

Find

Use the reported Berquist-Sherman method to calculate the

unpaid

for AY

2025

Given

AY	Cumulative Paid <u>Loss</u> (\$000s) (CPL)			
	12	24	36	48
2022	560	1,325	1,650	1,680
2023	650	1,350	1,720	
2024	615	1,305		
2025	625			

AY	Cumulative Reported <u>Loss</u> (\$000s) (CRL)			
	12	24	36	48
2022	1,100	1,650	1,675	1,680
2023	1,250	1,680	1,750	
2024	1,200	1,800		
2025	1,500			

AY	Cumulative Paid <u>Counts</u> (CPC)			
	12	24	36	48
2022	78	106	114	115
2023	80	111	118	
2024	75	99		
2025	82			

AY	Cumulative Reported <u>Counts</u> (CRC)			
	12	24	36	48
2022	108	115	115	115
2023	112	120	120	
2024	104	110		
2025	106			

annual severity trend	5.0%
-----------------------	------

Step 1a calculate Average Paid Loss (APL) & Average Case O/S (ACOS)

1 (Solution)

AY	Average Paid Loss (\$000s) (APL)			
	12	24	36	48
2022	7.2	12.5	14.5	14.6
2023	8.1	12.2	14.6	
2024	8.2	13.2		
2025	7.6			

Ex: $8.1 = 650 / 80$
 $APL = CPL / CPC$

AY	Average Case O/S (\$000s) (ACOS)			
	12	24	36	48
2022	18.0	36.1	25.0	0.0
2023	18.8	36.7	15.0	
2024	20.2	45.0		
2025	36.5			

Ex: $18.8 = (1250 - 650) / (112 - 80)$
 $ACOS = (CRL - CPL) / (CRC - CPC)$

Step 1b calculate & select severity trend down columns (if trend is not provided)

AY	Average Paid Loss TREND			
	12	24	36	48
2022				
2023	12.5%	-2.4%	0.7%	
2024	1.2%	8.2%		
2025	-7.3%			

severity trend selection: n/a
 severity trend given: 5.0%

AY	Average Case O/S TREND			
	12	24	36	48
2022				
2023	4.4%	1.7%	-40.0%	
2024	7.4%	22.6%		
2025	80.7%			

Note increase along latest diagonal.
 (Evidence for case reserve strengthening in CY 2025)

Step 2a restate ACOS by de-trending from latest diagonal of original ACOS

AY	Average Case O/S (ACOS)			
	12	24	36	48
2022	31.5	40.8	14.3	0.0
2023	33.1	42.9	15.0	
2024	34.8	45.0		
2025	36.5			

* latest diagonal doesn't change under de-trending

Ex: $33.1 = 36.5 / 1.05^2$

Step 2b restate CRL using restated ACOS from step 2a: (restated ACOS) x (open counts) + (original CPL)

AY	Restated CRL			
	12	24	36	48
2022	1,505	1,692	1,664	1,680
2023	1,709	1,736	1,750	
2024	1,624	1,800		
2025	1,500			

Ex: $1,709 = 33.1 \times (112 - 80) + 650$

Step 3b apply development method to restated CRL from step 2b

LDFs	AY	12-24	24-36	36-48	48-ult
	2022	1.124	0.984	1.009	
	2023	1.016	1.008		
	2024	1.108			
	2025				
selected		1.083	0.996	1.009	1.000

Tail Factor: Set = 1.0 if triangle is fully developed.
 If triangle is not fully developed then select something different from 1.0

CDFs		12-ult	24-ult	36-ult	48-ult
age -> ult		1.088	1.005	1.009	1.000

<===== (selected) x (prior [age -> ult])
 (calculate from right-to-left)

Ult.		'25@12	'24@24	'23@36	'22@48
diagonal		1,500	1,800	1,750	1,680
ultimate		1,632	1,809	1,766	1,680

<===== (diagonal) x (age -> ult)

Step 3b unpaid for AY 2025 = 1,007 <-- final answer