Underwriting and Actuarial Audits

Endurance
YOUR RISK IS OUR FOCUS

A Reinsurer's Perspective

Jeffrey L. Dollinger, FCAS

Agenda

➢ Types of Audits

➢ Audit Challenges

➢ Better Understanding of Exposures and Client

➢ Underwriting Audits – Key Elements

➢ Claims Audits

➢ Role of the Actuary

➢ Rate Monitoring

➢ Review of Pricing Adequacy

➢ Individual Account Umbrella Rate Adequacy Tool

➢ Final Advice

Endurance
YOUR RISK IS OUR FOCUS

Audit Challenges

➢ Short time frame

➢ Lots of required social time

➢ Regular job doesn't go away

➢ Other auditors in conference room don't shut up

➢ Each file takes a while to review

➢ Relationship considerations

➢ Key Question: How to best spend your time?

Types of Audits and Challenges

➢Ceding Companies

- Managing the relationship
- Getting access to additional data

➢MGA's

- Adherence to guidelines
- Testing ceding company oversight

➢Internal Audits

- Avoid creating internal squabbles
- Providing information to upper management
- Best practice sharing

➢Acquisition Targets

- Prospective book
- Reserve review
- Retention of business and key personnel

Endurance
YOUR RISK IS OUR FOCUS

Understanding the Exposure

➢Good chance to meet management and line underwriters

➢Opening Meeting: Client Overview of their book

- Good chance to ask open ended questions

- Be prepared with good questions – clients appreciate it when you do your homework

- Get their view of market trends and competitors

- What are they targeting, where are they pulling back

- Good chance to judge quality of management

  But does that transfer down to line underwriting and pricing?

➢Review of Bordereaux Critical

- Internal audit example

- Board of Director Audit Example

Underwriting Audits – Overview

➢Optimal Team: Underwriter, Actuary, Claims Officer, and sometimes a transactional auditor.

➢Typical Schedule

- Overview Meeting
- File Review
- Lunch or Dinner with Client
- Wrap Up

➢Objectives

- Deepen relationship with client: Get feedback on your level of service, find out more about their needs, make them feel guilty about leaving you
- Specific Limited Objectives are Optimal
- File Review: Review of Adherence
- Gather additional data for final pricing and underwriting analysis
- Provide value added to the client

Elements of Underwriting File Review

- File Information and Analysis
  - Completed Application, Loss History, Loss Control Reports, MVR's, Financials
  - Indications that the above have been reviewed
- Risk Analysis
  - Quality review and understanding of policyholder operations and exposures
  - Review of historical losses
  - Follow up on loss Control Recommendations
  - Proper use of limits and SIR
  - Coverage: Were the policy form, exclusions, and endorsements appropriate?
- Pricing
  - Was risk property classified and rated?
  - Does exposure base seem reasonable – test WC payroll
  - Use of schedule rating reasonable or just a means to back into needed rate
- Documentation
  - Is file neat and organized? Did they clearly summarize the reasons for writing the risk
- Compliance
  - Is the risk within their underwriting guidelines
  - Was the risk appropriately referred and approved
- Alignment – Does the risk fit with the company's strategy and capabilities?
- Risk Return

Underwriting Audit:
Lessons from an Experience Underwriter

➢If you have a question or don't understand something, ask the client underwriter

➢Don't fixate on just one file – look at the results of your full sample

➢Maintain consistent grading among audit team members

➢Critical Suggestions to the Client: You need to provide examples

➢File Sample: Should be selected by the auditors

➢Large & Tough Accounts: You want to see the ones that can blow up on you, but don't over-emphasize those accounts when judging the book

Claims Audits: Key Elements

➢ Review of claims management and staffing

➢ Coverage Analysis

- Is the claim covered?
- Were reservation of rights letters and denial letters legally sound and appropriate?

➢ Claim Investigations – Good information in file, evidence of early attention

➢ Reserving Adequacy

- Claims auditors usually have more trouble seeing and assessing changes in reserving practices

➢ Claim Resolution

- Are they making efforts to close claims quickly?
- Are settlement amounts appropriate?

➢ Subrogation/Recovery

➢ Management of External Resources: Vendors & Litigation Expense

➢ Evaluation of Systems & Protocols

➢ Reinsurance Reporting

➢ Claims Supervision & Interface with Underwriting

Endurance
YOUR RISK IS OUR FOCUS

Claims Audit: Examples of Significant Findings

➢Often more valuable than the underwriting audit

➢Honest dialogue within the claims fraternity/sorority

Sample Findings:

➢Public D&O: Companies rarely put up case reserves on security class action claims. Critical to work with claims for this line of business

➢Property insurer doesn't reserve for business interruption or if a there was a coverage issue

➢President of company reviews all claims excess of a certain amount – claims often were reserved below that amount

➢One small regional client updated case reserves only once per year

➢Surety: Reserves net of overly optimistic estimated collection of contract balances

➢Fraud
- Clients were out sourcing adjustments to companies owned by family members
- Cat Covers: Clients sometimes slip in an occasional fire loss with their hurricane claims.

