

— IFRS 17 EXPLAINED · EPISODE 6

The PAA made your LRC simple. It did nothing for your LIC.

Liability for Incurred Claims: what it is, how chain ladder and Bornhuetter-Ferguson estimate it, and where it lands in the P&L.

IFRS 17 para 40(b)

PSAK 117

GMM & PAA



— DEFINITION

A claim moves from LRC to **LIC** the moment the event happens



The LIC is the obligation to **investigate and pay valid claims for events that have already occurred**, reported or not, plus other incurred insurance expenses and past-service amounts not in the LRC.

IFRS 17 para 40(b) and Appendix A



Same formula under GMM and PAA. **No CSM, ever.**

$$\text{LIC} = \text{PV}(\text{future cash flows}) + \text{RA}$$

PV OF FUTURE CASH FLOWS

Unbiased, current estimate of unpaid claims and claims-handling costs, discounted at current rates.
para 33–36, B65

RISK ADJUSTMENT

Compensation for the uncertainty in amount and timing of those claims.
para 37, B86–B92

The CSM is unearned profit for future service. Incurred claims are past service, so there is nothing left to defer.

Four layers of unpaid claims

- 1 **Case reserves.** Reported claims, estimated claim by claim by the claims team.
- 2 **IBNER.** Reported but not enough reserved: case estimates that will still develop.
- 3 **Pure IBNR.** Incurred but not yet reported. Only an actuarial projection can see these.
- 4 **Claims handling costs.** Loss adjustment expenses to settle all of the above (B65).

Layers 2 and 3 are estimated from a **claims development triangle**. IFRS 17 does not prescribe the method. Two classics: **chain ladder** and **Bornhuetter-Ferguson**.

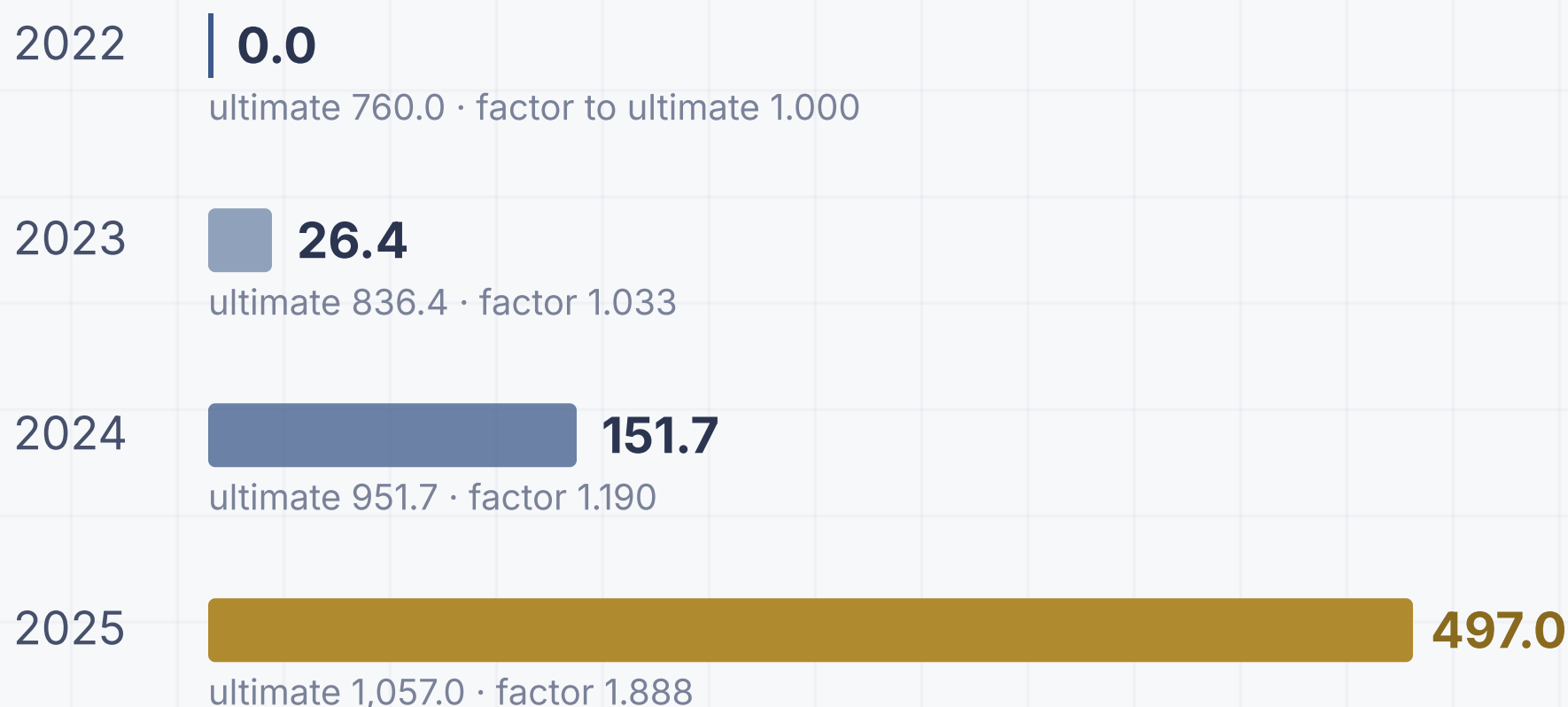
Let the past development project the future

