

Tips for using Actual vs. Expected in Arius at Year-end

There are three sets of Actual vs. Expected tables in Arius:

- Direct approach - calculates the expected amounts based on applying prior development factors to the prior diagonal of data and compares to actual current results, helping you examine how well the development method performed over the period
- Indirect approach using selected patterns - calculates the expected amounts based on the prior indicated reserves and prior incremental emergence (using prior selected factors), helping you examine how the development method and selected ultimates performed over the period
- Indirect approach using implied patterns - calculates the expected amounts using the prior indicated reserves and prior incremental emergence (using prior implied patterns of development), helping you examine how the selected ultimates performed over the period

All of these can be found in the Object Library under the Methods node - Actual vs. Expected folder.

If you plan to use the Direct approach and/or Indirect approach using selected patterns, you will not need to select anything other than the standard development patterns and ultimates you selected as part of your most recent analysis in Arius.

If you plan to use the Indirect approach using implied patterns, you will also need to select ratio to ultimate patterns *before* you prepare your most recent Arius analysis file for the new period.

On the following page, we have provided the steps to populate the Actual vs. Expected tables for Paid Loss, in two different scenarios.

- Scenario 1 assumes an analysis at 12/31/2014 with a 12-24-36 structure is being updated at 12/31/2015 with a 12-24-36 structure.
- Scenario 2 assumes an analysis at 9/30/2015 with a 9-21-33 structure is being rolled forward to 12/31/2015 with a 9-21-33 structure.

Similar steps will be necessary for each data element (e.g., Incurred Loss, Open Claims, etc.) for which you want to populate Actual vs. Expected tables.

Scenario 1: 12/31/2014 to 12/31/2015 with 12-24-36 structure

Original file at 12/31/2014 with 12-24-36 development periods
Roll forward to 12/31/2015 with 12-24-36 development periods

In the 2014 file

1. Select 12-24-36 Paid Loss Development factors.
2. Select Ultimate Loss.
3. If using Indirect Actual vs. Expected using implied pattern, select 12-24-36 Cumulative Paid Loss to Ultimate Loss factors (Exhibit 65 under Exhibits – Losses – Other Ratios).
4. **Save this file.**

Create and update 2015 file

5. Modify Structure – Append New Evaluation, uncheck the *Clear All Assumptions* box.
6. **Save this file with a new name.**
7. Load new data into the latest diagonal.
8. Select 12-24-36 Paid Loss Development factors.
9. If using Indirect Actual vs. Expected using implied pattern, select 12-24-36 Cumulative Paid Loss to Ultimate Loss factors (Exhibit 65 under Exhibits – Losses – Other Ratios).

Scenario 2: 9/30/2015 to 12/31/2015 with 9-21-33 structure

Original file at 9/30/2015 with 9-21-33 development periods
Roll forward to 12/31/2015 with 9-21-33 development periods (last diagonal is a partial period and interpolation is activated)

In the 9/30 file

1. Select 9-21-33 Paid Loss Development factors.
2. Select Ultimate Loss.
3. If using Indirect Actual vs. Expected using implied pattern, select 9-21-33 Cumulative Paid Loss to Ultimate Loss factors (Exhibit 65 under Exhibits – Losses – Other Ratios).
4. Save this file.

Create and update 12/31 file

5. Modify Structure – Append New Evaluation, uncheck the *Continue Adding Exposure Periods* and *Clear All Assumptions* boxes.
6. Modify Project Settings – Length of Last Calendar Period = 3.
7. **Save this file with a new name.**
8. Load new data into the latest diagonal.
9. Select 12-24-36 (interpolated) Paid Loss Development factors.
10. If using Indirect Actual vs. Expected using implied patterns, select 12-24-36 (interpolated) Cumulative Paid Loss to Ultimate Loss factors (Exhibit 65 under Exhibits – Losses – Other Ratios).