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IFRS 17
Lessons Learned to Date

Indonesian Actuaries Summit

April 2018

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Agenda

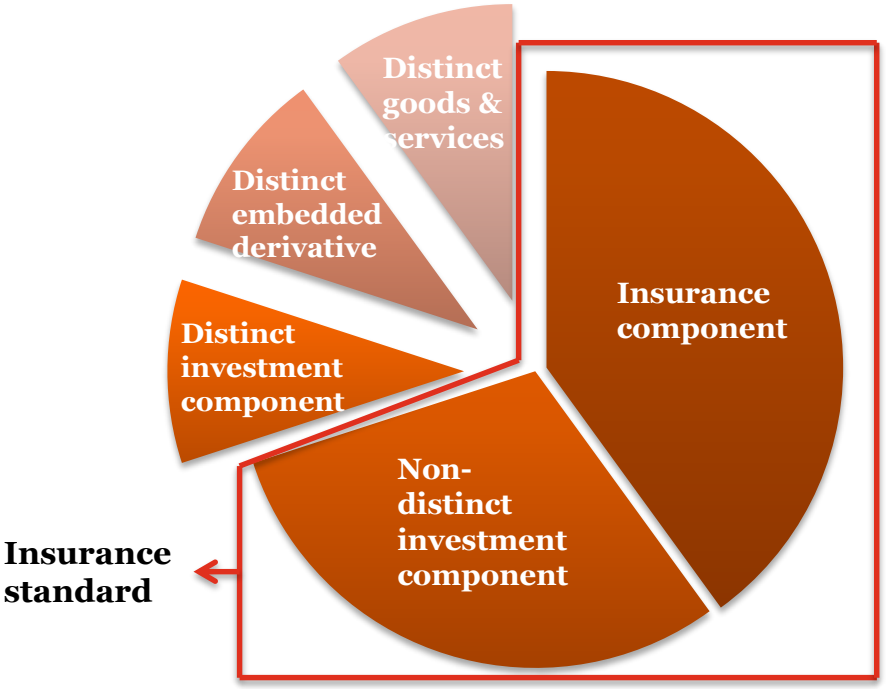
I. Potential Pain Points in Indonesia	**1.1** Unbundling of Insurance Contract	**1.2** Contract boundary
	1.3 Expense allocation & projection	**1.4** Level of aggregation – Unit of Account
		1.5 Transition
II. Illustrative Example	**2.1** Day 0 – Initial recognition of the contract Day 1 – Cash flows occur	**2.2** End of year 1 – Everything happens as expected
III. Q & A		

Potential Pain Points in Indonesia

Where are the key GAPs?

How to identify key points?

Unbundling of Insurance Contract – 1



Assessment criteria*:

- Investment component
- Embedded derivative
- Goods & services

Only <u>distinct</u> components need to be unbundled

Definition of distinct:

"The components are *<u>NOT</u>* highly related to the underlying insurance contract. These components are highly interrelated if the value of one component varies with the value of other component without considering the other"

Unbundling of Insurance Contract – 2

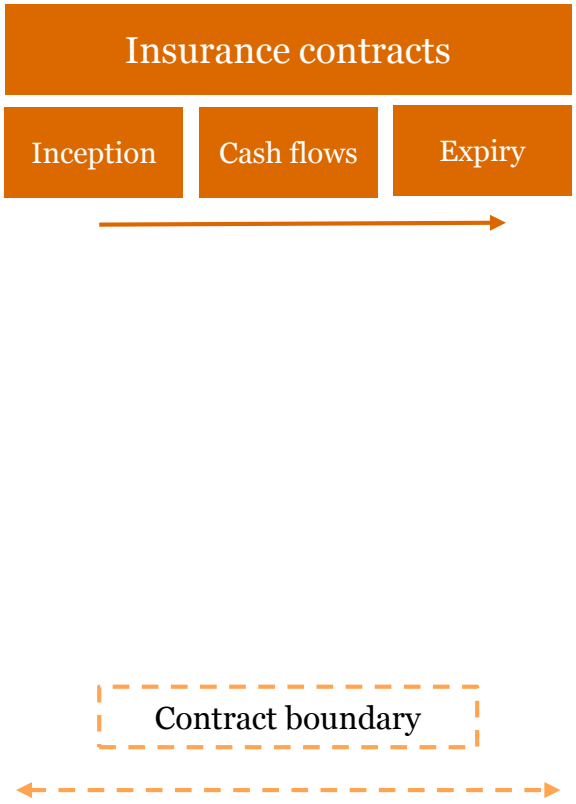
Assessment of the Components	Treatment of Top Up (in Unit-linked)	Treatment of Riders
Data Granularity	Availability of Top Up data	Availability of Rider data
Availability of the process of identifying the components	Is the inherent investment component distinct?	Are the riders need to be unbundled?
Methodology for distinctness assessment?		