ACCIDENT YR	YEAR 1	YEAR 2	YEAR 3	YEAR 4
2022	400	640	736	760
2023	450	702	810	?
2024	500	800	?	?
2025	560	?	?	?
Factor	→ 1.587	→ 1.152	→ 1.033	

Factor = sum of the next column ÷ sum of this column, using rows where both exist. Example: $(640 + 702 + 800) \div (400 + 450 + 500) = \mathbf{1.587}$. Multiply forward to fill each ?.

Cumulative paid claims, illustrative motor portfolio, valuation date 31 Dec 2025. Mack (1993) gives the standard error of this method.

Chain ladder unpaid: 675.1. The newest year carries 74%.



The catch: 2025 has only **one diagonal** of data, multiplied by **1.888**. One unusually high or low first year would swing the whole reserve. That is the problem Bornhuetter-Ferguson solves.

Blend the triangle with an expected loss ratio

Unpaid = Premium × ELR × (1 – 1/CDF)

ACCIDENT YR	EARNED PREM.	× ELR 70%	% UNPAID	BF UNPAID
2022	1,100	770.0	0.0%	0.0
2023	1,200	840.0	3.2%	26.5
2024	1,300	910.0	15.9%	145.0
2025	1,450	1,015.0	47.0%	477.2

The development pattern tells you *how much is still to come*; the prior loss ratio tells you *how big the year is*. Actual paid claims to date are then added on top. Bornhuetter & Ferguson (1972).

Chain ladder for mature years, BF for the newest

ACCIDENT YR	CHAIN LADDER	BF	SELECTED
2022	0.0	0.0	0.0 • CL
2023	26.4	26.5	26.4 • CL
2024	151.7	145.0	151.7 • CL
2025	497.0	477.2	477.2 • BF
Total	675.1	648.8	655.3

Rounded to one decimal; totals may differ by 0.1.

