

# IFRS 17 Variable Fee Approach

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# About the speakers



**Keyur Parekh** is a consulting actuary in the Indian Life Insurance practice and is based in Mumbai. He supports on projects in India and the Asia-Pacific region. Keyur is also a qualified Chartered Accountant.

- Keyur is working on a number of live IFRS 17 implementation projects in India.
- Keyur has extensive experience in the areas of statutory valuation and solvency. He has been the head of statutory valuation, shareholder reporting and product pricing at various Indian insurers.
- Keyur is currently a member of the Life Insurance Advisory Group of the Institute of Actuaries of India.



**Philip Jackson** is a Principal and Consulting Actuary and leads Milliman's Mumbai life insurance consulting practice.

- He supports projects in India and also in the wider Asia region. Philip has expertise in economic value reporting, having worked in embedded value and now in IFRS 17 implementation and review. He also works extensively in M&A.

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Why?

Why do we have a VFA?

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When?

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- Some quantitative tests
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- Deep dive example on initial recognition
- Deep dive on mutualisation
- Deep dive on subsequent measurement

How? – Level 2

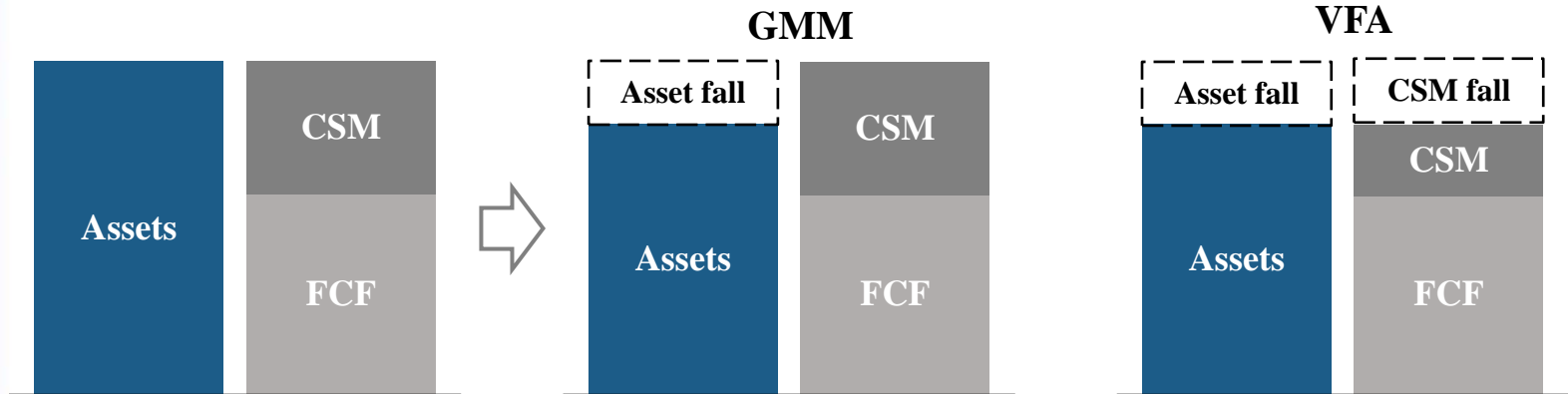
Deepen our understanding and tweaks

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- Bow-wave effect
- OCI disaggregation
- Risk mitigation option