Contract Boundary – 1

Timing of initial recognition:

Groups of insurance contracts are initially recognised from the earliest of:

- When the coverage period starts
- When the first payment from the policyholder is due, or actually received if there is no due date, or
- Based on the facts and circumstances, when the insurer determines that the group of contracts is onerous



Contract boundary:

The contract boundary is period during which the policyholder is obliged to pay premiums or the insurer has a substantive obligation to provide the policyholder with insurance coverage or other services.

Contract Boundary – 2

Determination of Initial Recognition	YRT product with loyalty or no-claim bonus?
Definition of inception date	Is there such product? How is the feature priced?
Is the first premium payment date record available?	

Expense Allocation & Projection

Granularity of Expense Study	The company is in expense overrun position	Treatment of Expense Overrun
Data granularity	What is the main driver?	If it was to be included, how likely the contract becomes onerous?
Identification of type of unit expenses which form part of fulfilment cash flows		

Level of Aggregation – 1

Minimum requirement (top-down approach):

Portfolio Level

Similar risks, managed together

Group Level

- **Level of profitability: onerous, profitable with no significant risk of becoming onerous, and other profitable contracts**
- **Underwriting year: a group shall not include contracts issued more than one year apart**

Things to consider:

Higher Granularity	Lower Granularity
+ More accurate profit pattern	- Less accurate profit pattern
- Prolonged calculation process	+ More time efficient calculation process
- Potential system upgrade required	+ Easier control

- **Group requirements**
- **Local regulatory minimum requirements**
- **Current systems ability & cost for new systems**
- **Auditor**

Level of Aggregation – 2

Expected number of groups – potential requirements:	Level of Profitability	Riders
- Similar risk (mortality, morbidity, longevity) - Underwriting year - Level of profitability - Channel	Granularity of NB reporting	Could the risks from the riders dominating the mortality risk in base contract?
	Will expense overrun (if any) potentially make the contract becoming onerous?	

Transition

Approach

Full retrospective

- Requires day 1 data and assumptions and full history to date of transition
- Measures all the insurance contracts as if IFRS 17 had always been applied

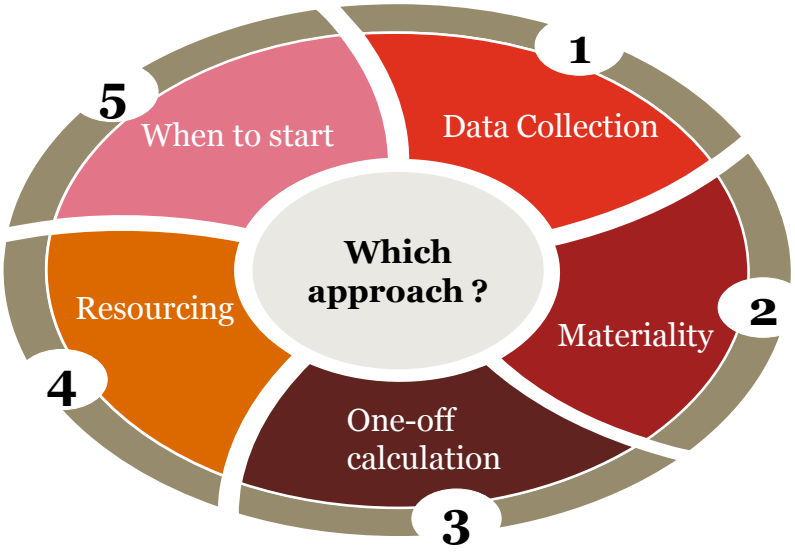
'Simplified' approach

- Applies when full historical data and assumptions are partly available
- Examples of the simplification are discount rates, aggregation, etc.

