk Mitigation Exception:** In general, under VFA model changes related to future service adjust the CSM including changes in financial risk / time value of money.





Illustrative Example – VFA – Hedged Risk?

- Now assume that the entity has hedged financial risk of GMBD.
- In year 3, the return on the underlying items is -10%, whereas we expected +5%.



VFA **without** risk mitigation exception:

- 1) CSM balance falls as it absorbs full impact of market risk on liabilities.
- 2) Earnings less stable (gain on hedge instrument in year 3)

VFA **with** risk mitigation exception:

- 1) CSM balance falls to a lesser extent as impact of on market risks that are mitigated no longer adjusts CSM.
- 2) Earnings appear more stable.



Agenda

- Introduction
- IFRS 17 Variable Fee Approach
- IFRS 17 Premium Allocation Approach

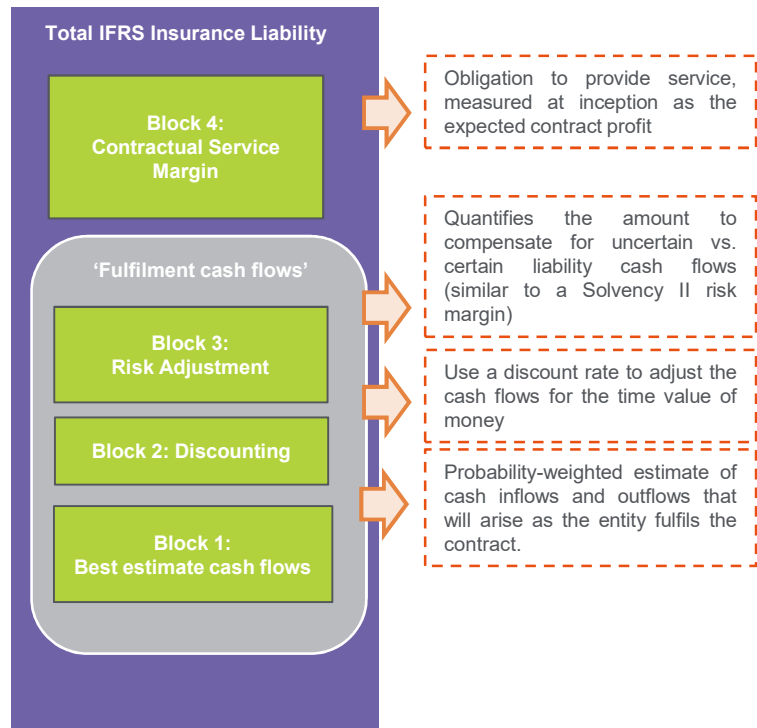


Introduction to the PAA

PAA vs BBA – What are the differences between the two models?

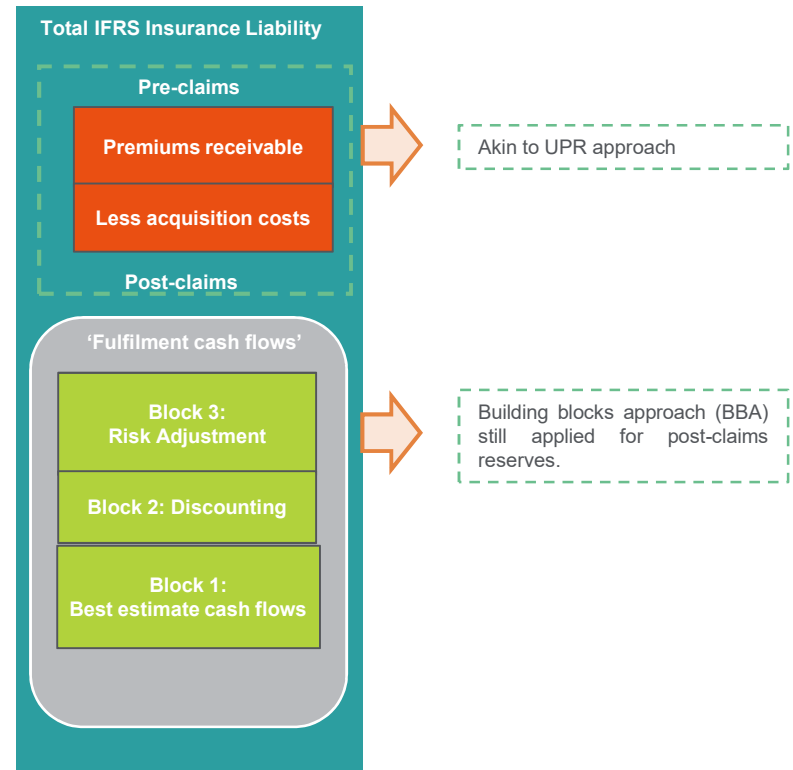
The general model: Building blocks approach (BBA)

Measurement objective is to quantify the notion of the insurer's "fulfilment of obligations under the contract"



Simplified approach: Premium allocation approach (PAA)

