

IFRS 17 – Introduction, Challenges & Opportunities

DUBLIN SEMINAR

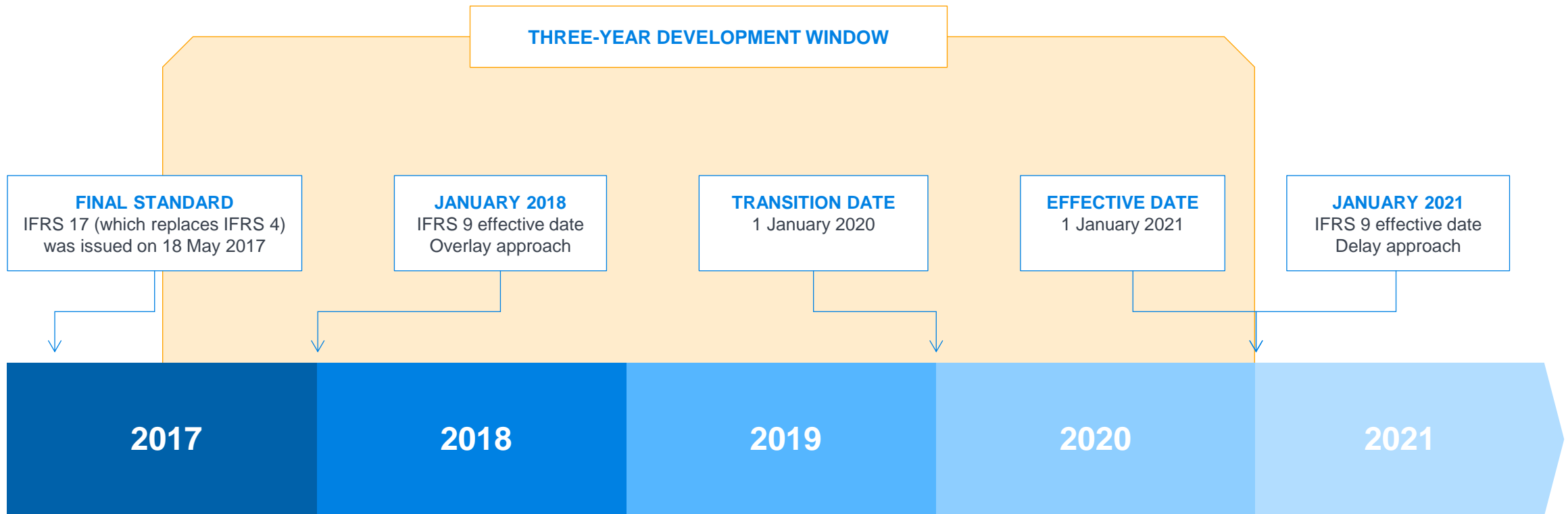
19 OCTOBER 2017

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Introduction to IFRS 17

Timelines for IFRS 17 and IFRS 9



Scope and Unit of Account

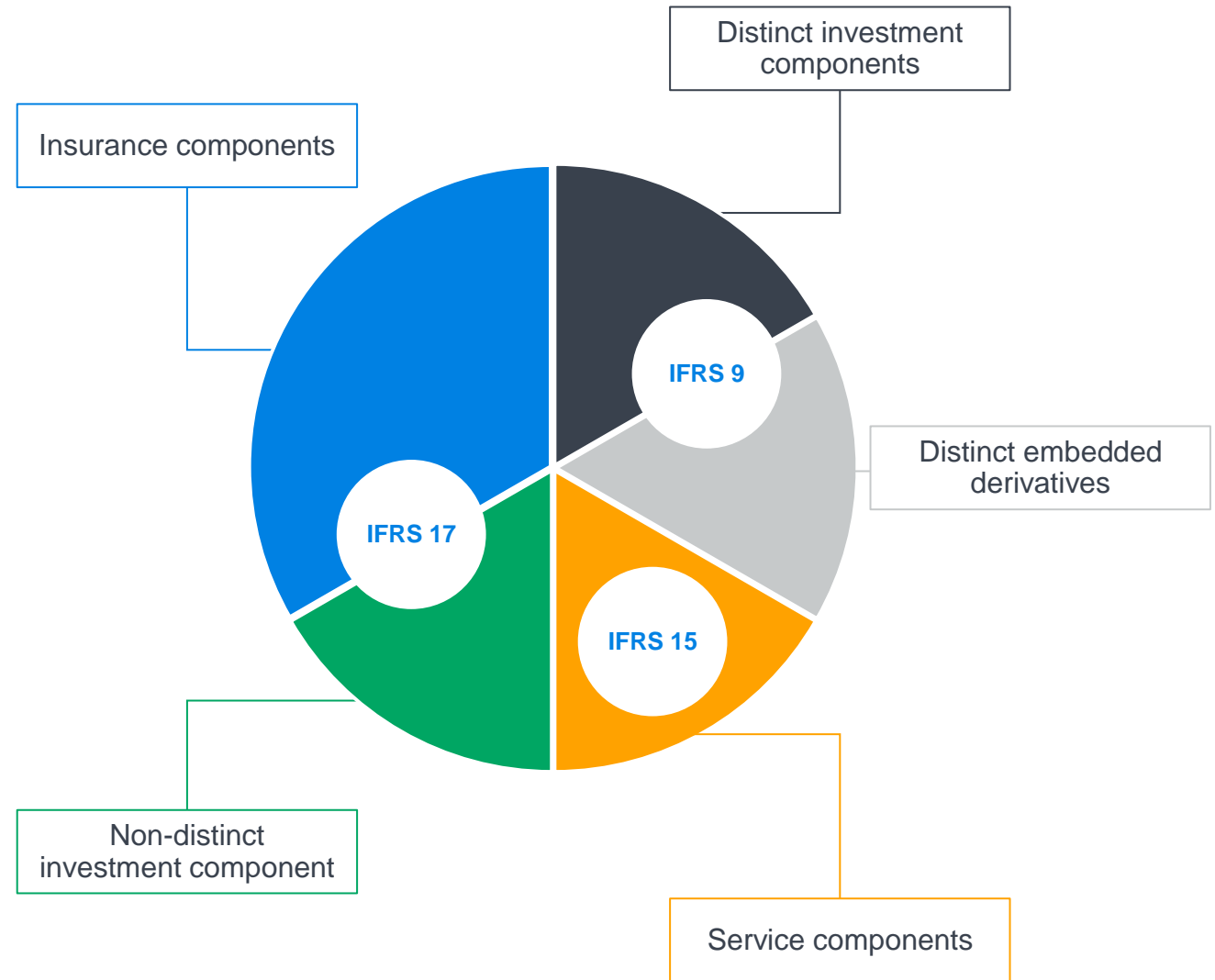
What and how is IFRS 17 applied?

Scope of IFRS 17: Mostly unchanged from IFRS 4

- Applies to:
 - Insurance and reinsurance contracts issued
 - Reinsurance contracts held
 - Investment contracts with discretionary participation features
- Does not apply to:
 - Warranties or residual value guarantees provided by manufacturer, retailer
 - Employer provided benefits
 - Contingent payments on non-financial items
 - Financial guarantee contracts
 - Policyholder accounting other than reinsurance ceded
- Optionally applies to fixed fee service contracts (or can apply IFRS 15 – Revenue)

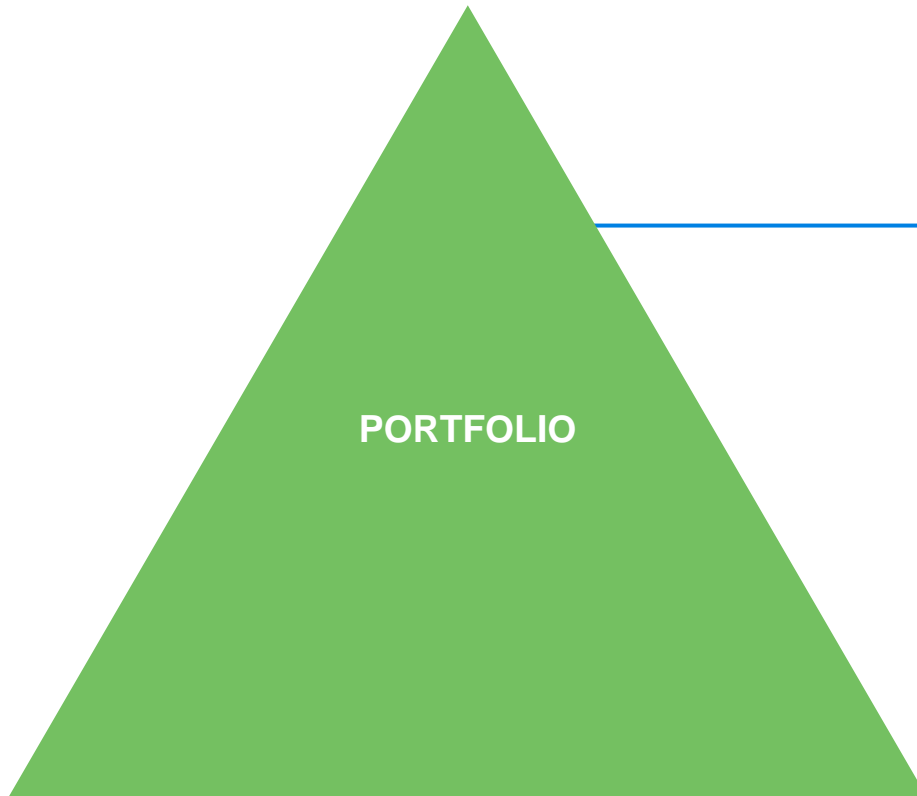
Bifurcation - Investment components

- Distinct investment components separated from the host insurance contract unless highly interrelated
- Distinct investment component - is sold or can be sold separately
- Highly interrelated if:
 - not possible to measure one without considering the other; or
 - Policyholder unable to benefit from one component unless the other is also present
- Promises to transfer distinct goods or non-insurance services to the policyholder – apply IFRS 15



Level of Aggregation

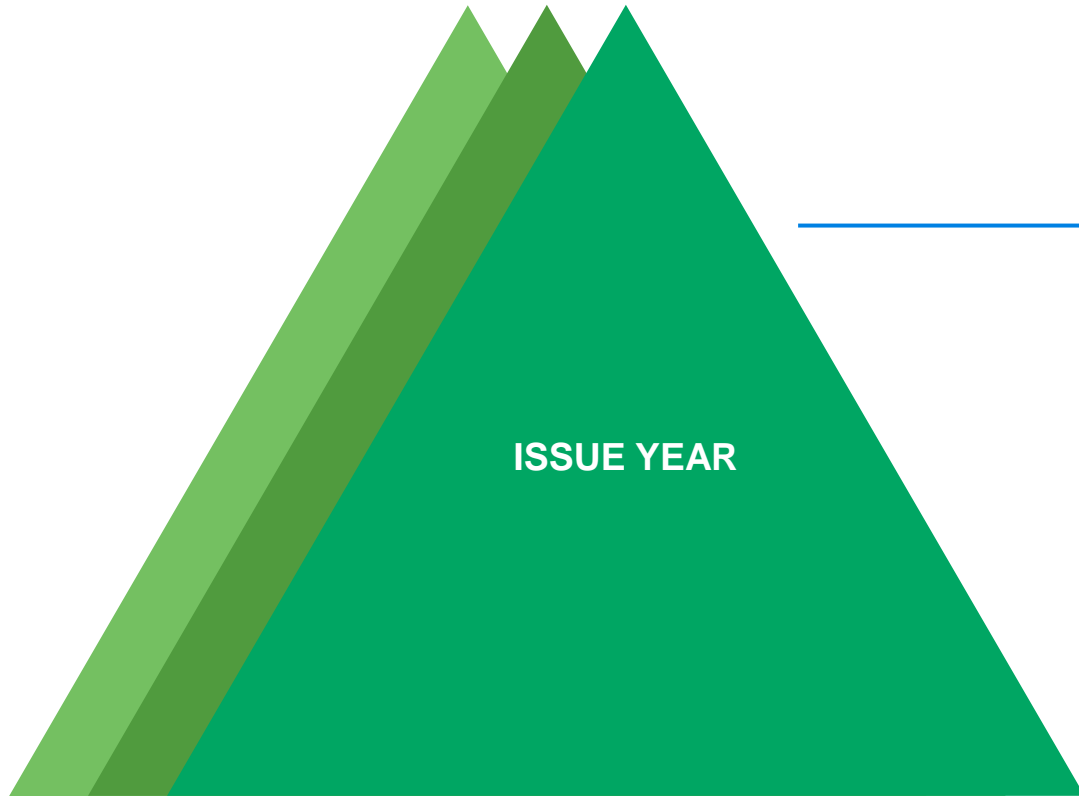
Start at the portfolio level



PORTFOLIO

Contracts that are subject to similar risks and managed together

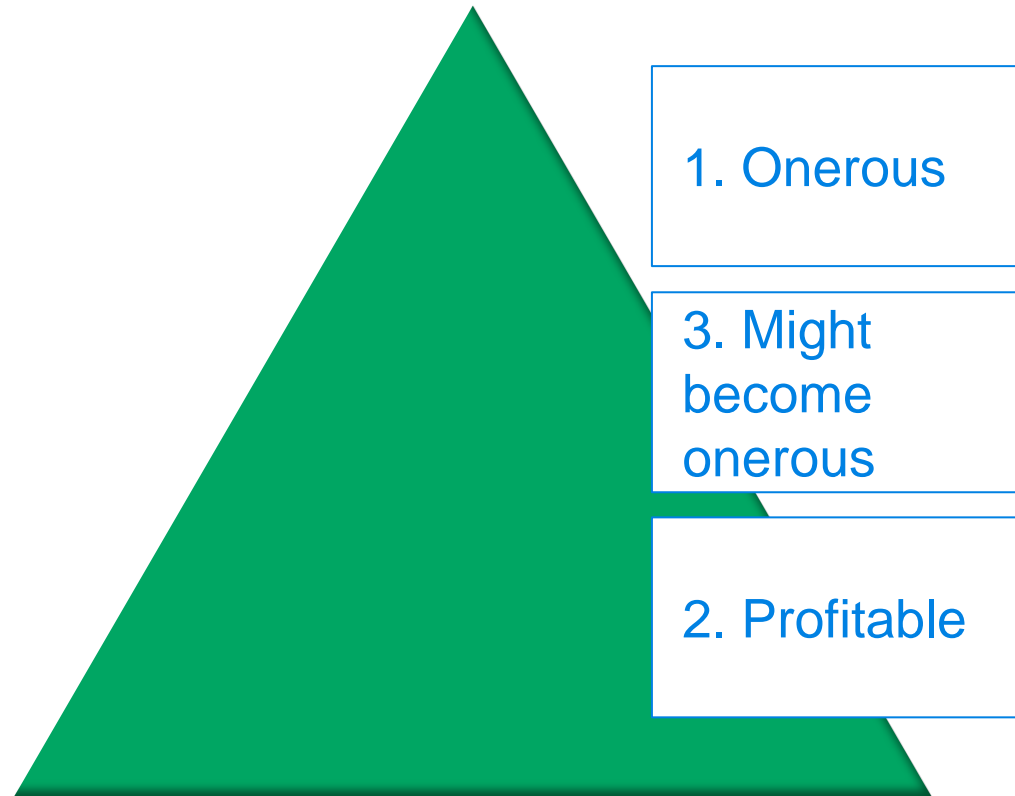
Level of Aggregation – Yearly Cohorts



Contracts issued more than 1 year apart cannot be in same group

Level of Aggregation – Minimum Grouping

3 groups minimum for each issue year within a portfolio



Exception

A legal or regulatory restriction on entity's ability to reprice the product.

Can include in same group

Key issue

Assessing significant possibility of becoming onerous

Groups of contracts are the unit of measurement used in IFRS 17

Measurement Models

Introduction – Measurement Approaches

There are three measurement approaches in IFRS 17, depending on the type of insurance contracts:



GENERAL MODEL

(aka Building Block Approach
or BBA)

Default valuation approach

VARIABLE FEE APPROACH (VFA)

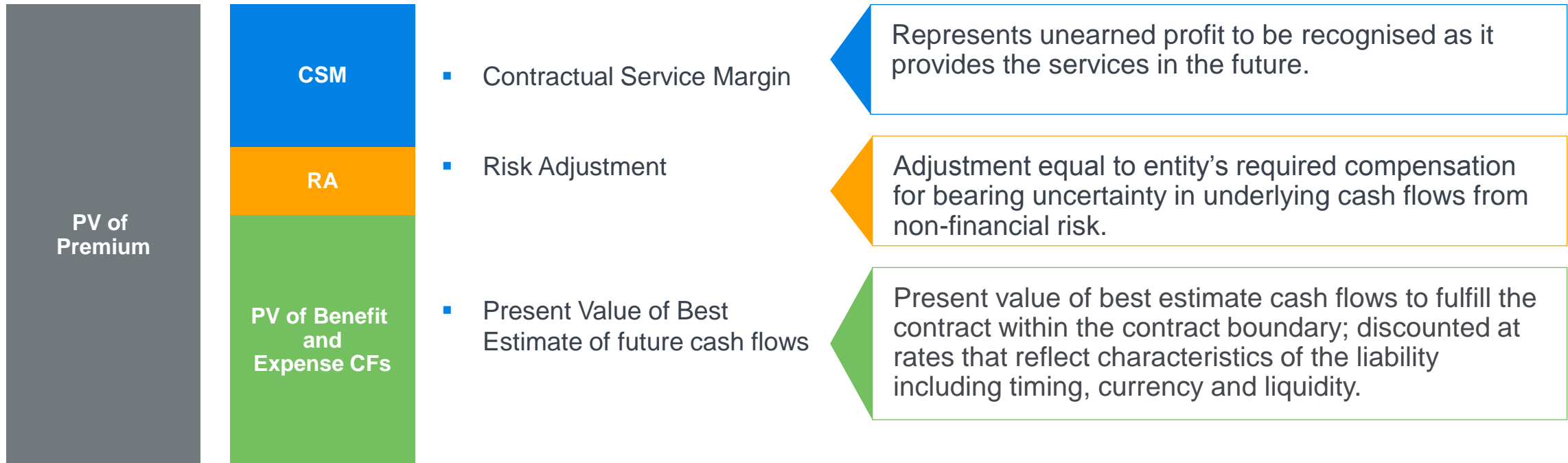
Approach for contracts with direct
participation features (e.g. unit-
linked, with-profit contracts)

PREMIUM ALLOCATION APPROACH (PAA)

Simplified approach for short
duration contracts (generally for
coverage period up to one year)

General Model (aka Building Block Approach or BBA)

Initial Calibration of General Model



Best Estimate - Future Cash Flows

Objective: Estimate the expected (probability weighted mean) present value of future cash flows

- Best estimate cash flows under all possible scenarios based on conditions as of the reporting date – captures the time value of options and guarantees
- Incorporate in unbiased way all reasonable and supportable information available without undue cost or effort about amount, timing and uncertainty of CFs
- Reflect perspective of entity as long as market variables are consistent with observable market prices for those variables
- Only include cash flows within boundary of contract
 - As long as company can compel policyholder to pay the premiums or has a substantive obligation to provide the policyholder with coverage
 - Until the company has the right or the practical ability to reassess the risks by changing the price or level of benefits
- Only include cash flows directly attributable – includes allocation of directly attributable overhead expenses
- May estimate cash flows at a higher level of aggregation than group of contracts

Best Estimate - Discount Rate

Discount rates applied to the estimates of the future cash flows shall:

- a. reflect time value of money,
 - b. reflect characteristics of the cash flows,
 - c. reflect liquidity characteristics of the insurance contracts
 - d. consistent with observable current market prices for financial instruments with cash flows whose characteristics are consistent
 - e. exclude factors that influence market prices but do not affect the future cash flows of the insurance contracts
- If cash flows are not dependent on underlying items – can use top down or bottom up approach
 - If cash flows are dependent on underlying items (VFA) – discount rates need to reflect the variability of the cash flows
 - Own credit risk should be disregarded
 - Weighted average discount rates per annum (underwriting year) are acceptable

Discount Rate - Top down or Bottom up

BOTTOM UP	
Risk “free” rate	Swap rate, Government bonds or Corporate bonds in relevant currency and without credit risk
Illiquidity premium	Dependent on variability of cash flows; <ul style="list-style-type: none"> ▪ Longevity/mortality risk ▪ Policyholder options: surrender values Not directly observable. Several methods to determine the illiquidity premium on assets.
TOP DOWN	
Reference portfolio	Same characteristics as liability - currency, cash flows (timing, level, variability)
Exclude market risk premiums for credit risk, which are relevant only to the assets included in the reference portfolio	Possible approach: price of CDS for expected and unexpected credit risk Fundamental spread approach from Solvency II?
Correct for other differences necessary	e.g. different liquidity

Use observable inputs if available – otherwise adjust for differences or use an estimation technique (e.g. use last liquid point, assume constant forward or spot rate)

Risk Adjustment

- Adjustment to PV of cash flows to reflect compensation entity requires for bearing uncertainty as to amount and timing of CFs due to non-financial risk
 - Financial risk is reflected in cash flows or in discount rate and not in the RA
 - Non-financial risk includes insurance risk and other risks such as lapse and expense risk
- Only reflects risk arising from insurance contracts; not general operational risk.
- Reflects degree of diversification the entity includes when determining the compensation to require. For measurement on a more granular level it will be necessary to allocate the amount of diversification (marginal approaches, game theory)
- Reflects both favorable and unfavorable outcomes in a way that reflects the entity's degree of aversion to risk.
- Key: A higher risk adjustment means a lower CSM and vice versa.

