



# Actuarial view on the implementation topics of IFRS 17

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# Agenda

1	<b>KPMG Financial Services Insurance at a glance</b>
2	<b>Actuarial details on the single Building Blocks</b>
3	<b>Variable Fee Approach:</b> key measurement model for Life/Health primary insurance business!
4	<b>Premium Allocation Approach:</b> target picture for Non-Life primary insurance business?
5	<b>Transition to IFRS 17:</b> how to determine the Insurance Contract Liabilities?



# KPMG Financial Services Insurance at a glance



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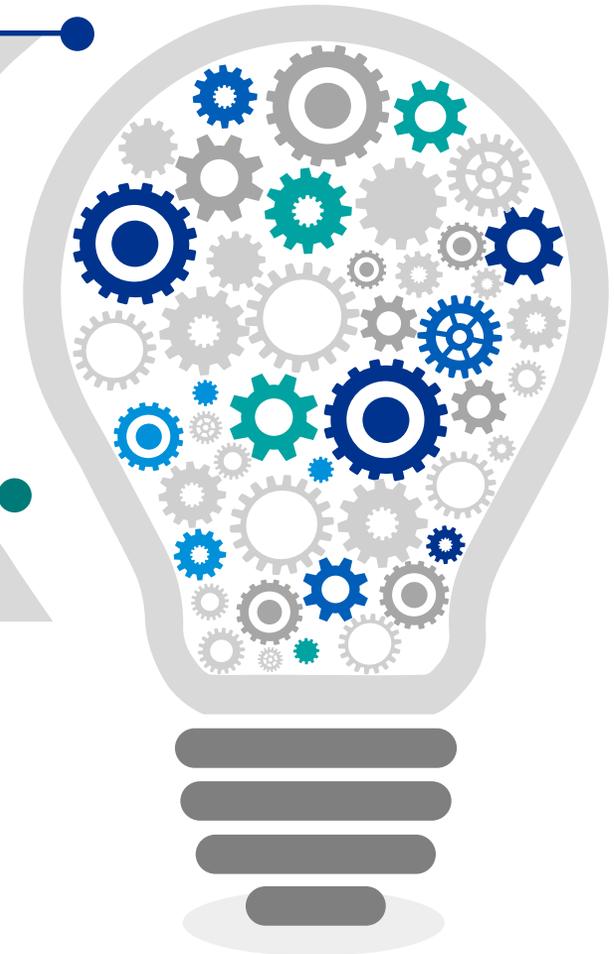
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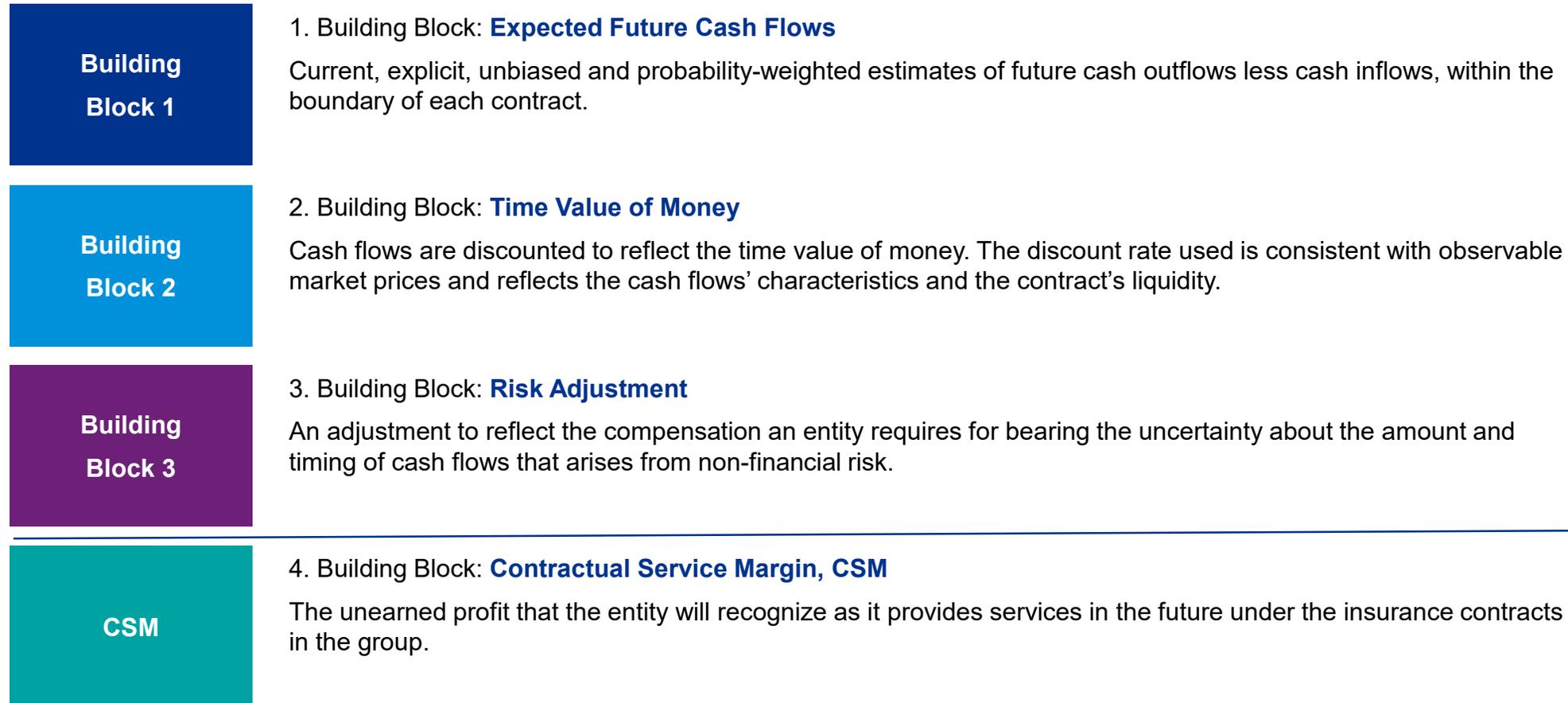


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# Actuarial details on the single Building Blocks

# Building Blocks of the key IFRS 17 measurement model





# IFRS 17 – Cash Flows

## IFRS 17 vs. Solvency II

The estimates of future cash-flows for each group of contracts include cash inflows and outflows and shall

- be **explicit** (i.e. estimated separately from the risk adjustment and the adjustment for the time value of money)
- reflect the **perspective of the entity** (provided that estimates of relevant market variables are consistent with the observable market prices for those variables)
- include **all reasonable and supportable information** that is available without undue cost or effort
- be **current**, i.e. represent the conditions that exist at that date and changes faithfully represent the changes in conditions during that period
- include only the future cash flows **within the boundary of each contract**

**Germany: asymmetric benefits embedded in traditional participating business with minimum guarantees!**

Cash flows models to reflect, in particular:

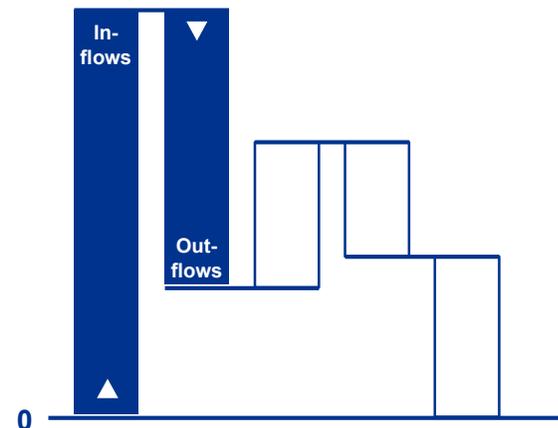
- **Management Actions** of the insurer w.r.t. amount and timing of bonus allocation/distribution
- **Dynamic Policyholder Behaviour** w.r.t. lapse, paid-ups and capital option
- **Dynamic strategic asset allocation**, in particular:
  - Asset allocation in dependence of the underlying economic scenario
  - Realization of hidden reserves



Are the models ready for IFRS17? Ready for more granularity? Is there a model for the pension entity?  
Adjustments for contract boundary?



# IFRS 17 - Cash Flows



“Explicit, current, unbiased, and probability-weighted estimates of future cash flows that will arise as the insurer fulfils the contract...”



## Contract boundaries

Contract boundary

### Included in measurement



Future cash flows relating to **existing** insurance contract



### Excluded from measurement



Future cash flows relating to **future** insurance contract





# IFRS 17 – Cash Flows

## Examples of cash flow components in the boundary of an insurance contract

**Payments to, or on behalf of, a policyholder (e.g. benefits / claims)**

**Premiums** and any other costs specifically chargeable to the policyholder

**Policy administration** and maintenance costs

Allocation of fixed and variable **overheads** *directly attributable to fulfilling contracts*

**Claims handling costs** – investigating, processing and resolving claims

**Cash flows from options and guarantees** that were not separated from the contracts

**Insurance acquisition cash flows** *directly attributable to the portfolio of contracts* and allocated to the contract

**Costs of providing benefits** in kind



# IFRS 17 – Cash Flows

## Materiality Concept?

### Treatment of Simplifications

- Neither does IFRS 17 offer **any specific simplifications** nor provides IFRS 17 **any explicit guidance with respect to materiality**
- However, for certain areas the principle based approach of the IFRS 17 Standard gives some room for simplifications (e.g. cash flows modelling)
- Such simplifications may for example, be linked to model limitations or data availability
- Therefore, a **framework** needs to be in place to assess whether or not a simplification is reasonable and supportable from an IFRS 17 perspective («**undue cost or effort**»)



Is the simplifications analysis needed for the modelling of the whole business in-force?  
E.g. unmodelled business is always an error!



