Evaluating Reserves in a Changing Claims Environment

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Efficiency and Effectiveness:
- Claims practices over time have sought to improve both efficiency and effectiveness
- **Efficiency**: Claims expenditures relative to operating costs
- **Effectiveness**: Claims expenditures relative to desired claim outcome and peer group of companies

Efficiency:
- Segmentation of claim type and assignment of specialists
- Expected litigation position
- Early identification of fraud, questionable claims
- Standardization of claims processes
- Facilitation of workload management during periods of peak demand

Effectiveness:
- Establishment of performance metrics and targets
- “SWAT” team approach to problem identification and remediation
- Linkage between claim process improvements and dashboard reports
- Actuarial support closely aligned or embedded
A Brief History – What Prompted the Claims Initiatives?

- **Cost Containment**: Powerful incentives to settle claims effectively, efficiently, and at a fair cost;
- **Technology**: Introduced speed and the ability to analyze claims in finer segments;
- **Fraud Detection**: A practical necessity to eliminate fraudulent claims

These drivers continue today, further impacted by soft pricing market, decreased investment returns and increased competition.

Changes in Claims Handling Philosophy

**Common Examples**

- Minor Soft Tissue
- Claim Process Redesign
  - Litigation avoidance
  - Reduced contact time
- Defense & Cost Containment Expenditures
- Enhanced segmentation
  - Attorney Represented vs. Non-represented
  - Fraud or potentially fraudulent cases

Changes in Claims Handling Philosophy

**Minor Soft Tissue**

**Claims Approach:**
- Selection Criteria
- Rigorous Defense
- Objective Evaluation of Liability and Damages
- Willingness to try case

**Potential Actuarial Impact:**
- Delayed Pending Disposition
- Increased ALAE
- Increased CWOP
- Lower average severity
- Elimination of soft tissue cases
Changes in Claims Handling Philosophy
Claim Process Redesign

Claims Approach:
- Rapid Initial Contact of Third Party Claimants
- Resolution of Claimant Needs
- Rapid Liability Investigation and Resolution of Property Damage
- Regular claimant follow-up and Settlement Offers

Potential Actuarial Impact:
- Acceleration of Claim Notice Counts
- Faster Settlements
- Reduction in Pending
- Reduction in Claim Severity
- Reduction in ALAE

Changes in Claims Handling Philosophy
Defense and Cost Containment Expenditures

Claims Approach:
- Consolidation of Defense Firms
- Web based Auction Sites for Legal Services
- Alternative Fixed Fee Arrangements
- Increased use of Staff Counsel

Potential Actuarial Impact:
- Changes in rate and amount of DCC payments
- Changes in claim settlement philosophy

Changes in Claims Handling Philosophy
A Sampling of Current Trends

Claims Approach:
- Workstation redesign and process standardization
- Enhanced claims audit procedures, metrics and monitoring
- Improved catastrophe response
- Predictive modeling

Potential Actuarial Impact:
- Changes in historical development patterns
- Process disruptions
- Changes in data definitions
Current Trends in Claims Process Transformation:

- The view of many within insurance company management is that claims operations can be improved or enhanced in the following areas:
  - People
  - Process
  - Information
  - Technology

People
- Perceived lack of flexibility
- Organizational structure
- Inconsistency between individuals and locations

Process
- Manual, cumbersome, or inflexible processes
- Time-consuming processes
- Concerns about lack of controls due to cumbersome or manual processes
- Lack of an insured matrix

Information
- Internal management reporting in not used in its current form
- Information provided is too late or not helpful
- Impact of changes such as new assumptions of new protocols not addressed in a timely manner
- Lack of compatible external information
- Benchmarking of performance

Technology
- Lack of predictive methodologies
- Legacy systems are relied upon and do not adapt to changing needs of the corporation
- Poor use of technology solutions

The world does not stand still while the company implements its claims initiatives.

Ultimate claims resolution will be impacted by both internal and external influences.
Berquist-Sherman was a good start in reflecting a changing claims environment.

BUT

Today's changing internal and external claims environments call for even more refined methodologies.

Alternative Reserving Approaches to Reflect the Following Changes in the Claims Environment:

- Changes to Settlement Rates that Vary by Type of Claim
- Changes to the Mix of Claims Settled
- Interaction of Internal Initiatives and External Influences
- Changes to Defense and Cost Containment Expenditures
- Modeling claims outcome
- Inflation

Common Changes to Settlement Rates that Vary by Type of Claim:

- Formation of a minor injury/soft tissue unit
- Introduction of a contact time requirement
- Increased claim staffing
- Implementation of an “expert” claim reserve system
- Alternative Dispute Resolution
Changes to the Mix of Claims:

- Migration towards specialization
- Emphasis on the rapid settlement of severe cases while holding fast on minor claims with questionable liability
- Changes in settlement philosophy based on presence of legal representation
- Specialization has led to subject matter experts

Interaction of Internal Initiatives and External Influences:

- Favorable auto claim severity in 1990's due in part to claims initiatives and external environments
- Followed closely by reductions in claim frequency throughout much of the 2000's
- External factors included:
  - Increased use of seat belts
  - Increased use of airbags, and other safety features
  - Decreases in the use of alcohol/DWI convictions
  - Increases in average car size
  - Proportional reduction in youthful drivers
  - Price of gasoline
  - Economic uncertainty/recession

Interaction of Internal Initiatives and External Influences:

- Reasonable to believe that the improvement was a function of both internal initiatives and external factors
- Actuary may need to evaluate the benefit of one initiative versus another. Or the benefit of a group of initiatives
- Does the cost of the initiative offset the benefit of the initiative?
Changes to Defense and Cost Containment Expenditures:

- Many legal expense cost containment initiatives seek earlier recognition and payment of costs.
- If successful, these initiatives should generally result in truncated expense cost development.
- The actuary must also be aware of the potential distorting effects of a shift from outside legal (or “panel” firms) to internal staff counsel positions.