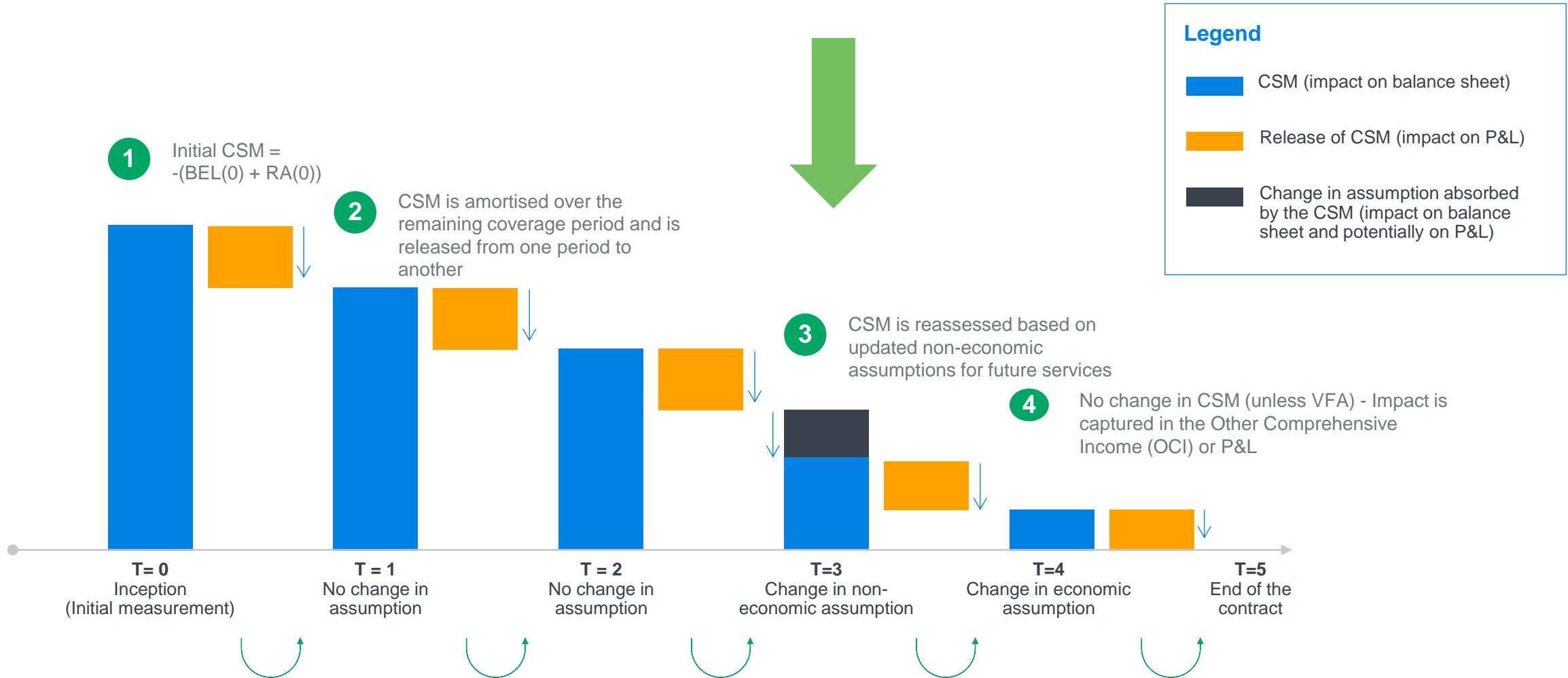
Criteria for Risk Adjustment method

- Methodology not specified
- No requirements about the confidence level or horizon. To be determined by the company.
 - Low frequency/high severity risks should have higher risk adjustment
 - For similar risks, contracts with longer durations should have higher risk adjustments
 - Risks with a wider probability/heavy tail distribution will have a higher risk adjustment
 - The less that is known about the current level and trend, the higher the risk adjustment
- If emerging experience reduces uncertainty about amount/timing, risk adjustments will decrease
- Need to disclose confidence level associated with risk adjustment if use another method.
- One possible approach is to benchmark with the Solvency II SCR (99.5% percentile) and assume normality (99.5% percentile $\sim 2.58 \times \text{SD}$)

Contractual Service Margin

- Excess of consideration charged for the contract over the risk-adjusted expected present value of the fulfilment cash outflows – i.e. the profit
- CSM is a measure of the service the entity would perform in fulfilling the contract. Therefore, don't recognise an immediate gain, but instead recognise gain over time as the entity satisfies its obligation.
- The contractual service margin can not be negative.
- Amortised over coverage period in proportion to service provided (insurance coverage or benefits).
- $\text{CSM released in year } t = (\text{expected release of coverage units in year } t) / (\text{sum of expected coverage units in all years})$
- CSM unlocked for changes in estimates of future cash flows related to providing future service that derive from non-financial risks.
- CSM not unlocked for changes in discount rates

General Model: Contractual Service Margin



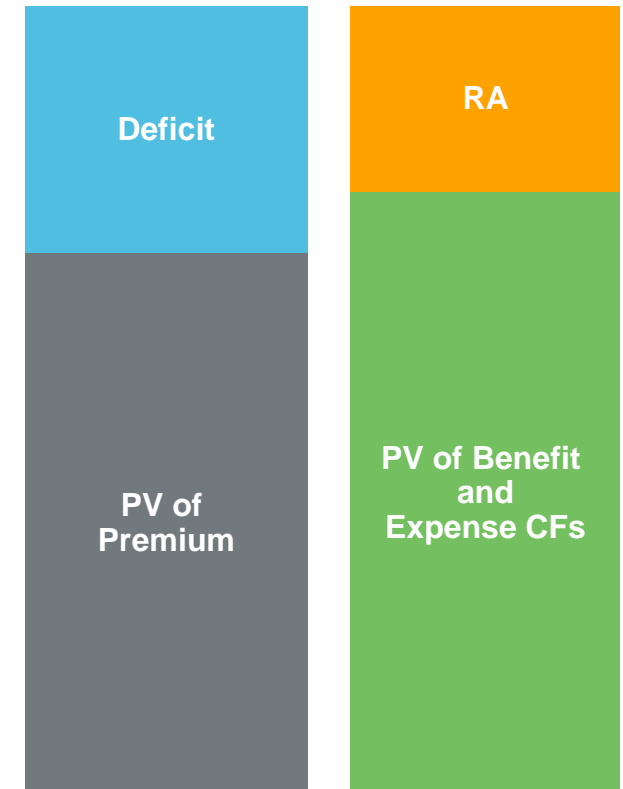
Onerous Contracts

At inception

- A contract can be onerous at inception. In that case the deficit is recognised as a loss.

During the lifetime of a contract

- The CSM can decrease to zero due to unfavourable changes in cash flows. Change is recognised via CSM until it is depleted.
- Additional losses are recognised as losses and off balance-sheet a negative CSM is administered.
- If the contracts becomes profitable again due to favourable changes, first the recognised losses need to be earned back. When the losses are earned back a new CSM can be created.

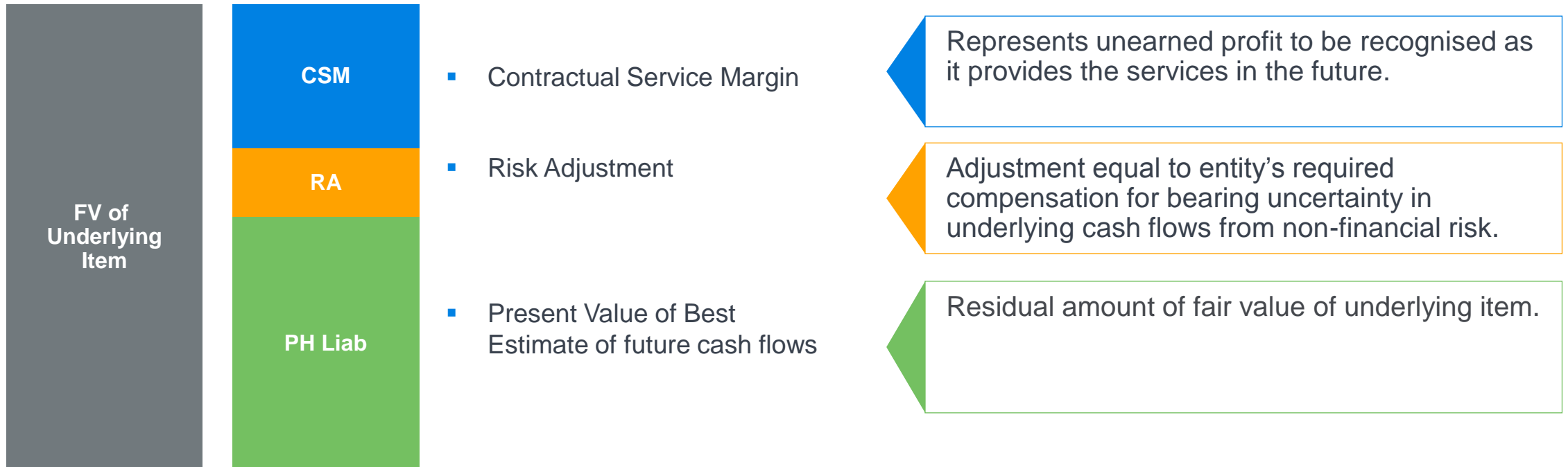


Variable fee approach (VFA)

Direct Participating Contracts

- Definition
 - Contract terms must specify PH to share in returns of clearly defined pool of underlying items
 - Entity expects to pay PH a substantial share of FV returns on underlying items
 - Entity expects a substantial portion of any change in the amounts to be paid to the PH to vary with the change in FV of the underlying items
- Assess at inception only
- Underlying item
 - Can be anything
 - Must be specified in the contract and be enforceable
 - Do not need to hold it
 - Cannot change it in retrospect
- Reinsurance contracts cannot be direct participating contracts

Initial Calibration of Variable Fee Approach



Premium allocation approach (PAA)

Measurement

Premium Allocation Approach

The PAA, as a simplified approach, is subject to the following conditions

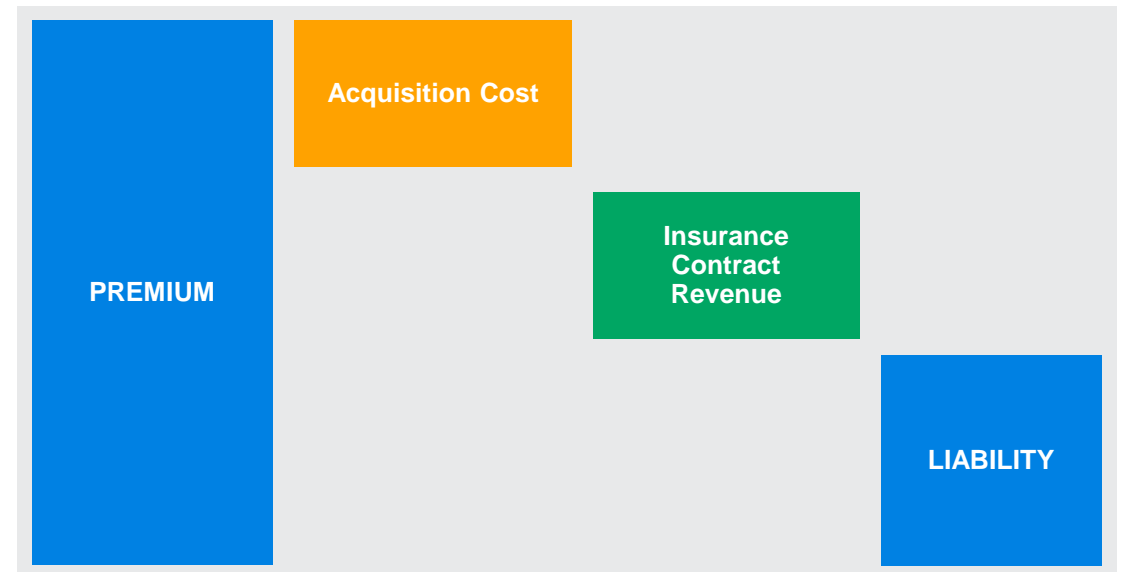
- It should be a reasonable approximation of the General Model specifically the entity shouldn't expect significant variability (e.g. due to options or other derivatives) during the period before a claim is incurred,

or

- The coverage period of the insurance contract at initial recognition (including coverage arising from all premiums within the contract boundary) is one year or less.

SHORT TERM PRE-CLAIM LIABILITIES

- Implicit CSM and Risk Adjustment
- Decrease by passage of time
- No discounting of future cash flows



General model or PAA

P&C	PAA	GENERAL MODEL
Claims made & loss occurrence	Duration <=1 year	Duration > 1 year
Incurred claims	Not applicable	BE + RA no discounting if < 1 yr

DISABILITY/HEALTH	PAA	GENERAL MODEL
One year risk premium and premium adjustable to reflect risk at portfolio level	Permitted	Applicable
One year risk premium, but premium rates are not adjustable to reflect risk at portfolio level	Not applicable	Applicable
Fixed premium for the duration of the contract	Not applicable	Applicable
Incurred claims	Not applicable	Applicable

Reinsurance

Reinsurance impacts

- For direct writers
 - Insurance and reinsurance contracts held are presented & valued separately
 - Should use consistent assumptions to value reinsurance contract and underlying contracts
 - Need to allow for default risk of reinsurer
 - Net cost/gain recognised on purchasing reinsurance is deferred via CSM
 - Can have a negative CSM
 - Treatment of contracts that are loss-making on gross basis but profitable when reinsured
- For reinsurers
 - Can use either the General Model or Premium Allocation Approach
 - Cannot use the Variable Fee Approach for reinsurance contracts held or issued

Disclosures

Disclosures – Explanation of Recognised Amounts

- Reconciliations of beginning and ending balances of:
 - Net liabilities (assets) for remaining coverage
 - Onerous contract values
 - Claim liabilities
- Separately for PV of CFs, Risk adjustment, CSM
- Identify items from roll-forwards that go into insurance revenue, insurance service expense
- Separate incurred claims and expenses, acquisition expense amortisation, changes related to past service, changes related to future service
- Disclose cash flows separately for:
 - Premiums
 - Incurred acquisition expenses
 - Incurred claims and expenses
- Significant amounts of detail behind revenue and expense accounts in income statement

Disclosures – Significant Judgements

- Methods used to measure insurance contracts
 - Cash flow estimates including estimates of discretionary payments
 - Risk adjustment determination
 - Discount rates
 - Determination of investment components
- Process for estimating inputs
- Confidence level associated with risk adjustment
- Yield curve used for discounting in general model

Disclosure – Nature and Extent of Risks in Insurance Contracts

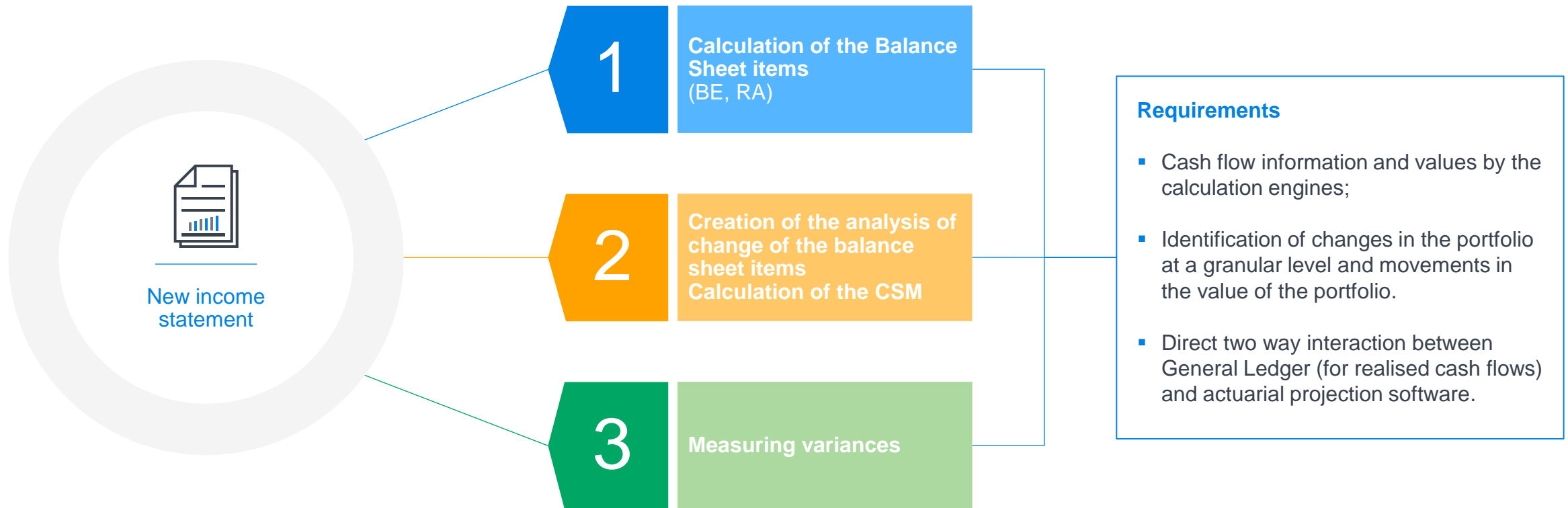
- Exposure to risk and how they arise
- Entity's objectives, policies and processes for managing risks
- Methods used to measure risks
- For each type of risk – quantitative information about its exposure
- Effect of regulatory framework such as minimum capital requirements, minimum interest rate guarantees that are required
- Concentrations of risk
- Sensitivity analysis for profit and loss and equity to changes in risks, with and without risk mitigation
- Claims development exhibits (undiscounted)
- Information on credit and liquidity risk

Presentation and Profit Patterns

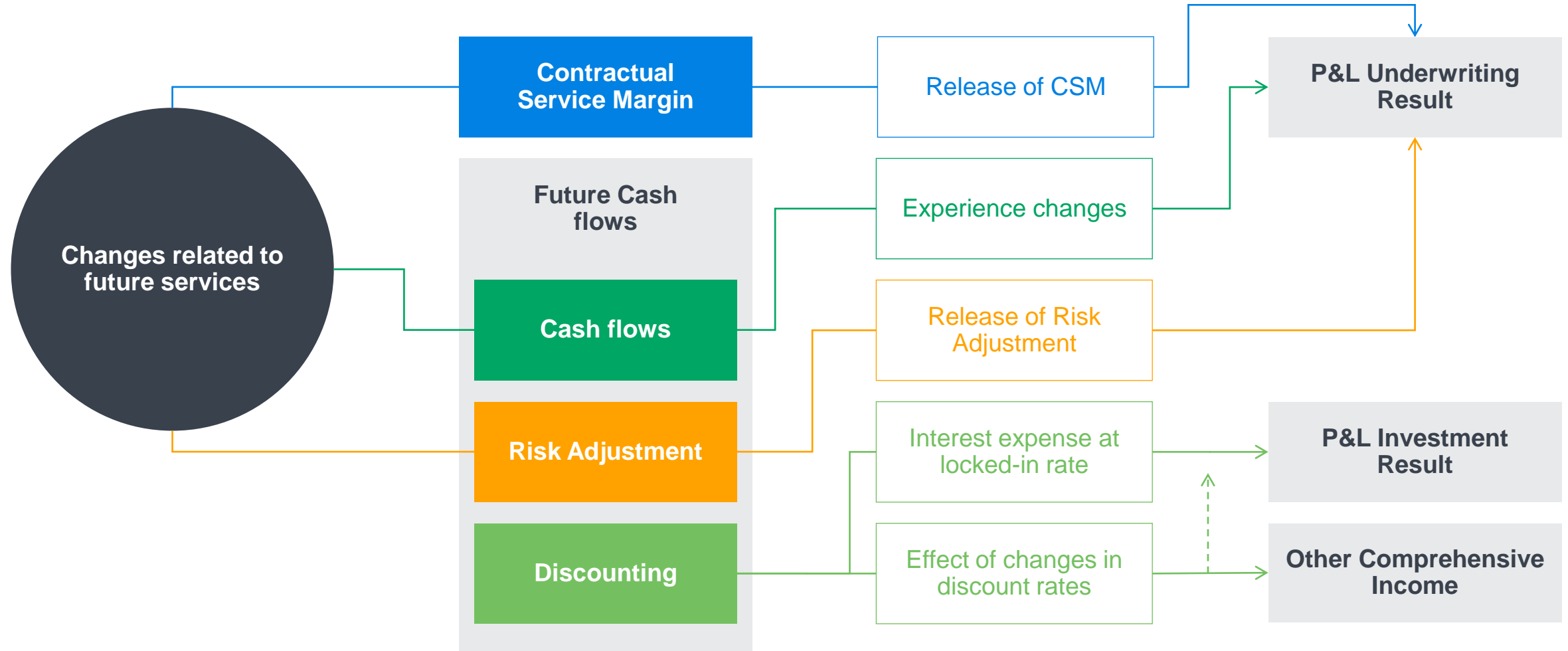
About IFRS 17

Balance sheet and income statement components

To construct the new income statement “requires” a three step approach



Subsequent Measurement & Impact on P&L



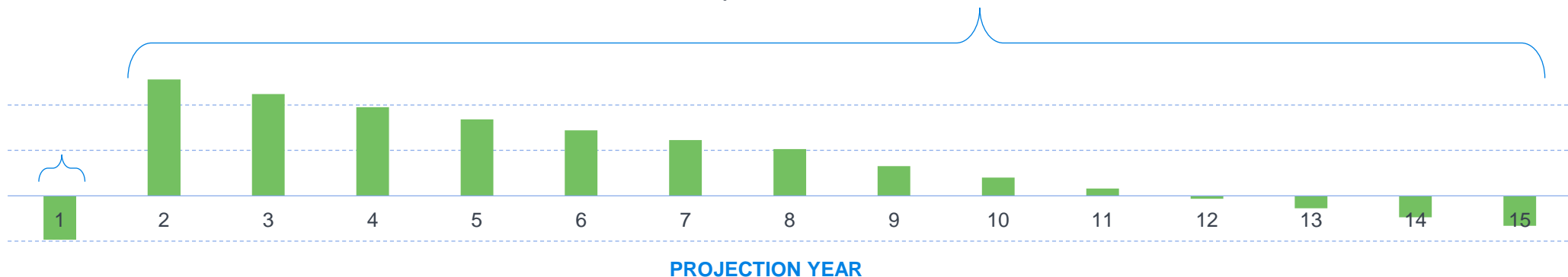
Examples

Term Assurance: Product features and policy information

The key features and assumptions of the non-participating product we illustrate are as follows:

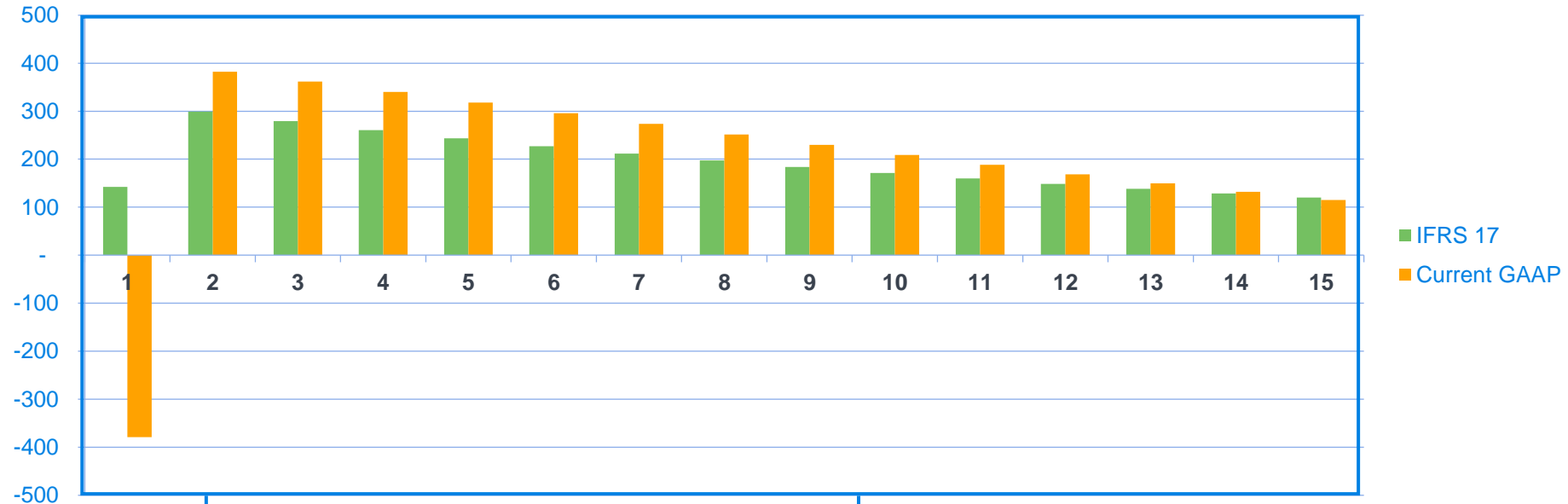
KEY POLICY FEATURES	POLICY TYPE	PREMIUM TERM	POLICY TERM	DEATH BENEFIT
	Level Term Assurance	15 years	15 years	100% SA
REPRESENTATIVE POLICY	AGE AT INCEPTION	GENDER	PREMIUM	SUM ASSURED (SA)
	51	Male	778 p.a.	60,000
KEY ASSUMPTIONS	INVESTMENT RETURN (IR)	DISCOUNT RATE (DR)	ASSET TREATMENT	EXPENSES
	3.0% p.a.	3.0% p.a.	Assume to be measured at fair value through OCI – No asset model taken into account	77% of expenses are assumed to be directly attributable to the contract

Projected new business net cash flows of the term assurance product:



Actual = Expected: Current GAAP vs IFRS17 profit signatures

Profit before tax and cost of capital under IFRS17 basis and Current GAAP basis:



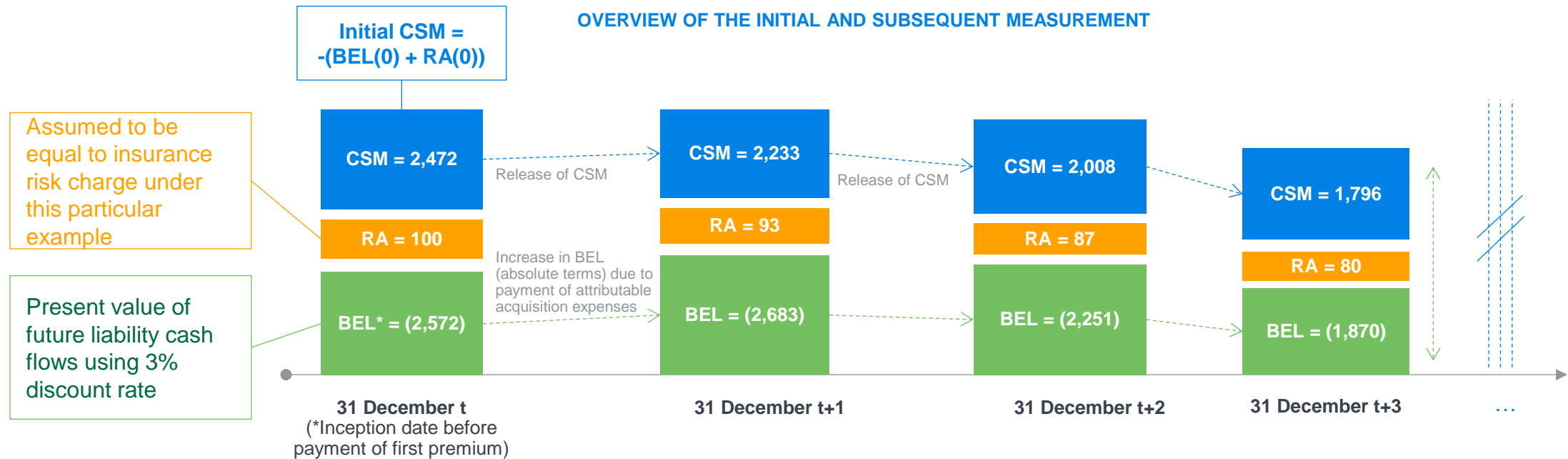
YEAR 1 – INITIAL STRAIN

Given the CSM acts to smooth profits, there is a much bigger initial strain for Current GAAP compared to IFRS 17.

YEARS 2 TO 15

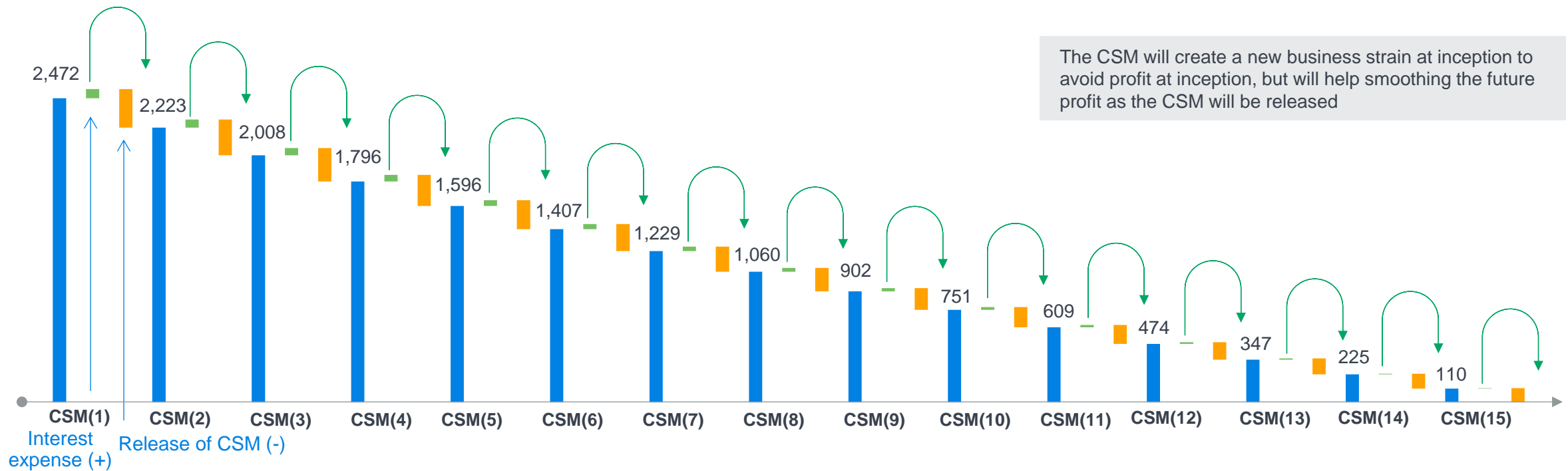
Under IFRS 17, the future IFRS profit will be smoother than under the Current GAAP basis due to the release of CSM from one period to another.

Actual = Expected: Projected IFRS 17 balance sheet



- The BEL, RA and CSM are calculated at the inception of the policy using non-economic assumptions and discount rate at inception.
- Under the base case scenario, best estimate assumptions and investment return (3.0% p.a.) are assumed to remain unchanged throughout the projection period.

Actual = Expected: Projected IFRS 17 CSM



The CSM will create a new business strain at inception to avoid profit at inception, but will help smoothing the future profit as the CSM will be released

- The key difference between the IFRS 17 balance sheet and a Solvency II / EV type balance sheet is the CSM. The CSM is an estimate of the profit that the company expects the contract to generate over the coverage period and will be released over the coverage period.
- Under IFRS 17, the future profit will be smoothed due to the joint effect of (i) the roll forward of the CSM; and (ii) the absorbing capacity of the CSM when non-economic assumptions are modified.

Actual = Expected: Projected IFRS 17 P&L

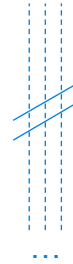
PROJECTION YEAR	1	2	3	4	5
Allocation of CSM to P&L	313	292	272	254	237
Change in Risk Adjustment related to current service	7	7	7	7	7
Expected insurance service expenses	165	166	166	166	166
Amortisation of Attributable Acquisition Expenses	40	40	40	40	40
Insurance revenue	526	505	485	467	450
Claims paid	(165)	(166)	(166)	(166)	(166)
Amortisation of Attributable Acquisition Expenses	(40)	(40)	(40)	(40)	(40)
Non-Attributable Acquisition Expenses	(178)	-	-	-	-
Insurance service expenses	(383)	(206)	(206)	(206)	(206)
Insurance service result	142	299	279	261	243
Investment income	-	6	10	14	16
Insurance finance expenses	-	(6)	(10)	(14)	(16)
Finance result	-	-	-	-	-
Profit/Loss	142	299	279	261	243
OCI	-	-	-	-	-

Under IFRS 17, the statement of comprehensive income does not show insurance inflows / outflows anymore but shows various margins generated by the contract.

The scenario above is based on the assumption that actual economic experience is in line with expectations. Therefore the investment margin is nil (i.e. locked-in rate is equal to the investment return). The IFRS profit is then explained by the release of the RA and CSM.

Actual <=> Expected mortality: Impact on P&L

PROJECTION YEAR	1	2	3	4	5
Insurance service result	142	299	279	261	243
Finance result	-	-	-	-	-
IFRS net income	142	299	279	261	243
OCI	-	-	-	-	-



PROJECTION YEAR	1	2	3	4	5
Insurance service result	142	133	278	260	243
Finance result	-	-	-	-	-
IFRS net income	142	133	278	260	243
OCI	-	-	-	-	-

- Mortality profit is worse than expected in year 2 leading to a lower underwriting margin.
- Underwriting margin is slightly reduced in year 3 and 4 as experience changes are absorbed in CSM.

PROJECTION YEAR	1	2	3	4	5
Insurance service result	142	31	182	169	157
Finance result	-	-	-	-	-
IFRS net income	142	31	182	169	157
OCI	-	-	-	-	-

- Underwriting margin is reduced from year 2 onwards as the release in CSM is lower than in Sensitivity 1 due to lower CSM at the end of year 2 (see next slide).

BASE CASE SCENARIO
Actual mortality = expected mortality



SENSITIVITY 1 (THEORETICAL)
Actual mortality in year 2 = 200% expected mortality
No change in mortality assumption

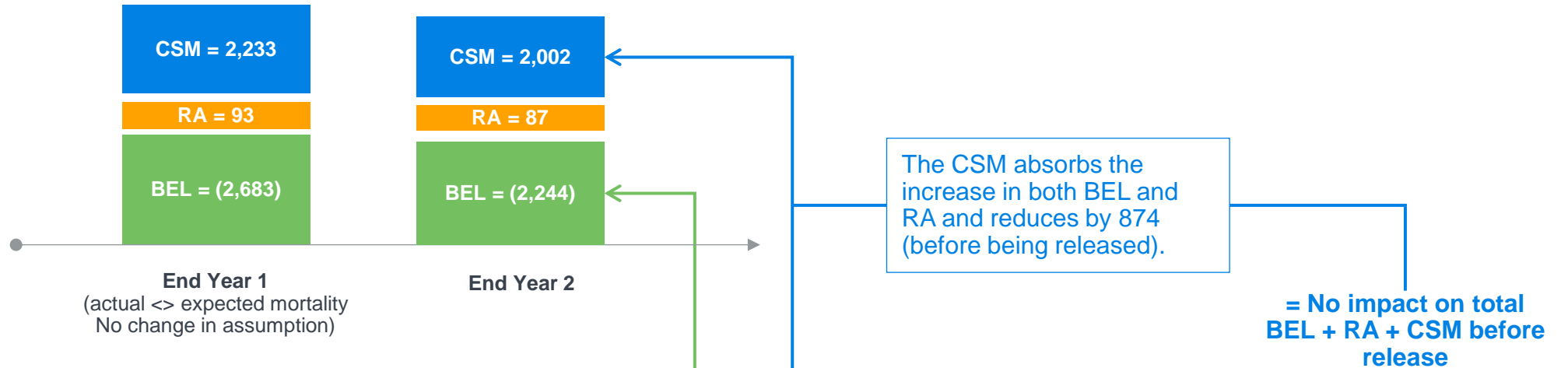


SENSITIVITY 2
Actual mortality in year 2 = 200% expected mortality
Mortality assumption is updated from year 2 onwards

Actual <> Expected Mortality: Impact on balance sheet

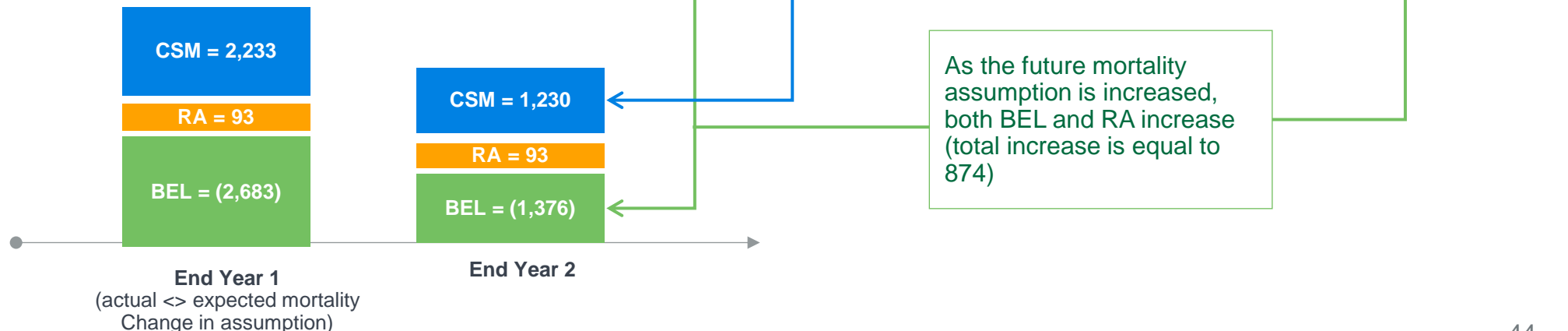
SENSITIVITY 1

No change in mortality assumption



SENSITIVITY 2

Change in mortality assumption



Actual <=> Expected investment income: Impact on P&L

PROJECTION YEAR	1	2	3	4	5
Insurance service result	142	299	279	261	243
Finance result	-	-	-	-	-
IFRS net income	142	299	279	261	243
OCI	-	-	-	-	-

PROJECTION YEAR	1	2	3	4	5
Insurance service result	142	299	279	261	243
Finance result	-	(2)	(3)	-	-
IFRS net income	142	297	276	-	-
OCI	-	-	-	-	-

Since the actual investment return is lower than the expected in years 2 and 3, the investment margin becomes negative.

- Investment return and discount rate are updated in year 3, leading to a material impact on OCI in year 3.
- In practice, this impact would be partly offset by a change in asset value not captured in this simplified example.

	2	3	4	5
Insurance service result	299	277	261	243
Finance result	(2)	(3)	(5)	(5)
IFRS net income	297	274	256	238
OCI	-	-	74	(17)

From year 4 onwards, the investment margin remains negative, the interest rate accretion on BEL, RA and CSM being based on the locked-in discount rate at inception of 3%.