Fair value

- Considers only the future projections; ignores about the past
- Could result in limited CSM hence limited future profits
- Although easier, potentially unattractive?

Transition considerations



Illustrative Example

Reminder

The three measurement models in IFRS 17

	General model	*Premium allocation approach (PAA)*	*Variable fee approach*
Why is it needed?	Default model for all insurance contracts Discounted, risk adjusted cash flows	To simplify for short term contracts with little variability	To deal with participating business where payments to policyholders are linked to underlying items
Types of contract	• Long-term and whole life insurance, protection business • Certain annuities • US style universal life • Reinsurance written • Certain general insurance contracts	• General insurance • Short-term life and certain group contracts	• Unit-linked contracts, US variable annuities and equity index-linked contracts • Continental European 90/10 contract • UK with profits contracts
Mandatory?	Mandatory, unless VFA applies	Optional	Mandatory for direct participating contracts

The general model & Key areas of focus

The building blocks of the general model

Contractual service margin

Fulfilment cash flows

Risk adjustment

+

Probability weighted discounted expected present value of cash flows

Key areas of focus for this example:

1

Establishment of opening CSM

- CSM is the liability which ensures that there is no day 1 profit or loss for a group of profitable contracts
- Based on fulfilment cash flows on day 1, including acquisition expenses attributable to the portfolio

2

If everything is as expected, profit is release of CSM and risk adjustment

- The CSM represents the future profits expected to arise over the life of the contracts
- The risk adjustment represents non-financial risks
- So everything in line with expected means profits represent service delivered (CSM release) and non-financial risks covered (risk adjustment release)

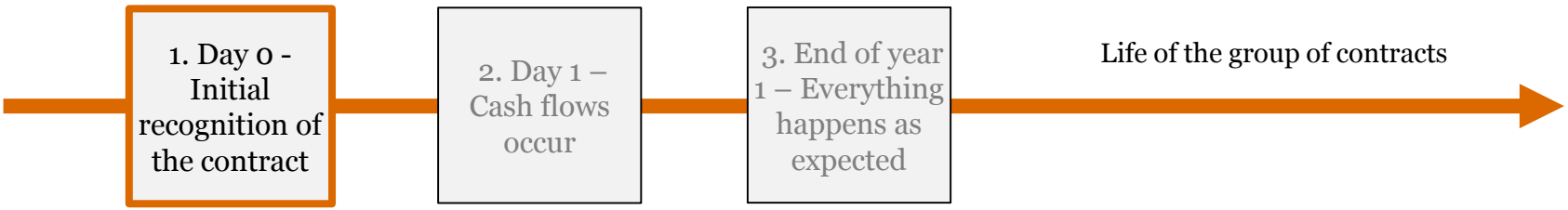
Term assurance

Illustration – a group of (thinly priced!) term assurance contracts

Number of policies in group	• **10,000** policies, all written on same day • All are expected to be profitable and no onerous contracts exist • Aggregated into one group, and no new contracts added throughout the examples
Duration and Sum Assured 	• **5 years** • Pays **$5,000** per contract at the end of year of death ($50m sum assured for the group)
Premiums 	• **$22.00** per year per contract (**$220,000** expected in first year for the group)
Expenses 	• Initial: **$7** per contract • Maintenance: **3%** of premium
Mortality characteristics 	• Starts at **0.2%** per year (Year 1) • Increasing linearly to **0.6%** per year (Year 5)
Interest Rate 	• **3% p.a.** for all cash flows (not a yield curve for simplicity)

Term assurance

Start of the coverage period – before any cash flows have occurred



Before any cash flows have occurred
Best estimate liabilities at inception – a closer look

The best estimate liabilities at inception are calculated as follows:

Year	Expected Claims (Death)		Expected Expenses (Maintenance and Acquisition)		Expected Regular Premium	
	CF $ Undiscounted	CF $ Discounted	CF $ Undiscounted	CF $ Discounted	CF $ Undiscounted	CF $ Discounted
1	100,000	97,087	76,600	76,600	220,000	220,000
2	149,700	141,107	6,587	6,395	219,560	213,165
3	199,001	182,114	6,567	6,190	218,901	206,335
4	247,756	220,128	6,541	5,986	218,025	199,524
5	295,821	255,178	6,508	5,782	216,935	192,744
	Total	**895,616**	**Total**	**100,953**	**Total**	**1,031,769**
	• Death cash flows are calculated in arrears as sum assured for the group of contracts * probability of death during each year • Cash flows discounted by applying 3% flat rate		• Since calculations are done before any cash flows occurred, all costs (including acquisition costs for year 1) are included		• Premiums are paid annually in advance • Decreasing undiscounted cash flows reflect decreasing number of policies in the group	

Before any cash flows have occurred
Fulfilment cash flows

The fulfilment cash flows used in the example are calculated as follows:

PV of future claims
- Discounted best estimate of future claims, reflecting best estimate assumptions

$895,615

PV of future costs
- Discounted best estimate of future directly attributable costs.
- Including directly attributable acquisition costs (as measured at time zero).

$100,953

PV of future premiums
- Before any cash flows have occurred, the entire collective premium is considered future premium.

$1,031,769

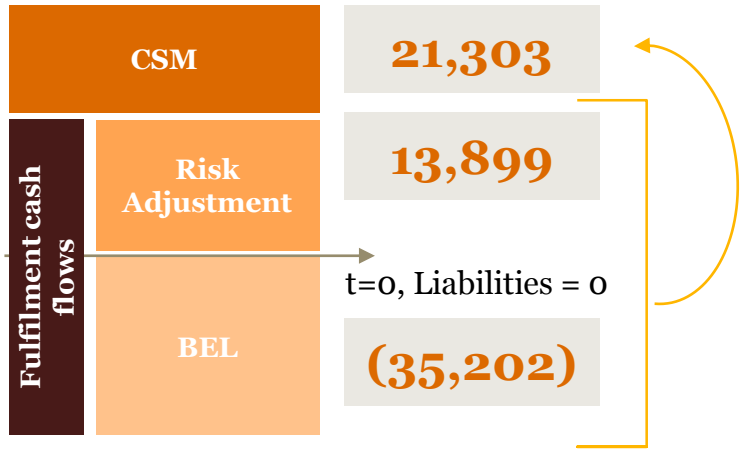
Risk adjustment
- We've used a simplified calculation for risk adjustment in this example of 1.5% of PV of best estimate future cash outflows

$13,899

$$\textit{Day o fulfilment cash flows} = \textit{BEL} + \textit{risk adjustment}$$
$$= (895{,}616 + 100{,}953 - 1{,}031{,}769) + 13{,}899$$
$$= (35{,}202) + 13{,}899$$
$$= (21{,}303)$$

Before any cash flows have occurred
Contractual Service Margin

The fulfilment cash flows used in the example are calculated as follows:



A profitable group of contracts when measured at inception – positive CSM

BEL + RA + CSM = 0

At inception

Day 0 fulfilment cash flows = BEL + risk adjustment
= (895,616 + 100,953 – 1,031,769) + 13,899
= (35,202) + 13,899
= (21,303)

Before any cash flows have occurred

Summary

Present Value of future cash flows	inception
(+) PV of future claims	895,615
(+) PV of future costs	100,953
(-) PV of future premiums	(1,031,769)
Present value of future cash flows / BEL	**(35,202)** ①

Risk adjustment	inception
Opening balance	
Discount unwind	
Release	
Change in future services	
Closing balance	**13,899** ②

Contractual service margin (CSM)	inception
Opening balance	
Discount unwind	
Amortization	
Change in future services	
Closing balance	**21,303** ③