➢Buy Backs: Client agrees to pay out claim on heavily reinsured policy. Policy renewed at very favorable term which they coincidently kept net.

➢Noticing Potential Underwriting Issues:
- EPLI claims on companies suffering layoffs, which should have been caught in the underwriting process
- Splitting a bond on a single project to get around treaty special acceptance rule

Endurance
YOUR RISK IS OUR FOCUS

Role of the Actuary

- Gain a better understanding of the client, target business, and exposures
- Member of the underwriting file review team
- Meet with client actuary
    - Actuaries usually very open with each other
- Review rate monitoring
- Review price adequacy
- Gather additional sources of data for renewal analysis. Some good examples:
    - Excess of loss development
    - Rate Monitoring: Data dump of renewal business showing renewal and expiring premium and exposures
    - Data dump allowing us to run our umbrella rating tool on the company's portfolio – more later
    - Insight into changes impacting loss development – for one client older accident years taken over by runoff company that had incentive to close claims
    - New Ideas: Earned premium per indemnity claim for WC

        LR = Earned Premium per Indemnity Claim x State Average Severity x Med Only Load x ALAE Load

Review of Client Rate Monitoring

➢Methodology:

- How is it calculated? Renewal rate monitoring or changes in filed loss costs, LCM's, and average credits

- How are changes in limits, attachment points, and exposure considered?

- Are changes in schedule credits considered?

- Does the calculated rate change include or exclude premium exposure trend?

➢New Business

- Is it considered in the rate monitoring? If not, how does the exclusion of new business impact the meaningfulness results?

➢Frequency: How often is the rate change calculated?

➢Communication and Uses:

- Do individual policy rate change calculations get used in the underwriting process?

- How are corporate total rate changes communicated to the organization?

➢A few reinsurers focus their file review entirely on calculating rate changes

Endurance
YOUR RISK IS OUR FOCUS

Review of Price Adequacy

➤Wherever possible, bring benchmark rating plans or models to audit

- ■ Access to ISO loss costs

- ■ We have a D&O pricing model

- ■ Bring whatever you can find that is relevant to the client

➤Success Stories

- ■ D&O Audit in 2002: Pricing astoundingly higher than expiring

- ■ E&S Property Example – Facultative primary rates, exposure rating tool, and use of RMS output

- ■ Excess WC Example

- ■ Large Account Umbrella Audit: Fortune 1000 primary umbrella book pricing shockingly low relative to primary loss cost – more later

Endurance
YOUR RISK IS OUR FOCUS

Individual Account Umbrella Pricing Model

Typical Data Available From Client

➢Umbrella Loss Development Triangles

➢Premium

➢Excess Factors; i.e.:

- 1xP (as a percent of P)

- 4x1xp (as a percent of 1xP or P)

- 5x5xp (as a percent of 5xP or 1xP or P)

➢1xP Rating basis: Re-rated vs. Charged

➢bPrice Monitoring

Issues with Standard Umbrella Pricing Approaches

➢ Experience approach

- Loss development and experience is often volatile

- Change in mix of business is not considered

- Long tail nature makes it particularly tough to evaluate underwriting changes

- Good price monitoring is often available only for recent years

➢ Analyzing client excess factors

- Approach involves comparison of client umbrella factors to a benchmark – either ISO or factors from other umbrella carriers

- When comparing to other carrier's rates, doesn't always consider differences in judgment credits used

- Doesn't consider whether client hazard group (ISO ILF table) assignments are appropriate

- Doesn't reflect adequacy of primary premium actually used in rating

- Difficult to appropriately analyze programs using 1xP auto unit rates

- Rarely explicitly considers impact of minimum premiums

Another Solution: An Exposure Rating Approach

➢Beautiful in its simplicity….on an account by account basis determine:

- Umbrella Loss Ratio = Umbrella Loss Cost/Umbrella Premium

- Umbrella Loss Cost = Primary Loss Cost * (Umbrella Loss Cost as a % of Primary)

- Primary Loss Cost (for GL and CCA) = Primary Premium * Gross loss Ratio

- Sample Calculation for one account:

	Umbrella Terms				Comm Auto			General Liability		
Account Name	Limit in $'s	Premium in $'s	Calculated Loss Cost Using ISO ILF's	Projected Loss Ratio	Estimate Primary Loss Cost	Umb Charge as a % of Primary	Estimated Umbrella Loss Cost	Estimate Primary Loss Cost	Umb Charge as a % of Primary	Estimated Umbrella Loss Cost
Company XYZ	10,000,000	41,118	29,783	72.4%	21,600	32.1%	6,941	62,300	36.7%	22,842