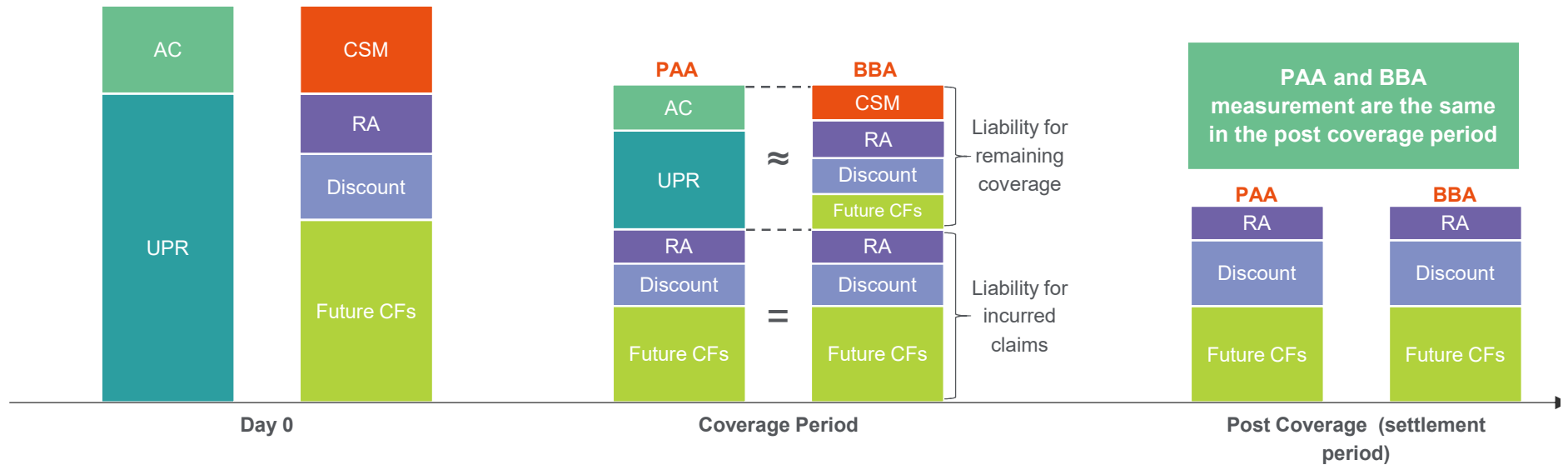
Simplified approach to measuring the value of insurance contracts if eligibility criteria is met.





Introduction to the PAA

PAA vs BBA – What are the differences between the two models?



Coverage Period	Premium Allocation Approach	Building Block Approach
Day 0	Includes concept similar to UPR and DAC (however new definition of directly attributable expenses).	Consists of discounted present value of future cashflows (including premium, claims and expenses), Risk Adjustment and Contractual Service Margin (CSM).
During the coverage period (e.g.: 6 months from inception)	Unexpired risk: consists of UPR and unamortised cost of acquisition cost. Expired Risk: modelled using Building Block Approach	Unexpired Risk: CSM is only applicable for unexpired risk and other elements are same as expired risk. Expired risk: modelled using BBA approach
End of coverage period	No unexpired risk and only future cashflows are modelled using BBA. At this point the technical provisions are equal between PAA and BBA.	No difference as compared to PAA.



Introduction to the PAA

PAA vs BBA – What are the differences between the two models?

Discounting

- If the coverage period is one year or less then the LfRC does not need to be discounted
- LfRC - Locked in yield curves
- If the time between the claim being incurred and the claim being settled is less than a year, then the LfIC does not need to be discounted
- Materiality?

Insurance Acquisition Cashflows

- Paragraph 59 (a): if coverage period of the contract is no more than a year then insurance acquisition costs can be recognised as they are incurred
- BBA: amortised in line with the CSM

Onerous Contracts

- No requirement for explicit onerous test at initial recognition
- Facts and circumstances
- Onerous Liability: LfRC under the PAA – LfRC under the BBA



Introduction to the PAA

PAA vs BBA – How is the LfRC under the PAA calculated?

PAA Insurance Liability

Liability at initial Recognition

- + Premium received at initial recognition
- Insurance acquisition cash flows
- + Any onerous contract liability recognised

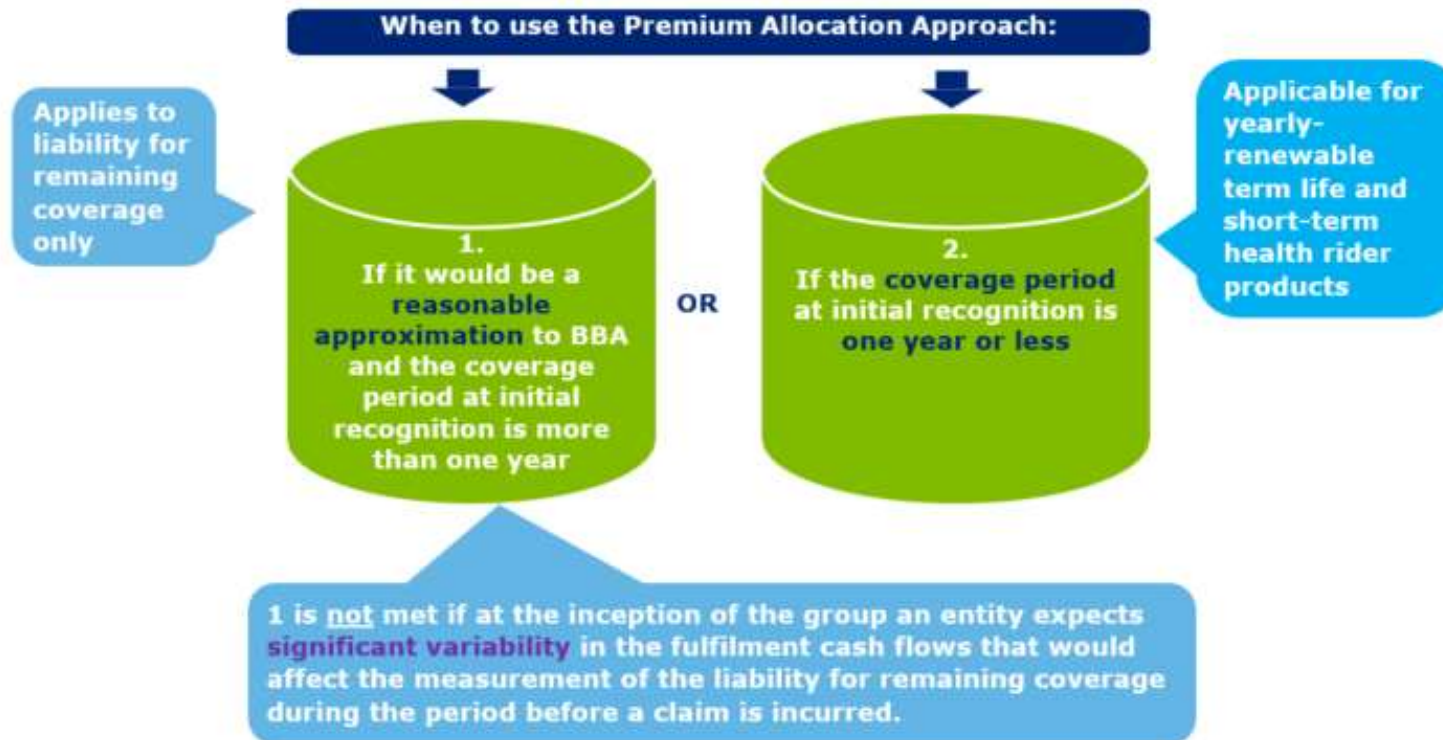
Liability at each subsequent reporting period

