

KPMG LLP

Evaluating Reserves in a Changing Claims Environment

Efficiency and Effectiveness:

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

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Evaluating Reserves in a Changing Claims Environment

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

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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

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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

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Changes in Claims Handling Philosophy Claim Process Redesign Claims Approach: Potential Actuarial Impact: • Rapid Initial Contact of Third Party Acceleration of Claim Notice Claimants Counts • Resolution of Claimant Needs Faster Settlements Rapid Liability Investigation and Resolution of Property Damage • Reduction in Pending Reduction in Claim Severity • Regular claimant follow-up and • Reduction in ALAE Settlement Offers x Hab **Changes in Claims Handling Philosophy Defense and Cost Containment Expenditures** Potential Actuarial Impact: Claims Approach: Consolidation of Defense Firms Changes in rate and amount of DCC payments Web based Auction Sites for Legal Changes in claim settlement philosophy Services Alternative Fixed Fee Arrangements • Increased use of Staff Counsel

Changes in Claims Handling Philosophy A Sampling of Current Trends

Claims Approach:

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- 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

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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



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| People | Perceived lack of flexibility | Organizational structure | Process | People | Perceived lack of flexibility | Organizational structure | Process | Process | Manual, cumbersome, or inflexible processes | Time-consuming processes | Time-consuming processes | Concerns about lack of controls due to cumbersome or manual processes | Lack of or incorrect metrics | Linformation | Information management reporting is not useful 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 | Lack of predictive methodologies | Legacy systems are relied upon and do not adapt to changing needs of the corporation | Poor use of technology solutions

Evaluating Reserves in a Changing Claims Environment

The world $\underline{\text{does not stand still}}$ while the company implements its claims initiatives

Ultimate claims resolution will be impacted by both $\underline{\text{internal}}$ and $\underline{\text{external}}$ influences



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Evaluating Reserves in a Changing Claims Environment 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. x Hab Evaluating Reserves in a Changing Claims Environment 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 e de la comp Evaluating Reserves in a Changing Claims Environment 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



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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



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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?



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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.



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Potential Adjustments to Traditional Actuarial Methodologies:

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

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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



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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



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Adjustment to Settlement Rate by Size of Loss:

- 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 layers and accumulate adjusted paid losses
- Apply Berquist-Sherman development pattern to adjusted losses for each year

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Acc Year	Actual Paid	Berquist/ Sherman Paid DFU	Initial Ultimate	Adjusted Paid Loss	Adjusted Ultimate	Difference
1994	\$ 26,088	1.022	\$ 26,670	\$ 26,398	\$ 26,987	\$317
1995	\$ 28,384	1.073	\$ 30,459	\$ 25,732	\$ 27,613	(\$2,847)
1996	\$ 38,053	1.132	\$ 43,074	\$ 36,434	\$ 41,241	(\$1,833)
1997	\$ 29,263	1.420	\$ 41,544	\$ 27,751	\$ 39,398	(\$2,146)
1998	\$ 25,804	1.976	\$ 50,980	\$ 25,644	\$ 50,664	(\$316)
1999	\$ 11,071	4.036	\$ 44,680	\$ 10,769	\$ 43,461	(\$1,219)
2000	\$ 1,398	24.986	\$ 34,941	\$ 1,541	\$ 38,512	\$3,571
Total	\$160,062		\$272,349	\$154,270	\$267,876	(\$4,472)
Total Excld 2000	\$158,664		\$237,408	\$152,729	\$229,364	(\$8,043)



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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



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Use of Claim Metrics:

- Examples of external influences for personal automobile include:
 - Increased Use of Seat Belts
 - Increased Use of Airbags and other Safety Devises
 - 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



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Use of Claim Metrics:

- 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)



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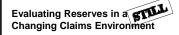
Use of Claim Metrics:

- 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



Use of Claim Metrics:

- 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

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Modeling Claim Outcomes - Next Steps:

 Modeling claims 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

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Modeling Claim Outcomes What kind of information are we talking about?

- 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

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

- In-Suit, Not In-Suit
- Attorney Represented, No Represe
- Variables leading to represented and/or in-suit

- Complexity of issues/appropriate assignment

Anticipated Claim Costs

- Aggregate costs by segment
- Consistency of inputs
- Reactive to market changes

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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



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exception rathe with the insurer methodologies	vinced that static claims environments have become the er than the ruleBy developing effective communications 's operating areas, and adjusting the actuarial as warranted, the resulting reserve analysis is both more I more valuable in evaluating the benefits of the operational
changes.	
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