# Key differences between VFA and GMM in statements

## An over-simplified view of the differences

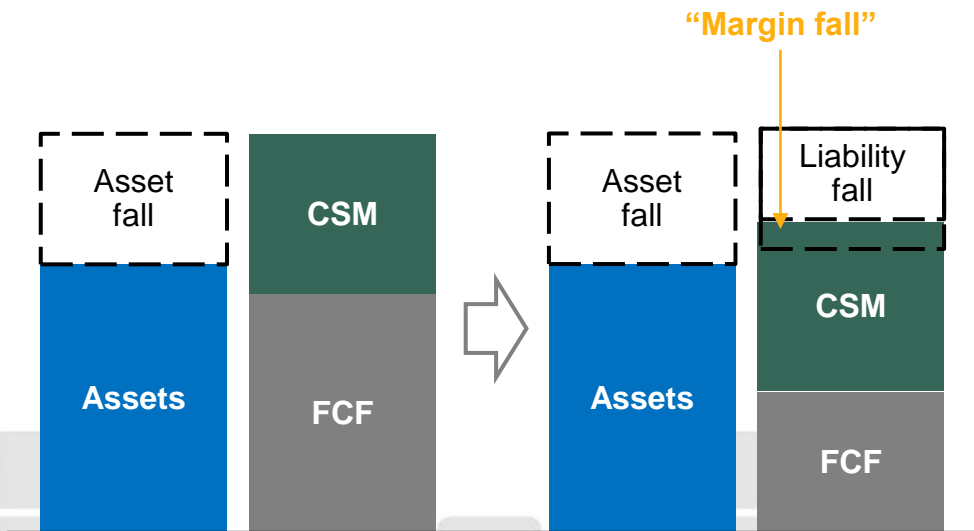


- Under GMM, changes in economic conditions do not impact the CSM, which is calculated based on locked-in interest rates – the investment result includes changes in economic variables.
- Under the VFA, changes in economic assumptions movement and market-value investment performance are all just 'swept up under the rug' of the CSM.

*FCF – Fulfillment cash flows (encompassing future cash flows and risk adjustment), CSM – contractual service margin*

# Key differences between VFA and GMM in statements

Our 'simple' analysis misses the movements on the liability side of both GMM and VFA models



- However, contracts where we may think about applying the VFA usually have a substantial link to the performance of the assets, so that we need to look at FCF and asset side movements together before we can see the full picture.
- If we have been able to achieve (either through investment strategy or product design) a high level of matching, the volatility we observe may be only due to the change in our margin for services.

# Why a VFA

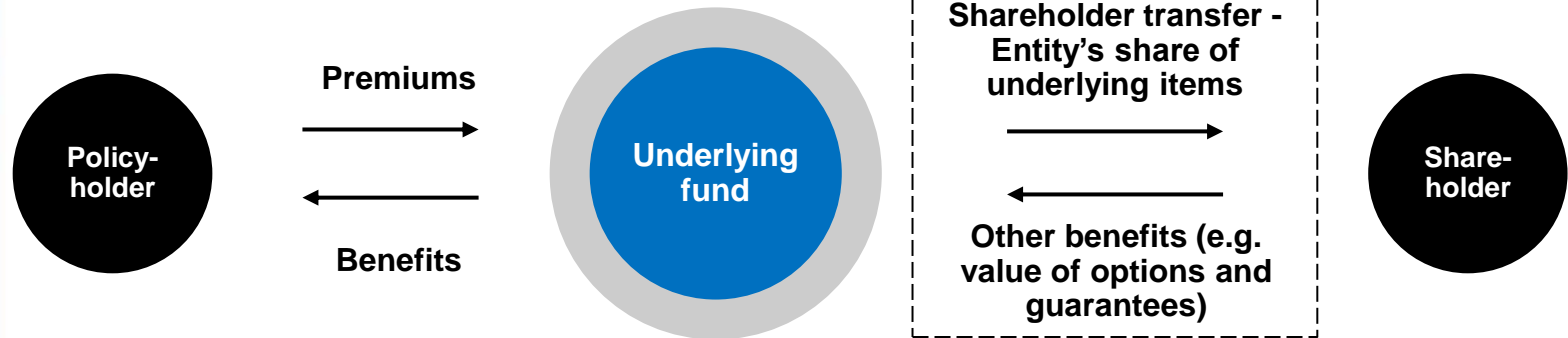
When the assets underlying our contracts change in value should the change in expected future earnings reflect as a change in income statement for that year?

- If we are writing non-participating savings contracts, then balance sheet management (ALM etc.) is very much part of our business model and financial performance – our investors should be able to see that performance in our investment service result.
- If we are just managing a pool of assets and extracting yearly fees, should changes in the expected present value of those fees show up each year in our income statement? Would it for a mutual fund manager?

Clearly there are contracts that straddle these two views, but the two measurement models (VFA and GMM) are designed to allow two key ways of reporting insurance financials.