- + Previous Liability
- + Premiums received in the period
- Insurance acquisition cash flows
- + Any onerous contract liability recognised
- Amount recognised as insurance revenue for the coverage provided in that period
- + Amount recognised as the amortisation of acquisition cash flows
- + Any adjustment to reflect the time value of money (if applicable)



Introduction to the PAA

What are the criteria for using the PAA model?





PAA Eligibility Testing



Consideration of several factors:

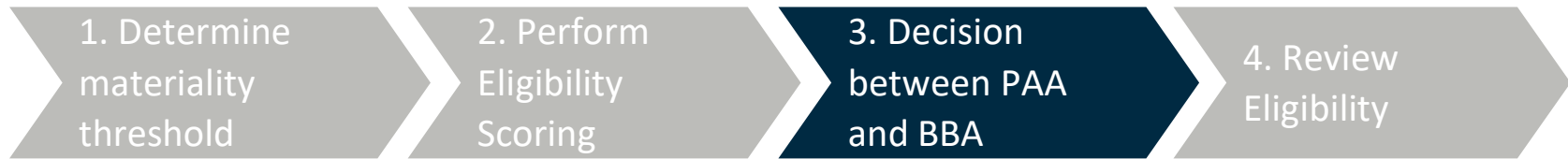
- Nature and size of business
- Length of cohort lifetime and volatility of claims experience
- Discussion with auditors
- Risk appetite of insurer
- Market trends



- Eligibility scoring is based on PAA/BBA differences of **Gross** Liability for Remaining Coverage (LfRC) at initial recognition from base and various sensitivity scenarios:
- Insurer will have to decide the 'passing' mark of scoring and weightage of each sensitivity scenario in scoring



PAA Eligibility Testing



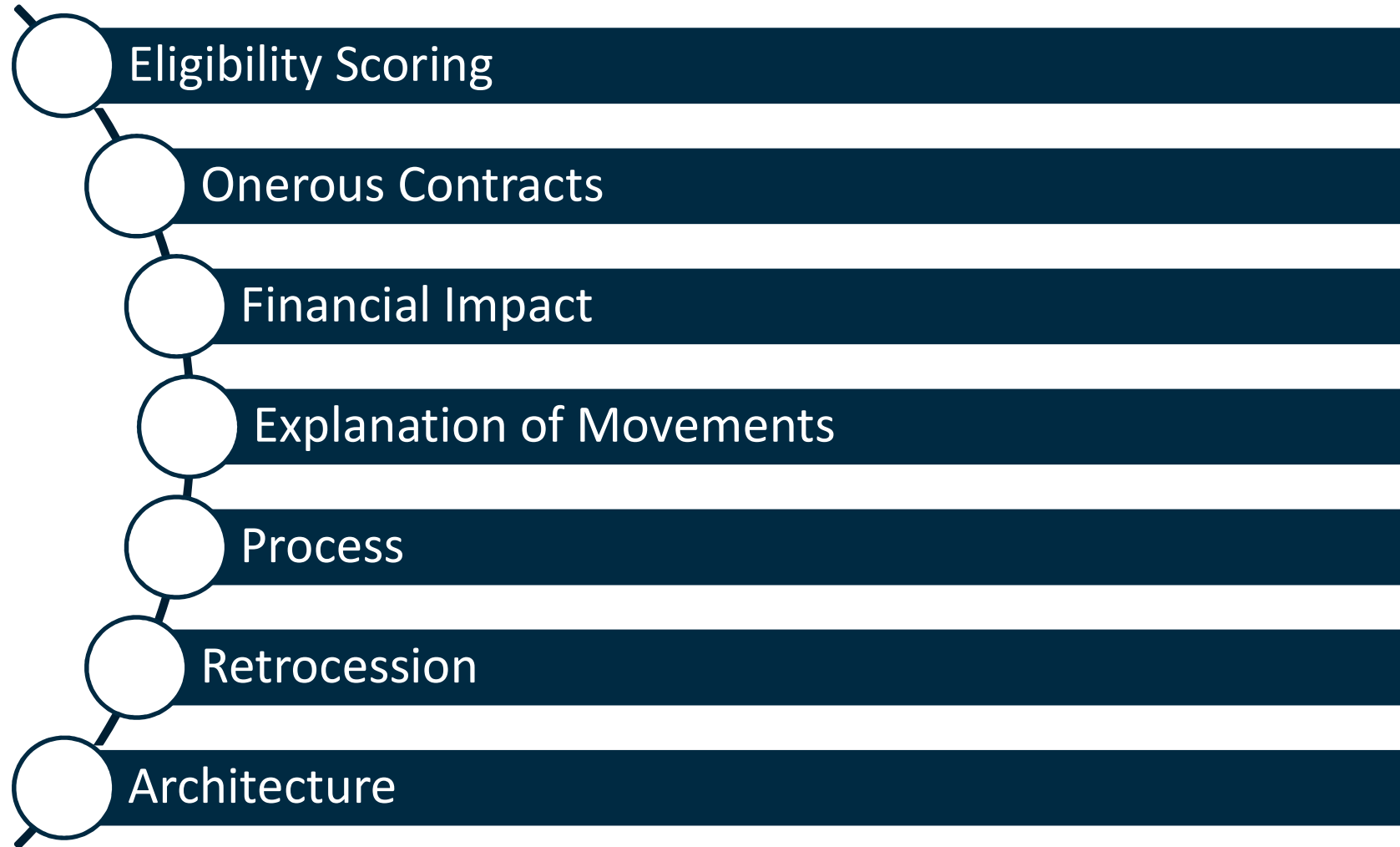
- Determine whether a cohort is eligible for PAA by referring to eligibility score and pre-determined 'passing' score
- What if the cohort is onerous at initial recognition?