Endurance
YOUR RISK IS OUR FOCUS

Audit Data Capture

Umbrella:	
Account name	**XYZ**
Brief description of operations and chief exposure(s)	Service
State of domicile	**NY**
Umbrella Limit	10,000,000
Umbrella attachment point	1,000,000
Umbrella Charged Premium	41,118
Auto Liability:	
Primary CA Limit	1,000,000
Primary CA Premium ($$$) used for rating umbrella	36,000
Was Primary CA Premium based on rerated manual? (y/n and $$$)	**Y; 36,000**
Was Primary CA Premium based on charged? (y/n and $$$)	no; based on manual; charged was 20,000
Vehicle counts: Light	2
Vehicle counts: Heavy	17
Vehicle counts: Extra Hvy	4
Vehicle counts: All other	2
Vehicle counts: Zone rated	1
General Liability:	
Primary GL Limit	1,000,000
Primary GL Premium ($$$) used for rating umbrella	89,000
Was Primary GL Premium based on rerated manual? (y/n and $$$)	N
Was Primary GL Premium based on charged? (y/n and $$$)	Yes; charged was 89,000
Approximate split of GL exposures - PremOps vs Products (x%; y%)	80% Premops; 20% Products
Approximate split of GL exposures - PremOps Tables 1,2,3	table 1 = 10%; table 2 = 90%
Approximate split of GL exposures - Products Tables A,B,C	table B = 80%; table C = 20%

Endurance
YOUR RISK IS OUR FOCUS

Overview of Method

➢An audit sample:

Account Name	Limit in $'s	Premium in $'s	Umbrella Terms Calculated Loss Cost Using ISO ILF's	Projected Loss Ratio	Comm Auto Estimate Primary Loss Cost	Umb Charge as a % of Primary	Estimated Umbrella Loss Cost	General Liability Estimate Primary Loss Cost	Umb Charge as a % of Primary	Estimated Umbrella Loss Cost
Company XYZ	10,000,000	41,118	29,783	72.4%	21,600	32.1%	6,941	62,300	36.7%	22,842
A	5,000,000	31,406	12,091	38.5%	3,268	0.0%	-	30,898	39.1%	12,091
B	5,000,000	25,057	6,922	27.6%	14,067	0.0%	-	33,541	20.6%	6,922
C	2,000,000	4,132	58	1.4%	6,735	0.0%	-	419	13.8%	58
D	2,000,000	21,053	11,985	56.9%	5,012	0.0%	-	46,205	25.9%	11,985
E	5,000,000	26,506	6,450	24.3%	21,787	0.0%	-	29,950	21.5%	6,450
F	3,000,000	24,710	10,393	42.1%	35,000	0.0%	-	33,600	30.9%	10,393
G	5,000,000	26,867	11,729	43.7%	5,237	0.0%	-	52,702	22.3%	11,729
H	5,000,000	15,479	2,587	16.7%	5,956	0.0%	-	30,139	8.6%	2,587
I	1,000,000	7,500	4,066	54.2%	-	0.0%	-	25,835	15.7%	4,066
J	2,000,000	12,000	7,221	60.2%	-	0.0%	-	29,280	24.7%	7,221
Projected LR of Sample				43.8%						

Advantages

➢Supplements results from other approaches.

➢This method reflects current pricing and composition of book.

➢Reflects impact of minimum premiums.

➢Provides quantitative result of underwriting audit.

➢Results of this method have been in line with our expectations for given types of business.

➢Even better if you can get an in-force policy data dump

Endurance
YOUR RISK IS OUR FOCUS

Challenges

➤ Selection of Primary Loss Ratios:

- For a supported book, analyze the client's GL and CCA loss triangles to derive the GL and CCA Gross Loss Ratios.
- For unsupported business that is re-rated, use LCM's and average credits.
- For unsupported business that is not re-rated, will have to make an educated guess (find out who predominant underlying carriers are).

➤ Underlying auto premium not available as client uses auto unit rates for the 1st Mill umbrella.

- Apply guesstimates for average premium per type of vehicle to the corresponding vehicle counts.

➤ Selection of exposure curves.

- ISO curves haven't always been intuitively logical in umbrella layers.

  Reversals among tables above $2 million: 4x1xP factors as a percent of 1xP factors

  Filed mixed exponential curves are light in the tail compared with the truncated pareto.

  Umbrella data call started in 2004. Curves should get better each year.

  ISO appears to have done a better job with the 2008 update, but for GL 4x1xP and higher factors are nearly identical for all tables

Final Advice

➢ Participating in audits in a great way to better understand your clients and their business

➢ Don't get lost in the minutia, file reviews are important, but…

- Meeting with actuaries and seeking out additional data is critical and often more fruitful
- Don't forget to review the bordereaux

➢ Clients can be very sensitive to audit recommendations. Make suggestions carefully and with supporting examples

➢ The audit process can have big benefits

- Better client relationships
- Better data
- Finding major pricing problems or opportunities