+

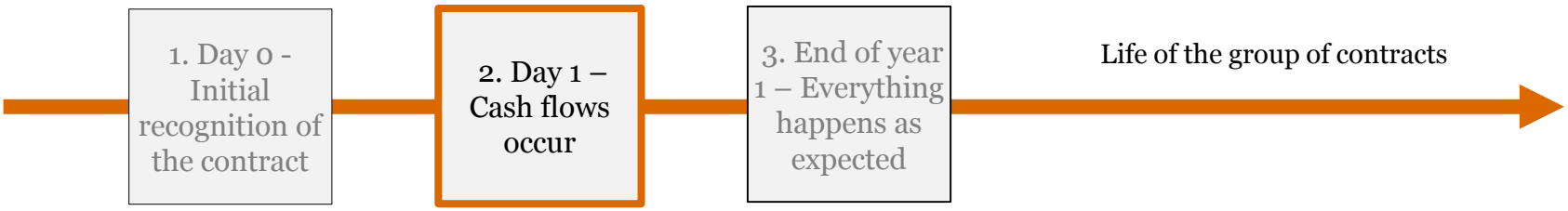
= Balancing item

Balance Sheet at Inception			
ASSETS		LIABILITIES AND EQUITY	
Cash	-	Insurance contracts	
		Future cash flows / BEL	(35,202) ①
		Risk adjustment	13,899 ②
		CSM	21,303 ③
		Total liabilities	-
		Shareholders' equity	-
Total assets	-	**Total liabilities and shareholders' equity**	-

Before any cash flows have occurred, the balance sheet totals add us to zero

Term assurance

Receipt of premium and payment of acquisition costs on day 1



Receipt of premium and payment of acquisition costs

Present Value of future cash flows	Day 1
(+) PV of future claims	895,615
(+) PV of future costs	30,953
(-) PV of future premiums	(811,769)
Present value of future cash flows	**114,798**

Risk adjustment	Day 1
Opening balance	
Discount unwind	
Release	
Change in future services	
Closing balance	**13,899**

Contractual service margin (CSM)	Day 1
Opening balance	
Discount unwind	
Amortization	
Change in future services	
Closing balance	**21,303**

Balance Sheet at Day 1

ASSETS		LIABILITIES AND EQUITY	
Cash	-	Future cash flows	114,798
Investments	150,000	Risk adjustment	13,899
		CSM	21,303
		Total liabilities	**150,000**
		Shareholders' equity	-
Total assets	**150,000**	**Total liabilities and shareholders' equity**	**150,000**

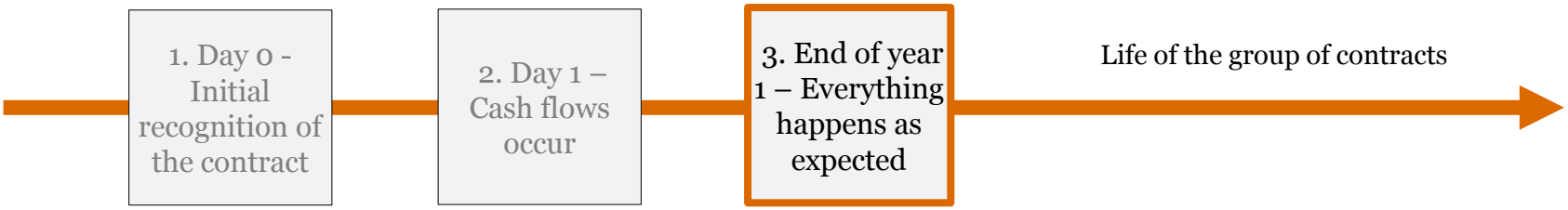
Receipt of premiums (220,000) minus payment of direct acquisition costs (70,000) is added to cash and decreases the future cash outflows

Cash has no impact on P&L

CSM still contains acquisition costs (which are therefore implicitly deferred)