- Does eligibility testing need to be carried out for new underwriting cohorts of the same product?
 - Use of sensitivity parameters



PAA Eligibility Testing





PAA vs BBA

Eligibility Testing

Implication:

- New process required to be set up for eligibility testing.
- Eligibility testing requires a projection of the LfRC under both the PAA and the BBA
- Materiality thresholds need to be set to quantify the % deviation allowed
Would be required to do on an ongoing basis, potentially annually.

Comparison with BBA:

- No eligibility testing required.
- Do not need to provide the auditors with the rationale for using the BBA rather than the PAA.

Financial Impact

Discussion

- Not expected to be any financial impact in applying the PAA versus the BBA.



PAA vs BBA

Onerous Contracts

Requirement:

- Can assume that contracts in a group are profitable unless facts and circumstances indicate otherwise.
- If a group of contracts becomes onerous during the coverage period => a loss component is required to be set up
- FCF's => risk adjustment for unearned exposure and cashflow functionality.
- Loss component

Implication:

- BBA mechanism required in the case where a group of contracts is onerous.
- Facts and circumstances to be defined.
- Ability of the selected architecture to store and apply the facts and circumstances?
- Two sets of data
- Requirement to track and unwind the loss component still applicable



PAA vs BBA

Process

Discussion:

- From a process perspective, the PAA may be easier to implement. However, this is assuming that the PAA can be applied to all of the non life business.
- What if one portion of the book is eligible for the PAA but not another portion?
- Does a significant portion of the book require eligibility testing?
- A process for calculating the LfRC under the BBA will be required for both eligibility testing and onerous loss component, even if the PAA model is selected.
- Is data/functionality required to produce the BBA already present?

Data Req's

Liability for Incurred Claims:

1. Same under both the BBA and the PAA, i.e. cashflows plus RA
2. Discounting – simplification met?

Liability for Remaining Coverage:

1. Additional BBA data elements : coverage units plus AoC for CSM
2. Simplification: Discounting
3. Eligibility Testing: in this case two sets of data are required
4. Onerous Testing: as per eligibility testing above.



PAA vs BBA

Understanding and explanation of movements

Requirement

- CSM is required to be rolled forward at each valuation date according to a prescribed formula.
- Disclosures for business using the BBA or the PAA discussed later.
- Disclosures relating to the CSM are not required for the PAA .
- The reconciliation between the opening and closing balance of the LfRC is required under both the BBA and the PAA.
- There are three additional disclosures required for the PAA.

Discussion

- Easier to explain the movements in the LfRC under the PAA
- However, IFRS 17 in general does require an education of all of your stakeholders. Consistency of logic.
- Can you leverage your engine to set up your AoC, reconciliations etc?



PAA vs BBA

Reinsurance

Requirements:

- Eligibility testing required to be performed separately for the reinsurance contracts.

Discussion:

- Do not want to end up in a scenario where the assumed business is applying one measurement model and the reinsurance business is applying another. What % of your reinsurance contracts have a coverage period of one year or less?
- What basis are your reinsurance contracts written on? How are they structured?

Architecture

Discussion

- Different feeds of data required to feed the IAS engine depending on whether it is the PAA or the BBA.
- Eligibility Testing/Onerous Loss Component: in these case two sets of data are required => change from usual quarter to quarter process
- Leveraging the SII process



PAA vs BBA

Factors impacting eligibility testing:

- Claims experience
- Duration and pattern of run off of liabilities
- Level of discount rate
- Amortisation pattern of CSM
- Risk adjustment

Which model are we seeing insurers choose, when they have the option?

- Non Life insurers
- Life insurers
- Composite insurers
- Reinsurers



PAA vs BBA

What are the issues that the PAA does not negate?

- Unit of account
- Contract boundaries
- Risk adjustment
- Reinsurance contracts – allowing for contracts that have not yet been written
- Offsetting of loss component
- Identification of directly attributable expenses
- Approach to discounting – unless simplification is met (future proofing?)

What are the issues that the PAA negates?

- CSM
- Coverage Units
- Risk adjustment for unearned exposure
- Explanation of movements between one reporting period and the next is easier



Disclosure Requirements – PAA vs BBA

What are the additional disclosure requirements required by the BBA versus the PAA?

An entity must disclose qualitative and quantitative information about:

1. Explanation of recognised amounts	The amounts recognised in F/S that arise from insurance contracts	New IFRS 17 requirements
2. Significant judgements	The significant judgements, and their changes	Some requirements brought forward from IFRS 4
3. Risks	The nature and extent of risks that arise from insurance contracts	Most requirements brought forward from IFRS 4



Disclosure Requirements – PAA vs BBA

What are the additional disclosure requirements required by the BBA versus the PAA?

Paragraph Number	Overview of Disclosure	Applicable to PAA?
97	Three additional disclosures for PAA	✓ Yes
98	Change in net carrying amount of contracts due to cashflows and income/expenses recognised	✓ Yes
99	Structure requirements	✓ Yes
100	AoC for LfRC, Loss component and LIC	✓ Yes
101	AoC for PVFCF, RA and CSM	✗ No
102	Objective	✓ Yes
103	Insurance Revenue and Insurance Service Expenses	✓ Yes
104	Split of change in future vs current vs past service	✓ Yes
105	Cashflows in the period, change in non performance risk, IFE	✓ Yes
106	Breakdown of LfRC into ISE/risk adjustment/CSM	✗ No
107	PvFCF, RA and CSM	✗ No
108	Contracts acquired and onerous contracts	✗ No
109	Recognition of CSM	✗ No

Key Points:

- The disclosures not applicable to the PAA mainly relate to the CSM.
- However the structure for producing these disclosures will already be set up in the CSM calculation engine
- Three additional disclosure required for the PAA that are not required for the BBA.
 1. Criteria satisfied
 2. Adjustment for time value of money and effect of financial risk
 3. Insurance acquisition cash flows



Disclosure Requirements – PAA vs BBA

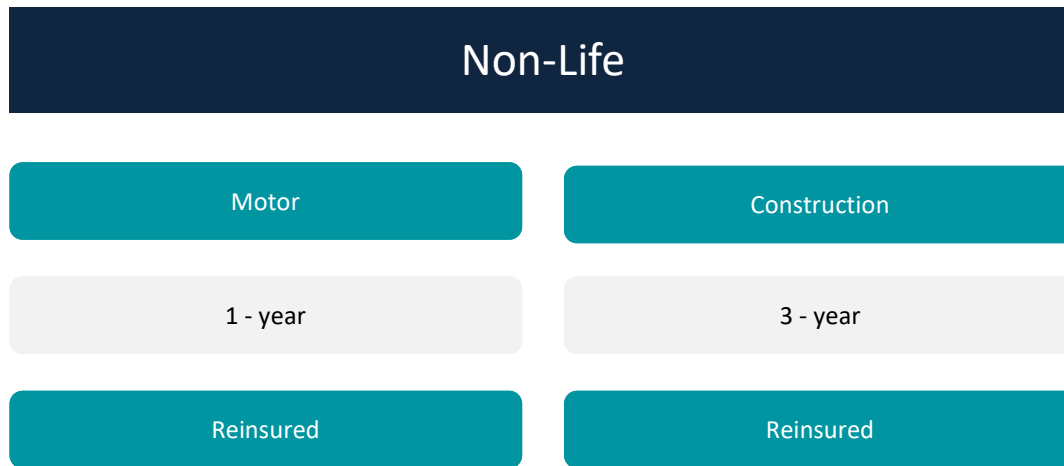
What are the additional disclosure requirements required by the BBA versus the PAA?

Source IASB Effects Analysis

Para 103	Para 100		Liabilities for incurred claims
	Excluding onerous contracts component	Onerous contracts component	
Insurance contract liabilities 20X0 ¹⁴	161,938	15,855	1,021
Insurance revenue ¹⁵	(9,856)		
Insurance service expenses	1,259	(623)	7,985
Incurred claims and other expenses		(840)	7,945
Acquisition expenses	1,259		
Changes that relate to future service: losses on onerous contracts and reversals of those losses		217	
Changes that relate to past service: changes to liabilities for incurred claims			40
Investment components	(6,465)		6,465
Insurance service result	(15,062)	(623)	14,450
Insurance finance expenses	8,393	860	55
Total changes in the statement of comprehensive income	(6,669)	237	14,505
Cash flows			
Premiums received	33,570		
Claims and other expenses paid			(14,336)
Acquisition cash flows paid	(401)		
Total cash flows	33,169	-	(14,336)
Insurance contract liabilities 20X1	188,438	16,096	1,190

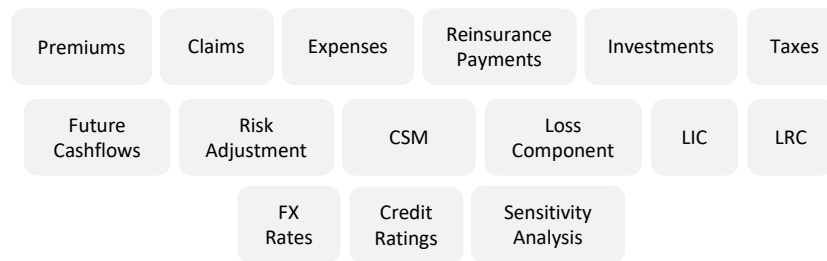
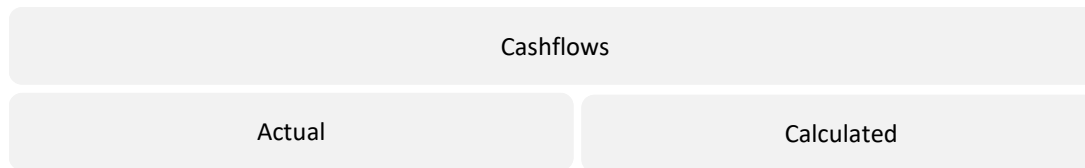
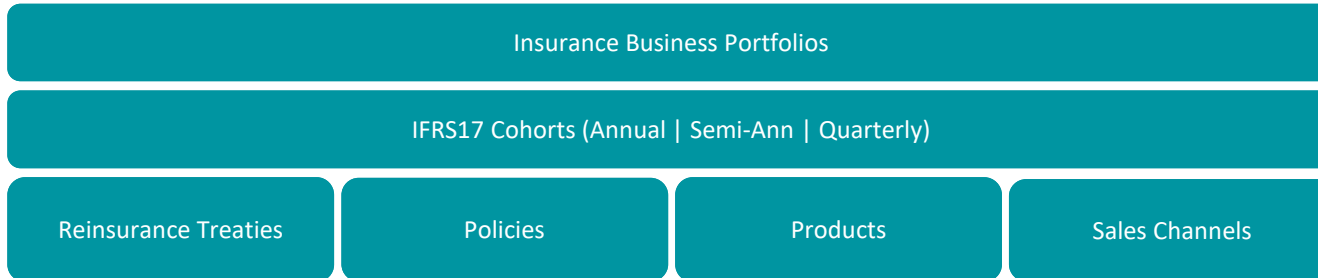


PAA Example





PAA Example





PAA Example

STEP 1:

Identify “Portfolios” ...

insurance contracts subject to **similar risks** and **managed together**:

- P1 - Motor
- P2 - Construction

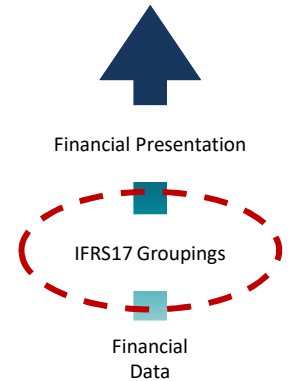
STEP 2:

Aggregate policies into “Cohorts”... based on **profitability** and **issuance date**:

Onerous Contracts	If facts and circumstances indicate so, then policies are marked as onerous.
Non-Onerous Contracts	Contracts that at inception have no significant possibility of becoming onerous.
	Other profitable contracts.