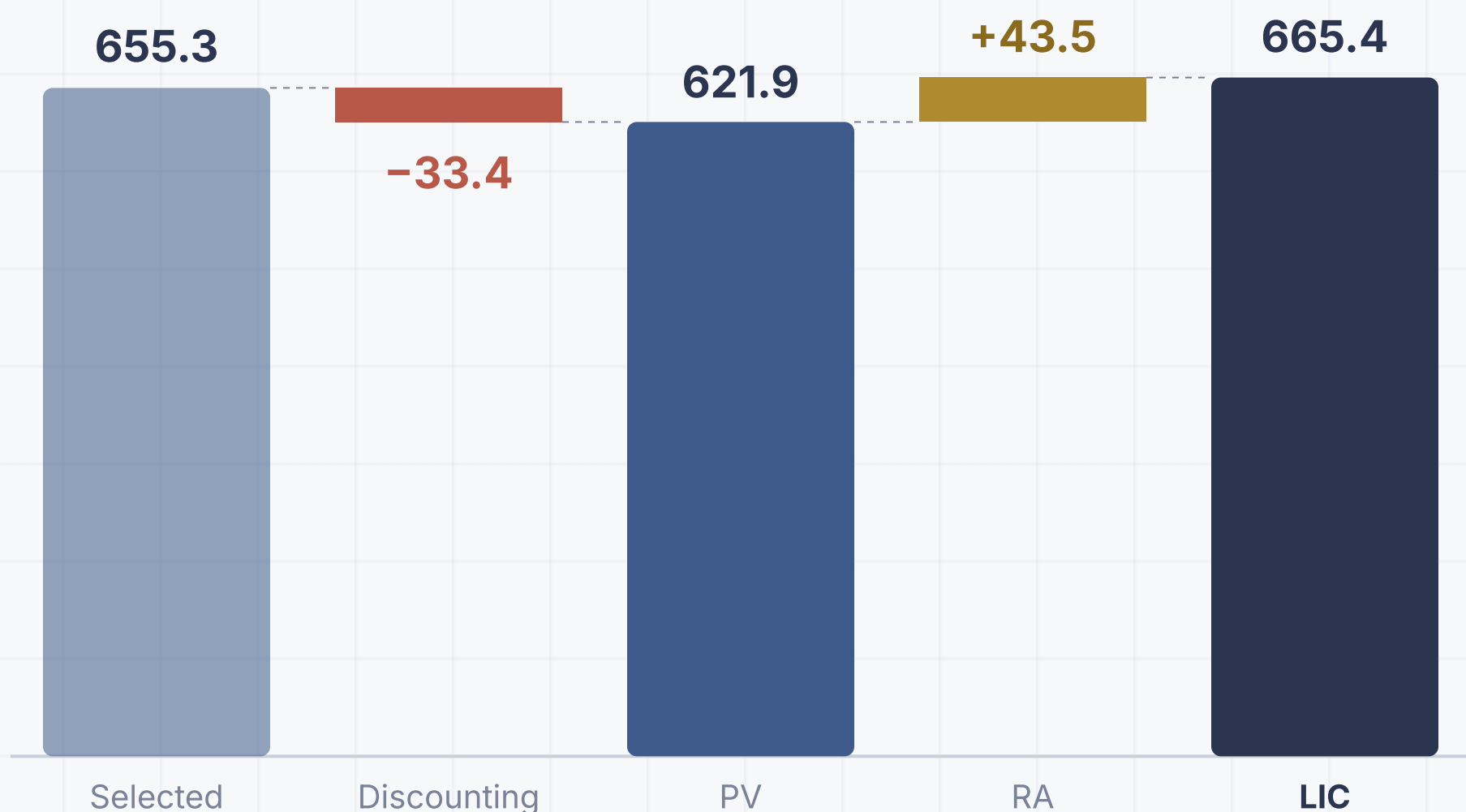
CHAIN LADDER

Fully responsive to actual data. Reliable when development is stable and the year is mature.

BORNHUETTER-FERGUSON

Stable when data is thin: new years, new products, or a changed claims process. Only as good as the ELR.

Discount it, then add the **risk adjustment**



Payments of 463.5 / 159.8 / 32.1 in 2026–28, discounted at 6.5% (mid-year; see Ep 4 for the SBN curve). RA assumed at 7% of PV. **para 36, 37** 29% is paid after one year, so the para 59(b) no-discount option would not apply.

LIC movements split across two lines of the P&L

INSURANCE SERVICE EXPENSE

New incurred claims and expenses, and changes in estimates of the LIC (past service). **para 84, 103(b)**

INSURANCE FINANCE INCOME OR EXPENSE

Unwinding of the discount and the effect of changes in interest rates. With the OCI option, part goes to OCI. **para 87–89, B72(e)(iii)**

RISK ADJUSTMENT RELEASE

Goes to the service result as claims settle, unless you split its time-value part into finance. **para 81**

Three things to remember

- 1 **The LIC is never simplified.** GMM or PAA, it is PV of unpaid claims plus RA, with no CSM.
- 2 **Pick the method per year.** Chain ladder where data is mature, Bornhuetter-Ferguson where it is thin.
- 3 **Disclose the development.** Para 130 asks for a claims development table, reconciled to the LIC.

NEXT · EPISODE 7

Risk Adjustment. Two insurers, same risks, different RA. Both can be right.

Full version on gusta-act.vercel.app · Numbers are illustrative.

Sources

IASB (2017, amended 2020). *IFRS 17 Insurance Contracts*. Paras 33–37, 40(b), 59(b), 81, 84, 87–89, 103, 130; Appendix A; B65, B72, B86–B92.

DSAK IAI. *PSAK 117 Kontrak Asuransi*. Effective 1 January 2025.

Bornhuetter, R.L. & Ferguson, R.E. (1972). The Actuary and IBNR. *Proceedings of the Casualty Actuarial Society*, 59, 181–195.

Mack, T. (1993). Distribution-free calculation of the standard error of chain ladder reserve estimates. *ASTIN Bulletin*, 23(2), 213–225.

Friedland, J. (2010). *Estimating Unpaid Claims Using Basic Techniques*. Casualty Actuarial Society.

IFRS 17 Explained, Episode 4. Discount rates: bottom-up approach and the SBN curve.

All figures in this episode are illustrative and not from any company. Not professional advice.