# IFRS 17 – Discount rate

IFRS  
17.36

Discount rate should be **consistent** with observable current market prices (if any) for financial instruments with cash flows whose characteristics are **consistent** with those of the insurance contracts.

If 'Own Portfolio' of assets produces cash flows which are **consistent** with the liabilities then this can be used as a starting point.

If Own Portfolio is not consistent with the liabilities (e.g. as invested much shorter than the liabilities even though longer dated assets are readily available) then a Replicating Portfolio may need to be used.

IFRS  
17.B81

An entity shall adjust the yield curve to **eliminate any factors that are not relevant to the insurance contracts**, but is not required to adjust the yield curve for differences in liquidity characteristics of the insurance contracts and the reference portfolio.

IFRS 17.B81 and 'consistency' in IFRS 17.36 may imply that using a portfolio of assets that is more liquid than theoretically the 'best match' for the liabilities may be fine – i.e. credit may not be taken for illiquidity premium yield where this does not match the liabilities, but not taking full credit for illiquidity yield theoretically available to match the liabilities may be ok.

Suitable allowance for reinvestment risk will need to be taken into account for longer dated liabilities.



# IFRS 17 - Discount rate

	Yield component	Component Elements	KPMG preliminary observation on ease of calculation		
Total Reference Portfolio Yield	Credit Risk Premium	Expected Defaults	Reasonably straightforward	IFRS 17 Discount Rate	
		Expected Cost of Downgrade			
		Default Risk Premium	Difficult to estimate from market observable data		Top Down Approach
		Downgrade Risk Premium			
	Illiquidity Risk Premium	Asset Illiquidity risk premium	By definition, may be difficult to obtain market observable data for illiquid assets		Bottom Up Approach
		'Risk of illiquidity' premium	Can be taken as 'usual spread' over risk free for liquid assets		
Risk-Free Rate	Risk Free Rate	Reasonably straightforward (apart from UFR)			

The exhibit above shows the various components of **credit** and **illiquidity risk premia** in Reference Portfolio yields.

In setting the discount rate for a specific level of liability illiquidity, the components should be taken into account in deriving the discount rate.



# IFRS 17 - Discount rate

## Example of the hierarchy of decisions to determine interest rates for IFRS 17 measurement purposes

Note that in practice these decisions are not "linear"...

First level decision:  
**Asset portfolio**



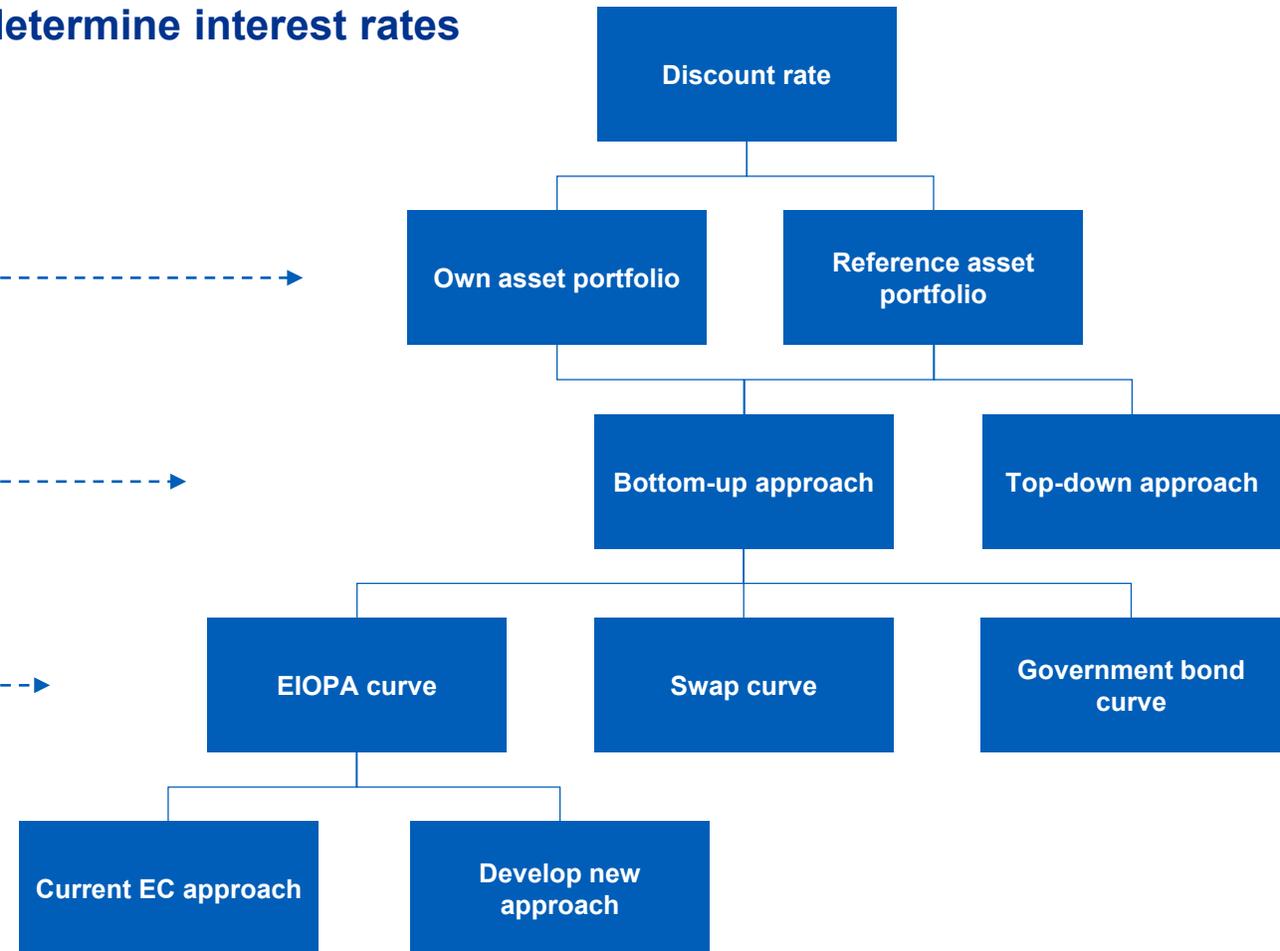
Second level decision:  
**High level approach**



Third level decision:  
**Risk free rate**



Fourth level decision:  
**Illiquidity premium**

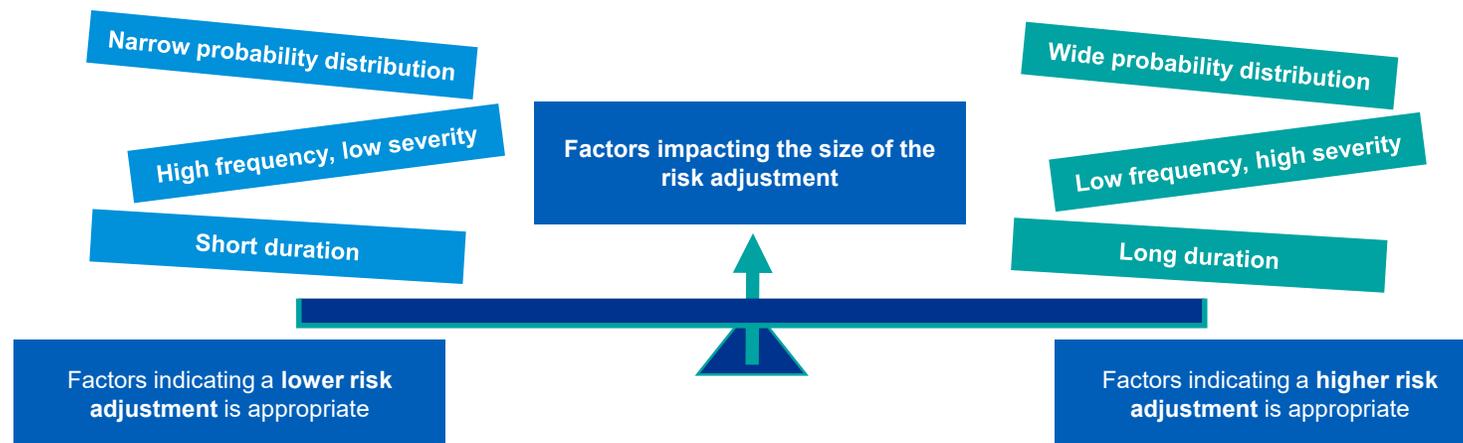




# IFRS 17 – Risk adjustment

## Building block 3 – Risk adjustment

	IFRS 17 risk adjustment	Solvency II risk margin
<b>Objective</b>	The compensation the insurer requires for bearing the uncertainty about the amount and timing of the cash flows that arise as the entity fulfils the insurance contract.	Represents the amount an insurance company would require to take on the obligations of a given insurance company.
<b>Prescription</b>	<b>Principle-based, no prescribed calculation technique.</b>	<b>Prescribed calculation.</b>
<b>Methodology</b>	Assumed most popular techniques would be: Confidence level (VaR), calibrated margins, Conditional tail expectations, Cost of Capital.	Based on the cost of capital.





# IFRS 17 – Risk adjustment

The **Risk adjustment** is the compensation the insurer requires for bearing the uncertainty about the amount and timing of the cash flows that arise as the entity fulfils the group of insurance contracts.

