

6.3.2 → Analysing the Expected Claims method

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You are given the following information about a particular line of business:

Accident Year	Cumulative Reported Claims as of (months)			
	12	24	36	48
2015	300	600	900	900
2016	315	640	925	
2017	350	645		
2018	480			

Accident Year	Cumulative Paid Claims as of (months)			
	12	24	36	48
2015	240	500	800	900
2016	250	540	770	
2017	175	400		
2018	242			

The adequacy of the case reserves has not changed.

Create a diagnostic triangle. Use it to justify whether or not the following reserving methods would be appropriate.

- The paid development technique.
- The paid expected claims method.
- The expected claims method using an a priori estimate of the ECR.

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We're given cumulative paid and cumulative reported triangles, so the problem is clearly leading us toward creating a paid-to-reported diagnostic triangle. Divide each cell in the cumulative paid claims triangle by the corresponding cell in the cumulative reported claims triangle.

Accident Year	Cumulative Paid to Cumulative Reported Claims as of (months)			
	12	24	36	48
2015	0.800	0.833	0.889	1.000
2016	0.794	0.844	0.832	
2017	0.500	0.621		
2018	0.504			

Notice that the ratio of paid to reported claims appears to decrease significantly in AY2017. This indicates one of two things: either the adequacy of the reserves increased in AY2017 or the rate at which claims are being paid (the settlement rate) decreased. We are told that the reserve adequacy has not changed, so it is likely that the decreasing paid-to-reported ratios are due to a slowdown in the settlement rate. Keeping this in mind,

- The ratio of paid to reported claims for earlier maturities decreased suddenly in AY2017. This likely indicates that the settlement rate has decreased. In this case, the paid development method would not be appropriate as it would underestimate ultimate claims.
- The paid expected claims method could be a reasonable choice for estimating ultimate claims. It would still be impacted by the decreasing settlement rate, though to a much smaller degree. So, it would slightly underestimate ultimate claims.
- When an a priori estimate of the ECR is used, the resulting ultimate claims estimate would be completely unaffected by a change in the settlement rate. As such, this would be an appropriate reserving method based on the information we're given.