BASE CASE SCENARIO				
YEAR	1	2	3	4+
Actual IR	3%	3%	3%	3%
Exp. IR / DR	3%	3%	3%	3%

SENSITIVITY 1 (THEORETICAL)				
YEAR	1	2	3	4+
Actual IR	3%	2%	2%	3%
Exp. IR / DR	3%	3%	3%	3%

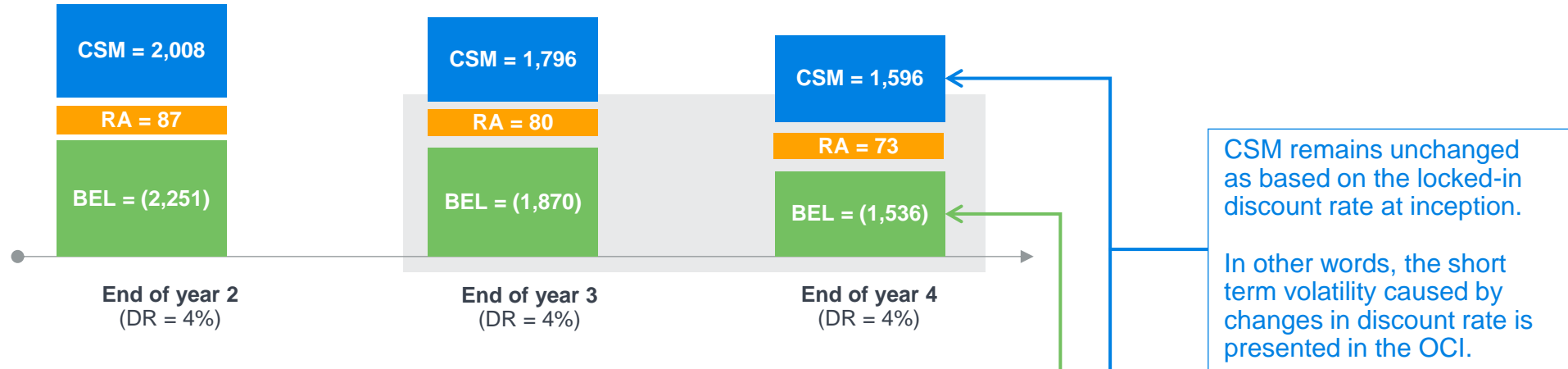
SENSITIVITY 2				
YEAR	1	2	3	4+
Actual IR	3%	2%	2%	2%
Exp. IR / DR	3%	3%	2%	2%

Note: IR: investment return. Exp.: expected. DR: discount rate

Actual <=> Expected investment income: Impact on balance sheet

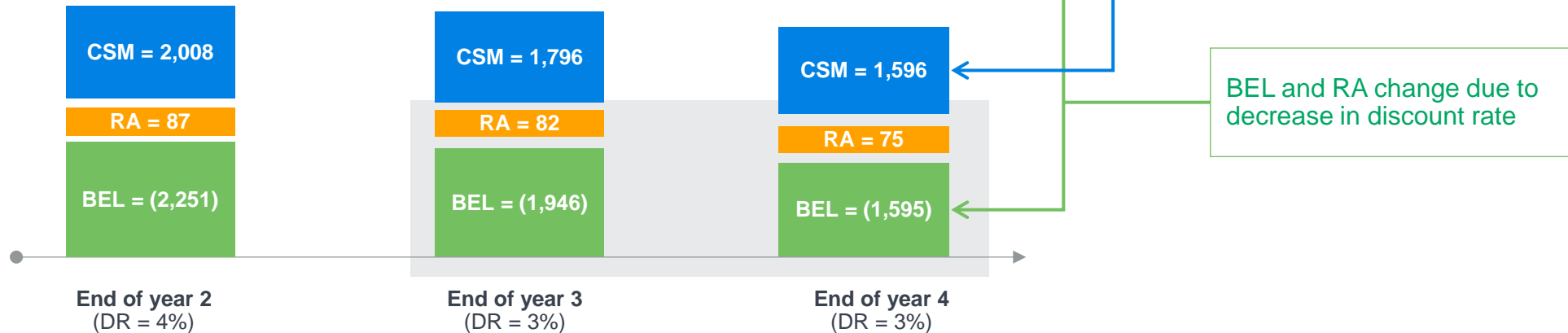
BASE CASE SCENARIO

No change in discount rate



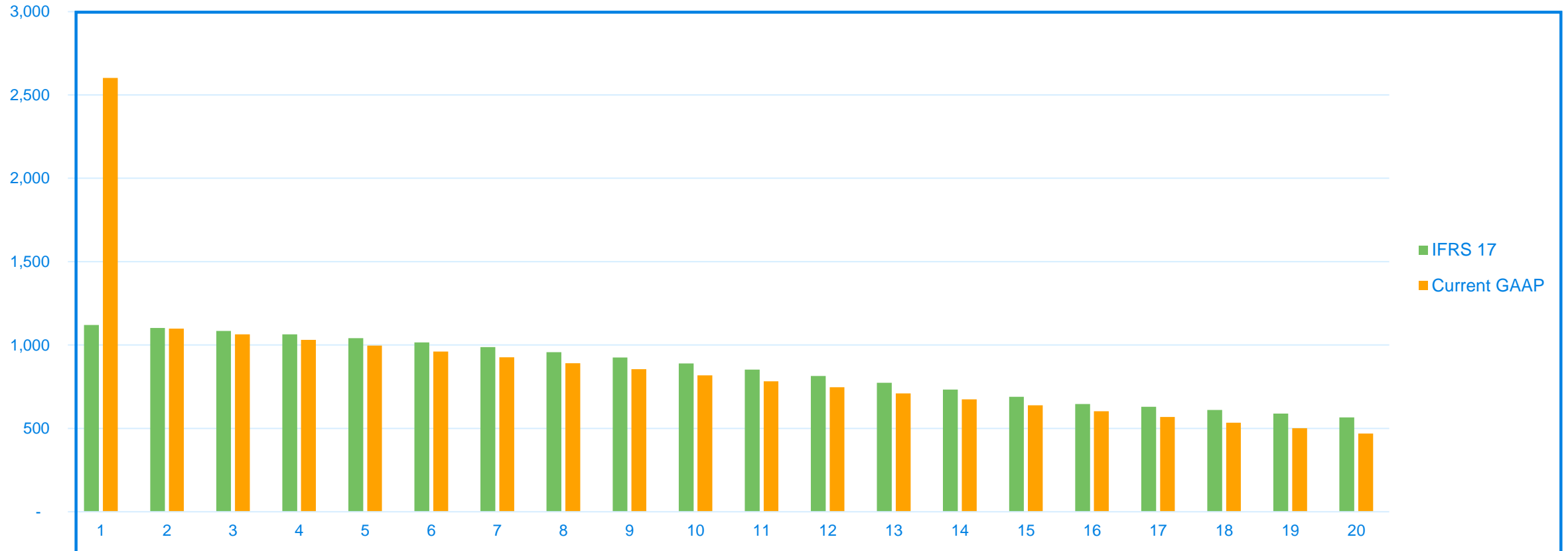
SENSITIVITY 2

Change in discount rate from 4% in year 2 to 3% in year 3



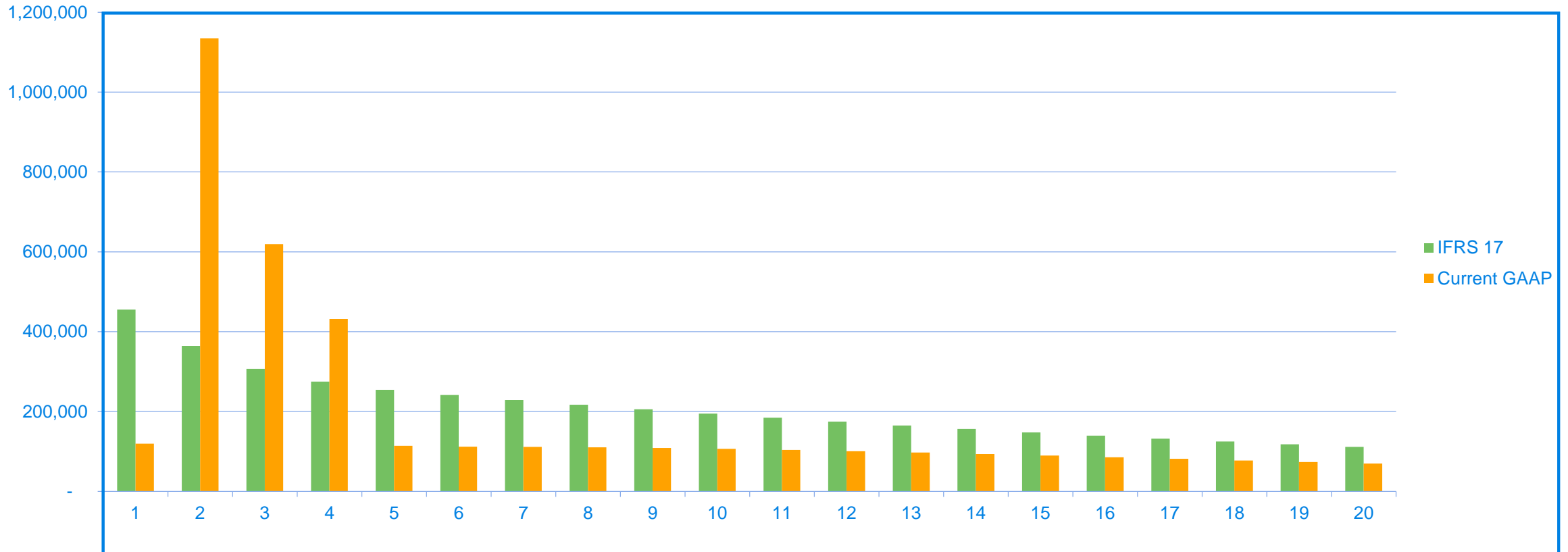
Annuities: Current GAAP vs IFRS17 profit signatures

Profit before tax and cost of capital under IFRS17 basis and Current GAAP basis:



Unit Linked: Current GAAP vs IFRS17 profit signatures

Profit before tax and cost of capital under IFRS17 basis and Current GAAP basis:



Key takeaways

1

The inclusion of the CSM constitutes the major difference between the Current GAAP balance sheet and the IFRS balance sheet.

2

The CSM acts as an additional buffer of smoothing, so profits are generally more smooth under IFRS 17.

3

Change in non-economic assumptions can be absorbed by the CSM, allowing the underwriting margin to be more smoothed from one year to another.

4

Under the General Model approach, the CSM is not impacted by the change in economic environment. Under the VFA approach, the CSM absorbs all the non economic and economic assumption changes.

5

The OCI has been introduced to reduce the accounting mismatch in the income statement between the insurance liability measurement and related assets recorded at either amortised cost or FVOCI.

6

Accounting mismatches may not be entirely eliminated and will require further tailor-made ALM analyses.

Transition

IAS 8 – Accounting Policies, Changes in Accounting Estimates and Errors

The implementation of the IFRS 17 standard will be performed consistent with IAS 8.

IAS 8 recognises three types of changes in valuations:

1. Change in accounting policy: The implementation of IFRS 17

- a) This requires a retrospective application for each prior period presented
- b) This means adjusting the opening balance of each affected component of equity for the earliest prior period presented and the other comparative amounts disclosed for each prior period presented as if the new accounting policy had always been applied.

2. Errors:

- a) This requires restating all figures from the moment the error occurred or for each period presented
- b) Consequence: the implementation of IFRS 17 requires the highest level of quality, because in case of an error a retrospective application is required.

3. Change in accounting estimate

- a) Prospective application: restate all figures from the moment the change is applied

Companies need to avoid errors after the transition given the burden related to errors.

Hence, the transition to IFRS 17 is a first-time-right operation.

Transition to IFRS 17

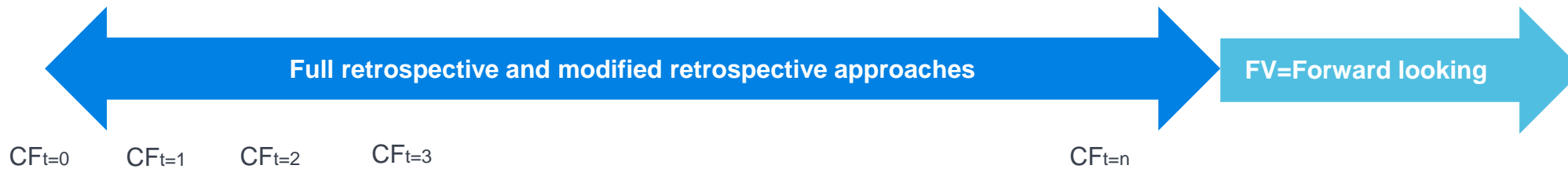
- The following opening adjustments need to be made:
 - Measurement of all insurance liabilities as sum of BE, RA and CSM
 - Adjustment of the retained earnings
 - Adjustment of the accumulated OCI, by including the difference on the fulfillment cash flows between current discount rates and initial discount rates
 - Derecognition of DAC and intangible assets from previous business combinations that do not meet the definition of an intangible asset (VOBA)
 - Recognition of any assets or liabilities from business combinations not previously recognised

Transition – three approaches

Full retrospective approach	Modified retrospective approach	Fair value approach
<ul style="list-style-type: none"> Required where not 'impracticable' Requires day 1 data and assumptions and full history to date of transition If impracticable, choose between modified retrospective and fair value approach 	<ul style="list-style-type: none"> Retrospective with simplifications to address data gaps Simplifications can be applied on a piecemeal basis 	<ul style="list-style-type: none"> Comparison of fulfilment value to IFRS 13 fair value Could result in limited CSM and hence future profits Determination of fair value of insurance contract is unclear

Inception

Transition



Modified retrospective approach

The modified retrospective approach allows for the following simplifications (GM)

TOPIC	SIMPLIFICATION
Expected cash flows at initial recognition	<ul style="list-style-type: none">Realised cash flows until 1 January 2020Expected cash flows from 1 January 2020 on by using assumptions as per 1 January 2020
Discount rate at initial recognition	<ul style="list-style-type: none">Use applicable observable curve as approximation if availableOtherwise, determine an average spread over an observable yield curve
Risk margin at initial recognition	<ul style="list-style-type: none">Adjust risk margin at 1 January 2020 with the expected release between initial recognition and 1 January 2020
Developments between initial recognition and 1 January 2020	<ul style="list-style-type: none">Estimate contractual service margin at 1 January 2020 by scaling based on coverage units
Grouping of contracts	<ul style="list-style-type: none">Grouping is allowed for contracts from different contract yearsGrouping of contracts can be done at contract inception date or at 1 January 2020

Some practical issues with the modified approach

Availability of data; What if historical data before this moment is not available

Portfolio with 3 years of new business.

Transition

Grouping of data; how about the inception date



Segmentation of financial data per issue year? Does the financial administration have information per issue year?

How about changes in the portfolio that can't be identified easily?

For instance premium payments on universal life contracts, partial withdrawals and indexation of benefits.

Fair value approach

Define the CSM at 1 January 2020 as the difference between the fair value at exit value (IFRS 13) and the fulfillment cash flows (IFRS 17) at that date

The following is included in the IFRS 13 fair value:

- Non-performance risk of the insurance company (example: FAS157)
- Overhead (non-direct) expenses
- All effects influencing the fair value, but irrelevant to the cash flows of the insurance contract

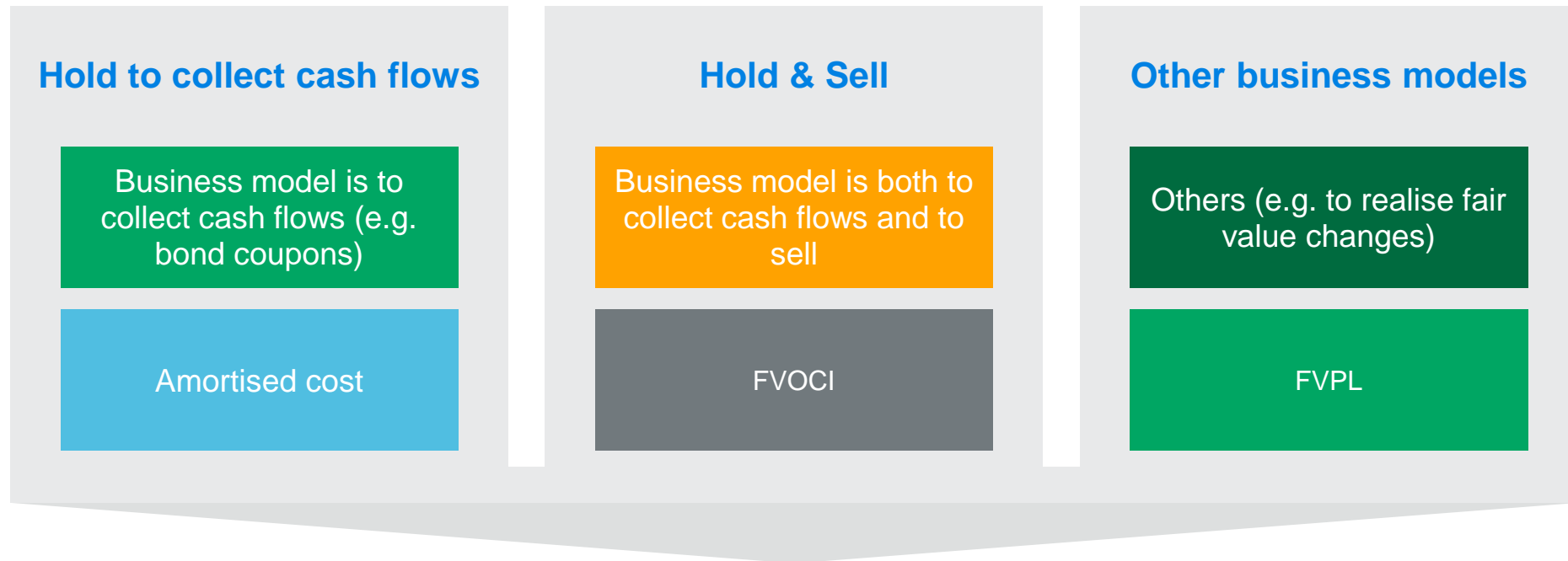
- Perspective: entity's perspective for IFRS 17 Risk Adjustment versus exit value perspective for IFRS 13 fair value
- Demand feature is not applicable: IFRS 13 fair value of a financial liability with a demand feature is not less than the discounted amount payable on demand.

Link with IFRS 9

IFRS 9 – Deferral approach

- Insurance companies are allowed to defer the introduction of IFRS 9 to 1 January 2021
- The following requirements apply:
 - they have not previously applied IFRS 9; and
 - they have activities that are predominantly connected with insurance
- Each (solo and group) reporting entity has to assess the applicability of the requirements
- A consolidated group can be allowed to defer where a subsidiary is not
- Predominantly connected with insurance:
 - the amount of its insurance liabilities is significant compared with its total amount of liabilities; and
 - the percentage of its liabilities connected with insurance relative to its total amount of liabilities is:
 - greater than 90 per cent; or
 - less than or equal to 90 per cent but greater than 80 per cent, and the company does not engage in a significant activity unconnected with insurance

IFRS 9 – Business Model Test for financial assets



- FVOCI is an option for solely principal and interest instruments like bonds and loans
- Classification can be made on an instrument-by-instrument basis

Accounting mismatch – analysis

Valuation of financial assets

Premium allocation approach

- Amortised cost and FVOCI

General model

- FVOCI
- FVP&L
- Amortised cost and FVOCI

Variable fee approach

- FVP&L

Valuation of insurance liabilities

Premium allocation approach

- No discounting

General model

- Discounting through OCI and roll forward P&L
- Discounting and roll forward P&L
- No discounting (short term claims reserves)

Variable fee approach

- FVP&L, but CSM will absorb significant part of the change of the variable fee.
Option to use P&L.

Actual <> Required investment income

Accounting mismatch

The OCI has been introduced to reduce the accounting mismatch in the income statement between the insurance liability measurement and related assets recorded at either amortised cost or FVOCI:

- Volatility in the income statement is expected to decrease significantly in comparison with statutory income statement.
- The income statement investment margin relies materially on assumptions at inception while the balance sheet is based on current assumptions. This may result in changes in spreads from inception being recognised only as they are realised.

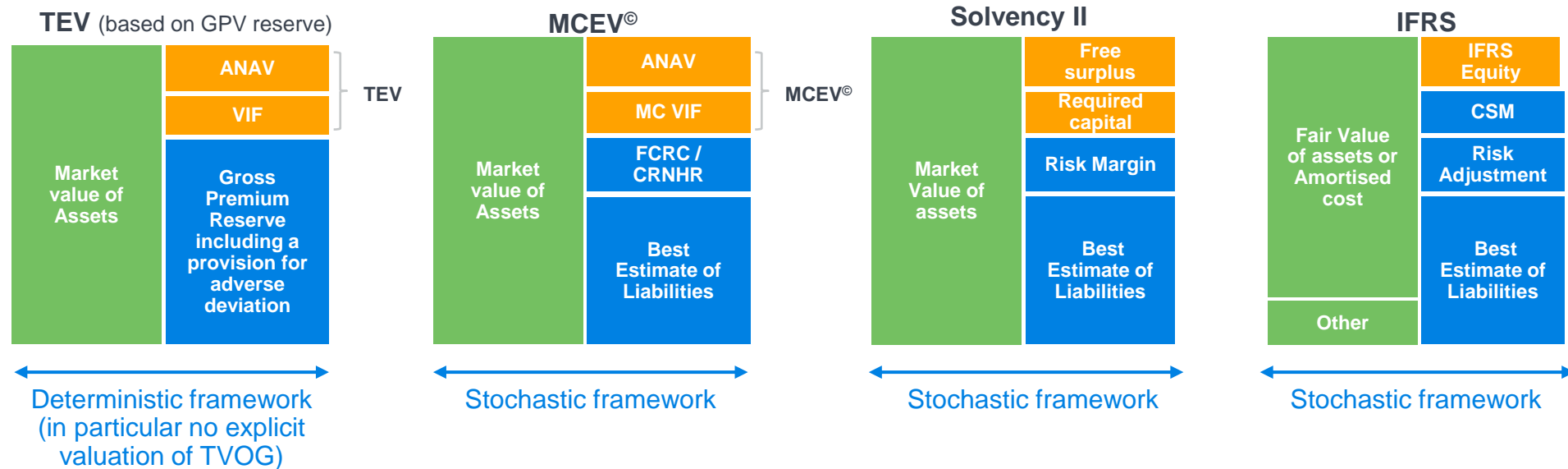
However, accounting mismatches may not be entirely eliminated due to

- Future reinvestment / divestment of future net cash flows (in particular premiums) at a future rate which may not be in line with locked-in rate at inception;
- Assets classified at FVPL (although there will be techniques to solve this); and
- Impairment impacts on assets.
- In that case the effect of changes of the discount rate might better go through P&L via the investment income instead of via OCI.

**Link with local
regulatory and other
valuation regimes**

Building Block Approach: Bridging with other frameworks

- Solvency II, IFRS 17 and MCEV assess the insurance liabilities based on an economic balance sheet framework.



- All differences in methodology and parameters need to be identified and explained. In particular a gap analysis between the IFRS 17 equity and Solvency II own funds should be developed. For companies reporting under a Traditional Embedded Value (TEV) basis, it is also key to explain the differences between TEV and IFRS 17 frameworks to management.