	IFRS 17	Solvency II
Approach	Principles based with no prescription Examples: Confidence level (VaR), Conditional tail expectations, Cost of Capital.	Cost of Capital with capital based on some SCR modules and a cost at 6%.
Level of diversification	Degree of diversification the entity includes when determining the compensation.	Legal entity. No diversification benefit within the group.
Risks covered	Insurance and other non-financial risks arising from insurance contracts. (this excludes general operational risk)	Reserves and Premiums; Default of reinsurers and Operational.
Presentation (B/S)	Gross and ceded separately.	Net of reinsurance in liabilities.
Disclosures	If any method other than VaR is used: Confidence level (Quantile), to which the calculated RA corresponds.	None

Using a CoC approach facilitates the reconciliation with Solvency but might lead to operational challenges to allocate the Risk Adjustment at a granular level as well as to provide the confidence level disclosure.

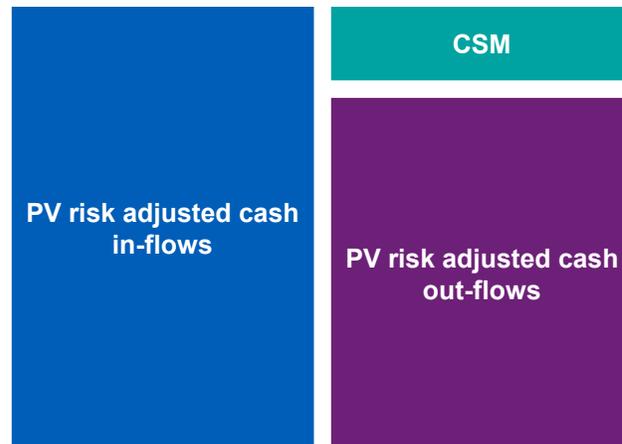


# IFRS 17 – Contractual Service Margin

## Building block 4 – Contractual Service Margin: initial measurement

### What is the CSM?

- The Contractual Service Margin (CSM) is a **new explicit liability component** under IFRS 17.
- The CSM for a profitable group of contracts (and all reinsurance contracts) is the **off-set of the risk adjusted cash inflows and cash outflows at inception** so that overall the liability is nil.
- At inception it represents **the unearned profit** and results in no gain arising on initial recognition of the group.

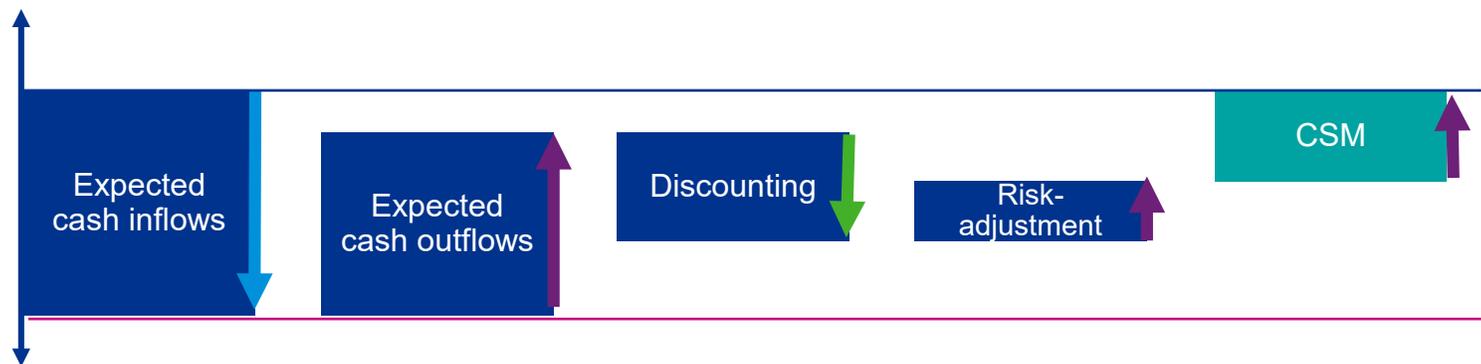


- The CSM removes any profit at inception and it is **released as services are provided**, based on the **coverage units** provided in the period.

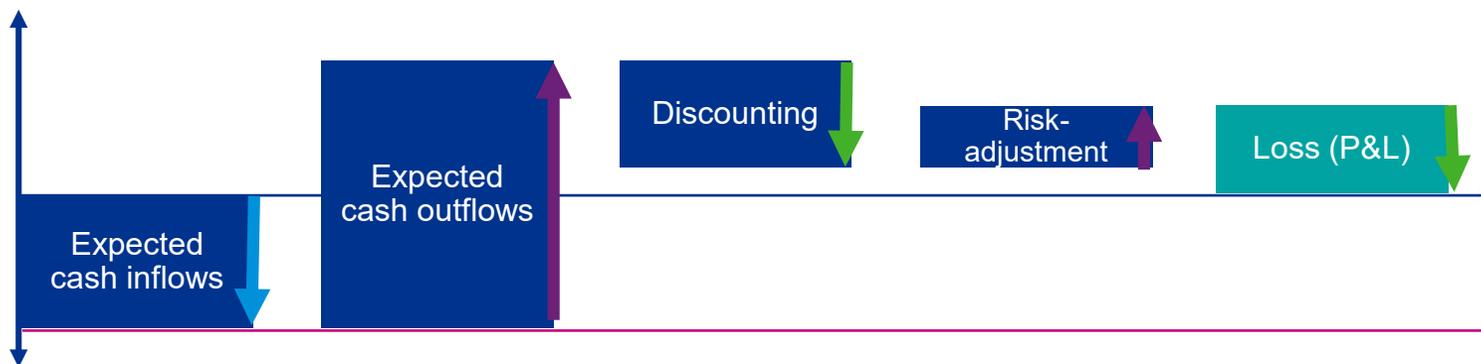


# IFRS 17 – Contractual Service Margin – visualized:

Fulfillment  
Cash Flows  $\leq 0$



Fulfillment  
Cash Flows  $\geq 0$

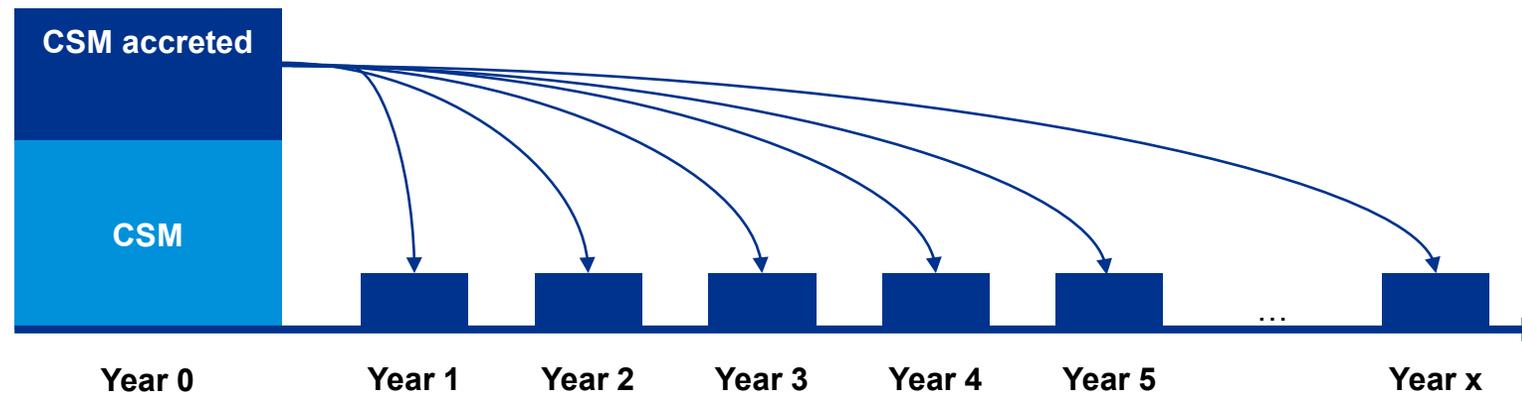




# IFRS 17 – Contractual Service Margin

## Subsequent measurement of the CSM and CSM release

- Interest accreted on the carrying amount of the contractual service margin on the basis of the historical interest curve (Exception: direct participating insurance business – **implicit based on current interest rates**)
- A systematic realisation of the contractual service margin **according to coverage units and the passage of time** (see picture below)



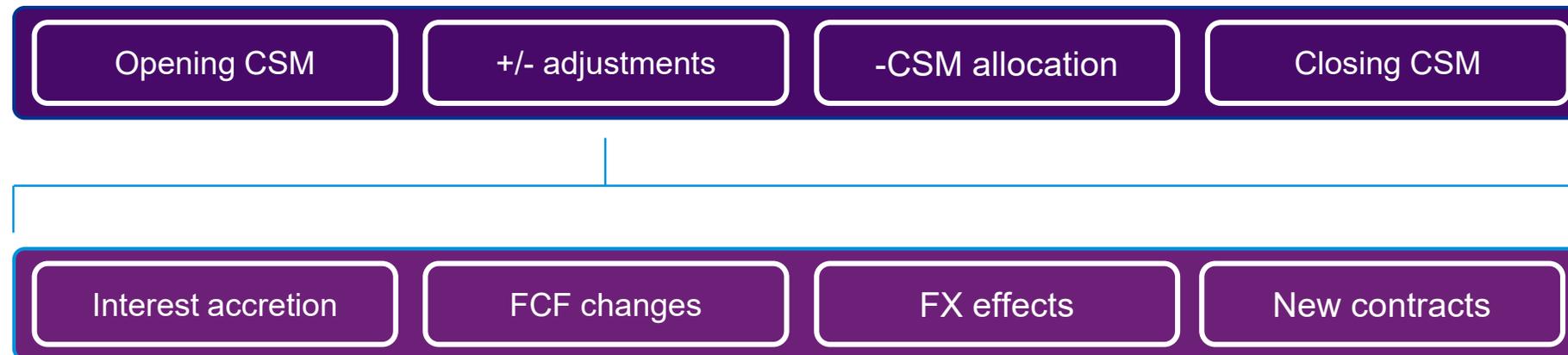


# IFRS 17 – Contractual Service Margin

## Building block 4 – Contractual Service Margin: subsequent measurement

### CSM run-off in the General Model

— Over each time period the CSM is adjusted based on the following:

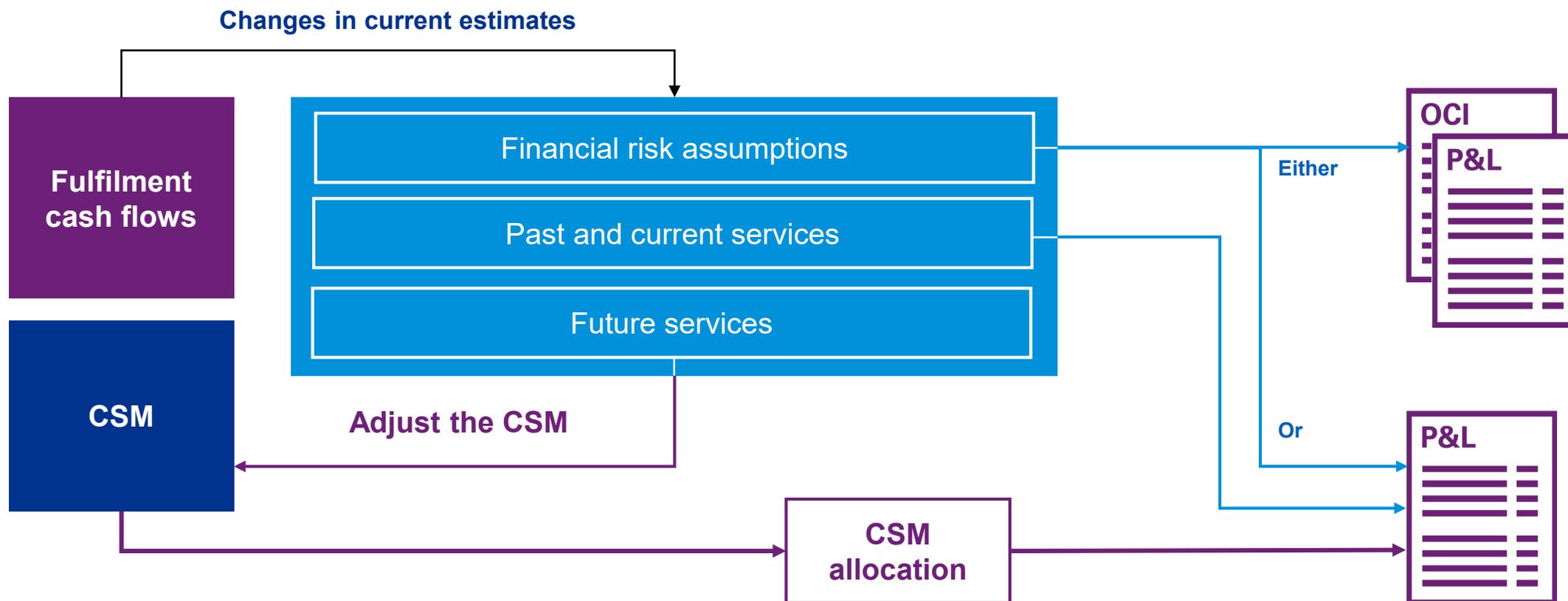


- CSM release (amortization) is brought through the P&L as services are provided.
- If the CSM goes negative due to experience variances or fulfilment cash flow changes then all further changes are posted to the P&L until the losses are reversed (a loss component is created).
- The changes fulfilment cash flows which adjust the CSM have to be added to the CSM before determining the release in any period - i.e. the release is the last step in the period.



# IFRS 17 – CSM and the Loss Component

## Building block 4 – Contractual Service Margin: subsequent measurement





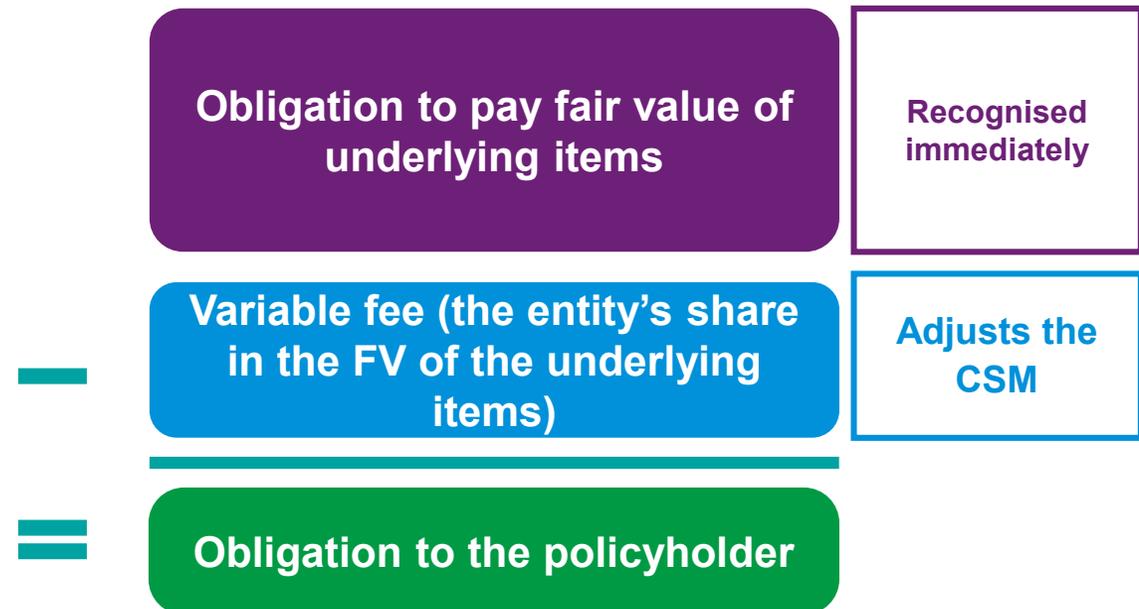
# Variable Fee Approach (VFA)



# Variable Fee Approach

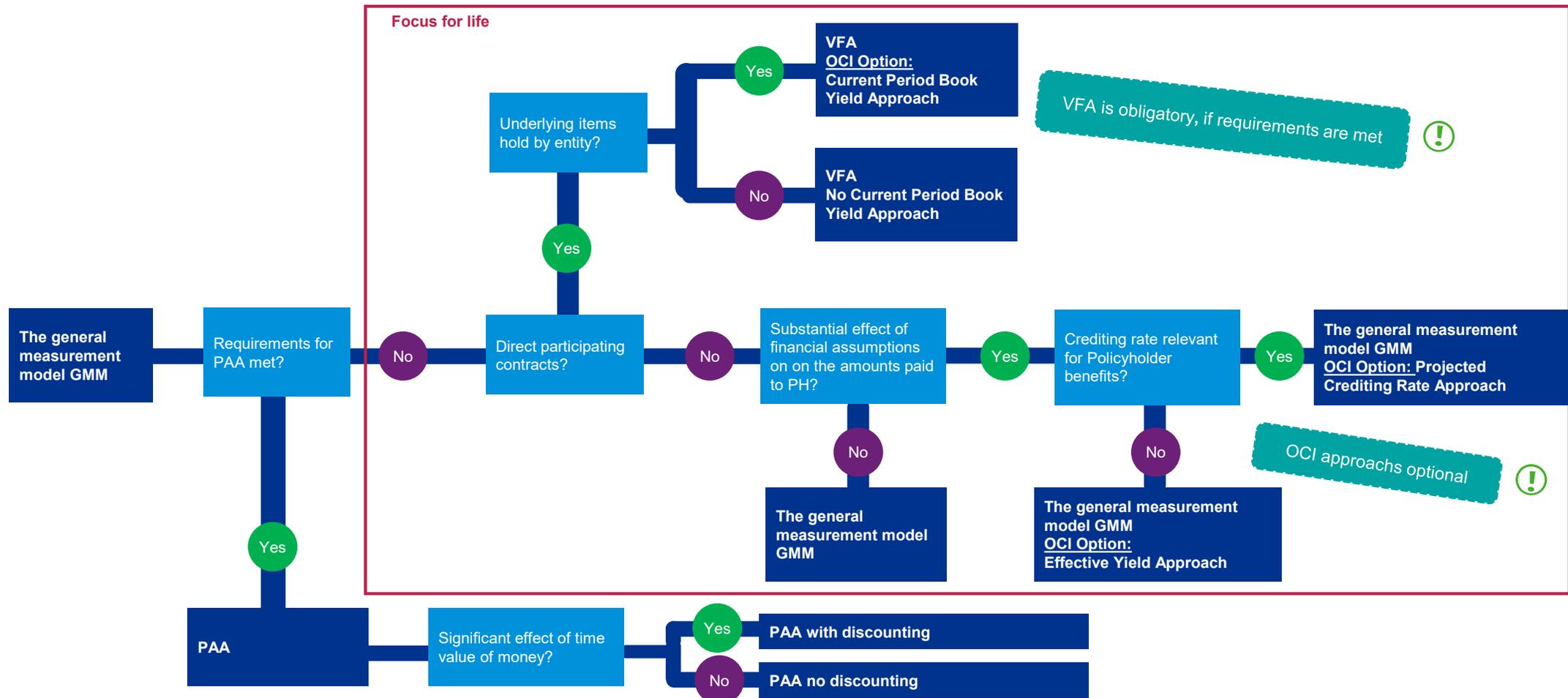
**Direct participating contracts** have an adaptation of the GMM called the Variable Fee Approach (VFA). Under the VFA, changes in the insurer's share of the fair value of the underlying items (e.g. assets) adjust the CSM.