# Indian par contract

## Variable Fee Approach (VFA)



For products with discretionary participation features, the policyholder's return is substantially linked to a pool of underlying items. The insurer's role in this product is often much more like that of a 'manager' of a fund, with the insurer taking a fee for providing services

The CSM is the risk-adjusted capitalised value of the variable fee and is released over time as services are delivered – as for non-par contracts



# Direct Participating Contracts



# Definition of Direct Participation



**IFRS17.B101** Insurance contracts with direct participation features are insurance contracts that are **substantially investment-related** service contracts under which an entity promises an investment return based on underlying items. Hence, they are defined as insurance contracts for which:

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



# B101 a) Identifying the items

IFRS 17.B101(a) the **contractual terms** specify that the policyholder participates in a share of a clearly identified pool of **underlying items** ...;

**IFRS 17.2** ... Contractual terms include all terms in a contract, explicit or implied .....  
Implied terms in a contract **include those imposed by law or regulation.**

We may be able to identify the underlying items with reference to our regulatory requirement to maintain, for example:

- Ring-fenced unit-linked funds for ULIPs
- A ring-fenced par fund, where surpluses are shared in the ratio 90:10



# What is the underlying?



**IFRS17.B106** The pool of underlying items referred to in paragraph B101(a) can comprise any items, for example a **reference portfolio of assets**, the net assets of the entity, **or a specified subset of the net assets of the entity**, as long as they are clearly identified by the contract. An entity need not hold the identified pool of underlying items.

**IFRS17.BC245** ....The Board decided the underlying items **do not need to be a portfolio of financial assets....**

.....seems to be quite an open definition!!



# Example of B101(B) Assessment



	Policy year			PV(@10% p.a.) at t=0
	1	2	3	
Opening asset share	-	103	215	
Premiums (A)	100	100	100	274
Expenses (B)	5	5	5	14
Risk charge deducted (C)	1	1	1	3
Investment income (10% p.a.) (D)	9	20	31	48
Shareholder transfer (10% of surplus, E)	0	1	2	3
Closing asset share	103	215	338	
PV of fair value returns (F = D)				48
PV of policyholders share (G = F - B - E)				31
Share of fair value returns to policyholder (G / F)				65%

# What is the underlying?

At least two schools of thought:

- Underlying items are simply the assets of the par fund – so that the fair value return on the underlying items is nothing but the investment return on those assets (e.g., previous slide)
- Underlying items are all forms of surplus – so that the fair value return on the underlying items includes investment returns, but also profits from mortality, expenses, lapsation etc. (e.g., next slide)

Depending on your view – the assessment of B101 may change



# Alternate Example of B101(B) Assessment

	Policy year			PV(@10% p.a.) at t=0
	1	2	3	
Opening asset share	-	103	215	
Premiums (A)	100	100	100	274
Expenses (B)	5	5	5	14
Risk charge deducted (C)	1	1	1	3
Investment income (10% p.a.) (D)	9	20	31	48
Shareholder transfer (10% of surplus, E)	0	1	2	3
Closing asset share	103	215	338	
PV of fair value returns ( $F = D - B$ )				34
PV of policyholders share ( $G = F - E$ )				31
Share of fair value returns to policyholder ( $G / F$ )				90%

# Example of B101(C) Assessment

At least two schools of thought:

- Under participating contracts, if the underlying fair value changes by an amount  $A$ , then the policyholder's return increases by  $90\% \times A$ . Therefore B101(c) may be satisfied (assuming guarantees have not bitten – see next slide).
- A further condition may be tested - whether the amount of benefit that is variable is a substantial portion of the overall benefits given to the policyholder. If bonuses are a small component of overall benefits, then B101(c) is not satisfied.



# Adjustments to the Assessment

There are some implicit assumptions used to establish:

“Policyholders return = Return on assets less some deductions”

Assumption	Relevant part of the standard
Guarantees have not bitten	IFRS17. B107 – Need to assess on a probability weighted basis
We are targeting to deliver asset share (or something similar) to policyholders	IFRS 17.B103/B68 – Need to reflect mutualisation in our assessment

# Assess probabilistically

IFRS 17.B107 ...An entity shall...assess the variability in the amounts in paragraphs B101(b) and B101(c): ... on a **present value probability-weighted** average basis, not a best or worst outcome basis....

Scenario	Share of fair returns passed to policyholders	Probability of scenario
Return on assets exceeds guaranteed benefits	90%	1-p
Return on assets is less than guaranteed benefits	0% - benefits are fully guaranteed	p

# Assess probabilistically

Probability guarantee bites (p)	Share of fair returns passed to policyholders	B101 (b) satisfied
5% - "low guarantee"	$90\% \times (1-p)$ $+ 0\% \times p = 86\%$	Yes?
50% - "high guarantee"	$90\% \times (1-p)$ $+ 0\% \times p = 45\%$	No?