Building Block Approach: Bridging with other frameworks

Item	MCEV [®] or MC EEV	Solvency II	IFRS 17
Value of future profits	<ul style="list-style-type: none"> Reported as value of in force 	<ul style="list-style-type: none"> Immediately recognised in the available own funds 	<ul style="list-style-type: none"> Recognised over the life time of the contracts via the release of the CSM
Adjustment	<ul style="list-style-type: none"> CNHR; based on 99.5% percentile over 1 year horizon FCOC; to be determined by the company 	<ul style="list-style-type: none"> Risk Margin calculation is very strict: Under Solvency II: 6% * NPV(Future SCRs) SCR based on 99.5% percentile over 1 year horizon 	<ul style="list-style-type: none"> Flexibility on the level of the Risk Adjustment as well as in the method used to derive it
Expenses	<ul style="list-style-type: none"> All expenses included in the Best Estimate 	<ul style="list-style-type: none"> All expenses included in the Best Estimate 	<ul style="list-style-type: none"> Only expenses directly attributable to the contract included in the future cash-flows For acquisition expenses, directly attributable to the portfolio, including those for unsuccessful contracts (directly attributable to the portfolio).
Discount rates	<ul style="list-style-type: none"> SWAP rate mostly with LLP and UFR Government bond rate mostly with LLP and UFR 	<ul style="list-style-type: none"> Interest rate provided by EIOPA Including Volatility adjustment, Credit Risk Adjustment Matching adjustment may be used after approval 	<ul style="list-style-type: none"> To be determined by the company following the principles defined in IFRS 17
Focus on	<ul style="list-style-type: none"> Income statement and performance 	<ul style="list-style-type: none"> Balance sheet and solvency 	<ul style="list-style-type: none"> Income statement and performance
Applicable to	<ul style="list-style-type: none"> Companies that disclose according to the MCEV principles 	<ul style="list-style-type: none"> All European companies and companies outside Europe that are part of a European insurance group 	<ul style="list-style-type: none"> Companies in jurisdictions where IFRS is applicable and companies that on a voluntary basis report under IFRS

Challenges of IFRS 17

Challenges of IFRS 17

PARAMETERS



Historical information – parameters and results

Discount rate – top down or bottom up, evidence of correctness

Expense allocation – only attributable

PRESENTATION

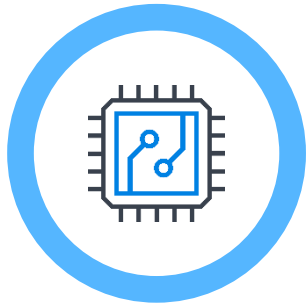


Balance sheet and income statement components

Presentation of income statement – need to develop template

Granularity, homogeneous value groups

CALCULATIONS



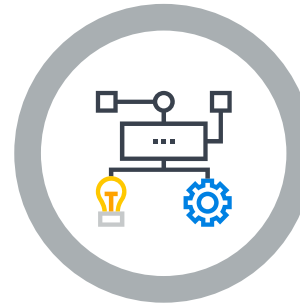
Retrospective application to in-force business

CSM – need historical information and asymmetric treatment of “negative CSM”. Determination of the “coverage unit” per line of business

Risk adjustment – need to select method and calibration

OCI – when to use it and how to structure calculations to support it

PERFORMANCE & RECONCILIATIONS



Forecasting – How to forecast under new regime

Performance metrics – more focus on the development of the CSM and the OCI

Reconciliations – to current IFRS regime and other reporting bases (SII, etc)

Interaction with IFRS 9

Challenges of IFRS 17 (2)



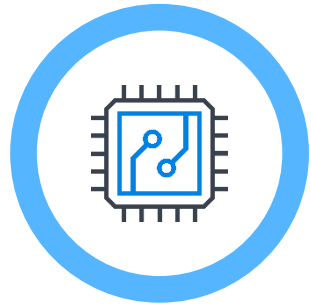
DATA

Higher data requirement: more granular, more historical information
Effective data storage
Better auditability



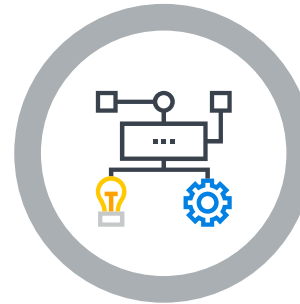
PEOPLE & STRUCTURE

Training & Education
Integration of Actuarial, Risk and Finance functions
Policies & processes



TECHNOLOGY

Better technology and less End-User-Computing



STRATEGY & GOVERNANCE

Capital generation and earnings
Asset allocation and ALM
Product design and distribution
Operational impact of the transition

Modelling and systems considerations

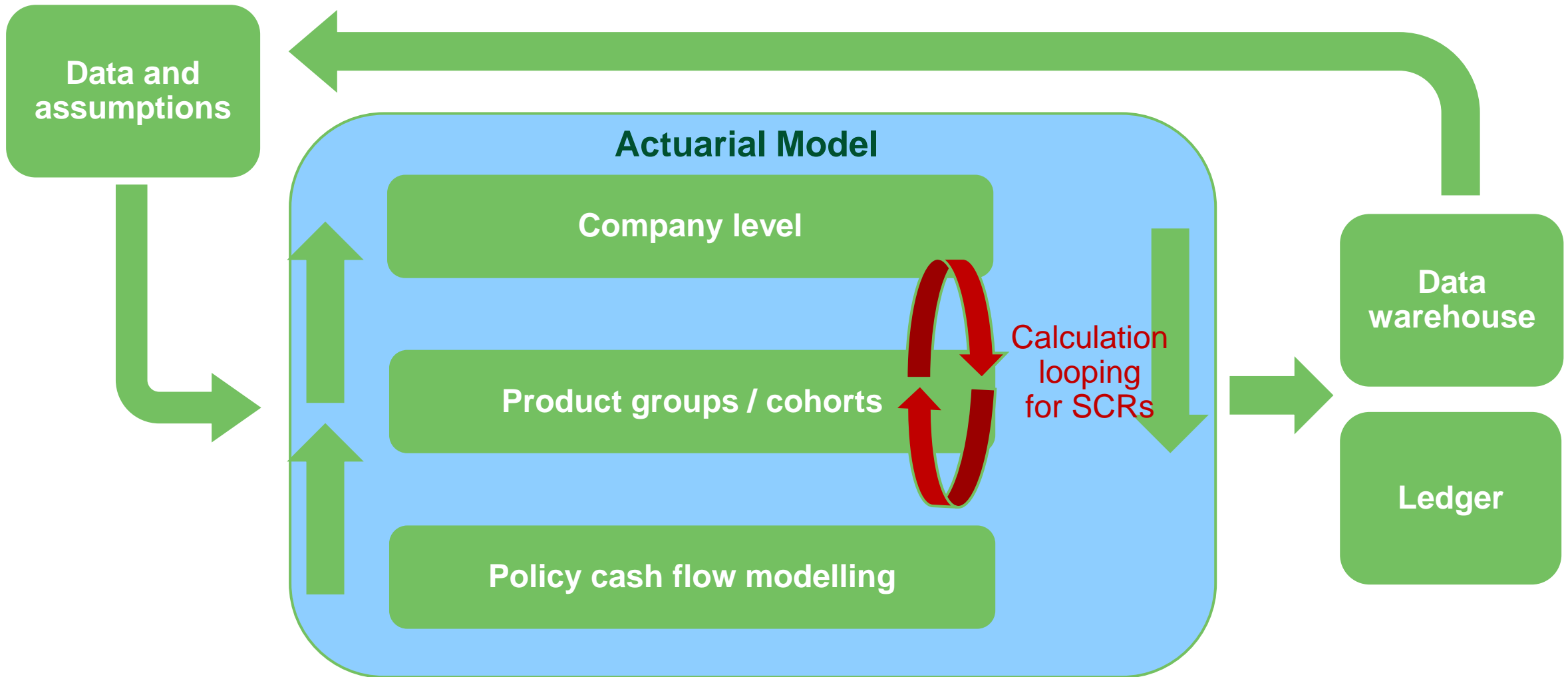
Modelling implications of IFRS 17

Considerations in moving from an existing Solvency II, GAAP or MCEV basis to a fully operational IFRS 17 model:

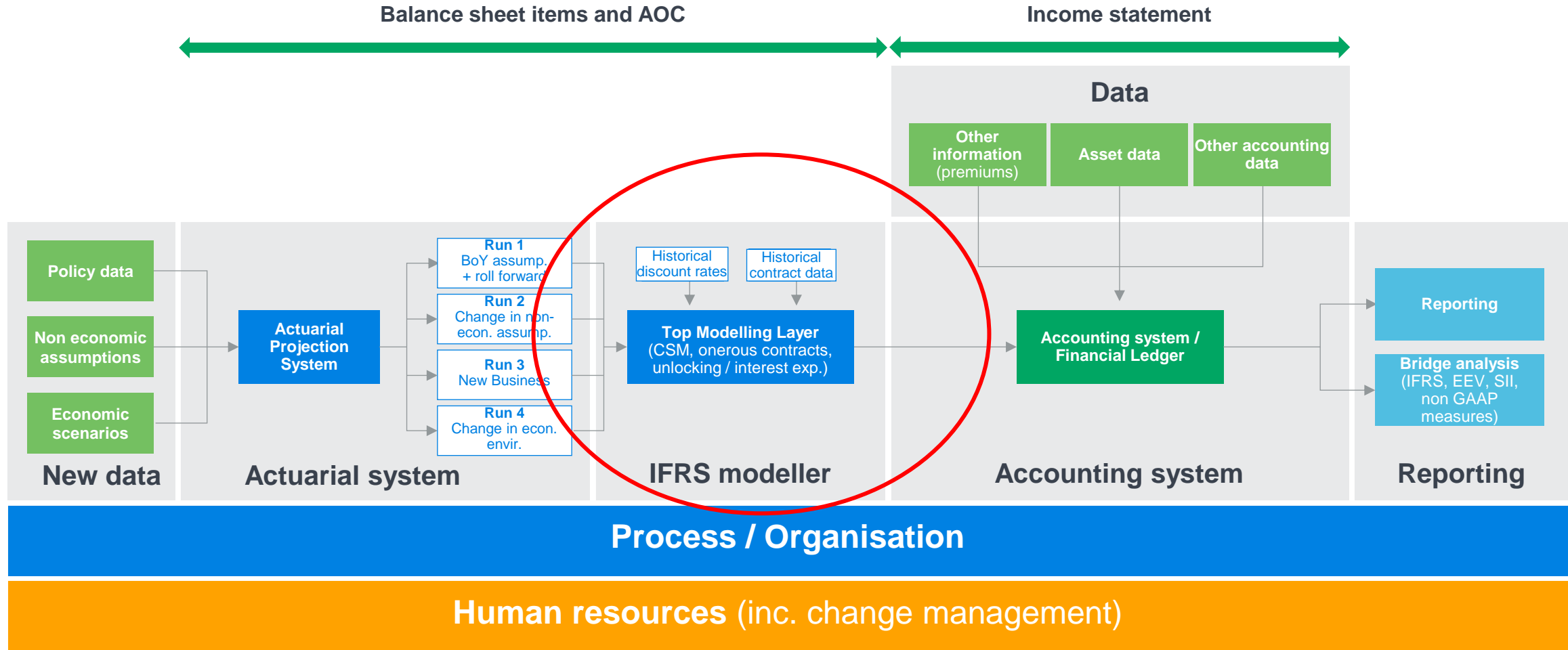
- Analyse differences between IFRS 17 and Solvency II
- Product grouping and cohorts
- Incorporation of the calculation and unlocking of CSM
- Period-to period dependency
- Cost of embedded options at granular level
- Movements between onerous/profit making contracts
- Risk adjustment calculated at cohort level
- Computer speed – consider integration of cloud computing and efficient implementation
- Increased data storage may be required



Modelling implications of IFRS 17



Overview of a target IFRS 17 operating model



Integrate IFRS 17 reporting solution

A cloud-based software-as-a-service solution that offers companies an end-to-end IFRS 17 workflow that is industrialised, fully automated, auditable, and version controlled, with access to virtually unlimited and secure resources.

DATA WAREHOUSE

INTERACTIVE REPORTING

DATA INTEGRATION

AUTOMATED PROCESSES

Pathway to Implementation

IFRS 17 Project Plan

2017	2018	2019	2020	2021
<ul style="list-style-type: none"> • Training • Project scoping and planning • GAP analysis • Initial impact assessment • Product classification • Data collection 	<ul style="list-style-type: none"> • Development of methodology and assumptions • Chart of accounts • Data definitions and storage • Reporting engines • Start with the modelling of high priority products • Systems and Technology 	<ul style="list-style-type: none"> • Testing and implementation of tools and development of models for low priority products • Development of governance structure • Risk management on IFRS • Forecasting models • Transition 	<ul style="list-style-type: none"> • Further testing and implementation of tools • Testing of entire valuation and reporting chain • Development of disclosures • Shadow runs • Collecting information for comparatives 	<ul style="list-style-type: none"> • GO LIVE!!!

Milliman IFRS 17 Readiness Assessment Tool

IFRS 17 Readiness Assessment Tool for XYZ

Summary		% of questions completed	IFRS 17 Score
General	Background	80%	Not applicable
	Project management	75%	Not applicable
Valuation	Methodology	72%	4.6
	Assumptions	84%	3.2
	Transition	78%	2.8
Governance and Strategy	Governance	84%	2.4
	Data Quality	52%	1.2
	Strategic Impacts	81%	4.1
Reporting and Analysis	Reporting and Analysis	75%	1.7
Other	Actuarial Modelling	62%	3.3
	IT and Systems	45%	2.7

Key - Level of readiness

1	1 = No progress has been made
2	2 = Some progress made but a lot of work still required
3	3 = Partly progressed
4	4 = Significant progress made but some minor work still required
5	5 = Fully implemented to meet all requirements



Tony O'Riordan

William Hines

Henny Verheugen

Andrew Kay

Q&A Panel Discussion

Appendix 1

Challenges of IFRS 17

Challenges of IFRS 17

PARAMETERS



Historical information – parameters and results

Discount rate – top down or bottom up, evidence of correctness

Expense allocation – only attributable

PRESENTATION

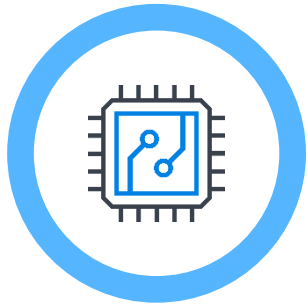


Balance sheet and income statement components

Presentation of income statement – need to develop template

Granularity, homogeneous value groups

CALCULATIONS



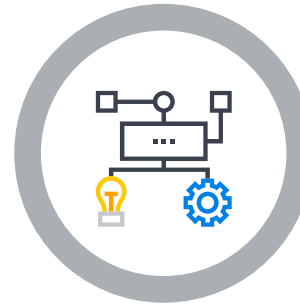
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PERFORMANCE & RECONCILIATIONS



Forecasting – How to forecast under new regime

Performance metrics – more focus on the development of the CSM and the OCI

Reconciliations – to current IFRS regime and other reporting bases (SII, etc)

Interaction with IFRS 9

Product classification

- Required to identify and categorise the different product groups.
- The categorisation is an ongoing activity

Aspects:

- Unbundling of investment and insurance components
- Participating and non participating contracts (different types)
- Onerous, possibly onerous and non onerous contracts
- Grouping of products in the case of the modified retrospective approach

Business issues

- Develop a clear set of criteria and a decision tree for product classification
- Ideally develop an IT solution for the classification
- Product information may need to be stored at a granular level in order to monitor the variances and movements
- Grouping of model points must lead to homogeneous profitability groups (no mixing profitable and onerous contract groups)
- Monitor and analyse the development of the portfolio between reporting moments

Direct participating features

There are fundamental differences in the revenue statement for direct participating and non-participating contracts

- Non-participating contracts will lock-in the discount rate used to determine the CSM at inception of the contract. An amortised interest rate cost, using this locked in discount rate, must be reported in P&L
- For direct participating contracts, it is possible to unlock this discount rate, to reflect the fact that higher participation payments are related with a higher expected investment return. The way this is done depends heavily on:
 - the nature of the participation features
 - the IFRS measurement of the corresponding asset portfolio

Business issues

- Products need to be classified as participating or non-participating
- The valuation of the participating feature and its development
- Determination of the methodology and the required information to determine the components for the revenue presentation

Valuation - Methodology

- IFRS 17 is principle based and companies need to develop a company specific methodology which is compliant
- The way that the discount rate, Risk Adjustment and CSM are defined will determine:
 - how future profits will be released over time;
 - how and when a contract becomes onerous, with all future losses to be booked at once in the P&L

Business issues

- A successful implementation requires a lot of interpretation of the principles
- Analysis of the portfolio and its features,
- Although the valuation is forward looking, information from the past is necessary to determine the Contractual Service Margin (CSM) and the classification of the results

Valuation - Assumptions

- The assumptions used in the projections need to be current and best estimates. On the other hand there will be strong preference for stability of the assumptions.
- The choice of the assumptions should capture the current view of future trends in order to avoid too much fluctuation in the technical provisions.

Business issues

- The assumptions need to be set on a sufficiently granular level, but should be stable. Very small groups of products may lead to undesired volatility.
- The allocation of expenses to products and into the relevant categories is a process that many companies have done. IFRS requires carve out of non-attributable expenses.
- The assumption setting process needs to be formalised.

Valuation – Historical data

Historical data is needed for various purposes:

- Calibration of parameters
- The transition
- Development of the CSM
- Classification of onerous contracts
- Information for revenue presentation
- Information for analysis, comparatives and errors

Business issues

- Information about changes in the portfolio during the reporting period. Required to construct the income statement.
- Historical economic data (scenarios) may not be available

Valuation - Discount rate

- The discount rate used for the valuation of the best estimate, CSM and risk adjustment needs to be consistent with observable market prices of financial instruments comparable with the cash flows of the insurance liabilities.
- This leaves the company with sufficient freedom to determine the discount rate. Instead of comparability between companies, this will lead to differences and difficulties for financial analysts.
- The discount rate may be different from the discount rate under Solvency II
- The locked in discount rate (at inception) will be used to unwind the technical provision and the amount will be reflected in P&L. The update of the discount rate and its effect will be reflected in P&L or other comprehensive income.

Business issues

The selection of the discount rate is important for:

- The management of the mismatch between assets and liabilities.
- The determination of the scenario sets for the calculation of the stochastic components of the technical provision such as the Time Value of Financial Options and Guarantees (TVFOG)
- The level of the CSM at the start of the contract or per the first application date
- A high historical discount rate for the unwind of the CSM will lead to a higher cost to be reflected in the insurance finance result

Valuation - Contractual Service Margin

- The CSM is created at inception of the contract and released over the duration of the contract. The release is presented in profit and loss.
- Changes in non-economic assumptions are absorbed in the CSM.
- For onerous contracts the CSM is set to zero.
- All accumulated losses from the moment that the CSM is set to zero are reflected in the P&L. In the case of a positive evolution, first the accumulated losses need to be offset.
- Companies need a methodology to determine drivers (coverage units) for the development of the CSM.

Business issues

The determination of the CSM and its development need to be registered at a unit of account level:

- There are products that given their nature will have frequent changes, like universal life products or products where the benefits follow some index (not being unit linked). It will be difficult to determine the CSM for the subsequent premiums.
- The CSM for group contracts may be difficult to determine given the nature of those products with new entrants/employees and people leaving the company.
- Segmentation of the portfolio per reporting period including the development of the CSM.
- It will become more important to monitor the sensitivity of the CSM for development of the portfolio. For instance if a sub-portfolio with a positive CSM compensates an onerous sub-portfolio. If there is significant lapse in the sub-portfolio the compensating effect may become insufficient.

Valuation – Risk Adjustment

- The risk adjustment is defined as being the compensation that the entity requires for bearing the uncertainty about the amount and timing of the cash flows that arise as the entity fulfils the insurance contract.
- The risk adjustment methodology can be based on the perspective of risk of the insurer.
- Note that a higher risk adjustment means:
 - a lower CSM, which absorbs changes in assumptions on future cash flows
 - a higher likelihood that a contract becomes onerous (negative CSM, to be managed in a more complex way than a positive CSM)
 - reduction of the insurance finance expenses, because normal changes in the RA can be reflected in insurance service income

Business issues

- The methodology and assumptions need to be determined for the calculation of the RA. It seems logical for European companies to use the Solvency II Risk Margin methodology.
- The entity also needs to define a methodology to determine the confidence interval for the whole technical provision. This is a challenge, given that it is uncommon to determine the distribution of the outcomes.
- The methodology needs to be implemented in the projection software.

Presentation and comparability of results

- There is no prescribed template for the presentation of results and disclosures. Analysts have a strong preference to receive transparent, detailed and comparable information. Comparable over time but also between companies.
- Companies will have to develop a template that is applicable for all lines of business.
- Also there is a need to define all components of the revenue presentation. Complexities will be:
 - Separation of the deposit and insurance components
 - Experience variance
 - Separation of the OCI components
- Due to the different structure of the revenue presentation management may need additional education.

Measuring the performance over time is important for analysts and shareholders. In order to have a meaningful analysis it will be necessary to identify the causes and drivers of the performance.

The analysis of change (see MCEV reporting) will provide important information about the performance. However, the analysis needs to be normalised to make it comparable over time. Furthermore, it is too high level and does not capture non-life business.

Business issues

- Meaningful analysis over time requires normalised or benchmarked historical information for comparison reasons
- The information needs to be sufficiently granular and structured to allocate effects to the different portfolios and steps

Forecast process and predictability of results

The forecast process is generally based on aggregated models. The current revenue presentation consists of the traditional components like premium income, outflow, expenses and change of reserves.

