

What's the Value in Value Added Reserving? 2005 CAS Annual Meeting, Baltimore

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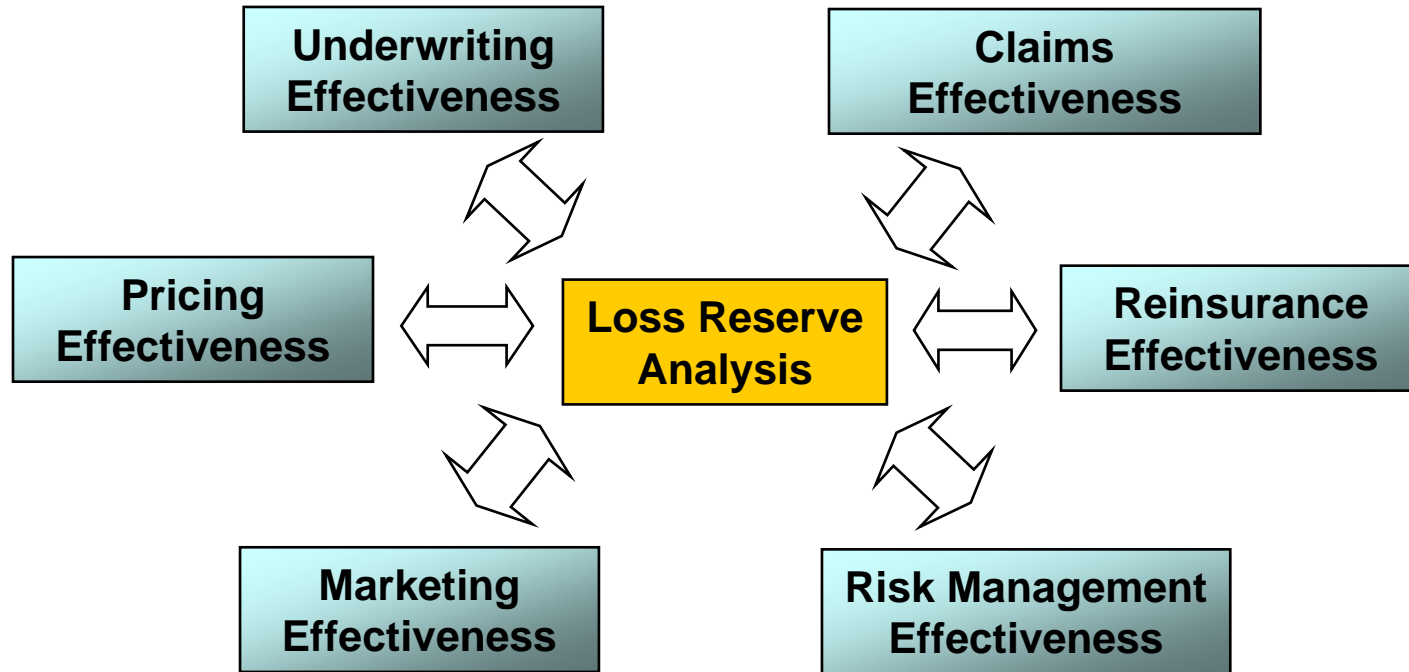
What is Value Added Reserving?

- Goes beyond “the number”
 - Makes loss reserving more than just a compliance exercise
- Reserve analysis used as a strategic tool
 - Insights into what’s working and what’s not
- Key component
 - Operational linkages provide additional value in two directions, both for the reserve estimate and by the actuary

Working definition of Value Added Reserving

- What it is
 - Knowing enough about the company's operations, including underwriting, claim, reinsurance and others
 - To be able within the reserve estimate to account for impacts created by these functions
 - To provide insights that support the effectiveness of the business
- What it is not
 - Being a “non-traditional” actuary
 - An invitation to underwriting or claim leadership to influence the reserve estimate
 - An opportunity for the actuary to influence the individual case reserves

Value added reserving techniques focus on the linkages between the loss reserve study and operational areas



- Capitalizing on these connections will
 - Enable a more accurate reserve estimate
 - Identify areas for the company to improve its operation

Why is Value Added Reserving important now?

- The actuarial profession is responding to financial reporting pressures being placed on insurance companies around the globe
 - GRIT report out of the UK concludes that a better business understanding will improve the reserve estimation process
 - CAS Task Force on Actuarial Credibility makes detailed recommendations related to summarizing changes in the actuary's estimates and increasing the visibility of the actuary

Today's Agenda

- Company actuary perspective
- Consulting actuary perspective
- Underwriting perspective
- Claim perspective
- Dialogue

Company Actuary Perspective

Martha Winslow
Senior Consultant, Towers Perrin

Value added reserving techniques apply to each step of the reserving process

- Information gathering
- Analysis
- Communication of findings

Information Gathering

- Impact
 - Dialogue with claim, underwriting and reinsurance
 - Takes place throughout the year
 - Not just at reserve analysis time
 - Does not add calendar time, because this dialogue is simultaneous with the data gathering
- Value added
 - Ability to anticipate newly emerging patterns in the data
 - Ability to focus quickly on key issues, rather than churn through the data to identify areas for focus

Analysis

- Impact
 - Increases both the effectiveness and the efficiency of the analysis
 - Reduces the variance around the point estimate
- Value added
 - If the stories told by claim, underwriting and reinsurance don't match the stories told by the numbers, then find out why

Communication of findings

- Impact
 - The audience for the results of and learnings from the analysis broadens
 - The various audiences are more interested in hearing about your analysis
- Value added
 - Opinion or report is easier to write
 - Your work is adding value to the operation