- 1 The **building blocks still apply** and the CSM is still determined the same way at initial recognition.
- 2 The **approach considers the variable fee** associated with direct participating contracts
- 3 The underlying items can be held or referenced
- 4 Should assist entities in **reducing accounting mismatches and volatility** for these types of contracts





# Measurements models: classification framework





# Qualifying for VFA with Example



An insurance contract is considered to be a direct participating contract when (IFRS 17.B101):

1. the **contractual terms** specify that the policyholder **participates in a share** of a **clearly identified pool of underlying items**;
2. the entity **expects** to pay the policyholder an amount equal to a **substantial share of the fair value returns** on the underlying items; and
3. the entity **expects** a **substantial proportion** of any change in the amounts to be paid to the policyholder to **vary with the change in the fair value of the underlying items**.

## Example German participating business (Überschussberechtigtes Geschäft):

Participation in changes in underlying items?	✓
Clearly identified pool of underlying items?	✓
Pool specified by law or regulation?	✓
Substantive rights and obligations, arise from contract, law or regulation, i.e. Policyholder share enforceable?	✓
Expects a substantial share of the fair value returns on the underlying items	✓
Expects a substantial proportion varies with the change in the fair value of the underlying items.	✓



Relevant question for German Life / Health entities: do you have any other business, not being in scope of the VFA?



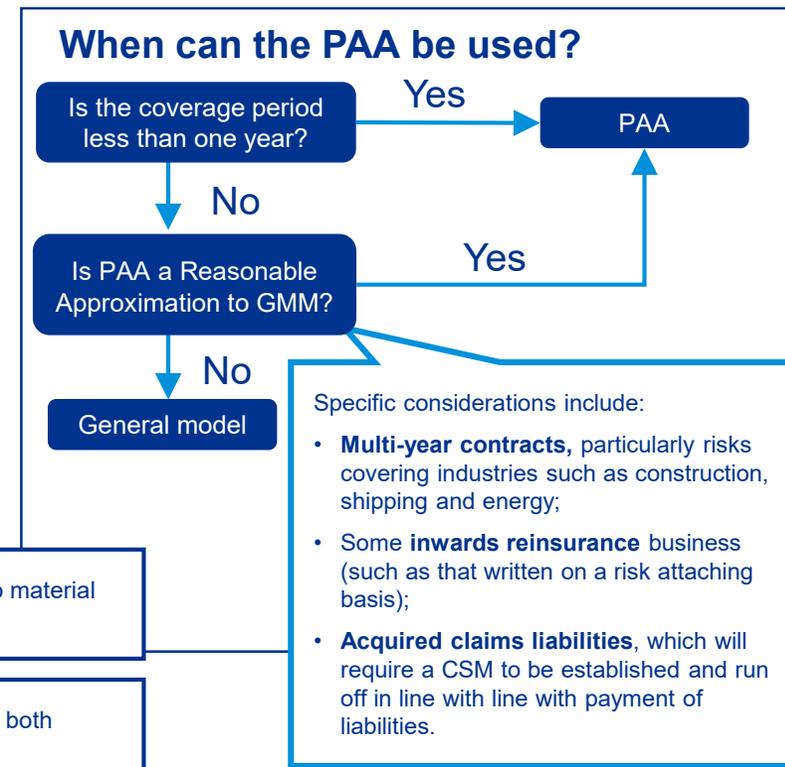
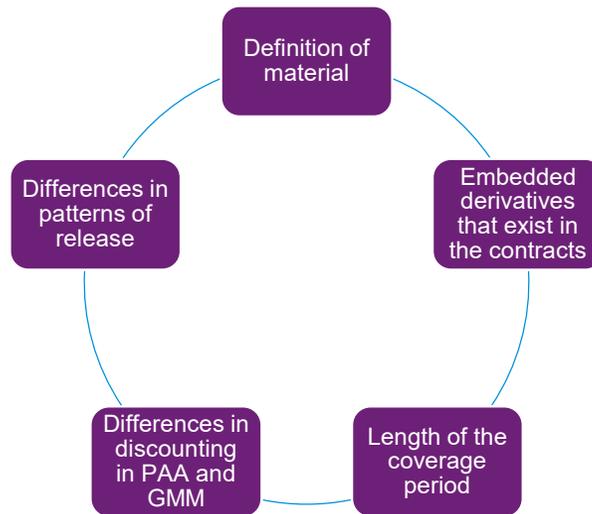
# Premium Allocation Approach (PAA)



# PAA Eligibility

To qualify automatically for the PAA approach the contracts must be provide one year of coverage or less...

Or....the entity **reasonably expects** that such simplification would produce a measurement of the liability for remaining coverage for the group that would not **differ materially** from the one that would be produced



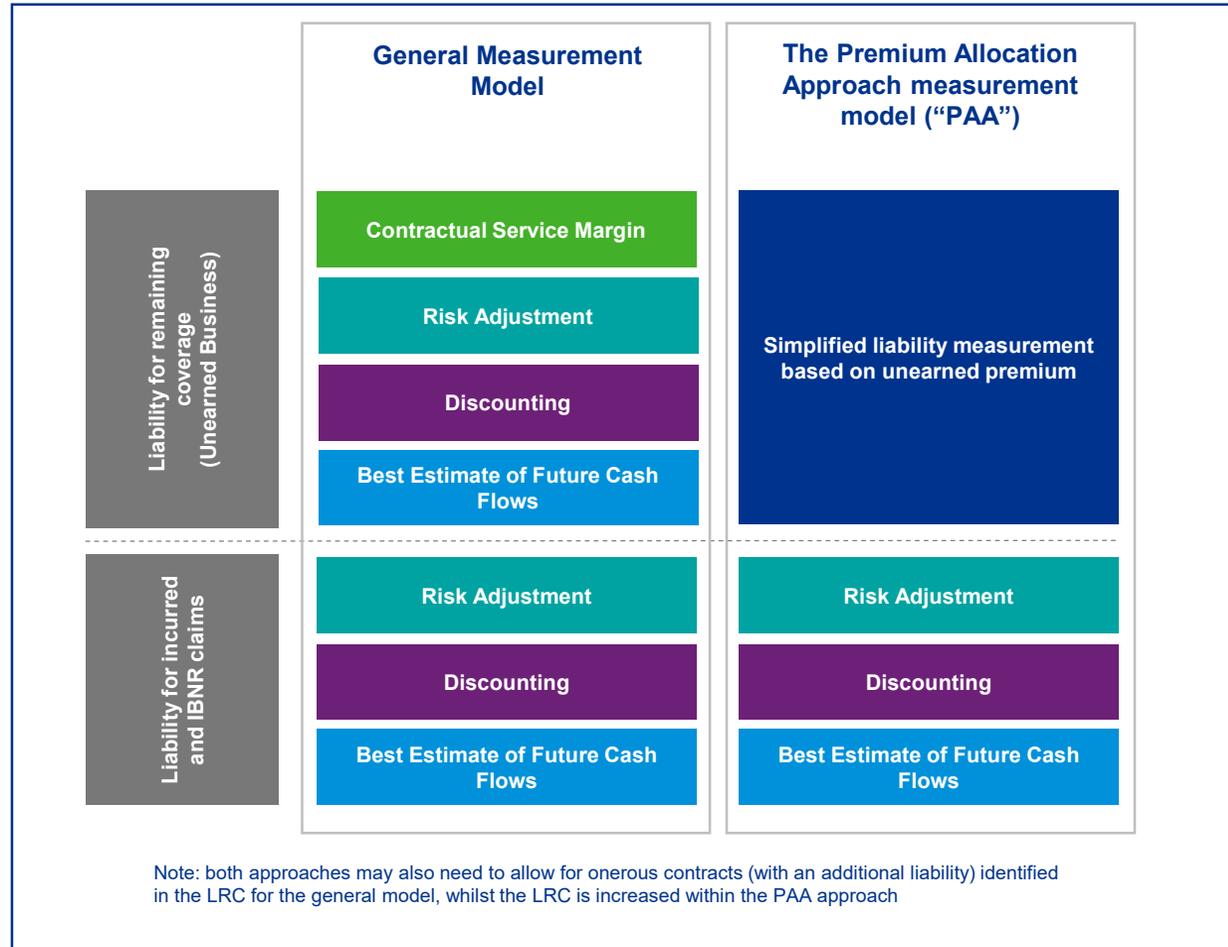
For multi-year contracts, it may be necessary to model to determine whether the PAA will provide no material difference in valuation to the IFRS 17 general measurement model.



How do we test that PAA is a reasonable approximation? Projected measurement of liabilities under both methods: expected (base) scenario, mid-term changes in interest rates, changes in estimates



# General Insurance under IFRS 17



Under IFRS 17, **Property & Casualty Insurers** may use one of two approaches to model liabilities:

**I.** The **PAA** is seen as being **operationally less complex** and closer to current IFRS 4 reserving, particularly in its treatment of Unearned Premium.