Business issues

- The set up of the forecast and analysis of the differences between actuals and forecast have to be adjusted to reflect the new presentation
- The models to create the forecast will need to be adjusted
- The indicators used to measure the performance during the year may need to be changed

Stability and predictability of results is key in creating confidence of analysts and shareholders. Unexpected movements and effects may lead to a negative impact of the share price.

Business issues

- The identification and monitoring of key drivers will help to reduce unexpected effects.
- Sensitivity testing can be used to identify the key drivers. This is an ongoing process.
- The forecasting process needs to be sufficiently detailed to capture the key drivers.

Challenges of IFRS 17 (2)



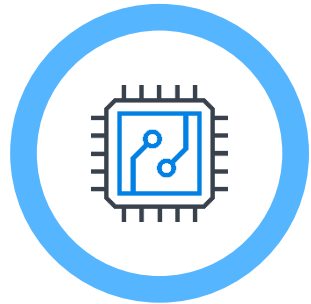
DATA

Higher data requirement: more granular, more historical information
Effective data storage
Better auditability



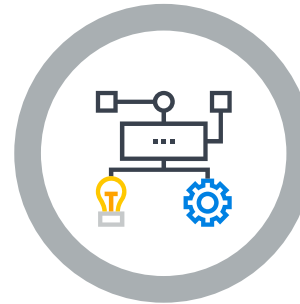
PEOPLE & STRUCTURE

Training & Education
Integration of Actuarial, Risk and Finance functions
Policies & processes



TECHNOLOGY

Better technology and less End-User-Computing



STRATEGY & GOVERNANCE

Capital generation and earnings
Asset allocation and ALM
Product design and distribution
Operational impact of the transition

Data quality

- There is no strict requirement regarding data quality in the IFRS principles
- However, the models to determine the insurance liabilities and components for the revenue presentation use data and parameters derived from the insurance portfolio. Even the economic parameters are impacted by the characteristics of the insurance portfolio (currency, timing, liquidity)
- The data needs to meet the data quality standards of the company regarding granularity, accuracy, and completeness
- The used data will be an important part of the audit by the external auditors

Business issues

The data quality policies developed for Solvency II need to be expanded to include

- data for the movement analysis,
- historical information for the CSM and classification of contracts
- the requirements of volatility of earnings materiality (generally lower materiality level),

Data processes need to be adjusted to monitor the quality on an ongoing basis

Model governance

- There is no strict requirement regarding model governance in the IFRS principles
- However, in order to convince the auditors and users of the results, it is advisable to develop and apply a robust system of model governance. This will reduce model risks and hence, risks of incorrect conclusions.
- Errors in results have a significant impact, because prior material needs to be corrected retrospectively (IAS 8 art 41)

Business issues

The development and maintenance of models needs to be meet the highest standards. Model governance should include the models used to determine the IFRS results.

- Expand the policy with the elements of the revenue presentation
- Simplifications and proxy models may be acceptable for one purpose but not for another
- Determine minor and major changes
- Define errors, changes in parameters, changes in estimates and changes of accounting policies from a model governance perspective
- Materiality levels are generally lower for the P&L than for balance sheet items

Parameter setting process

Several economic and non economic parameters are used to determine the best estimate liability as per the valuation date. Some parameters, like the discount rate, will change each reporting date. Others will be kept stable during the reporting year.

The accounting policy will capture the criteria to adjust the parameters. For each model the parameters need to be defined and documented.

Business issues

- The identification of the parameters and impact on the results (sensitivity) is a key activity during the preparation of IFRS
- The substantiation of the parameters needs to be documented in sufficient detail
- It is likely that expert judgement will be applied for situations where sparse data is available (for instance new products or markets) or where a change in the trend can be identified. The expert judgement will be documented and challenged on an ongoing basis.
- It will be required to test if parameters can be kept unchanged during the reporting year. In case of significant changes in parameters the changes need to be applied in the models.

Risk management

Commonly risk management is focused on protection of capital or the solvency ratio. The main focus of the CFO is typically on stabilising the P&L. The accepted volatility of the P&L is usually lower than the risk appetite re capital.

The valuation of insurance liabilities under Solvency II and IFRS will be different. The difference will impact the measures used in risk management.

Business issues

- Risk management policies may need to be adjusted
 - Prioritise
 - Risk appetite levels

Fast close

Most publicly listed companies inform their stakeholders within 6 – 10 weeks after the closing. That disclosure includes the consolidation and analysis of the results and risks. Consequently, the IFRS 17 calculations and analysis need to be completed very quickly. The Solvency II time scales are more relaxed.

Business issues

- The calculation process need to be industrialised to reduce problems during the process. Redo's and restarts of the calculation process due to errors in the data, models, or “hiccups” in the calculations are main causes of not meeting deadlines.
- Data and parameters need to be made available one or two days after closing.
- The tools used for the calculations will be tested and implemented before the closing. This may impact the release and version control processes.

Appendix 2

Integrate IFRS 17 reporting solution – overview and screenshots

Integrate IFRS 17 reporting solution from Milliman

A cloud-based software-as-a-service solution that offers companies an end-to-end IFRS 17 workflow that is industrialised, fully automated, auditable, and version controlled, with access to virtually unlimited and secure resources.

DATA WAREHOUSE

Integrate offers companies access to Microsoft Windows Azure storage which provides companies with a virtually unlimited data storage system. For IFRS 17, the data warehouse becomes the key storage point that contains multi-dimensional output from one or more valuation systems, on one or more valuation approaches, at the lowest level of granularity required.

INTERACTIVE REPORTING

Integrate provides companies targeted, interactive and cloud-based reports for each valuation date using Microsoft's latest Power BI software. Each set of reports for a given application and valuation date is separately stored, identifiable, and accessible. Reports can be standardised or tailored to specific company requirements.

DATA INTEGRATION

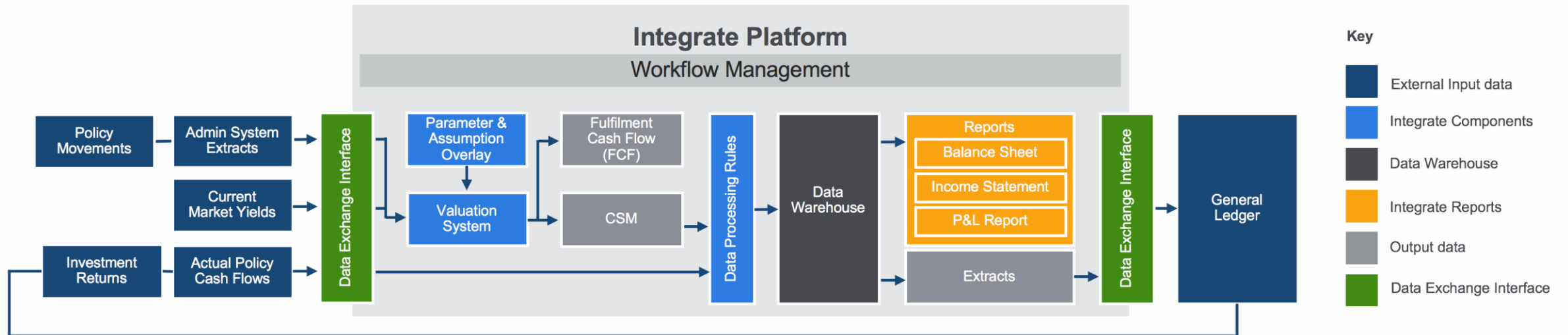
Integrate provides companies a platform that can access data and send results to companies' on-premises general ledger systems. Actual data such as inter-valuation period data on policy cash flows and investment returns can be accessed from the general ledger. Subsequent closing period balance sheet results can also be submitted to the general ledger. Note, Integrate offers tools to automate the aggregation of general ledger results to align with the granularity of IFRS output from the valuation system.

AUTOMATED PROCESSES

Integrate uses technology such as Azure Data Factory and HDInsight to automate the extract, transform, and load (ETL) processes. This provides a platform on which companies can systematically re-measure the CSM at subsequent reporting periods, support profit and loss attribution analysis, and generate reports and downstream extracts which feed the general ledger and other data sources.

Integrate IFRS 17 reporting solution overview

Overview of end-to-end Integrate solution



IFRS 17: Reporting Layer

Valuation Results

- IFRS 17 valuation results
- Ability to compare current period to prior period results
- Drill-down capabilities
- Sensitivity analysis

Roll-Forward for Analysis of Change

- Roll-forward of balance sheet from prior period
- Ability to analyse roll-forward by component of liability

Detailed Calculation Review

- Review amortisation profiles by liability component of cohort
- Ability to analyse results at low-level detail

Results Dashboard

IFRS 17 Valuation Results

(current FX rates)

Scaling

- BILLION
- MILLION
- THOUSAND
- NA

CompareTo

- Prior 1--09/2016

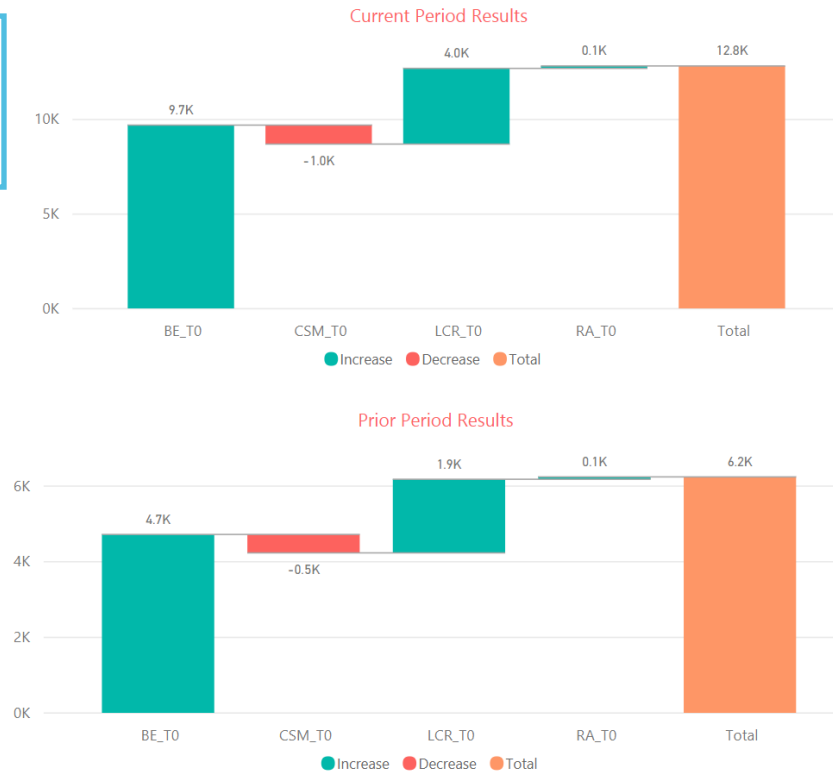
RecType

- ASSUMED
- CEDED
- DIRECT

NewBusiness

- No
- Yes

BE_TO 9,703.6 vc_Curr	4,721.6 vc_Prior	4,982.0 vc_Diff
CSM_TO -1,002.4 vc_Curr	-487.7 vc_Prior	-514.6 vc_Diff
LCR_TO 4,001.8 vc_Curr	1,947.2 vc_Prior	2,054.6 vc_Diff
RA_TO 127.6 vc_Curr	62.1 vc_Prior	65.5 vc_Diff
Total		
12,830.7 vc_Curr	6,243.2 vc_Prior	6,587.5 vc_Diff



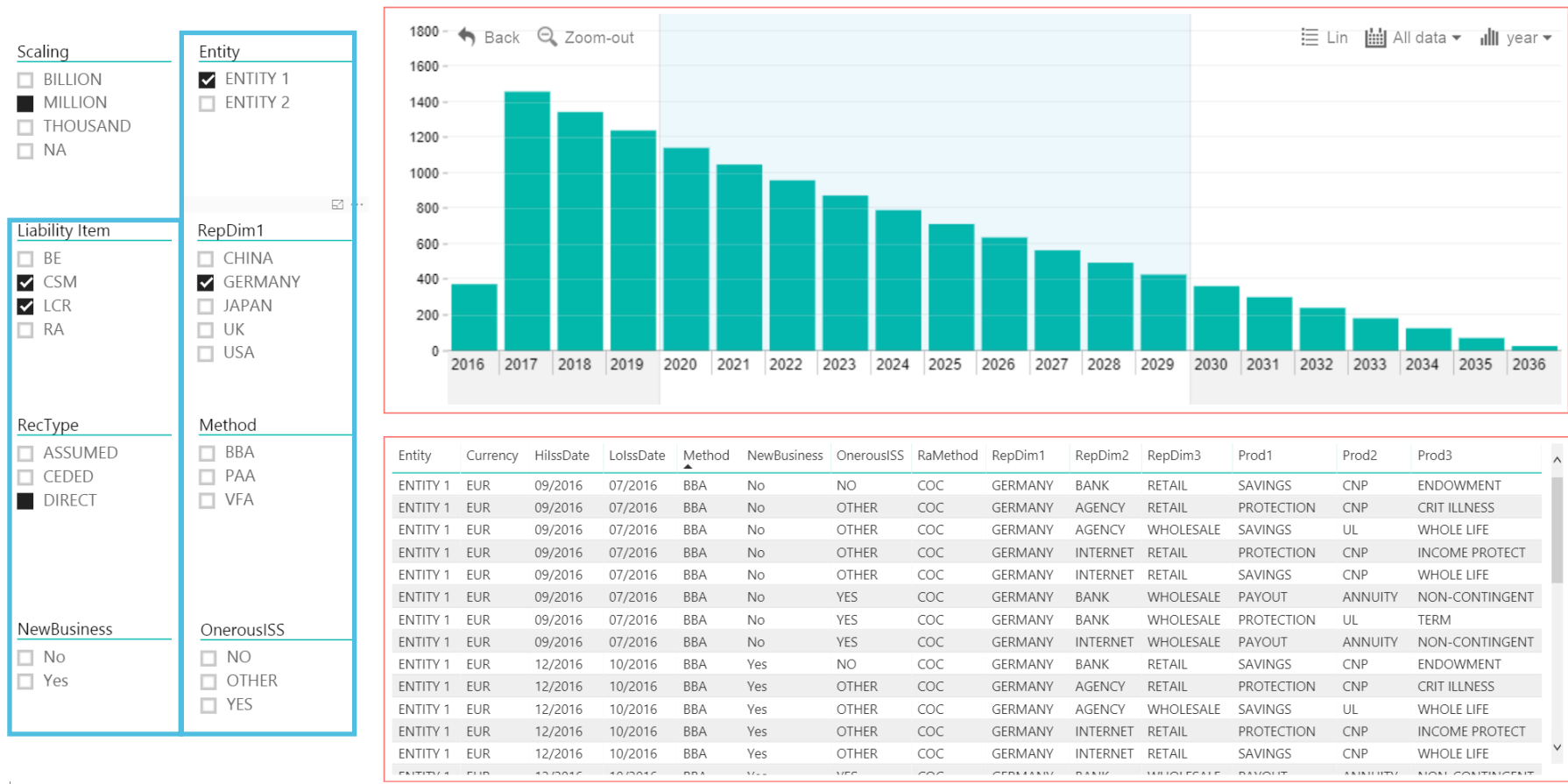
Features

Item	Description
1	Value scaling.
2	Compare to prior valuation.
3	Slicers to filter.
4	Current, prior and difference values.
5	Four liability items. a) BE b) CSM c) LCR d) RA

Calculation Controls

CSM Amortisation Profiles

IFRS 17 Calculation Checks - Amortisation Profile



Features	
Item	Description
1	Configurable liability component.
2	Select groups of cohorts.
3	Select cohort analysis key.

Roll-Forward Results Dashboard

Roll-Forward at Current Exchange Rates

Scaling

- BILLION
- MILLION
- THOUSAND
- NA

CompareTo

- Prior 1--09/2016

RecType

- ASSUMED
- CEDED
- DIRECT

NewBusiness

- No
- Yes



Features	
Item	Description
1a	Current date value.
1b	Discount unwind.
1c	Expected net cash flow
1d	Other (if any)
1e	Next date value
2	For the four liability items.

Appendix 3

Milliman's IFRS 17 Preparation Survey Results

Milliman Survey



- Surveyed IFRS reporters around the globe
- Approximately 50 questions
- The survey focuses on twelve areas:
 1. General status of preparedness,
 2. Implementation planning,
 3. Relation with Solvency II/EV,
 4. IT infrastructure,
 5. Assumption updating process,
 6. Discount rates setting,
 7. Methodology of risk adjustment calculation,
 8. Tracking of CSM amortisation,
 9. Methods applied towards different lines of business,
 10. Asset valuation choices,
 11. Transition and business issues.

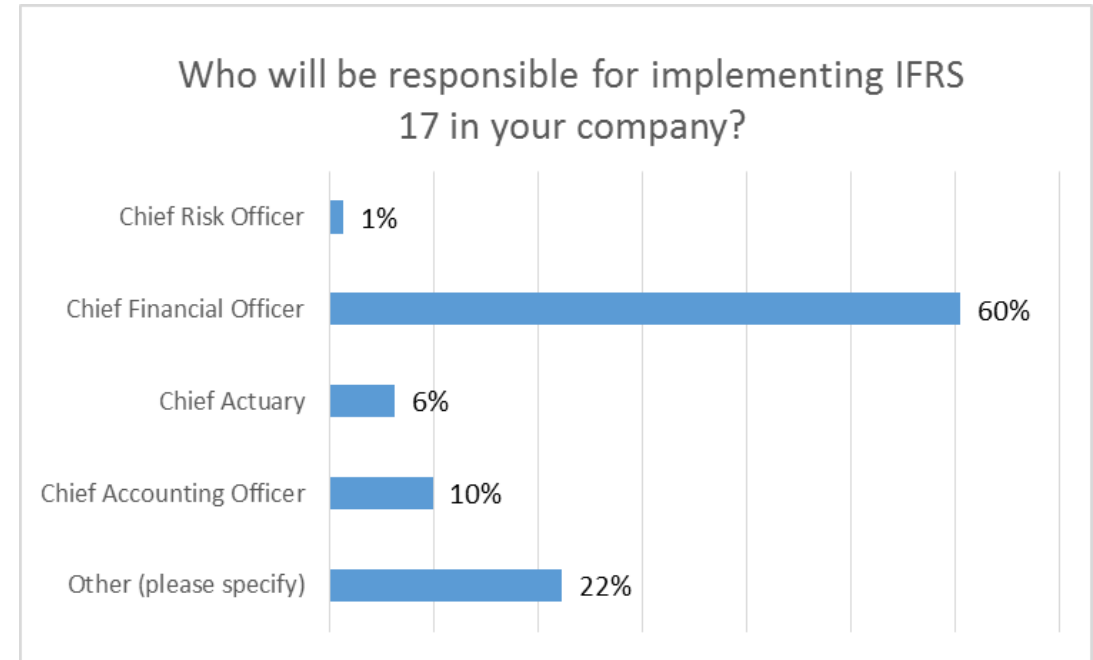
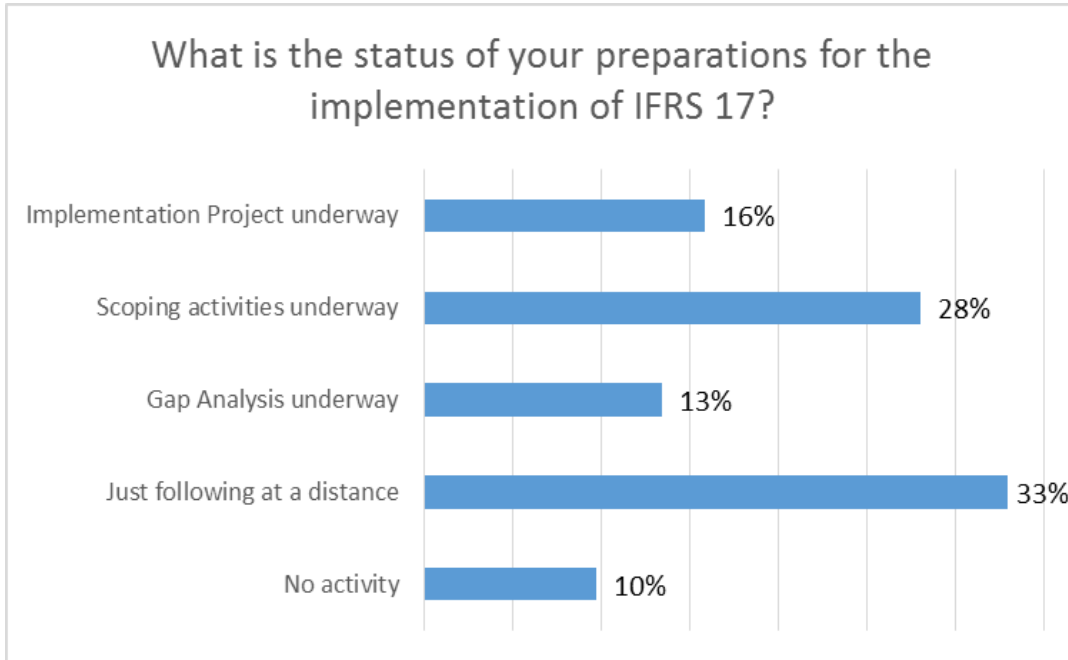
Milliman Survey



