Random 1 Friedland 17 (ULAE) F-17 (042) CG Practice (Problem 1)

Model: ULAE Example

Problem Type: Congor & Nolibos approach for ULAE

Find Estimate the unpaid ULAE as of the latest given year-end using all 3 versions of the Congor and Nobilos approach.

Given independent estimate of ultimate claims for all AYs 456,000

% of ULAE spend on opening claims	60%
% of ULAE spend on maintaining claims	30%
% of ULAE spend on closing claims	10%

CY	paid ULAE in CY M	ultimate for clms reported in CY R	paid loss in CY P	ultimate for clms closed in CY C
2021	4,650	54,900	20,900	16,700
2022	6,000	69,200	26,300	20,000
2023	7,500	89,300	33,100	25,400
2024	9,000	110,700	39,700	31,000
2025	11,275	142,800	48,800	38,800

Step 1a calculate the claims basis B

CY	60%	x	R	+	30%	x	P	+	10%	x	C	claims basis B
2021	60%	x	54,900	+	30%	x	20,900	+	10%	x	16,700	40,880
2022	60%	x	69,200	+	30%	x	26,300	+	10%	x	20,000	51,410
2023	60%	x	89,300	+	30%	x	33,100	+	10%	x	25,400	66,050
2024	60%	x	110,700	+	30%	x	39,700	+	10%	x	31,000	81,430
2025	60%	x	142,800	+	30%	x	48,800	+	10%	x	38,800	104,200
			466,900				168,800				131,900	**343,970**

Step 1b select a ULAE ratio W: W = M / B

CY	paid ULAE M	claims basis B	ULAE ratio W
2021	4,650	40,880	11.4%
2022	6,000	51,410	11.7%
2023	7,500	66,050	11.4%
2024	9,000	81,430	11.1%
2025	11,275	104,200	10.8%
	38,425	**343,970**	11.171%

If you decided at the beginning you are going to use a weighted average for B then you only need the totals line in Step 1a and 1b. The problem with that however is that you may not see trends in the ULAE ratio.

<====== *you can select this weighted average or choose another reasonable ratio*

Step 2a calculate the estimate of unpaid ULAE using the Expected Claims approach

unpd ULAE	=	W	x	L	-	M	
	=	11.171%	x	456,000	-	38,425	
	=	12,515					

Step 2b calculate the estimate of unpaid ULAE using the Bornhuetter-Ferguson approach

unpd ULAE	=	W	x	(	L	-	B	)
	=	11.171%	x	(	456,000	-	**343,970**	)
	=	12,515						

Step 2b calculate the estimate of unpaid ULAE using the Development approach

unpd ULAE	=	M	x	(	L	/	B	-	1)
	=	38,425	x	(	456,000	/	**343,970**	-	1)
	=	12,515							

Notes: *You get the same answer for all 3 methods if your selection for W is the weighted average. You also have to keep enough decimal places or they may differ due to rounding.*

If you choose something other than the weighted average, which could be entirely reasonable depending on the circumstances then you won't in general get the same answer.

Reading: Friedland 17 (ULAE) F-17 (042) CG Practice (Problem 2)
Model: ULAE Example
Problem Type: Congor & Nolibos approach for ULAE

Find Estimate the unpaid ULAE as of the latest given year-end using all 3 versions of the Congor and Nobilos approach.

Given independent estimate of ultimate claims for all AYs 437,000

% of ULAE spend on opening claims	45%
% of ULAE spend on maintaining claims	30%
% of ULAE spend on closing claims	25%

CY	paid ULAE in CY M	ultimate for clms reported in CY R	paid loss in CY P	ultimate for clms closed in CY C
2021	3,000	54,400	24,600	19,500
2022	4,000	65,300	31,000	24,200
2023	5,500	81,600	39,700	29,000
2024	7,000	103,600	48,800	36,300
2025	9,250	127,400	61,000	45,400

Step 1a calculate the claims basis B

CY	45%	x	R	+	30%	x	P	+	25%	x	C	claims basis B
2021	45%	x	54,400	+	30%	x	24,600	+	25%	x	19,500	36,735
2022	45%	x	65,300	+	30%	x	31,000	+	25%	x	24,200	44,735
2023	45%	x	81,600	+	30%	x	39,700	+	25%	x	29,000	55,880
2024	45%	x	103,600	+	30%	x	48,800	+	25%	x	36,300	70,335
2025	45%	x	127,400	+	30%	x	61,000	+	25%	x	45,400	86,980
			432,300				205,100				154,400	**294,665**

Step 1b select a ULAE ratio W: W = M / B

CY	paid ULAE M	claims basis B	ULAE ratio W
2021	3,000	36,735	8.2%
2022	4,000	44,735	8.9%
2023	5,500	55,880	9.8%
2024	7,000	70,335	10.0%
2025	9,250	86,980	10.6%
	28,750	**294,665**	10.0%

If you decided at the beginning you are going to use a weighted average for B then you only need the totals line in Step 1a and 1b. The problem with that however is that you may not see trends in the ULAE ratio.

<====== *you can select this weighted average or choose another reasonable ratio*

Step 2a calculate the estimate of unpaid ULAE using the Expected Claims approach

unpd ULAE	=	W	x	L	-	M	
	=	10.0%	x	437,000	-	28,750	
	=	14,950					

Step 2b calculate the estimate of unpaid ULAE using the Bornhuetter-Ferguson approach

unpd ULAE	=	W	x	(	L	-	B	)
	=	10.0%	x	(	437,000	-	**294,665**	)
	=	14,234						

Step 2b calculate the estimate of unpaid ULAE using the Development approach

unpd ULAE	=	M	x	(	L	/	B	-	1)
	=	28,750	x	(	437,000	/	**294,665**	-	1)
	=	13,887							

Notes: *You get the same answer for all 3 methods if your selection for W is the weighted average. You also have to keep enough decimal places or they may differ due to rounding.*

If you choose something other than the weighted average, which could be entirely reasonable depending on the circumstances then you won't in general get the same answer.