Don't Blame the Rearview Mirror: How Actuaries Can Help Put Claims Managers in the Driver's Seat

John W. Rollins, FCAS, MAAA
Florida Farm Bureau Insurance Cos.
Casualty Loss Reserve Seminar
Chicago, IL Sept. 9, 2003

Overview of Topics

Main Theme:

Communication between Claims and Actuary on <u>operating</u> issues is key to profitability

Three critical spheres:

- *Planning, staffing and incentives*
- *Reserving and financial reporting*
- *Coding and statistics*

Profitability and Claims Operations

- Actuaries know loss costs are related to claim disposal rates and severity
- But disposal rates and severity are themselves related to other operating indicators in Claims:
  - Inventory (pending files per adjuster)
  - Staffing (exposures in-force per adjuster)
- Further, the strength of these "second-order" relationships depends on the planning metrics used in Claims

The Claims-Actuary "Feedback Loop"

- Assume initial values for:
  - Exposure in-force, pending files, staffing
- Assume constants for:
  - Claim frequency, disposal rate per adjuster
- Assume adequate rate level is:
  - [Loss Cost] x [Expense Multiplier]

The Claims-Actuary "Feedback Loop"

- Then plausible model for claims operations is:
  - Incurred claims = [frequency] x [begin exposure]
  - Closed claims = [disposal rate] x [staffing]
  - End pending claims = [Begin pending] + [incurred] - [closed]
  - End staffing = [Begin staffing] x [adjuster hiring rate]

The Claims-Actuary "Feedback Loop"

- But Claims performance affects rates/growth:
  - Exposure growth rate (above pop. base) = [K_1] x ([Adequate rate] – [Actual rate])
  - Average Severity (above base amount) = [K_2] x ([Incd. claims] – [Closed claims])
  - Loss Cost = [frequency] x [severity]
  - New exposure = [Old exposure] x [Growth rate]
  - New rate = [Old Loss Cost] x [Growth rate] x [Expense Multiplier]

Feedback Loop: Key Assumptions

- Growth track depends on loss costs, which depend on severity, which depends on growth because of staffing assumptions
  - Negative feedback allows long-run stability
- Key model assumption is adjuster hiring rate:
  - If hiring proportional to *exposure growth*, model remains in equilibrium
  - If hiring proportional to *pending inventory*, equilibrium is uncertain – too late for stable results by time inventory builds

Feedback Loop: Key Assumptions

- Another key model assumption:
  - Severity depends on inventory pressure
- Claims operations may incent adjusters based on files closed and disposal rate, but *NOT* include financial metrics like:
  - Paid average severity vs. settlement lag and policy limit
  - Reserve development and initial accuracy (discussed later)

Profitability and Feedback: Actions

- Actuary can provide user-friendly data to Claims management for planning:
  - Earned and in-force exposure per adjuster
  - Lagged inventory vs. past exposure growth
  - Lagged severity vs. past inventory
- Claims must commit to operational usage:
  - Budgeting with actuarial growth projections
  - Rewarding adjusters for financial goals

Reserving Issues

- Actuaries can assist Claims in setting:
  - Factor (formula) reserves for new claims
  - Case reserves for pending claims

Reserving Issues: Factor Reserves

- Basic factor reserve formula should reflect:
  - Historical average paid severity
  - *Probability* of payment (no-pay ratio)
- Latter often ignored by Claims due to:
  - Lack of mathematical perspective
  - Poor data on no-pay claim counts
- Using feedback loop discussed above, factor reserve formula can be adjusted for inventory pressure and growth expectations as well!

Reserving Issues: Case Reserves

- Though province of adjusters, affected by actuarial issues:
  - Current reserving practices always affected by prior years' runoff (despite protests)
- Actuaries can help smooth cycle by:
  - Report runoff projections regularly
  - Educate Claims and stress consistency
  - Evaluate and help implement Claims benchmarking tools and use in projections

Coding Issues: Garbage In, Garbage Out

- Accurate statistical coding not typically a high priority for Claims; no performance incentives
- But critical to Actuary for rates and reserves:
  - Categorical (cause of loss, coverage)
  - Catastrophic event and "bad faith" codes
  - Dates of loss, report, settlement
  - "Count" transactions (no-pay, closure)

Coding Issues: Categories & Allocations

- Categorical accuracy a challenge with modern bulk-billed cost containment devices:
  - Medical/Legal invoice review
  - Auto Glass claims
- Difficulty of allocating back to file # leads to:
  - Establishment of fake file "dumpsters" with bogus accident/report dates and stats
  - Misallocation of D&CC expense to A&OE
- Effect on rates and reserves obvious – to *us*

Coding Issues: Catastrophes

- Ratemaking depends on exact match between excluded losses from *actual* catastrophic events and expected losses from *modeled* catastrophic events
- If definition of event not consistent between model and events "tagged" by Claims as cats, losses in rate base are over- or understated:
  - Severity (hurricane vs. weak tropic storm)
  - Peril (does "other wind" include STS?)

Coding Issues: Catastrophes

- Just using Property Claim Services definitions no guarantee of proper match (models based on phenomena, not industry loss)
- Also, cat codes should be "statistically isolated" as much as possible:
  - Line of business (i.e. no liability cat losses)
  - Geographic area (agree on affected territories/states)

Coding Issues: Bad Faith (ECO/XPL)

- Claims managers tend to be hostile to segregating such losses in stat systems due to easy discovery
- Unfortunately, actuaries must have systematic way to identify and exclude excess amounts from rate base in some states
  - F.S. 627.0651(12) prohibits use in rates
- Compromises on how data is stored and coded may be necessary

Counting Claims – is it that simple?

- Transaction coding rules deep in bowels of claims systems affect definitions of "closed", "no pay", and date logic
- Unpublished systems changes distort claim counts, affecting Actuary:
  - Data reporting (Sch. P part 5)
  - Bulk reserve estimate (structural methods)
  - Ratemaking (severity/frequency trends)
- Coverage partitions also affect claim counts

Claims and Actuary: Moral of the Story

- Both sides must be willing to "roll up sleeves" and gain operational knowledge outside professional comfort zone
- Actuary must learn about:
  - How claims units are staffed
  - How adjusters' performance is measured
  - Claims philosophy on reserve setting/runoff
  - Claims system coding and transaction keys
- How many of these do YOU know about?

Claims and Actuary: Moral of the Story

- Claims managers must learn about:
  - Importance of staffing and reserving using *leading* indicators
  - *Financial* (reserves) and *competitive* (rates) impact of apparent "micro" decisions:
    - Factor and case reserving patterns
    - Allocations of bulk billed loss and D&CC
    - Definition of catastrophes
    - Cause of loss descriptions
- How have YOU communicated these needs?

Speaker Contact Information

John W. Rollins, FCAS, MAAA
Chief Actuary
Florida Farm Bureau Insurance Cos.
5700 SW 34 St., Gainesville, FL 32608
(352) 374-1566 Fax: (352) 374-1514
JRollins@sfbcic.com

FARM BUREAU INSURANCE