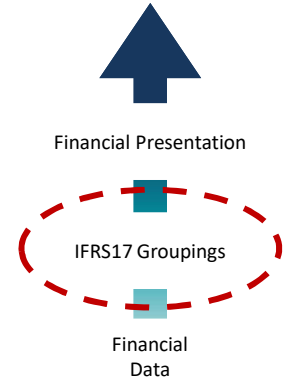
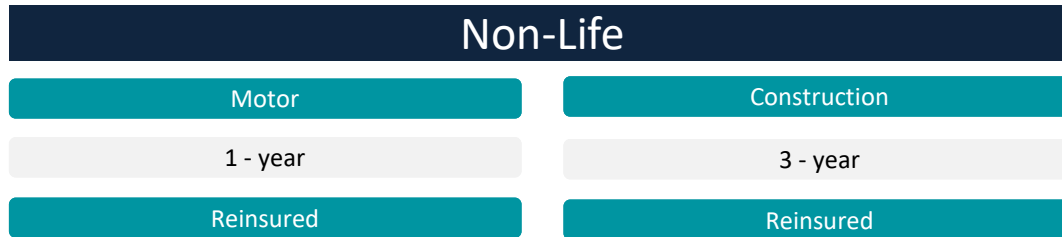
STEP 3:

If Reinsurance is used by the company then Cohorts must be created for reinsurance treaties too.



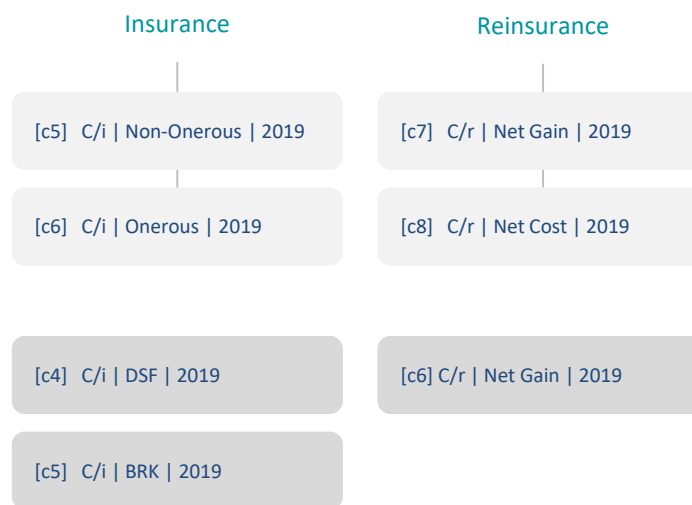
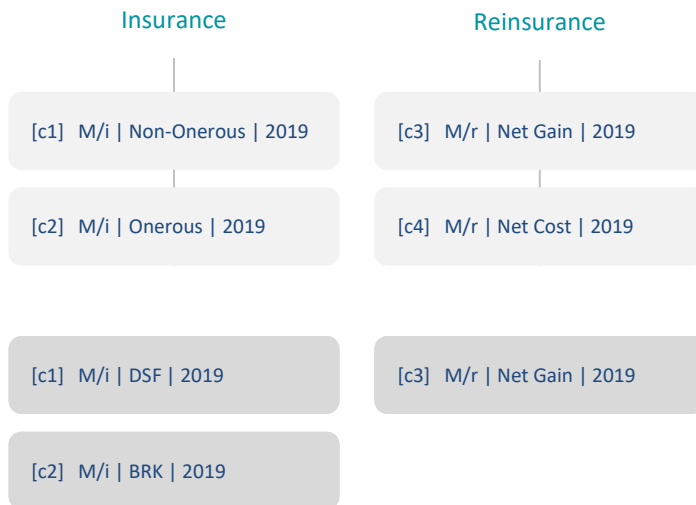


PAA Example - Cohorts



Motor

Construction



Unbundling?

Recognition Point?

Contract Boundary?

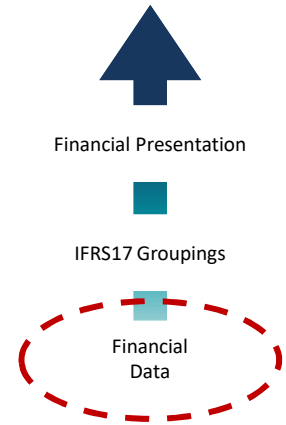
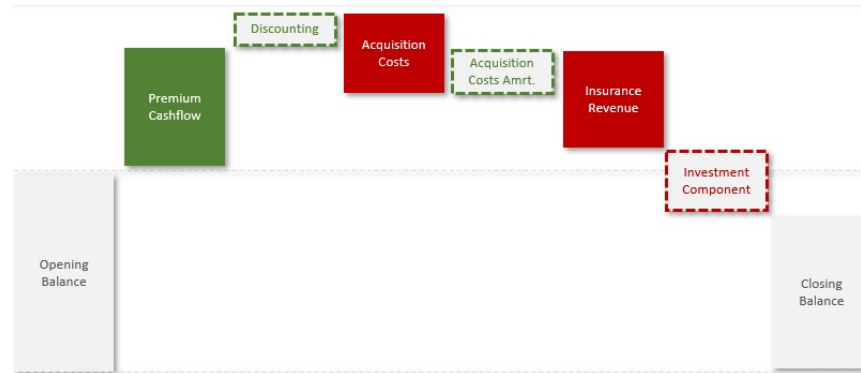
RI Cancellation?



PAA Example – LRC & LIC

1. By default, PAA uses the **'Passage of Time'** as coverage units
2. Unless release of risk during the coverage period differs significantly from the passage of time...