# Conclusions



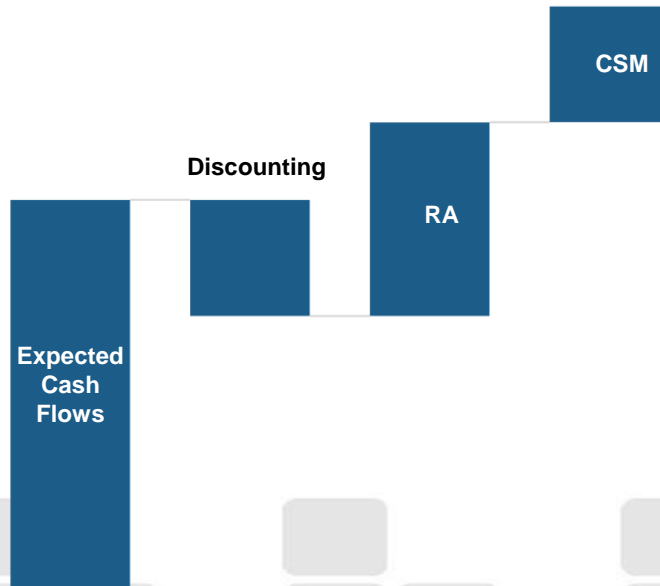
- B101(a) – Need to be careful about what's included in the underlying items.
- B101(b)/(c) – depend heavily on our bonus mechanism (and the link to asset shares) and our definition of underlying
- It is very possible that par contracts with different features (say high guarantees and low guarantees) would be measured under different models
- Need to define 'substantial' share



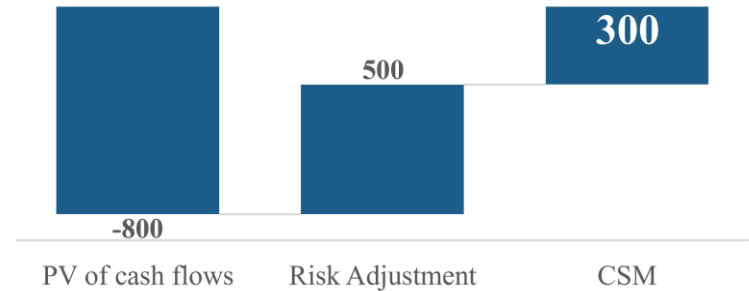
# Initial recognition



# Initial recognition



## CSM



- **VFA ensures no gain at initial recognition.**
- The CSM at initial recognition is equal to  $-(PVCF + Risk\ Adjustment)$ .
- If the total value of FCFs, is a liability – the contract is Onerous i.e., loss making, and such losses must be recognized immediately in the P&L.

# Initial recognition worked example



# Mutualisation





# Mutualisation

**IFRS17.B68** .... The fulfilment cash flows of each group reflect the extent to which the contracts in the group **cause the entity to be affected by expected cash flows**, whether to policyholders in that group or to policyholders in another group. Hence the fulfilment cash flows for a group:

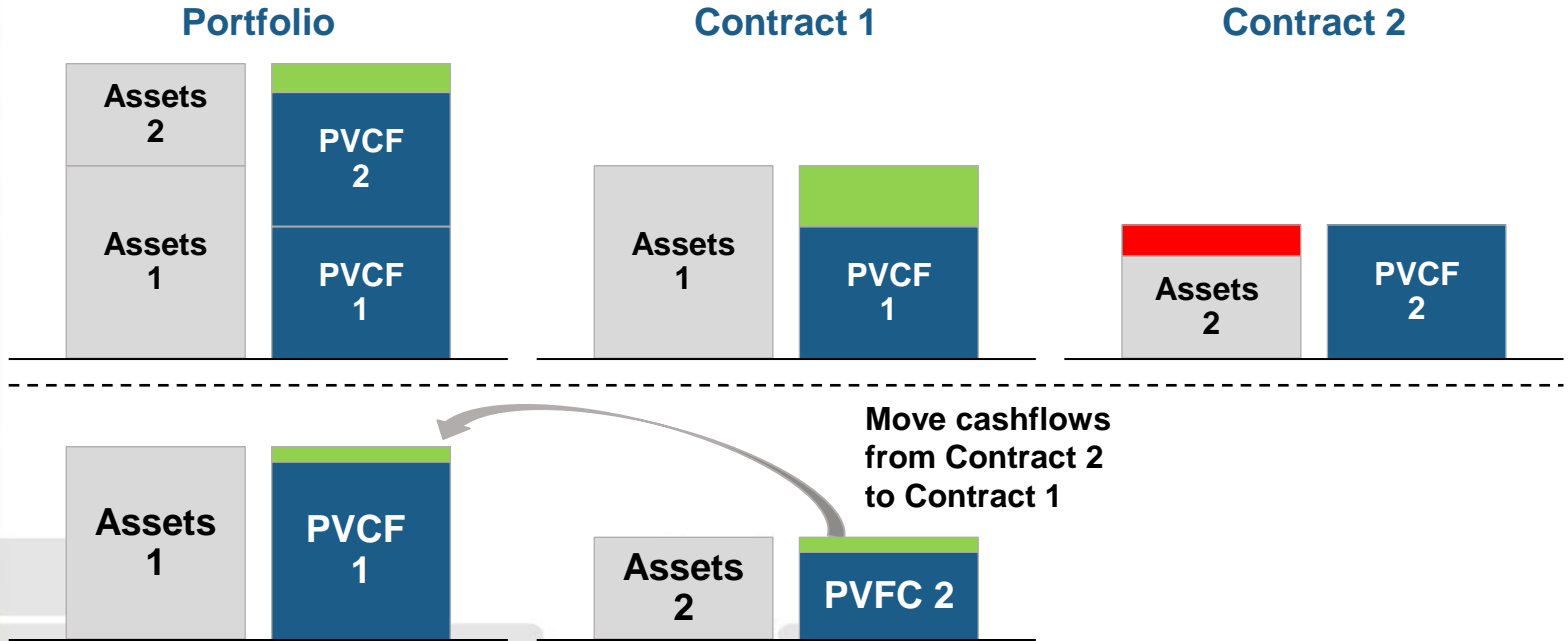
- a) include payments arising from the terms of existing contracts to policyholders of contracts in other groups, **regardless of whether those payments are expected to be made to current or future policyholders**; and
- b) exclude payments to policyholders in the group that, applying (a), have been included in the fulfilment cash flows of another group.

However note the exemption in the EU:

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R2036&from=EN>

... notwithstanding the definition of group of insurance contracts set out in Appendix A of the Annex to this Regulation, Union companies should have the option to exempt intergenerationally-mutualised and cash flow matched contracts from the annual cohort requirement of IFRS 17

