**Reading:** Friedland 10 (Cape Cod Method)
**Model:** 2018.Spring #18
**Problem Type:** Reserving Methods - CC with Pure Premium Trend Adjustments

**Find** Calculate the ultimate for AY 2025 using the reported Cape Cod method.

**Given**

| AY | rptd clms | CDF | pure premium trend |
|---|---|---|---|
| 2023 | 6,400 | 1.20 | 0.891 |
| 2024 | 3,900 | 3.40 | 0.944 |
| 2025 | 1,600 | 5.60 | 1.000 |

| CY | EP |
|---|---|
| 2023 | 13,440 |
| 2024 | 18,720 |
| 2025 | 12,960 |

** no rate level adjustments*
** no premium trend*

**Step 1** calculate the adjusted reported losses *(do not apply CDFs to the losses - we are not calculating the ultimate here)*

| AY | rptd clms | x | PP trend | = | adjusted reported claims |
|---|---|---|---|---|---|
| 2023 | 6,400 | x | 0.891 | = | 5,703 |
| 2024 | 3,900 | x | 0.944 | = | 3,682 |
| 2025 | 1,600 | x | 1.000 | = | 1,600 |
| | | | | | **10,985** |

**Step 2** calculate the used-up-premium (UUP)

| CY/AY | EP | / | CDF | = | UUP |
|---|---|---|---|---|---|
| 2023 | 13,440 | / | 1.20 | = | 11,200 |
| 2024 | 18,720 | / | 3.40 | = | 5,506 |
| 2025 | 12,960 | / | 5.60 | = | 2,314 |
| | | | | | **19,020** |

**Step 3** calculate the adjusted ECR at the level: 2025 *(you must back out the pure premium trend)*

| | | | | | | |
|---|---|---|---|---|---|---|
| ECR | = | Step 1 | / | Step 2 | / | (PP trend for AY 2025) |
| | = | **10,985** | / | **19,020** | / | 1.000 |
| | = | **57.75%** | | | | |

**Step 4** calculate the ultimate using the data for: 2025

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ultimate | = | rptd clms | + | ( 1 - | 1 / | CDF ) | x | ECR | x | EP |
| | = | 1,600 | + | ( 1 - | 1 / | 5.6 ) | x | **57.75%** | x | 12,960 |
| | = | 7,748 | <== *final answer* | | | | | | | |

**Reading:** Friedland 10 (Cape Cod Method)
**Model:** 2018.Spring #18
**Problem Type:** Reserving Methods - CC with Pure Premium Trend Adjustments

**Find** Calculate the ultimate for AY 2025 using the reported Cape Cod method.

**Given**

| AY | rptd clms | CDF | pure premium trend |
|---|---|---|---|
| 2023 | 6,900 | 1.90 | 1.016 |
| 2024 | 4,300 | 4.00 | 1.008 |
| 2025 | 1,800 | 6.40 | 1.000 |

| CY | EP |
|---|---|
| 2023 | 17,250 |
| 2024 | 17,200 |
| 2025 | 16,380 |

** no rate level adjustments*
** no premium trend*

**Step 1** calculate the adjusted reported losses *(do not apply CDFs to the losses - we are not calculating the ultimate here)*

| AY | rptd clms | x | PP trend | = | adjusted reported claims |
|---|---|---|---|---|---|
| 2023 | 6,900 | x | 1.016 | = | 7,011 |
| 2024 | 4,300 | x | 1.008 | = | 4,334 |
| 2025 | 1,800 | x | 1.000 | = | 1,800 |
| | | | | | **13,145** |

**Step 2** calculate the used-up-premium (UUP)

| CY/AY | EP | / | CDF | = | UUP |
|---|---|---|---|---|---|
| 2023 | 17,250 | / | 1.90 | = | 9,079 |
| 2024 | 17,200 | / | 4.00 | = | 4,300 |
| 2025 | 16,380 | / | 6.40 | = | 2,559 |
| | | | | | **15,938** |

**Step 3** calculate the adjusted ECR at the level: 2025 *(you must back out the pure premium trend)*

| | | | | | | |
|---|---|---|---|---|---|---|
| ECR | = | Step 1 | / | Step 2 | / | (PP trend for AY 2025) |
| | = | **13,145** | / | **15,938** | / | 1.000 |
| | = | **82.48%** | | | | |

**Step 4** calculate the ultimate using the data for: 2025

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ultimate | = | rptd clms | + | ( 1 - | 1 / | CDF ) | x | ECR | x | EP |
| | = | 1,800 | + | ( 1 - | 1 / | 6.4 ) | x | **82.48%** | x | 16,380 |
| | = | 13,199 | <== *final answer* | | | | | | | |