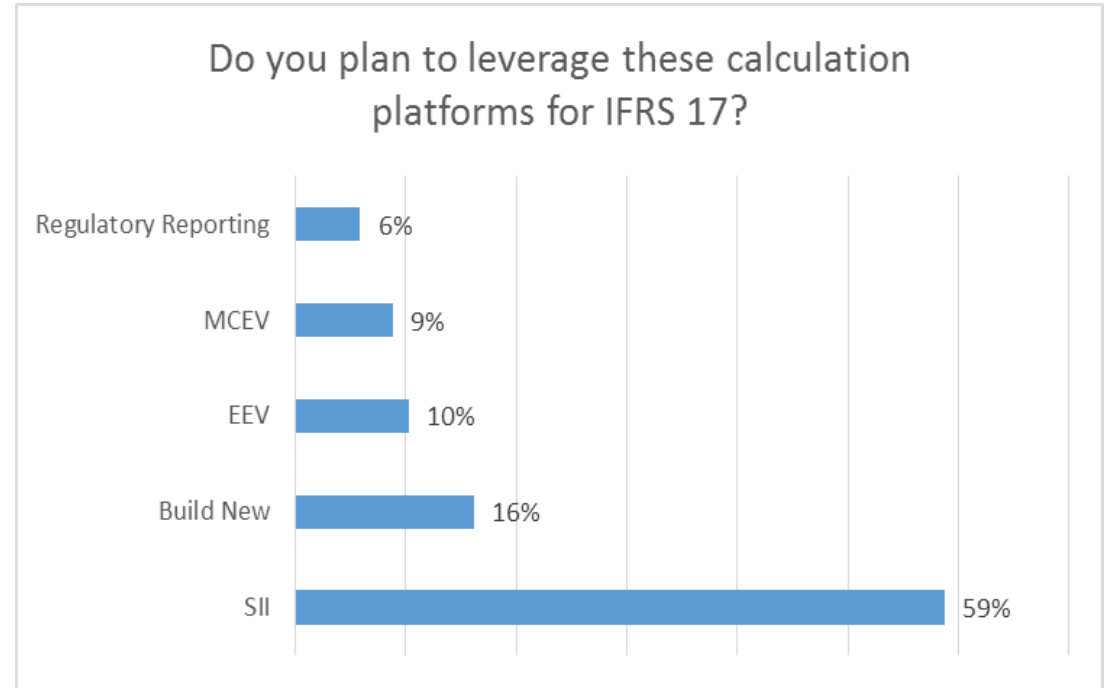
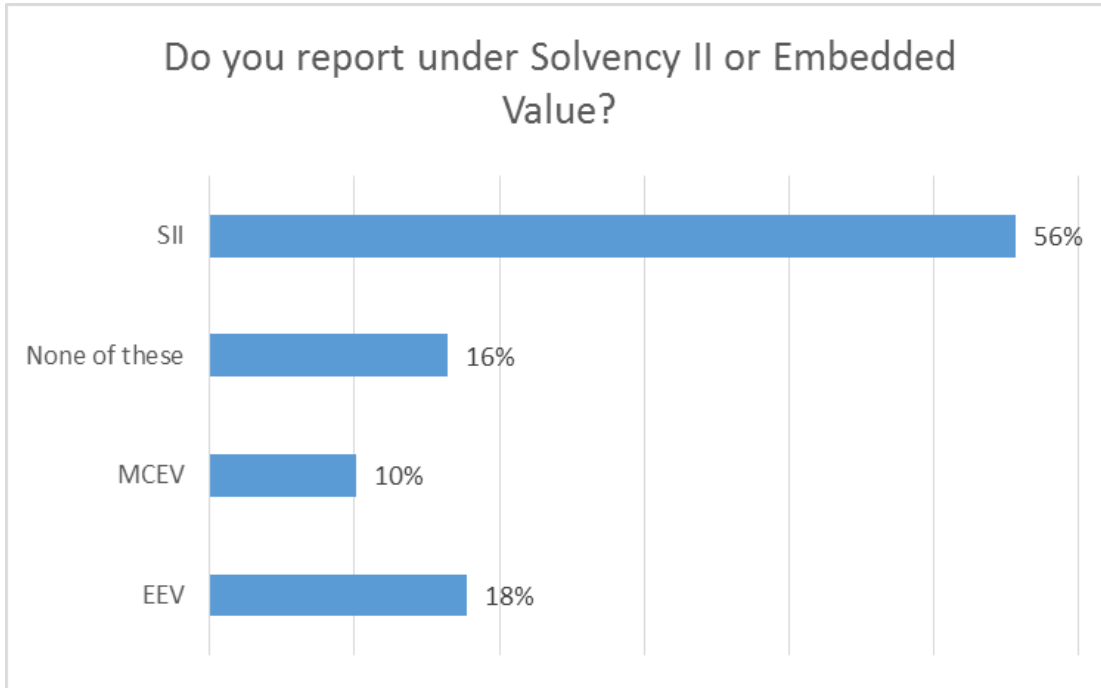
Main concerns of the respondents

- Determination of the discount rate (top down, bottom up, application UFR, RP requirement)
- Hedging and the possible accounting mismatch
- Granularity of the calculations/unit of account for new business/aggregation of in force business
- Determination and validation of the CSM (at transition and after implementation)
- Complexity of the income statement and disclosures
- Systems and models – robustness, auditability, integration in reporting chain, tight run time and reporting timeline
- Availability of resources and timescales during the transition project

Milliman Survey



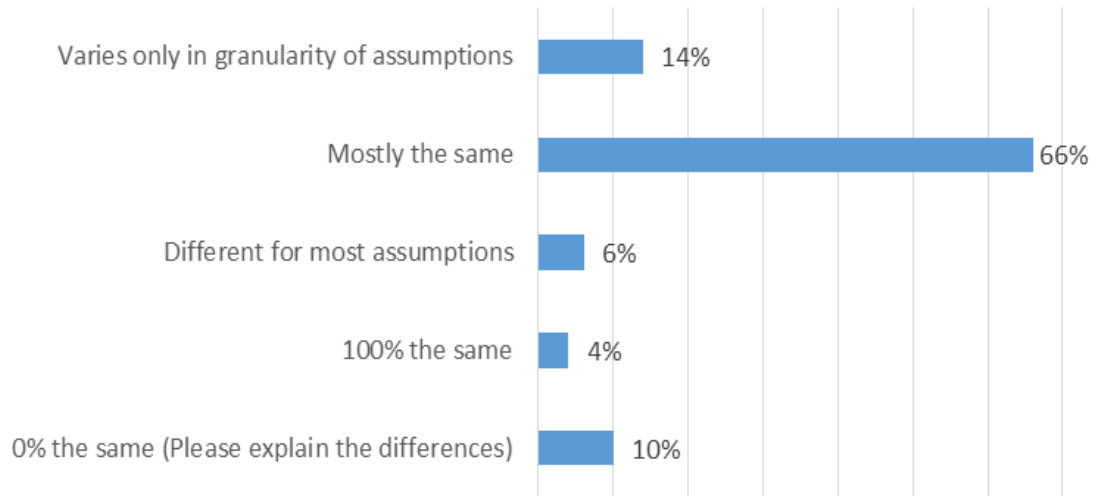
Milliman Survey



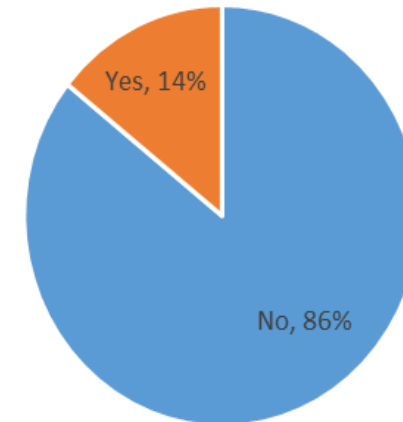
Milliman Survey



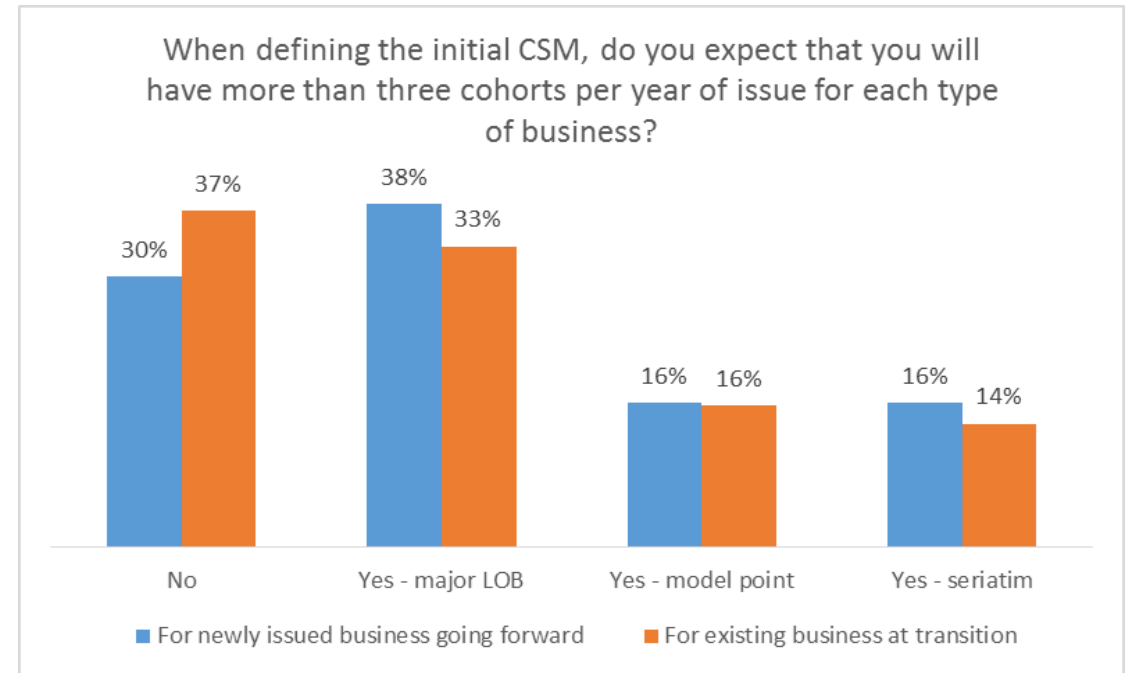
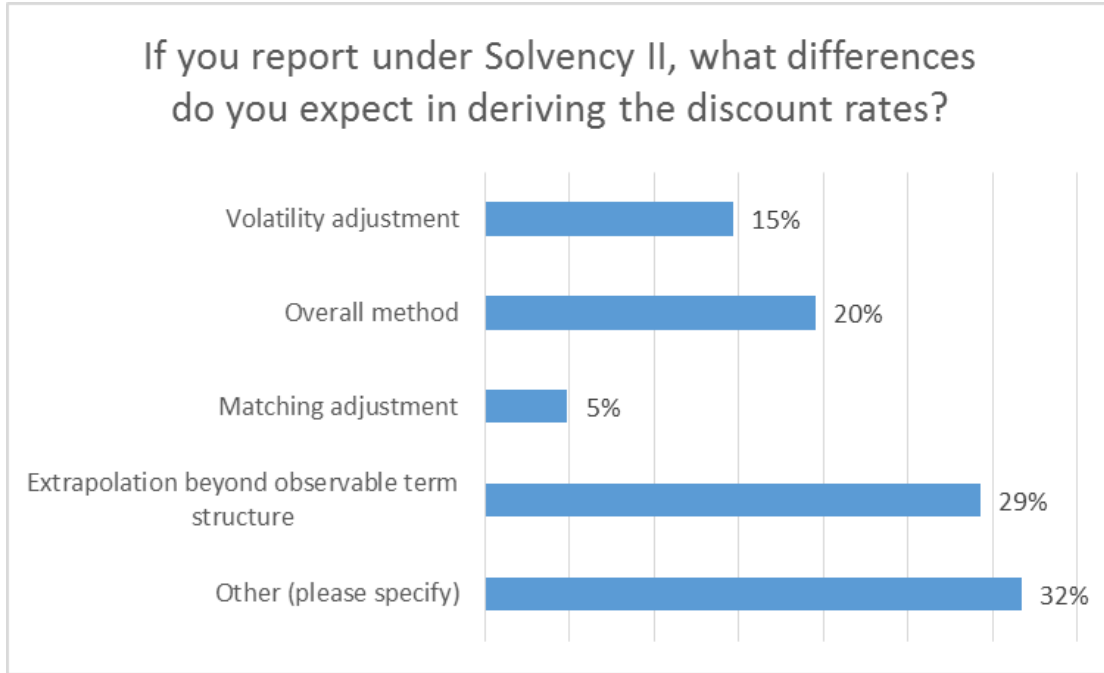
Do you expect the IFRS 17 assumptions to be the same as under Solvency II?



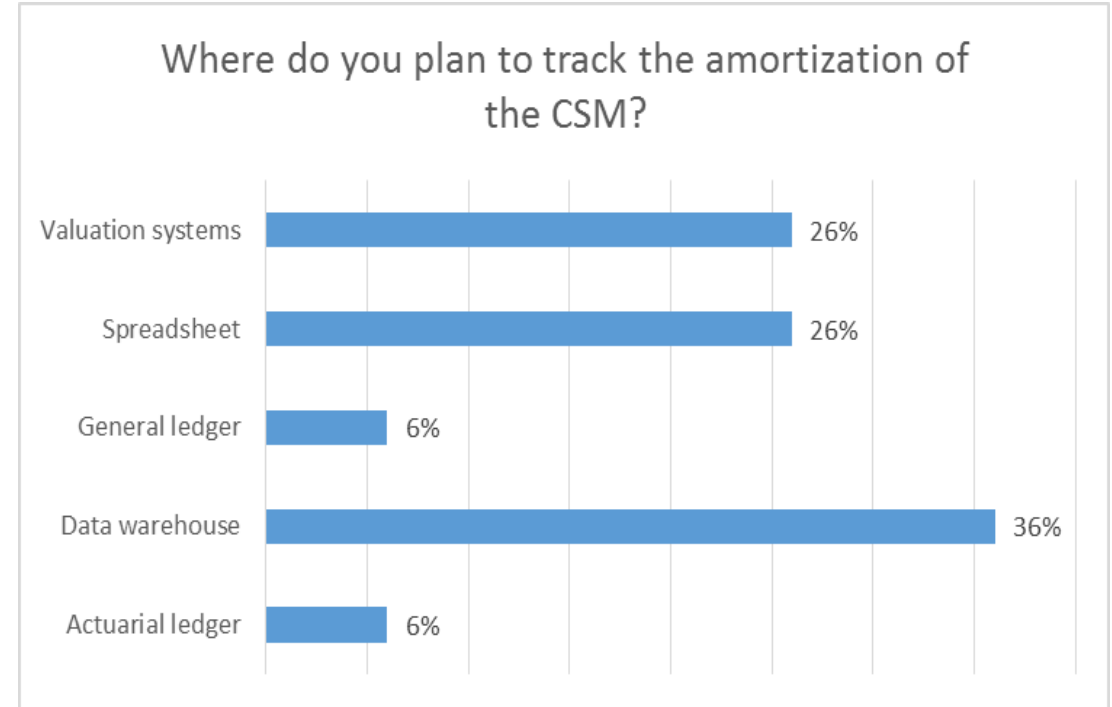
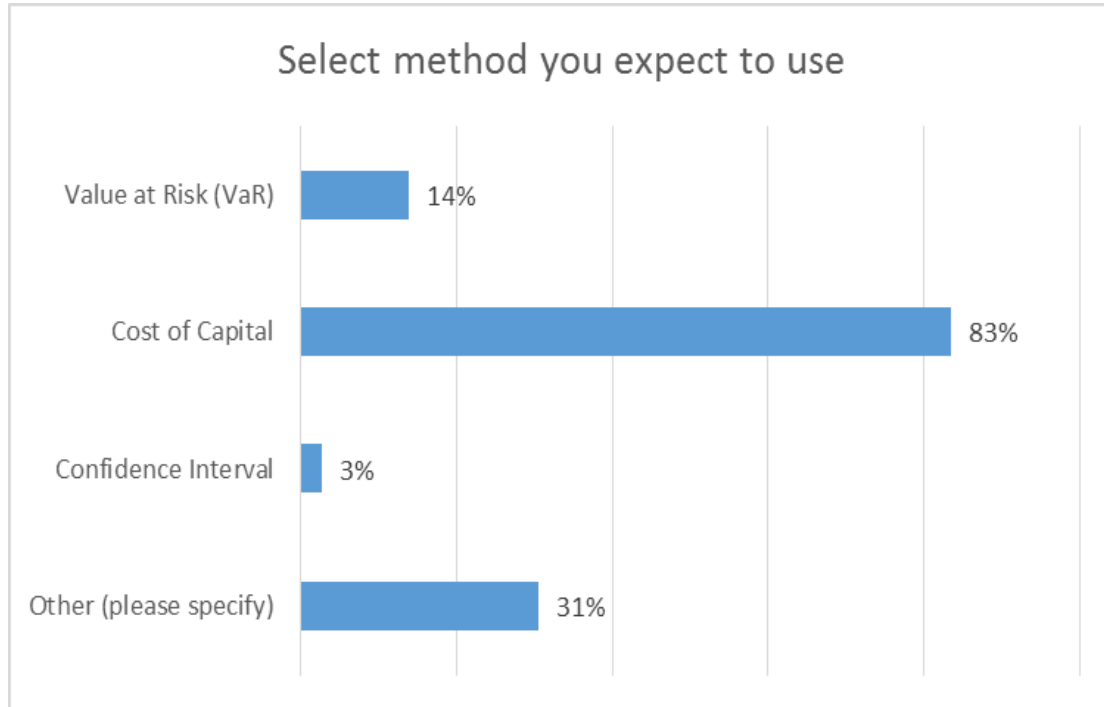
Has your company determined the process it will use to determine the discount rates?



Milliman Survey



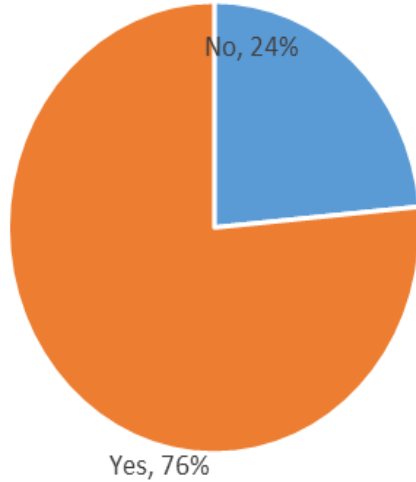
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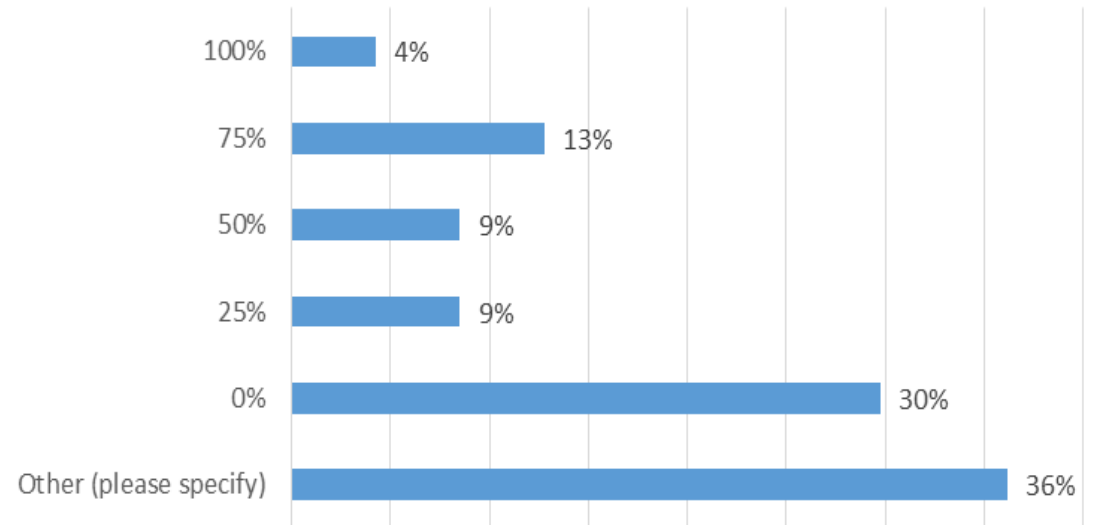
Milliman Survey



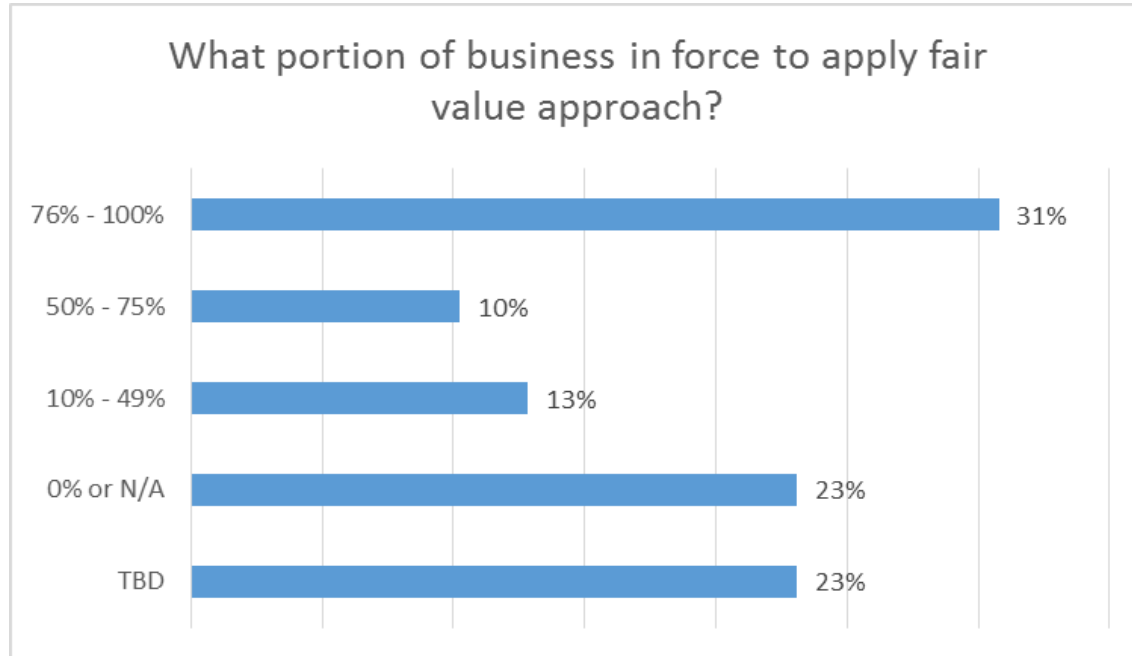
Do you plan to defer adoption of IFRS 9 until adoption of IFRS 17?