# Mutualisation



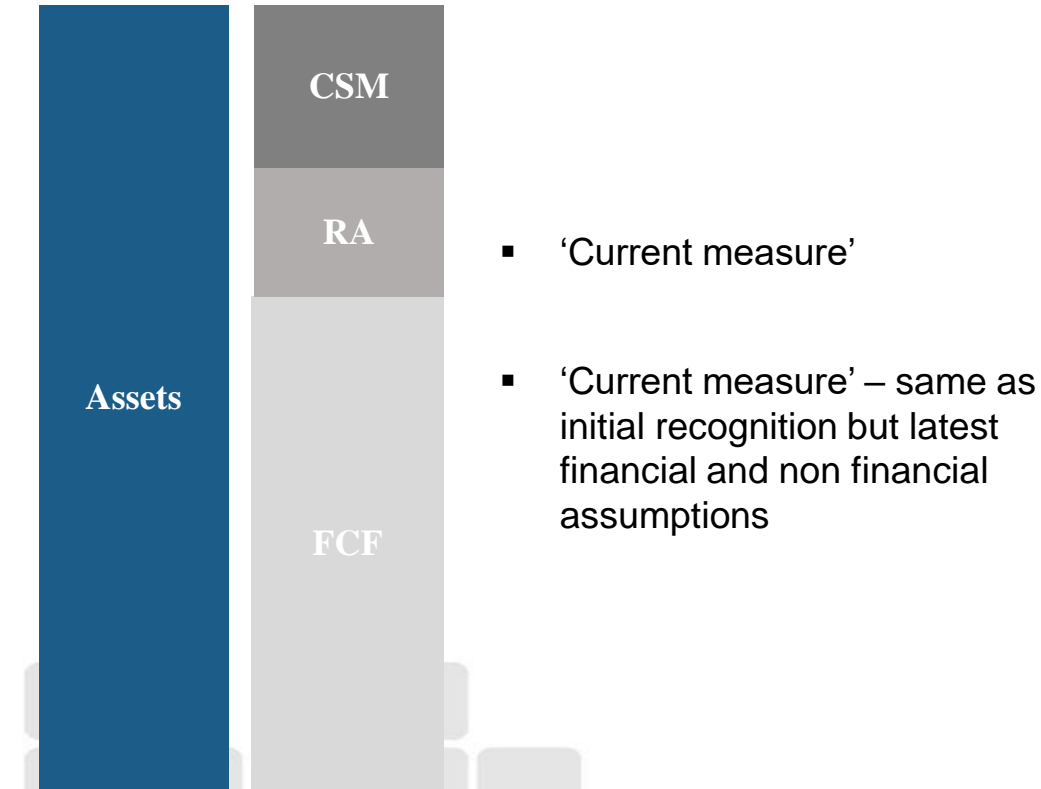
# Mutualisation worked example



# Subsequent measurement



# CSM roll forward under VFA



# CSM roll forward under VFA

CSM at start of period

CSM for new contracts

Change in the amount of the entity's share of the fair value of the underlying items

Changes in cash flows related to future service that do not vary based on returns of underlying items

Currency exchange

CSM allocated to period

CSM at end of period

Measured using the initial recognition approach, described earlier.

Occurs only when the Group is still forming an annual cohort.

change in fair value of the underlying items;  
less

change in fulfilment cash flows

Allocation based on coverage units.

# Income statement

Statement of comprehensive income	Year
Insurance revenue	...
Insurance service expenses	....
<b>Insurance service result</b>	<b>A</b>
Investment income	...
Insurance finance expenses	...
<b>Net investment result</b>	<b>B</b>
<b>Profit or loss</b>	<b>C = A+B</b>
Other comprehensive income (OCI)	<b>D</b>
<b>Comprehensive income</b>	<b>E = C+D</b>



What goes to P&L?

- Expected change in RA
- CSM allocated during the period
- A/E on CFs that do not vary with the underlying items for the period

# Subsequent measurement worked example with variances



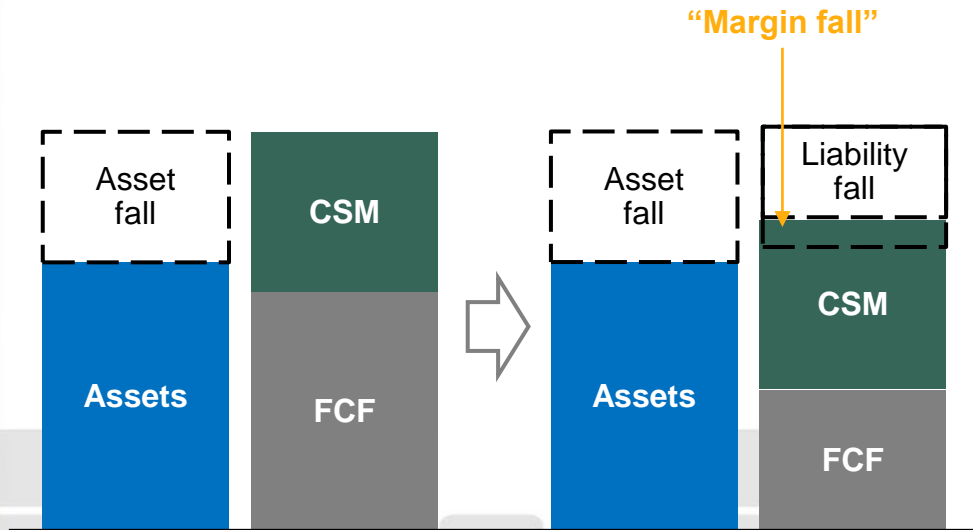


# VFA - further considerations and option



# Key differences between VFA and GMM in statements

Our 'simple' analysis misses the movements on the liability side of both GMM and VFA models



- However, contracts where we may think about applying the VFA usually have a substantial investment component, so that we need to look at liability and asset side movements together before we can see the full picture.
- If we have been able to achieve (either through investment strategy or product design) a high level of matching, the volatility we observe may be only due to the change in our margin for services.