**II.** The **GMM** means tracking the expected profit through time and adjusting the CSM as appropriate, whilst the PAA approach allows the insurer **to hold the unearned premium as the LRC**. Similarly the LRC is notably less complex for disclosures.

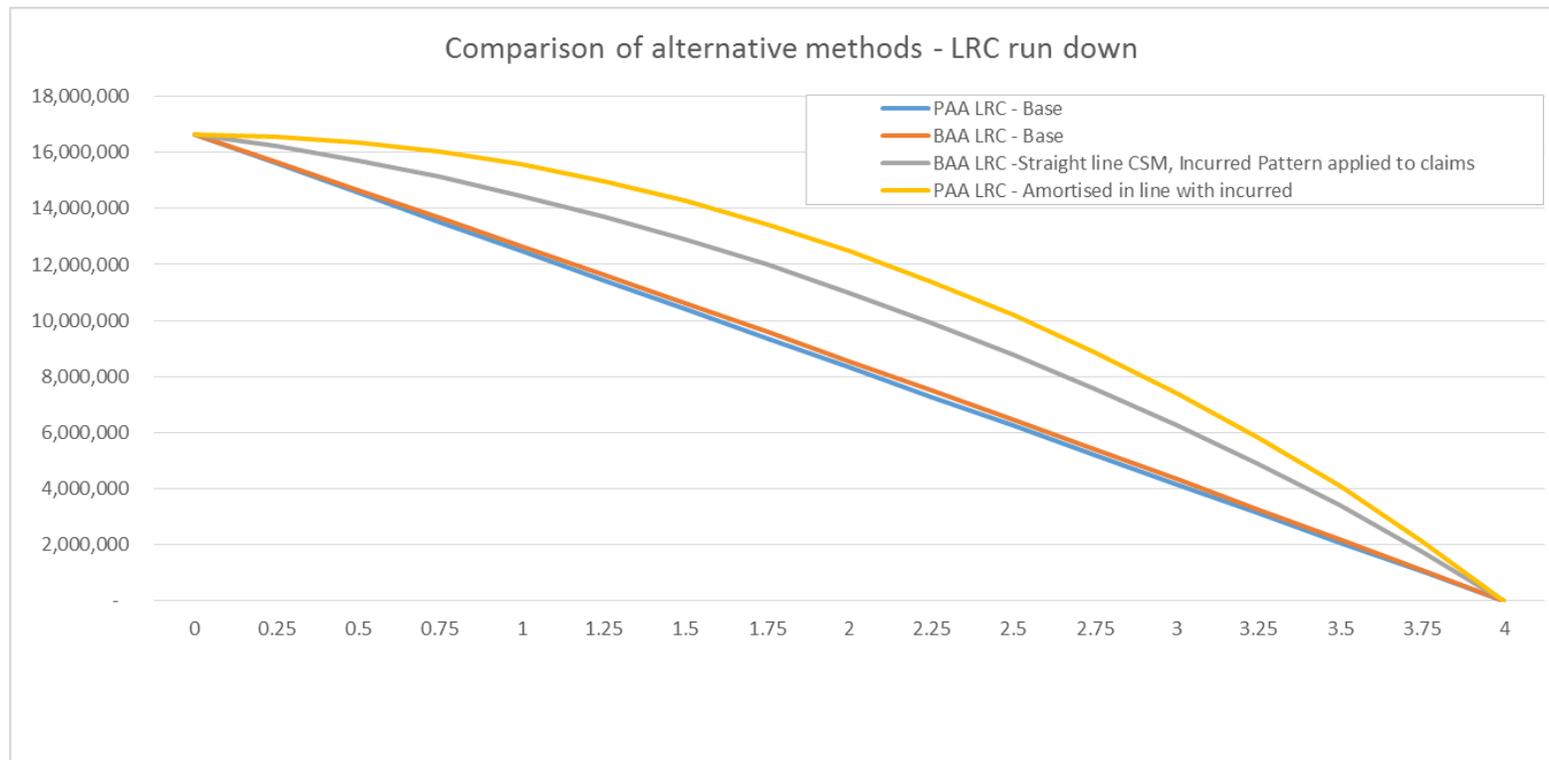
Note the **LIC** is determined similarly to that under the GMM.

**There are options available for insurer to further simplify:**

- They may have option **not to accrete interest in the LRC** if the entity expects that the time between providing each part of the coverage and the related premium due date is no more than a year.
- They may choose to **recognise insurance acquisition cash flows as expenses** when it incurs those costs, provided that the coverage period of each contract in the group at initial recognition is no more than one year (which has impact on Onerous contracts charge).



# PAA Eligibility - consideration of differences



Differences in patterns of claims incurrence can drive larger differences. In the example above the base case where the same set of best estimate assumptions applied to both PAA and GMM whereby claims incur in line with straight line earning of premium, leads to an immaterial difference in release of LRC.

However where the PAA LRC liability and FCF component of the GMM effectively run off together in line with the pattern of claims incurrence from reserving, but the release of the CSM continues to follow coverage provided (i.e. straight line) there may be a difference between the two approaches.

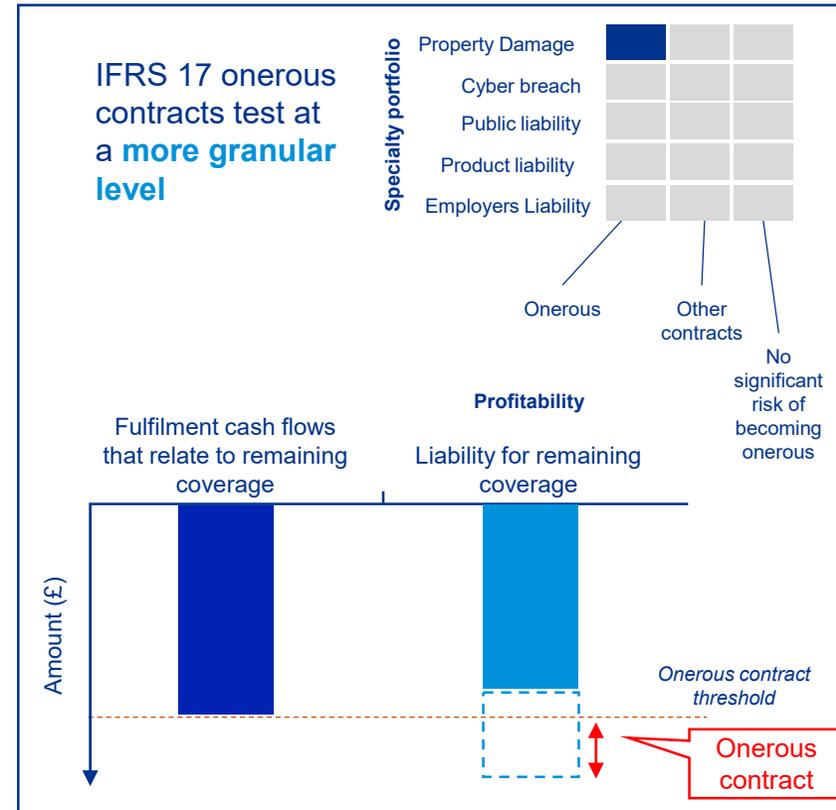
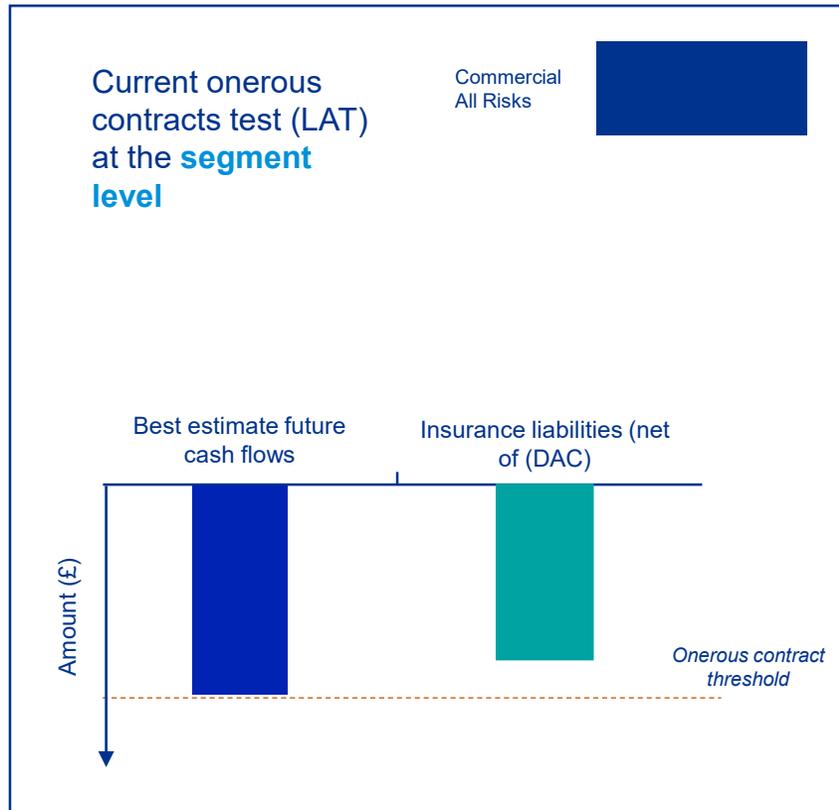


# PAA - Onerous Contracts

IFRS 17 requires insurers to divide contracts into groups at initial recognition for the purposes of the onerous contracts test. Groupings are required by portfolio and 'profitability', with the latter criteria requiring at least three groups: contracts that are onerous at inception, contracts with no significant risk of becoming onerous and 'other' profitable contracts. This is more granular than the current onerous contracts test.