...use the **expected timing of incurred insurance service expenses.**



Non-Life Insurer, sells 1-yr Motor

Un-discounted CFs								
	Premium	Claims	Expenses	Acquisition Costs		Total		
	100,000	-	-	-	10,000	90,000		
Mar-19	-	-	5,000	-	1,250	6,250		
Jun-19	-	-	5,000	-	1,250	6,250		
Sep-19	-	-	5,000	-	1,250	6,250		
Dec-19	-	-	5,000	-	1,250	6,250		
	100,000	-	20,000	-	5,000	-	10,000	65,000

If Disc. Rates = 0% then the PAA and GMM give the same result for LRC

PAA - LRC									
	Opening Balance	Premium Cashflow	Discounting	Acquisition Costs	Acquisition Costs Amrt.	Insurance Revenue	Closing Balance		
Mar-19	-	100,000.00	-	-	10,000.00	2,500.00	-	25,000.00	67,500.00
Jun-19	67,500.00	-	-	-	-	2,500.00	-	25,000.00	45,000.00
Sep-19	45,000.00	-	-	-	-	2,500.00	-	25,000.00	22,500.00
Dec-19	22,500.00	-	-	-	-	2,500.00	-	25,000.00	-
									135,000

GMM - LRC					
	PVCF	RA	CSM	TOTAL	
	-	65,000	2,500	62,500	-
Mar-19	18,750	1,875	46,875	67,500	-
Jun-19	12,500	1,250	31,250	45,000	-
Sep-19	6,250	625	15,625	22,500	-
Dec-19	-	-	-	-	-
					135,000



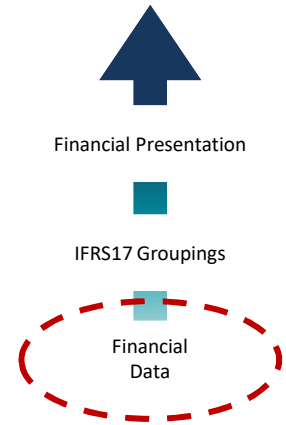
PAA Example – LRC & LIC

Non-Life Insurer, sells 3-yr Construction

Un-discounted CFs					
	Premium	Claims	Expenses	Acquisition Costs	Total
	100,000	-	-	30,000	70,000
Mar-19	-	5,000	1,250	-	6,250
Jun-19	-	5,000	1,250	-	6,250
Sep-19	-	5,000	1,250	-	6,250
Dec-19	100,000	5,000	1,250	-	93,750
Mar-20	-	5,000	1,250	-	6,250
Jun-20	-	5,000	1,250	-	6,250
Sep-20	-	5,000	1,250	-	6,250
Dec-20	100,000	5,000	1,250	-	93,750
Mar-20	-	5,000	1,250	-	6,250
Jun-20	-	5,000	1,250	-	6,250
Sep-20	-	5,000	1,250	-	6,250
Dec-20	-	5,000	1,250	-	6,250
Total	300,000	60,000	15,000	30,000	195,000

Discounted CFs					
	Premium	Claims	Expenses	Acquisition Costs	Total
	100,000	-	-	30,000	70,000
Mar-19	-	4,940	1,235	-	6,175
Jun-19	-	4,880	1,220	-	6,100
Sep-19	-	4,821	1,206	-	6,026
Dec-19	95,238	4,762	1,191	-	89,285
Mar-20	-	4,704	1,176	-	5,881
Jun-20	-	4,647	1,162	-	5,810
Sep-20	-	4,591	1,148	-	5,739
Dec-20	90,703	4,535	1,134	-	85,033
Mar-20	-	4,480	1,120	-	5,601
Jun-20	-	4,426	1,107	-	5,533
Sep-20	-	4,372	1,093	-	5,466
Dec-20	-	4,319	1,080	-	5,400
Total	285,941	55,478	13,874	30,000	186,589

PAA - LRC							
	Opening Balance	Premium Cashflow	Discounting	Acquisition Costs	Acquisition Costs Amrt	Insurance Revenue	Closing Balance
Mar-19	-	100,000	859	30,000	2,704	25,772	47,792
Jun-19	47,792	-	587	-	2,704	25,772	25,310
Sep-19	25,310	-	311	-	2,704	25,772	2,553
Dec-19	2,553	-	31	-	2,704	25,772	20,483
Mar-20	20,483	100,000	976	-	2,704	25,772	57,425
Jun-20	57,425	-	705	-	2,704	25,772	35,061
Sep-20	35,061	-	430	-	2,704	25,772	12,424
Dec-20	12,424	-	152	-	2,704	25,772	10,492
Mar-20	10,492	100,000	1,098	-	2,704	25,772	67,539
Jun-20	67,539	-	829	-	2,704	25,772	45,300
Sep-20	45,300	-	556	-	2,704	25,772	22,788
Dec-20	22,788	-	280	-	2,704	25,772	0
Total							285,218





PAA Example – Accounting

P&L

Insurance Revenue

Incurred Service Expense

Insurance Service Result

Investment Income

*Insurance Finance Expense

Profit / Loss

*Insurance Finance Expense

Total Comprehensive Income

B/S

Reinsurance contract assets

Insurance Contract Assets

ASSETS

Insurance contract liabilities

Reinsurance contract liabilities

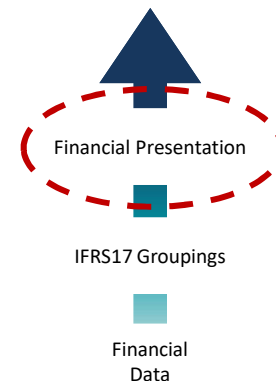
LIABILITIES

CF	Premiums received	Cash and cash equivalents	A	Dt	100,000
CF	Premiums received	Insurance contract liabilities	L	Ct -	100,000
CF	Acquisition cash flows	Insurance contract liabilities	L	Dt	30,000
CF	Acquisition cash flows	Cash and cash equivalents	A	Ct -	30,000
CF	Incurred directly attributable expenses	Insurance service expenses	P&L	Dt	1,250
CF	Incurred directly attributable expenses	Cash and cash equivalents	A	Ct -	1,250