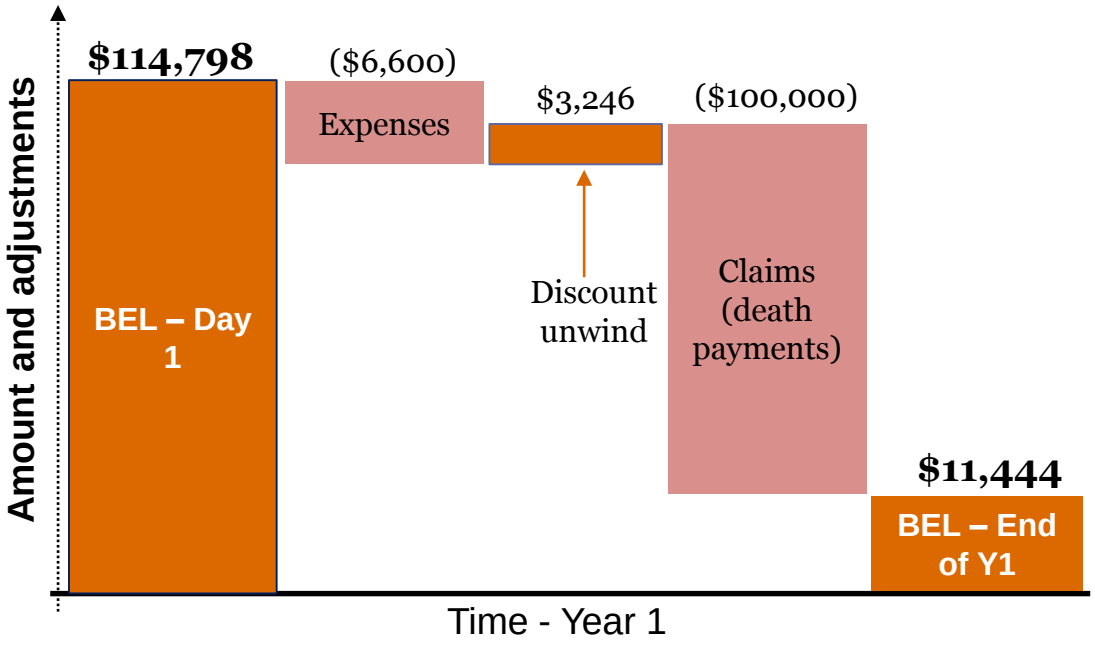
Term assurance

End of year 1 – Actual = Expected



Change in best estimate of future cash flows

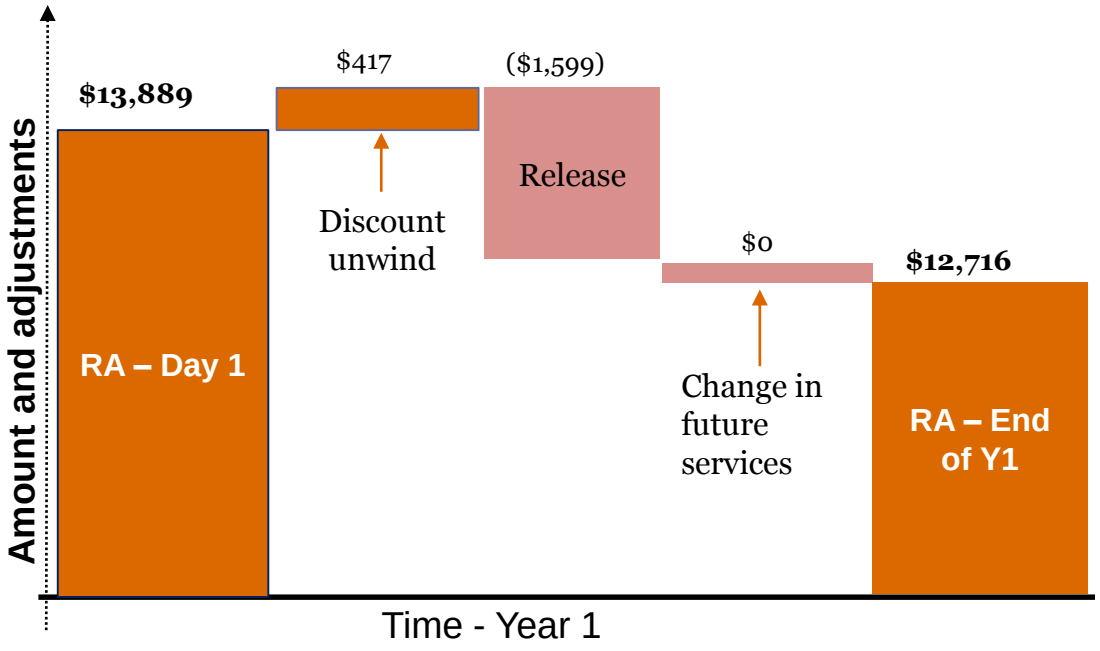
End of year 1 – everything as expected



- The expected Best Estimate liabilities at Day 1 are after the first premium is received and acquisition costs paid
- Expenses 6,600 are maintenance expenses for the Year 1 (Premium of 220,000 * 3%)
- Discount unwind calculated as 3% * (BEL Day 1 less Expenses). Assumed Interest rate has not changed since inception
- Death payments are in line with expected, ($50m * 0.2% = $100,000)

BEL moves in line with expectations

Change in risk adjustment
End of year 1 – everything as expected

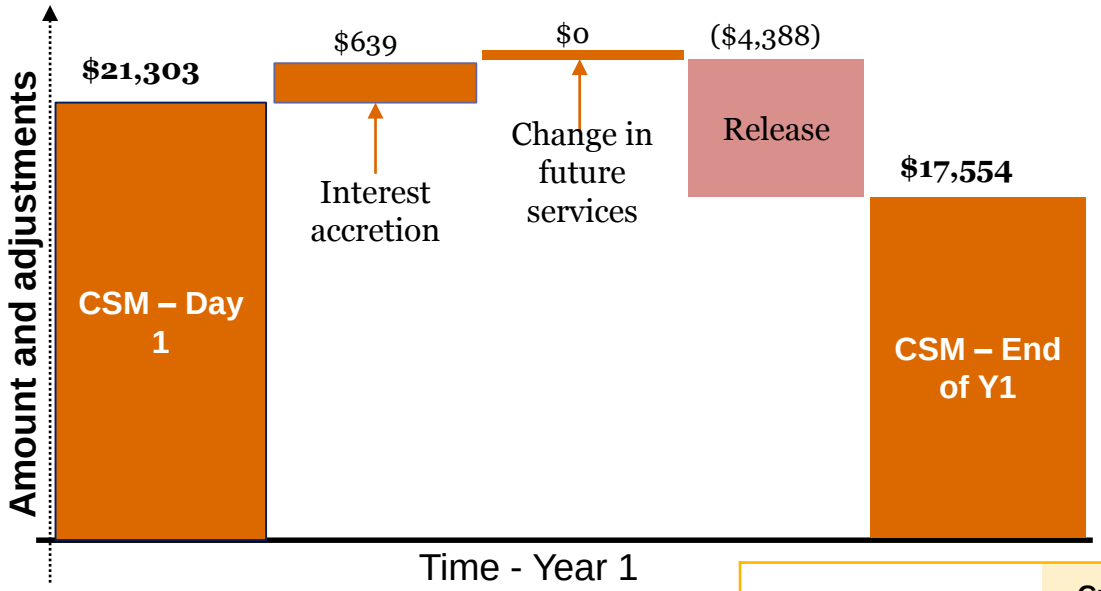


- The discount is unwound for 1 year to reflect the time value of money (3% p.a.). Assumed Interest rate has not changed since inception
- The risk adjustment is 1.5% of claims and expenses, the change is 1.5% of the expected claims and expenses (100,000+6,600) = 1,599
- The risk adjustment is recalculated and the change is recognised in revenue (release)

No change in expected future CF and change in non-financial risks

RA reduces in line with release of insurance risks over the year

Change in CSM
End of year 1 – everything as expected



- Interest is accreted on the CSM at the locked-in rate from the inception: 3% * 21,303 = 639.
- We have assumed there is no change in assumptions about future services that would adjust CSM
- The CSM is released as services are provided. This decreases the CSM and is included in revenue.
- Number of policies in the group for term assurance decreases very slowly over 5 years so it was assumed CSM is spread equally 20%p.a, (21,303 + 639 + 0) * 20% = 4,388.