# Key differences between VFA and GMM in statements



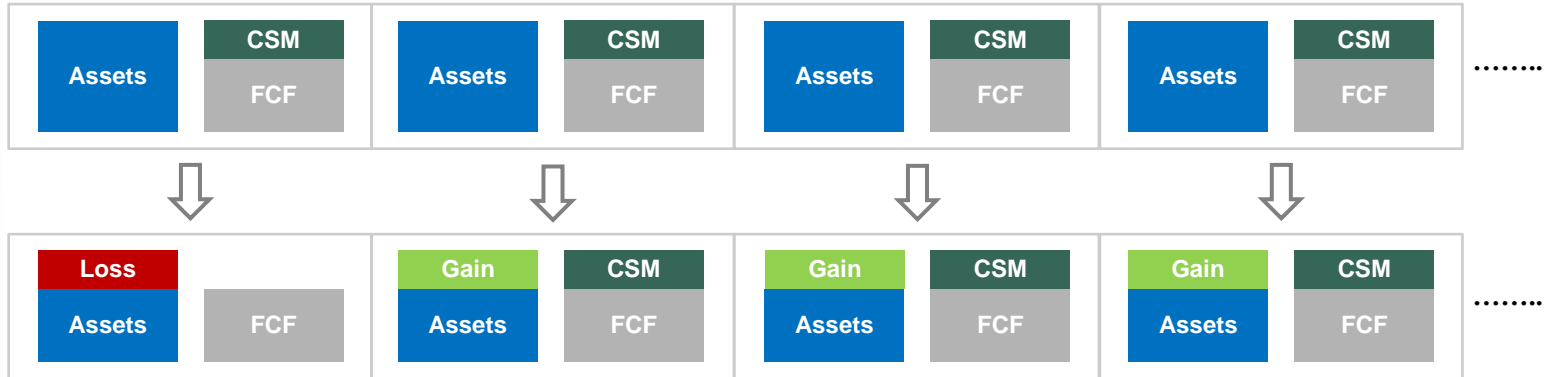
Our 'simple' analysis also misses the impact of the OCI line item

Statement of comprehensive income	Year
Insurance revenue	...
Insurance service expenses	....
<b>Insurance service result</b>	<b>A</b>
Investment income	...
Insurance finance expenses	...
<b>Net investment result</b>	<b>B</b>
<b>Profit or loss</b>	<b>C = A+B</b>
Other comprehensive income (OCI)	D
<b>Comprehensive income</b>	<b>E = C+D</b>

In addition, the GMM has a 'natural' volatility absorber in the OCI – although any profits and losses still remain in the total comprehensive income.

# Impact on onerous contracts

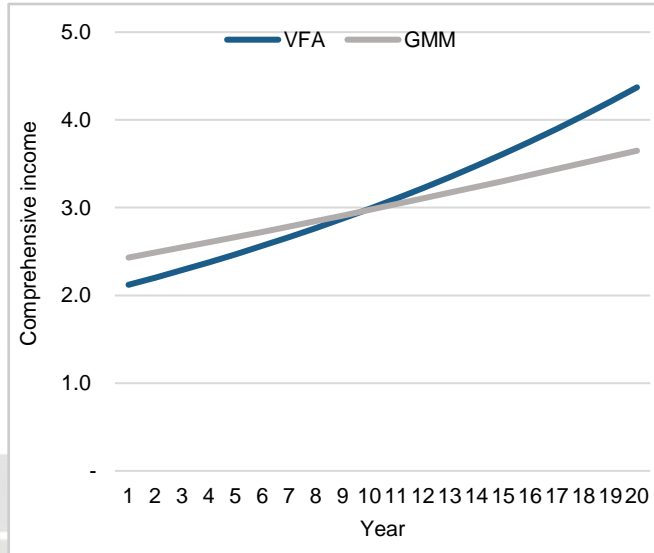
CSMs are cohorted, whereas OCI is an entity level calculation



- CSMs are calculated at a cohort level, and when a cohort moves into loss it must be recognised in the income statement. We may wish to avoid these losses as they could be interpreted as the company having sold loss making business.
- In this example, even if at a fund level, or line of business level, we have not made a loss, at the granular accounting level, a loss appears.
- However under the GMM, all investment losses and gains pass to the income statement, and most likely, substantially to OCI. Here we can manage the total company exposure at an entity level through existing risk management techniques (i.e. ALM) and at a level of aggregation at which the business is managed. If our ALM is strong, we may be comfortable managing the potential for OCI volatility.