LRC	Interest accreted to insurance contracts (LFRC; locked-in)	Insurance finance expenses	P&L	Dt	859
LRC	Interest accreted to insurance contracts (LFRC; locked-in)	Insurance contract liabilities	L	Ct -	859
LRC	Amortisation of insurance acquisition cash flows	Insurance service expenses	P&L	Dt	2,704
LRC	Amortisation of insurance acquisition cash flows	Insurance contract liabilities	L	Ct -	2,704
LRC	Insurance revenue - contracts measured under PAA	Insurance contract liabilities	L	Dt	25,772
LRC	Insurance revenue - contracts measured under PAA	Insurance revenue	P&L	Ct -	25,772

LIC	Incurred benefits (PVCF)	Insurance service expenses	P&L	Dt	5,000
LIC	Incurred benefits (PVCF)	Insurance contract liabilities	L	Ct -	5,000
LIC(RA)	Incurred benefits (RA)	Insurance service expenses	P&L	Dt	500
LIC(RA)	Incurred benefits (RA)	Insurance contract liabilities	L	Ct -	500

LIC(RA)	Incurred benefits (RA)	Insurance service expenses	P&L	Ct -	300
LIC(RA)	Incurred benefits (RA)	Insurance contract liabilities	L	Dt	300
CF	Claims paid	Insurance contract liabilities	L	Dt	5,200
CF	Claims paid	Cash and cash equivalents	A	Ct -	5,200





PAA Example – LRC & LIC

Primary Statements & Disclosures

- ❖ Statement of Profit or Loss
- ❖ Statement of Comprehensive Income
- ❖ *Insurance service result*
- ❖ *Investment Income & Insurance Finance Expenses*

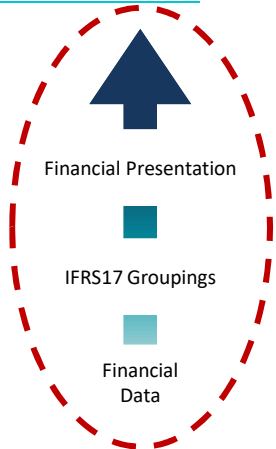
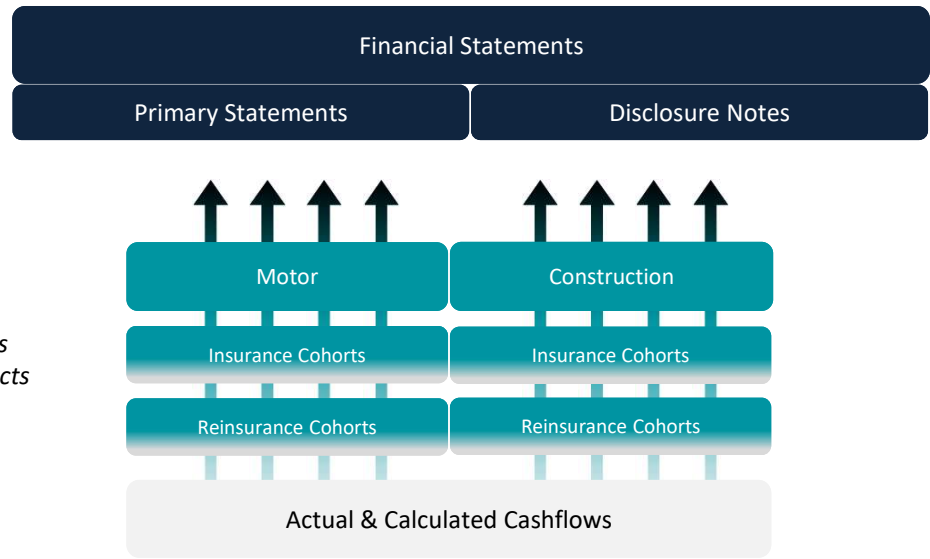
- ❖ Statement of Financial Position
- ❖ Statement of Changes in Equity
- ❖ *Reconciliation of the LRC and LIC for insurance contracts*
- ❖ *Reconciliation of the LRC and LIC for reinsurance contracts*

Other

- ❖ Impact of contracts recognised in the period
- ❖ Claim development
- ❖ Financial Assets & Liabilities
- ❖ Credit Risk for financial instruments
- ❖ Expenses by nature
- ❖ Maturity Analysis

MI Info

- Many Management Information reports (New Business, Claims, etc) are produced for existing accounts using **{AccountCode}** – provides subdivision.
- Need to ensure your new IFRS17 Accounting Ledger maintains at least the current level of granularity.
- Additional granularity may be required – especially for expenses (need to be assigned to Cohorts).



Minimum
You need to be able to produce statements at least at portfolio level.

Preferable
Accounting records should be tagged at a cohort level in order to facilitate investigations and reconciliations to primary data sources.



Summary

Recent developments

- Final standard mid 2020? Further delay to 1/1/2023?

VFA

- Modified version of the GMM – not optional (must apply VFA if the eligibility criteria met)
- *Aim:* To reduce accounting mismatch that would arise for certain types of contracts under the GMM
- *Key difference to GMM:* CSM Subsequent Measurement treatment of financial risk
- *Option* to combine some or all of the components in subsequent measurement of CSM.
- *Risk mitigation exception* – optional if criteria are met

PAA

- Simplified version of the BBA – optional
- *BBA Comparison:* LfRC calculation different, LfIC calculation is the same.
- *Simplifications:* Discounting, Acquisition Expenses, Onerous Contracts
- *Main benefits:* CSM is avoided and reconciliations between one reporting period and the next are more straightforward
- Can be used when certain eligibility criteria are met
- *Factors to consider when deciding whether or not to use the PAA:* Eligibility testing, Onerous contracts, Financial impact, Explanation of movements, Data, Process, Retrocession, Architecture
- Disclosures relating to the CSM are not applicable



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Questions?
