



VIRTUAL ACTUARY

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IFRS17

Asset Liability Management

Presented by Leon Fourie – April 2024

(Fellow of the Actuarial Society of South Africa)

South African Regulator

- Implementation date of 1 January 2023

Post Implementation

- Handovers to BAU (business-as-usual) teams
- Building checks & controls
- System integrations & automations
- Ongoing refinements to Actuarial models
- Transitioning to new KPIs
- Asset Liability Management (ALM)

Ongoing Implementations

- Where companies have a 30 June year-end, their first set of results on an IFRS17 basis is necessary for June 2024 reporting (in Q3 of 2024), with June 2023 comparatives.

Work is ongoing to get IFRS17 fully operational at South African insurers.

Asset Liability Management (ALM)

- **Managing financial risks** that arise due to mismatches between the assets and liabilities as part of an investment strategy. In particular, we consider the **relative sensitivity** of the assets to that of the liabilities for changes in the **interest rate environment**.
- Before IFRS17
 - IBNR (often undiscounted) and backed with cash
 - Savings elements backed with corresponding assets
 - Where prospective reserves were negative, these were often zeroized (and no corresponding assets needed).
- After IFRS17, in this presentation:
 - Consider a simple case study to explore the need for ALM.
 - Focus of the influence of IFRS 17 on valuing the insurance obligations. We won't be exploring methods for selecting the appropriate assets.

In the next few slides, we will explore the impact of IFRS 17 on ALM.

Case Study

- Life Insurance Portfolio
- Active book (not at initial recognition)
- General Measurement Model
- Liability for Remaining Coverage (only)
- Risk Adjustment ignored
- Discounted coverage units
- OCI policy choice not selected

Fulfilment Cashflows (t=0)

BEL					
	t1	t2	t3	t4	t5
Premiums	- 200	- 180	- 162	- 146	- 131
Claims	80	72	65	58	52
Expenses	40	36	32	29	26
Undiscounted	- 80	- 72	- 65	- 58	- 52
Interest Rate	8%	10%	12%	12%	12%
Discounted	-254				
CSM					
Coverage Units	- 635	- 450	- 298	- 176	- 79
CSM Recognised	29%	34%	41%	55%	100%
Balance	300				

Balance Sheet (t=0)

t = 0		
Assets		46
Liabilities		46
	BEL	- 254
	CSM	300
Equity		-

Change in INSURANCE LIABILITIES

Fulfilment Cashflows*

BEL	t1	t2	t3	t4	t5
Premiums	- 200	- 180	- 162	- 146	- 131
Claims	80	72	65	58	52
Expenses	40	36	32	29	26
Undiscounted	- 80	- 72	- 65	- 58	- 52
Interest Rate	8%	10%	12%	12%	12%
Discounted	-254	-194			
CSM					
Coverage Units	- 635	- 450	- 298	- 176	- 79
CSM Recognised	29%	34%	41%	55%	100%
Balance	300	229			

*For simplicity in this example:

No experience variances

No economic basis changes

No non-economic basis changes

Change over the Year

BEL Build-up	
Start of Period	- 254
Cashflow release	80
Investment return unwind	- 20
End of Period	- 194

$$(-254 + 80) \times 8\% = -20$$

CSM Build-up	
Start of Period	300
Interest Accretion	24
Allocation	- 95
End of Period	229

$$(300 + 24) \times 8\% = 24$$

Released as Profit

Balance Sheet

	t = 0	t = 1	Change	
Assets	46	130	84	← $46 \times (1+8\%) + 80 = 130$
Liabilities	46	35	- 11	
BEL	- 254	- 194	60	
CSM	300	229	- 71	
Equity	-	95	95	

Income Statement

simplified

Insurance Revenue

Release of CSM	95
Expected Prem, Claims, Expenses	80

Insurance Service Expenses

Actual Prem, Claims, Expenses	- 80
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Finance I&E

Actual	4
Expected	- 4

← $46 \times 8\% = 4$

← +20 from BEL; -24 from CSM

Balance Sheet

	t = 0	t = 1	Change	
Assets	46	130	84	← $46 \times (1+8\%) + 80 = 130$
Liabilities	46	35	- 11	
BEL	- 254	- 194	60	
CSM	300	229	- 71	
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Income Statement

simplified

	95
Insurance Revenue	
Release of CSM	95
Expected Prem, Claims, Expenses	80
Insurance Service Expenses	-
Actual Prem, Claims, Expenses	- 80
Finance I&E	
Actual	4
Expected	- 4

Why hedge?


Insurers may want to avoid volatility in their IFRS earnings by selecting appropriate backing assets.

Volatility could also affect solvency.

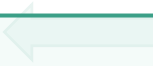
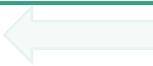
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simplified

	95	
Insurance Revenue		
Release of CSM	95	
Expected Prem, Claims, Expenses	80	
Insurance Service Expenses	-	
Actual Prem, Claims, Expenses	- 80	
Finance I&E		
Actual	4	 $46 \times 8\% = 4$
Expected	- 4	 +20 from BEL; -24 from CSM

Return on Assets to Offset Unwind on Liability

For a hedged portfolio, the return on assets should offset that used in discounting the liabilities.

Balance Sheet

	t = 0	t = 1	Change	
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Income Statement
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Economic Basis Changes

Furthermore, changes in the yield curve can significantly affect the BEL.

Duration matched assets should be selected such that the assets behave in a similar way.

← 46 x 8% = 4

← +20 from BEL; -24 from CSM

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Finance I&E

Actual	4
Expected	- 4

Negative Liabilities

At some future point, the total liability could well be negative.

The run-off pattern of the BEL and CSM is most often not the same.

This complicates hedging strategies.

← $46 \times 8\% = 4$

← +20 from BEL; -24 from CSM

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Locked-in Rates on the CSM

Interest on the CSM is as at initial recognition.

This poses a significant challenge to insurers to find matching assets, because:

- The CSM can change due to future service variances (such as demographic basis changes).
- The value of backing assets are affected by changes in future expectations (changes in the yield curve).

← $46 \times 8\% = 4$

← +20 from BEL; -24 from CSM

Balance Sheet

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Expected	- 4

Summary (Liability for Remaining Coverage):

The **BEL** needs to be hedged at current market rates. This can be a negative liability, and hedging strategies include short-selling assets.

Similarly, the **RA** needs to be hedged at market rates.

The **CSM** needs to be hedged at locked-in rates.

← $46 \times 8\% = 4$

← +20 from BEL; -24 from CSM



Leon Fourie
Chief Actuary

📞 +27 81 369 5570

✉ leon@virtualactuary.com

[in https://www.linkedin.com/in/leonfourie-actuary/](https://www.linkedin.com/in/leonfourie-actuary/)



THANK YOU