**Based on this simplified example, ~20% of the CSM will be amortised into the P&L in Year 1.*

	Current	Future Years				
Year	**1**	**2**	**3**	**4**	**5**	
No. of In-Force Contracts	10,000	9,980	9,950	9,910	9,861	**Total Coverage Units**
Sum Assured per contract (mln)	5,000	5,000	5,000	5,000	5,000	
Coverage Units	**50**	**49.9**	**49.8**	**49.6**	**49.3**	**248.5**
Amortisation for Year 1	20.12%					

Balance sheet

End of year 1 – everything as expected

Present Value of future cash flows	Day 1	Y1
Opening balance		**114,798**
Discount unwind		3,246
Claims and Expenses		(106,600)
Change in future services		
Closing balance	**114,798**	**11,444**

Risk adjustment	Day 1	Y1
Opening balance		**13,889**
Discount unwind		417
Release		(1,599) ①
Change in future services		
Closing balance	**13,889**	**12,716**

Contractual service margin (CSM)	Day 1	Y1
Opening balance		**21,303**
Interest accretion		639
Amortisation		(4,388) ②
Change in future services		
Closing balance	**21,303**	**17,554**

Balance Sheet at end of year 1			
ASSETS		LIABILITIES AND EQUITY	
Cash	-	Future cash flows	11,444
Investments	47,702	Risk adjustment	12,716
		CSM	17,554
		Total liabilities	**41,715**
		Shareholders' equity	5,987
Total assets	**47,702**	Total liabilities and shareholders' equity	**47,702**

Premium: 220,000

Acquisition costs: (70,000)

Maintenance expenses: (6,600)

Claims: (100,000)

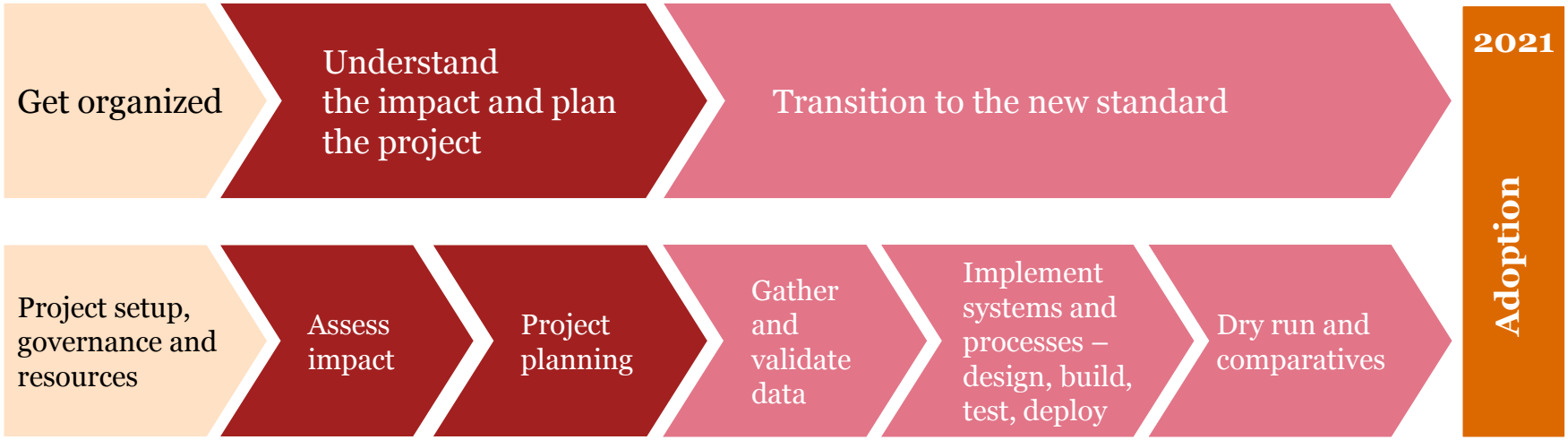
Investment income:

- Discount unwind (BEL+RA): 3,246+417
- Interest Accreted (CSM): 639

Total : 47,702

Earnings driven by release of CSM (service delivered) and risk adjustment (uncertainty borne) [items ① and ②]

Steps to consider up to expected IFRS 17 adoption date



Key activities in this planning phase:

1. Vision, principles and requirements
2. Training
3. Gap analysis
4. Systems impact assessment
5. Financial impact
6. Roadmap, detailed planning and budget

Need to start now

IFRS 17 is coming

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