What portion of business in force to apply full retrospective approach?



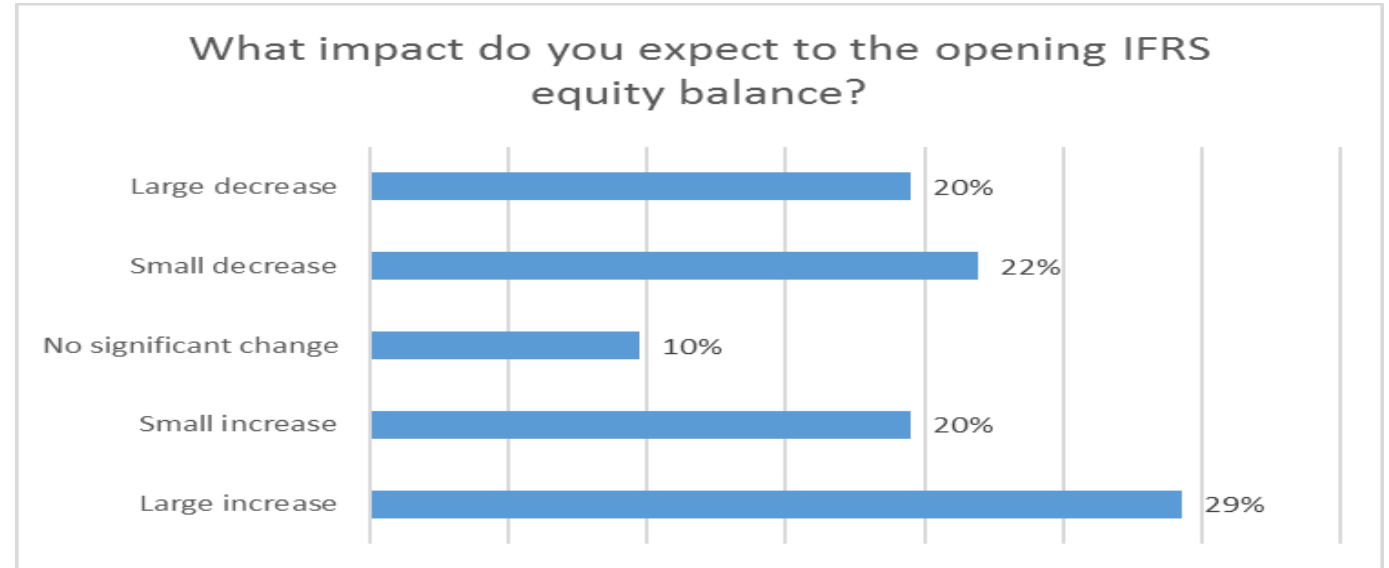
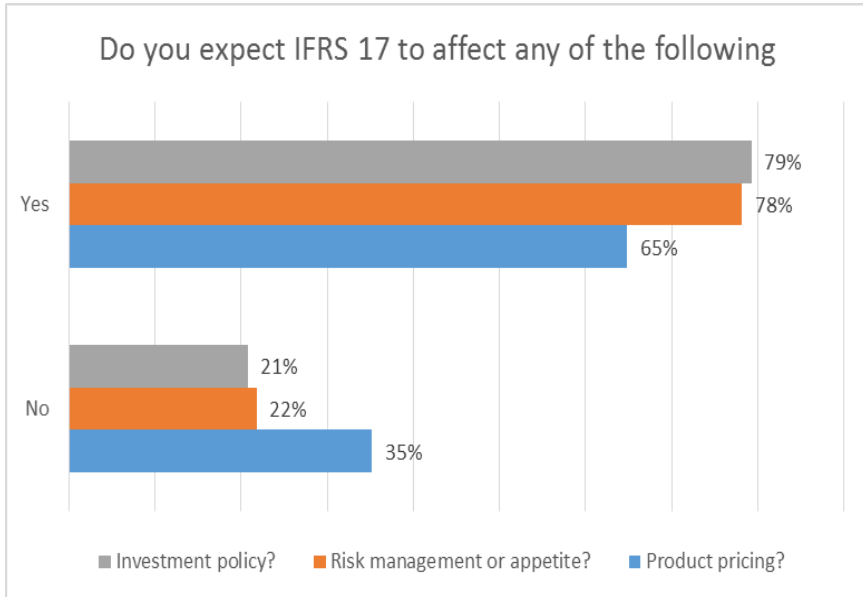
Milliman Survey



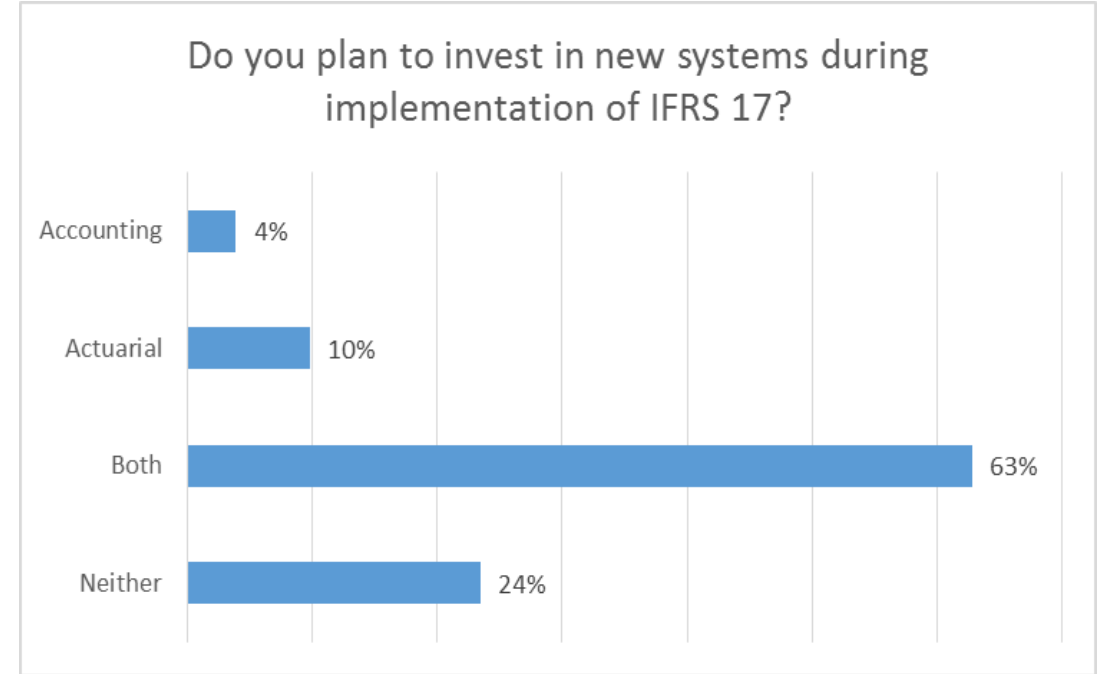
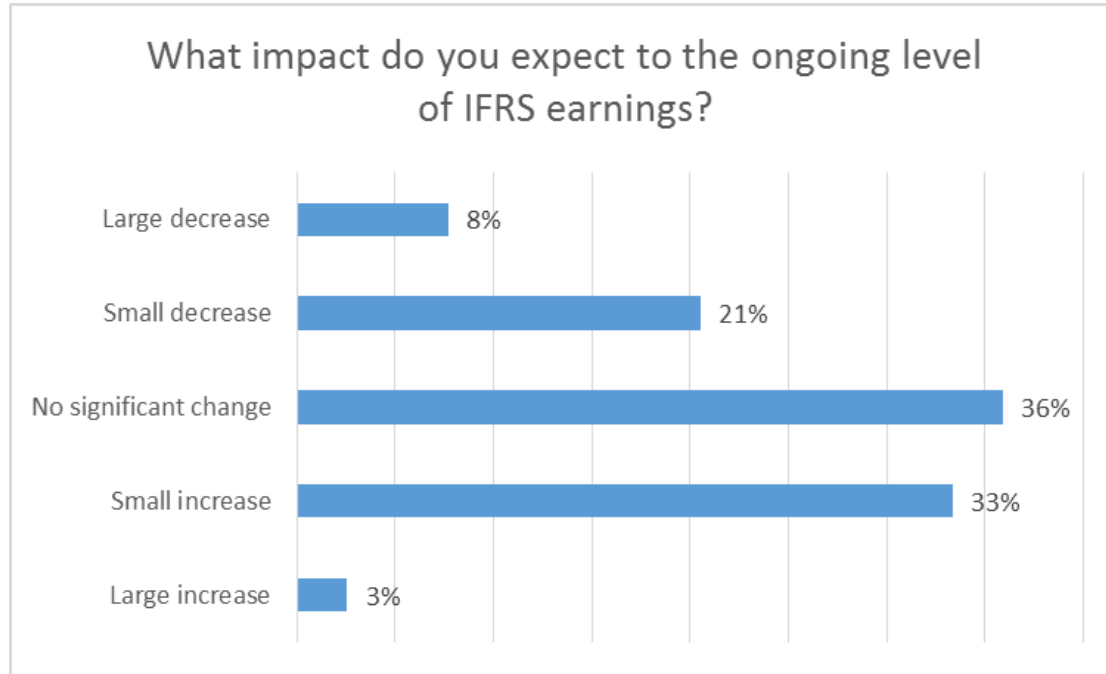
Q: How will you define fair value for that portion of the business?

R: Majority of the respondents who answered the question said that the definition of fair value is still to be determined. Some respondents mentioned that they would follow Market Consistent Embedded Value (MCEV) or economic embedded value (EEV). One respondent answered that they would adopt cash surrender value. Another respondent said that they would follow IAS39 approach.

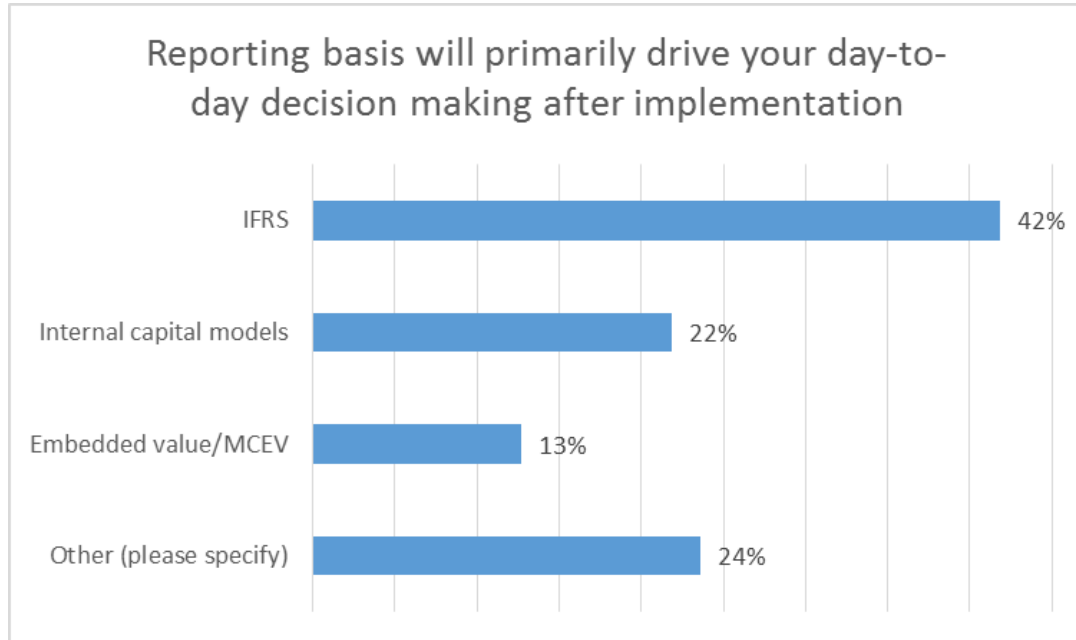
Milliman Survey



Milliman Survey



Milliman Survey



Appendix 4

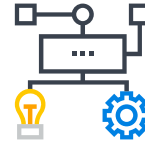
About Milliman

How Milliman can help...



CONSULTING

- Development of methodology and internal standard
- Financial impact analysis
- Gap analysis/Readiness monitoring
- Accounting manual
- Assumption setting
- Design of the income statement and chart of accounts
- Development performance measures
- Analysis of interaction between IFRS 9 and IFRS 17
- Model validation
- Forecasting/Multi-term planning bases on IFRS 17



MODEL DEVELOPMENT

- Prototyping supporting the development of the methodology
- Development of model projection/valuation tools
- Development of data interface into the projection software
- Data validations
- Development of run schedules to generate the information of the income statement, balance sheet and disclosures
- Model testing and documentation



REPORTING SOLUTIONS

- Workflow management
- Data warehouse solutions between the projection software and the general ledger
- Data interfaces into the data warehouse of general ledger
- Checks and balances/validation of outputs
- Reporting engines
- Reconciliation of SII, MCEV, or other GAAP to IFRS 17

IFRS 17 Thought Leadership

- Milliman's internal IFRS 17 working group have been actively following developments for the past 5 years including participating in the Accounting Committee of the International Actuarial Association (IAA).
- We have published a number of IFRS 17 briefing notes, white papers, blogs, and articles and have a dedicated website on IFRS 17 (<http://www.milliman.com/IFRS/>)
- We have presented on IFRS 17 at many industry events and deliver IFRS 17 training to finance professionals.

MILLIMAN RESEARCH REPORT
Transition to IFRS 17
June 2017

Sped Brethower, MSc, AAG
Andrew Kay, FSAL, FIA
Andrew Gilchrist, BSc, PhD, FIA

Akko Balesheri, OIA, IIA
William Hines, FSA, MAIA

Milliman

MILLIMAN BRIEFING NOTE
Milliman IFRS 17 Preparedness Survey
How ready is the insurance industry?

Alding Barrett, FSAI
Andrew Kay, FSAI
Gillian Tucker, FSAI
Roman Judge, FSAI

Milliman

This briefing note summarises key findings from our recent IFRS 17 preparedness survey completed by both local Irish insurers and international insurers.

Milliman carried out this survey to measure the level of preparedness for IFRS 17 among insurers. Responses were received from over 50 insurers worldwide, with responses from 9 insurers in Ireland. We have summarised below the responses received to some of the key questions along with our comments and observations.

The International Accounting Standards Board ("IASB") published the final IFRS 17 Standard on 18 May 2017 with an effective date of 1 January 2021. Most Irish and international participants are aiming to carry out a dry run of IFRS 17 calculations in 2019. If you have not yet started, an ideal timeline is:

- In 2017, establish a project team, start internal discussions and training around desired objectives for the project, conduct a gap analysis and allocate responsibilities;
- In 2018, begin designing and implementing system changes and conduct an impact assessment;
- In 2019, perform parallel dry runs and iron-out issues identified (especially with regard to the retrospective application); and
- In 2020, prepare full IFRS 17 results and familiarise investors and analysts with the new disclosures, such that you and your stakeholders are ready for full implementation of the Standard in 2021.

Our immediate recommendations include:

- Automate Solvency II calculations and reporting processes now, so as to free up resources for IFRS 17 implementation programmes;
- Establish a project team in the coming months who will determine IFRS 17 data, system and resourcing requirements (through a gap analysis), followed by development and testing of methodologies (e.g. discount rate, risk adjustment and transition approach); and
- Focus on business aspects early on to gain the support of management – changes to earnings patterns, new business strain and Asset and Liability Modelling (ALM) will have fundamental implications for business decision makers and product owners.

FIGURE 1: WHAT IS YOUR STATUS OF PREPAREDNESS FOR IMPLEMENTATION OF IFRS 17?

Preparedness Status	International (%)	Ireland (%)
Implementation Project underway	~45	~10
Scoping activities underway	~15	~10
Gap Analysis underway	~10	~10
Just following at a distance	~10	~10
No activity	~10	~10

FIGURE 2: WHAT YEAR DOES YOUR COMPANY PLAN TO BE READY FOR SHADOW / DRY RUNS?

Year	International (%)	Ireland (%)
2019	~45	~10
2020	~15	~10
2021	~10	~10
2022	~10	~10
2023	~10	~10

Milliman IFRS 17 Preparedness Survey | 1 | July 2017

MILLIMAN BRIEFING NOTE
Overview and Practical Considerations of the new Insurance Contract Standard: IFRS 17

Gillian Tucker, FSAI
Andrew Kay, FSAI

Milliman

The new accounting standard for insurance contracts, expected to be called IFRS 17 (previously known as IFRS 4 Phase 2) is currently expected to be issued in the first half of 2017. In this briefing note we discuss some of the key challenges companies will face in adopting and applying this new standard for insurance contracts.

Project Management Timeline

The timeline in Figure 1 illustrates the work which will need to be undertaken by companies between now and the expected implementation date:

FIGURE 1: EXPECTED TIMELINE

Introduction

The International Accounting Standards Board (IASB) continues to work on the Insurance Contracts project. The aim of this project is to provide a single principle-based standard to account for all types of insurance contracts that an insurer holds¹. The project also aims to enhance comparability of financial reporting between companies, jurisdictions, and capital markets.

Phase I of this project was completed in 2004 with the introduction of International Financial Reporting Standard (IFRS) 4: Insurance Contracts. However this was intended only as an interim standard.

Phase II is still underway. In July 2010, the IASB issued an exposure draft of IFRS 4 Phase II. In June 2013, a second exposure draft was issued outlining the draft standard and focusing on key areas for consultation. Currently it is expected that the final standard will be published in the first half of 2017 and it is expected to be called IFRS 17.

The new standard is expected to raise a number of practical challenges for insurance companies. While it is an accounting standard, implementation will require a multi-disciplinary program requiring involvement from accounting teams, risk management teams as well as a heavy actuarial involvement. In this briefing note we identify and discuss some of the most significant practical challenges companies will need to consider.

Valuation of Liabilities

GENERAL MODEL

Under IFRS 17 long-term insurance liabilities without direct participation features² will be calculated using the building block approach:

¹ Direct participation contracts are contracts where:

- The contractual terms specify that the policyholder participates in a defined share of a readily identified pool of underlying items;
- A substantial share of the return from the underlying items is paid to the policyholder;
- A substantial proportion of the expected cashflows paid to the policyholder vary with the cashflows of the underlying items.

² An insurance contract is defined as a contract under which one party accepts significant insurance risk from another party by agreeing to compensate them if a specified uncertain future event adversely affects them.

IFRS 17 | 1 | December 2016

Milliman

IFRS 17 – Overview, Challenges and Opportunities

Andrew Kay
22 June 2017

Milliman Financial training

Overview and Practical Considerations of the new Insurance Contract Standard: IFRS 17

Milliman

OVERVIEW

This training course provides a detailed view of the requirements/methodology and practical challenges involved in implementing the new insurance contract standard, IFRS 17.

The course will begin with a brief introduction to IFRS 17 including expected timelines for the new standard. The course will then go into detail on the requirements/methodology and main challenges companies will face in implementing the new standard. We will go through a worked example showing how IFRS17 will be applied in practice for a sample product. The worked example will demonstrate the impact this new standard will have on companies' profit and loss account and balance sheet and highlight associated implementation challenges.

This course is suitable for insurance professionals, practitioners and senior management involved in IFRS reporting and implementation.