# Real-world uplifts / bow-wave

**With market-consistent approaches adopted,  
where do real-world returns go?**



- On previous slides we focussed on the ability of the VFA to dampen the effects of volatility on the income statement, however this works both ways – excess returns are also removed from the income statement.
- Since IFRS 17 is a market-consistent standard, we expect widespread adoption of risk-neutral valuation techniques, with initial CSM recognition likely to utilise risk-free discount rates.
- In the chart opposite we have modelled a simple single premium of 100 units, which pays out the account balance on maturity after 20 years only. The insurer deducts an annual management charge of 2%.
- We assumed that the discount rate at inception was 5% p.a. but the actual realised investment return over the product life was 6% p.a. – this might be the case if the insurer invested some of the assets in corporate bonds or equities for example.
- Under the VFA, the CSM absorbs each year's excess return – that is the excess management charges and the value of the excess margin (larger asset base). This then increases income over time.
- Under the GMM, the expected excess passes to P&L each year, thereby accelerating P&L recognition.

# OCI disaggregation under VFA

Statement of comprehensive income	Year
Insurance revenue	...
Insurance service expenses	....
<b>Insurance service result</b>	<b>A</b>
Investment income	...
Insurance finance expenses	...
<b>Net investment result</b>	<b>B</b>
<b>Profit or loss</b>	<b>C = A+B</b>
Other comprehensive income (OCI)	<b>D</b>
<b>Comprehensive income</b>	<b>E = C+D</b>

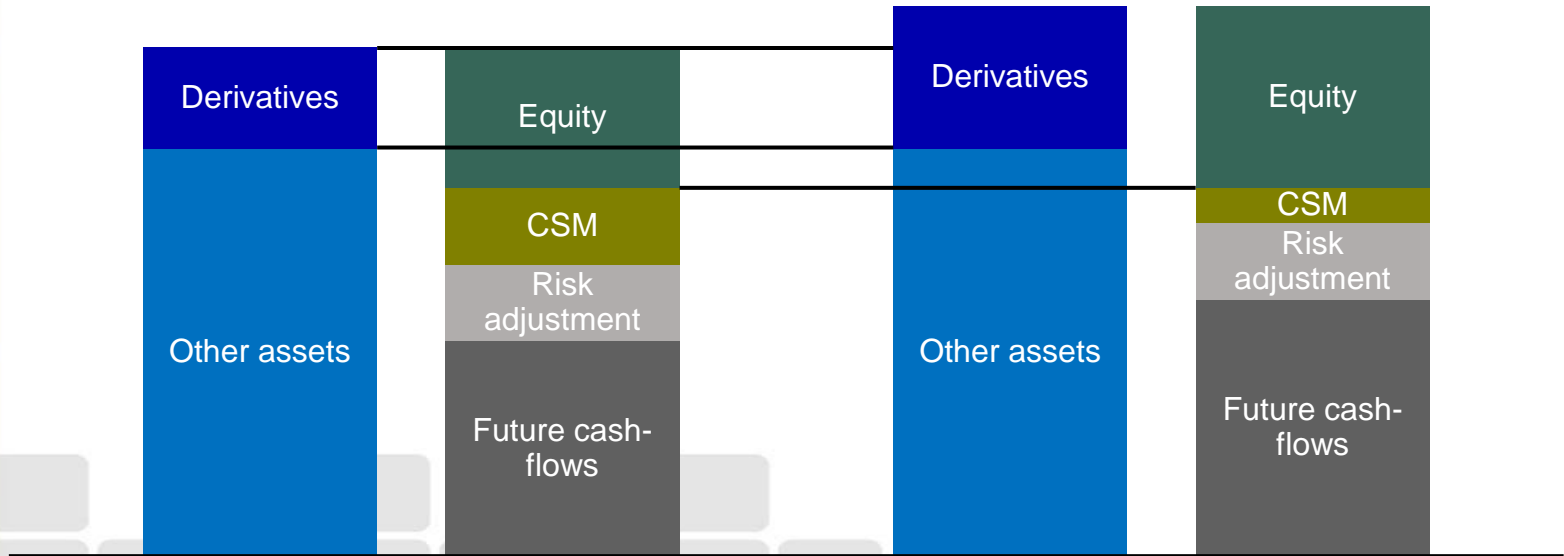
There is an option to split insurance finance income and expense above and below the line (similar to GMM) called the current period book yield approach

While we have managed to move margin volatility out of the net investment result, we may still be left with a volatile investment income line



# Risk mitigation option under the variable fee approach

Without risk mitigation option, hedging can produce volatile balance sheets and P&L



# Thank you!



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