## KEY QUESTIONS

- How will onerous contracts be identified?
- Can package products be split?
- Implications of deferring acquisition costs on onerous contracts test.
- How are groups of contracts currently managed? Are groups granular enough to identify onerous groups?
- Potentially consider a set of indicators to highlight any onerous contracts within the groups.
- Common issues with GI firms include identification of groups of contracts with higher acquisition costs that previously were not tagged in data (e.g. New vs. renewals in motor insurance)

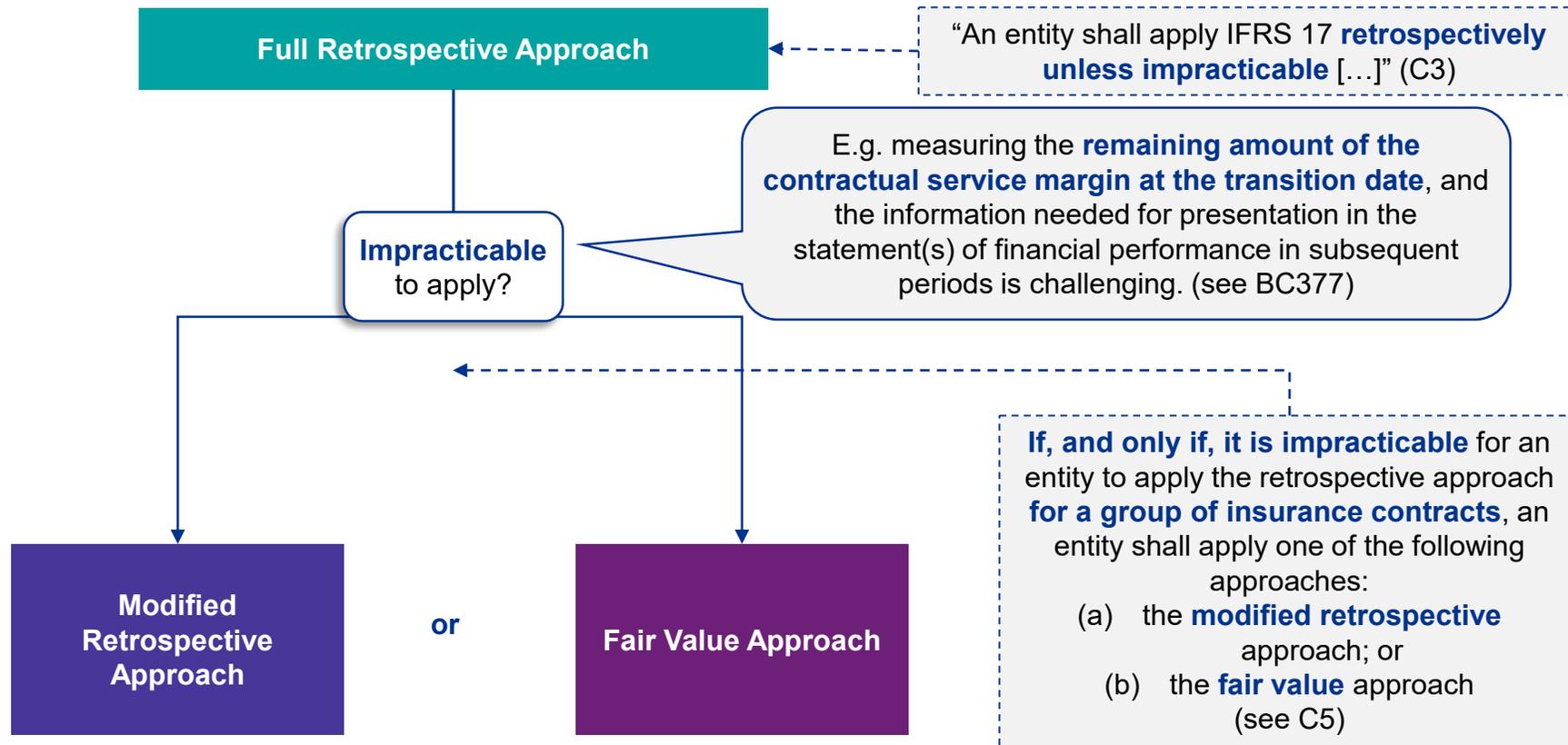




# IFRS 17 Transition



# IFRS 17 - Transition - three approaches



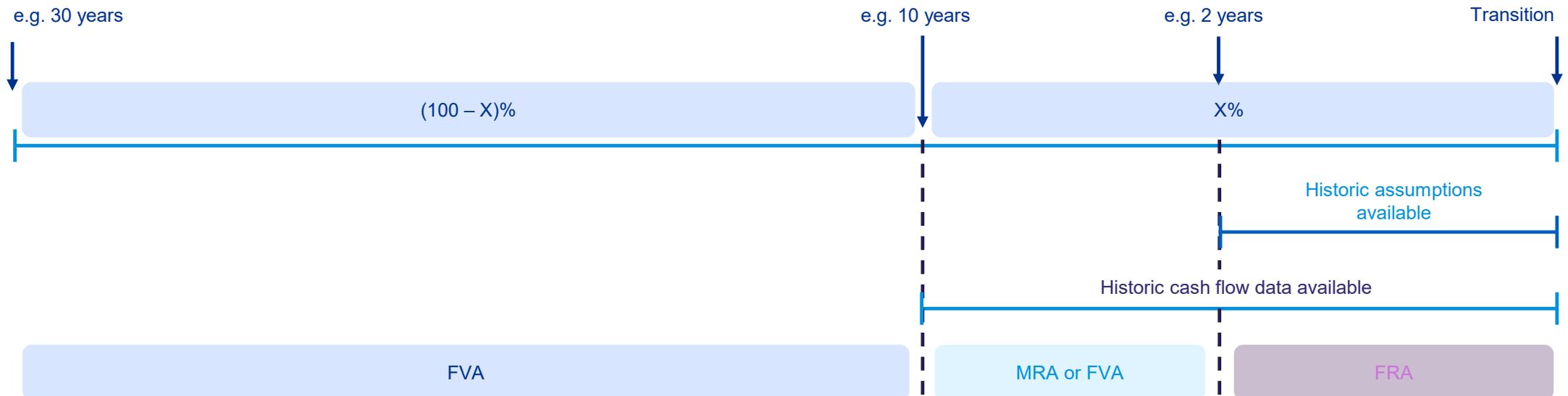
- Which approach will be used? For which business?
- What are the groups @ transition?



# IFRS 17 - Transition - All approaches expected to be applied

## Emerging industry practice

- Firms for which IFRS is a central reporting regime will likely invest more resources into a Full Retrospective Approach (**FRA**) or Modified Retrospective Approach (**MRA**) in order to maximize the initial CSM.
- Fair Value Approach (**FVA**) has appeal to many companies given perceived flexibility in application.
- Other firms have not yet selected an approach as cost / benefit analysis has yet to be thoroughly performed, including an assessment of the volume of business likely to be addressed under each approach.





# IFRS 17 – Group of Insurance Contracts – also for transition

Summary for Risk Carrier „NN“:

## 1) Portfolios of insurance contracts (POC)

## 2) Groups of insurance contracts (GOC)

- Onerous contracts
- Contracts with no significant possibility of becoming onerous
- Remaining contracts
- Each POC is to be separated due to these three criteria.
- Each box corresponds to one GOC.
- No revision of built GOCs.

...	Year T-4	Year T-3	Year T-2	Year T-1	
					POC 1
					POC 2
					POC 3
					POC 4
					...



# IFRS 17 – Transition in practice



## Data and systems implications

### Need to explore availability of data to determine the transition approach

- Significant amounts of historical data relating to the cash flows and pricing of in-force insurance contracts may be required in order to adopt the full retrospective transition method (depending on the product).
- Before any of the modification options are taken, insurers will need to demonstrate that full retrospective approach is impracticable.

### Regardless of the approach taken, new data will need to be gathered and calculations performed

- This could refer to new data never gathered before or existing data which has not previously been analysed in this way;
- This impacts both transition and on going measurement post transition. Even the simplified transition options will require a significant amount of work;
- Current actuarial systems may not be able to perform all of the required calculations, but it is crucial that the numbers on transition are robust.

### Specific data issues may arise on transition

- Complications may arise in relation to previously acquired claims liabilities where a CSM may need to be recognised on transition.
- Such scenarios will present data requirements and calculation challenges that are in addition to the transition work to be performed over the core book of business.

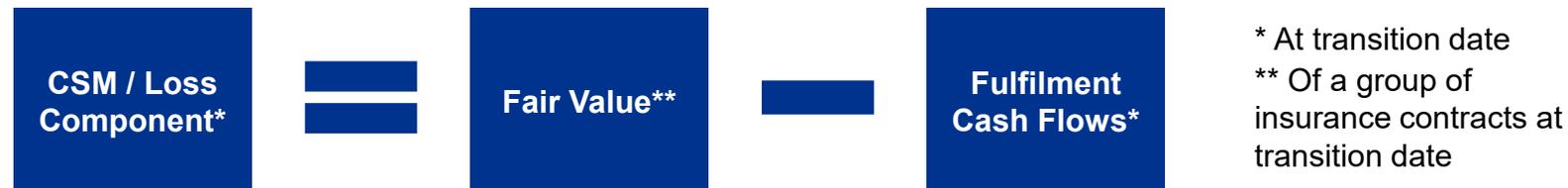
### Implications of different transition approaches

- The alternative approaches will have different strategic implications.



