Tech-Us-Out (TUO) Post-Catastrophe Analysis Presentation Documentation

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1. Overview

Tech-Us-Out (TUO) provided workers’ compensation loss triangles for Accident Years 2003-2015, including paid and reported losses split into indemnity and medical. Our objective was to estimate TUO’s ultimate losses and required reserves, accounting for normal development patterns as well as a known catastrophic outlier in AY 2012.

We applied industry-standard reserving methods, primarily the Loss Development Factor (LDF) method, and validated results using a Frequency-Severity framework.

2. Data & Methodology Summary

Data Used

- Reported & paid loss triangles for indemnity and medical
- Claim count and severity triangles
- Background notes confirming 20 years of consistent reserving practices
- Details on catastrophic New Year’s event in AY 2012

Methodology

- Developed indemnity and medical separately to reflect their different payment patterns

- Selected incremental LDFs using 3-5 year averages to smooth volatility
- Applied both reported and paid development
- Excluded AY 2012 during LDF selection to avoid distortion
- Validated LDF-based ultimate estimates using Frequency-Severity (Ultimate = Count × Severity)

3. Reported LDF Findings

Reported LDFs provide the most stable signal for TUO:

- Indemnity reported losses develop more slowly, reflecting long-tailed wage-replacement and disability benefits.
- Medical reported losses settle early, with most treatment occurring soon after injury.
- Reported indemnity LDFs remain above 1.00 for more periods; medical converges toward 1.00 quickly.
- TUO's consistent reserving practices support using multi-year averages for credible LDF selection.

This pattern confirms that TUO's portfolio is largely fully developed, especially in older accident years.

4. Paid LDF Findings

Paid patterns highlight timing differences between indemnity and medical:

- Indemnity paid development is volatile at early maturities due to waiting periods and staggered benefit payments.
- Medical paid development is smooth and front-loaded, with fast convergence to 1.00.
- Early indemnity paid factors were smoothed using multi-year averages; later periods selected near 1.00.

- Paid results are consistent with reported development but are less reliable early in development.

Paid analysis reinforces placing more weight on reported LDFs, especially for long-tailed indemnity.

5. Catastrophe / Outlier Adjustment

A major catastrophic loss event occurred in Accident Year 2012, causing unusually high early development.

- Including AY 2012 increased the 12-24 reported indemnity LDF from 1.3848 to 1.4031.
- Even small early-age LDF distortions compound and bias ultimate loss estimates.
- Because catastrophes are non-recurring, we excluded AY 2012 when selecting LDFs to maintain representativeness.

This adjustment produces a cleaner, more stable development pattern consistent with TUO's normal operations.

6. Ultimate Loss Estimate

Using selected reported and paid LDFs (≈1.00), implied development indicates the portfolio is essentially fully developed.

Ultimate Losses

- Reported ultimate: $1.93B
- Paid to date: $1.66B
- Required outstanding reserve: $267M

Most reserves (≈60%) lie in recent AYs (2013-2015), reflecting normal payment timing for WC claims.

7. Frequency-Severity Validation

An independent frequency-severity approach produced ultimate estimates consistent with our LDF results.

- Frequency: projected ultimate claim counts from count triangles
- Severity: projected ultimate indemnity + medical average severities
- Ultimate = Frequency × Severity

This alignment strengthens confidence in the $267M selected reserve.

8. Additional Considerations

TUO should monitor:

- Medical & wage inflation, which directly affect WC severity
- Tail factor uncertainty, especially for long-tailed indemnity
- Reopened claims, which can add late development
- Case reserve adequacy, to avoid upward or downward LDF distortions

9. Conclusion

After adjusting for the AY 2012 catastrophe and applying both LDF and frequency-severity methods, our final selected reserve for Tech-Us-Out is: $267 million

This reserve represents payment timing on known claims rather than unexpected future emergence, and is consistent with TUO's stable historical development patterns.