Potential Adjustments to Traditional Actuarial Methodologies:

- Adjustment to settlement rate by size of loss
- Use of claim metrics in evaluating the impact of claim initiatives

Adjustment to Settlement Rate by Size of Loss:

“One problem which is susceptible to the size of loss approach is that of shifts in emphasis by the claims department on priorities in settling large versus small claims. Such a shift can cause major distortions in the loss projections of nearly all reserving methods.”

Berquist, J.R. and Sherman, R.E, PCAS, Vol. CXIV
Adjustment to Settlement Rate by Size of Loss:
- Berquist and Sherman suggest segmenting the loss experience by size of loss before adjusting to equal percentages of closed claims.
- Alternative approach: Adjust the results of the traditional Berquist-Sherman paid loss methodology.
- As settlement rates increase, we would expect an increase in the proportion of larger claims being settled.
- Claim departments may focus on specific segments of claims:
  - Small, fast-closing
  - Larger, undisputed liability

Closed claim triangulations stratified by size:
- Ratio of closed claim counts within the layer of interest to total closed claims reviewed for acceleration or deceleration.
- Apply Berquist-Sherman methodology to closed claim ratios.
- Project close claim count (within layer).
- Compare projected claim count (within layer) to actual claim count.
- Apply average paid severity to determine adjusted payments for the layer.
- Repeat for remaining severity and accumulate adjusted paid losses.
- Apply Berquist-Sherman development pattern to adjusted losses for each year.

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Use of Claim Metrics:

- Claim metric reports provide the actuary with an additional tool to monitor both the implementation and impact of various claim initiatives.

Common internal claim metrics include:

- Suits to open claim ratios
- Attorney representation rates
- Third-party contact rates (contact time)
- Average claim settlements
- Ratio of bodily injury to property damage claim counts
- Pending claim counts
- Adjuster workload
- Staff counsel utilization levels

Examples of external influences for personal automobile include:

- Increased Use of Seat Belts
- Increased Use of Airbags and other Safety Devices
- Changes in Medical CPI
- Decreases in the use of alcohol/DWI convictions
- Increases in average car size
- Proportional reduction in youthful drivers
- Price of Gasoline

Use of claim metrics can provide the actuary with the ability to construct regression models in order to distinguish between the influences of internal claims initiatives and external factors.

Utilize the regression models to identify conditions which would lead to turning-points in loss development.

Evaluate the Company’s success in achieving various claim initiatives (cost/benefit).
Private Passenger Automobile Liability (000's)

Paid Loss Development

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Link Ratios

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Use of Claim Metrics:

- Should the actuary assume that the favorable trend in loss development factors will continue?
- Sample regression output:
  Fitted Change in Development Factor =
  Annual Change in:
  BI/PD Claim Count Ratio x 0.08797
  + Attorney Rep. Rate x 2.68400
  + Contact Time x 8.64900
  + Med. Inflation x 0.04777
  - Restraint Use x 0.61062
  + Constant + 0.05177

- The actuary must not only be aware of the fit statistics of the model, attention must also be paid to the (reasonability of the) sign of the coefficients
- The positive constant term is not surprising in that it suggests that without favorable results from the claims initiatives, loss development (and likely ultimate losses) will be subject to an increasing trend
- Relative magnitude of the coefficients permits identification of the internal initiatives and external factors with the greatest impact on loss
- The regression model can permit earlier identification of turning points in loss development through leading indicators
- The parameters of the model should be subjected to frequent re-evaluation and retuning in order to maintain their predictive value
Evaluating Reserves in a Changing Claims Environment

Modeling Claim Outcomes – Next Steps:

- Modeling claim outcomes requires making better use of information to understand what drives the value of a claim. Gaining this understanding not only allows actuaries to better predict the ultimate outcome of a portfolio of claims, it also provides insight into how the claims process can be enhanced to positively impact the drivers of these claim outcomes.

Enhanced Segmentation

- In-Suit, Not-In-Suit
- Attorney Represented, No Representation
- Variables leading to represented and/or in-suit claims
- Likelihood of closure
- Complexity of issues/appropriate assignment

Fraud Identification

- Application of Forensics-based fraud identification tools to evaluate potential fraud trends
- Examples: money laundering, check kiting
- Segmentation of claims data into fraud, non-fraud components
- Lift curve evaluation of fraud identification

Performance Metrics

- Establishment of performance guidelines concerning settlement targets and average settlement costs
- Effective pending levels
- Contact time and claim duration
- Appropriate staffing levels/cost containment

Anticipated Claim Costs

- Aggregate costs by segment
- Individual claim costs
- Design of predictive variables
- Consistency of inputs
- Sensitivity to market changes

Inflationary Risk:

- Companies likely would experience severe pressure on surplus in an inflationary environment
- Industry experience shows that inflation tends to increase the level of reserves and a corresponding deterioration in the underwriting results
- An inflation spike might also trigger a reduction in the market value of the bond portfolio
- The degree of risk is related to the liabilities’ duration (average length of time in the future until a liability needs to be paid)
- Historically, inflation rates for major P&C claim cost components (medical care and motor vehicle repair) are generally higher than the CPI. Likewise, the tort costs (claims expenses) have also historically been higher than the CPI
Conclusion (Revisited):
We remain convinced that static claims environments have become the exception rather than the rule. By developing effective communications with the insurer’s operating areas, and adjusting the actuarial methodologies as warranted, the resulting reserve analysis is both more meaningful and more valuable in evaluating the benefits of the operational changes.