# IFRS 17 – Transition - Fair Value Approach (1/3)

To apply the fair value approach, an entity shall determine the CSM or loss component of the liability for remaining coverage at the transition date as **the difference between the fair value of a group of insurance contracts at that date and the fulfilment cash flows measured at that date.** (see C20)



In applying the fair value approach, an entity is not required to apply paragraph 22, and **may include in a group contracts issued more than one year apart.**

An entity is permitted to determine the **discount rates at the date of initial recognition of a group** and the discount rates at the date of the incurred claim **at the transition date instead of at the date of initial recognition** or incurred claim. (see C23)

**No need for annual cohorts!**



# IFRS 17 - Transition - Fair Value Approach (2/3)

When applying the Fair Value Approach, can we set up a CSM similar in size to VIF?

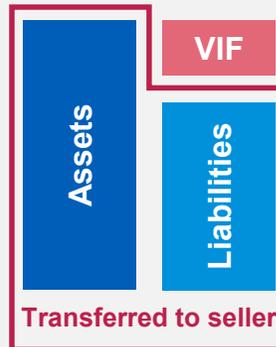
## What is the „Fair Value“ according to IFRS 13?

- IFRS 13.9: „This IFRS defines fair value as the **price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants** at the measurement date.“

Definition of  
Fair Value according to  
IFRS 13

## Simplified example for a segregated fund:

Value of in-force  
(VIF)



When selling an insurance portfolio made up of participating contracts, the underlying assets are usually transferred.

→ VIF as the transaction price

**VIF = Price for transferred Assets -  
Price for transferred insurance contracts**

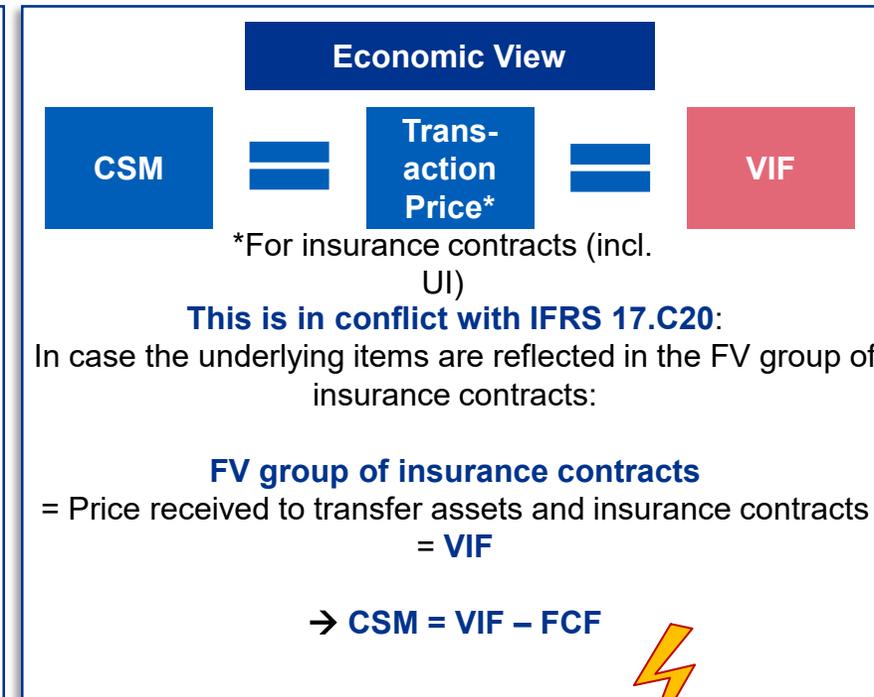
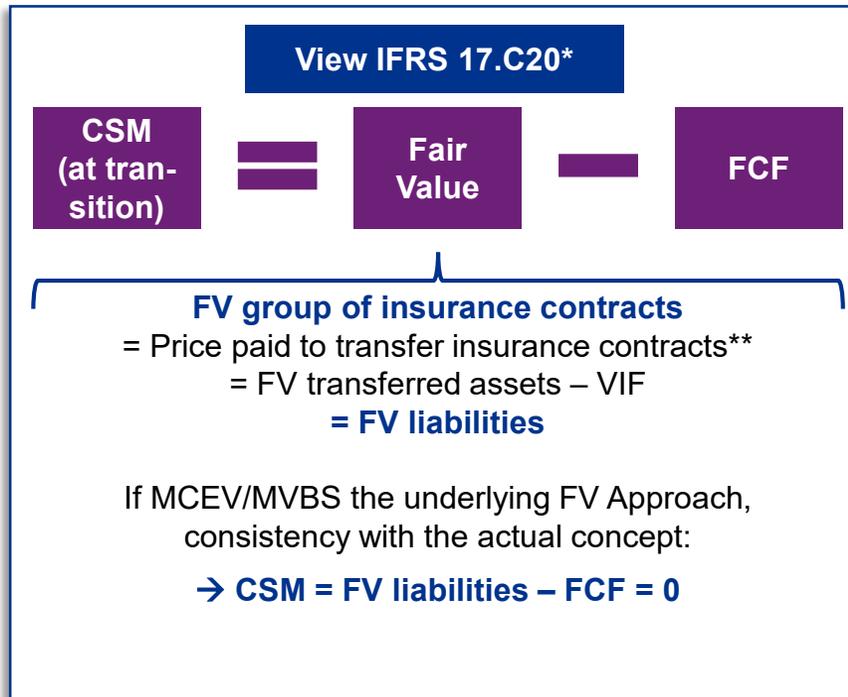
IFRS 17 view vs. Economic view



# IFRS 17 – Transition - Fair Value Approach (3/3)

## Goal

$$\text{CSM} = \text{VIF}$$



## Condition

IFRS 17.C20 shall not be violated. Adherence to the following equation required:

$$\text{FV group of insurance contracts} = \text{FV liabilities} + \text{VIF}$$

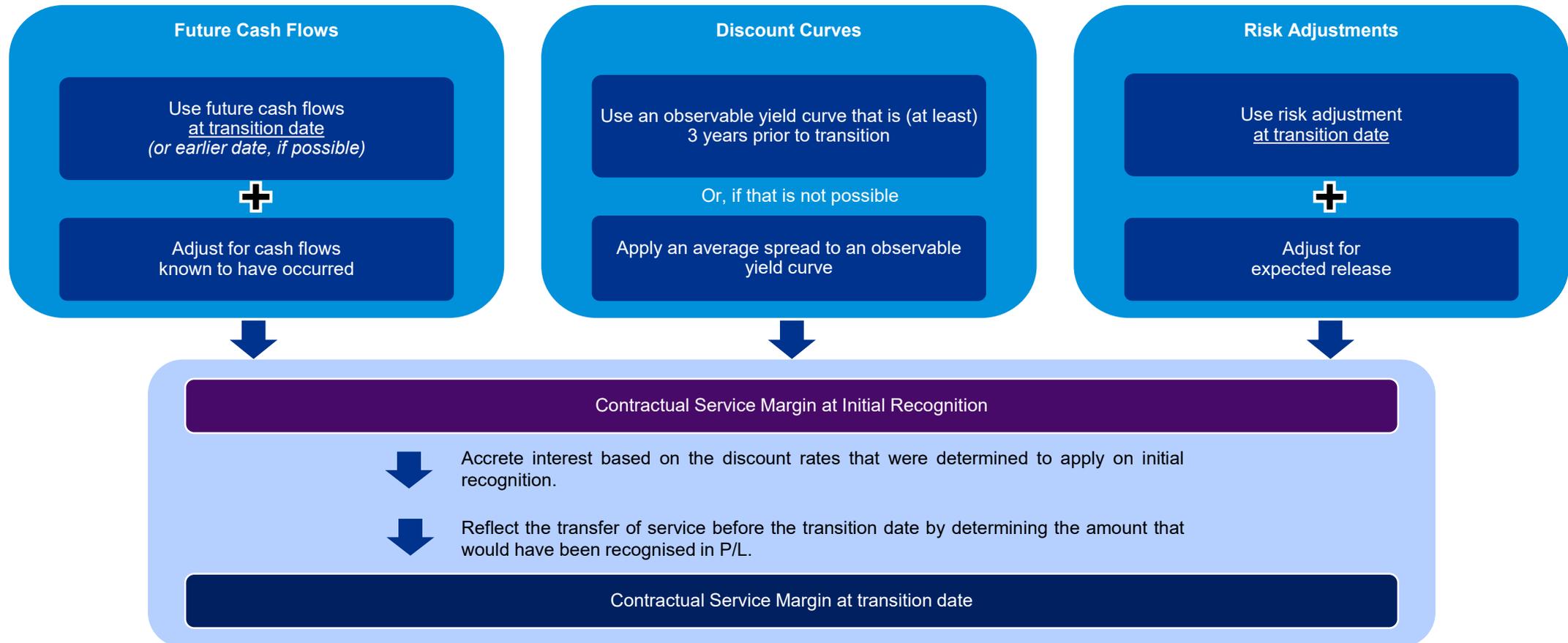
→ Interpretations IFRS 13?

\*\*Interpretation of IFRS 13



# IFRS 17 – Transition

## Permitted Modifications for non-direct par contracts





# Your Questions?



# Thank you for discussions

## **Vjaceslavs Geveilers**

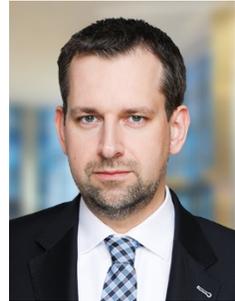
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