Consulting Actuary Perspective

Thomas Ghezzi

Principal, Towers Perrin

The challenge is to systematically operationalize the value added approach

- Need to gather information on
 - Claim operation
 - Underwriting/pricing operation
 - Reinsurance program
- Detail needs to be enough to
 - Identify potential impacts on loss estimates
 - Identify “hot spots” for further probing
 - Spot areas in need of additional study

One approach for claim and underwriting

- Two step information gathering process
 - “Quick-Check” questionnaire to key management
 - “Top 10” questions standard for all assignments
 - Samples of management reports/tools
 - Target one hour or less to complete
 - “Live” discussion
 - In person or on the phone
 - Claim/Underwriting professional or reserving actuary
 - Approach taken tailored to the situation

The deliverables from information gathering will be provided to two “audiences”

- The reserving actuary
 - Issues that may affect the actuarial analysis
 - Potential claim or underwriting/pricing operational gaps
 - Potential areas for further analysis
- The Company
 - Specific sections within Actuarial Report
 - Claim and Underwriting Operation History and Significant Events Logs
 - This is a living document which should be updated annually

Claim and Underwriting Histories

Claim/Underwriting								
Nature of Change	Time Period	Reason for Change	Details of Change	Specific Effects	Potential Effects	Known Effects	Lines of Business Impacted	Percentage of Book Impacted

- The types of changes to track include

Claim

- Case reserving
- Settlement rates
- Organization/management
- New markets/exposures
- New Vendors
- Systems
- Legislative/judicial

Underwriting

- Target markets
- Exposures
- Organization/management
- Acceptance guidelines
- Regulatory
- Pricing
- Price monitoring

Based on the information gathered, insights into actuarial data can be derived

- Claim examples
 - File reassignments
 - New handler likely to increase case reserves
 - Many files closed
 - New front end system
 - Claim counting could change
- Underwriting examples
 - New classes of business
 - Impact on frequency and severity
 - Different development pattern/tail
 - Different expected loss ratios
 - New price monitoring system
 - More accurate initial expected loss ratios

The flip side of the value added proposition is that the reserve analysis gives insights into the Company's operational effectiveness

■ Claim

- Estimated trends in case reserves and settlements may indicate sub-optimal claim performance

■ Underwriting

- Loss ratio trends may indicate sub-optimal risk selection or marketing

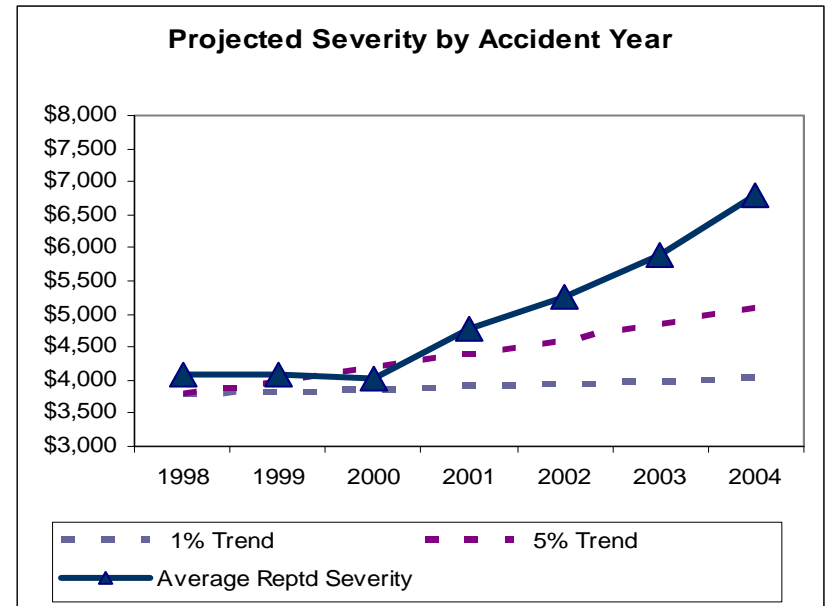
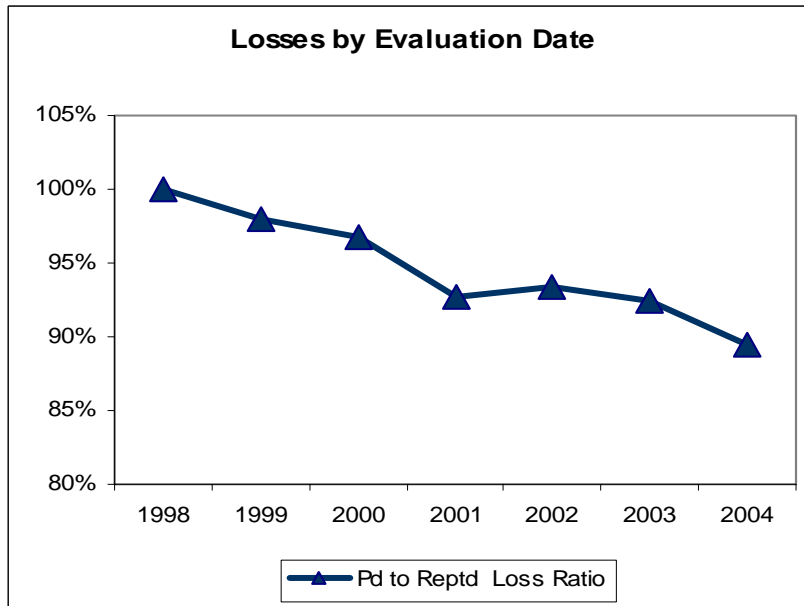
■ Reinsurance

- Gross versus new versus ceded may indicate sub-optimal reinsurance program

The next three slides provide hypothetical reserve study findings that may point to operational issues

Hypothetical: There are signs of case reserve strengthening, and greater than expected severity trend

Auto Liability Analysis of Case Reserve Strength

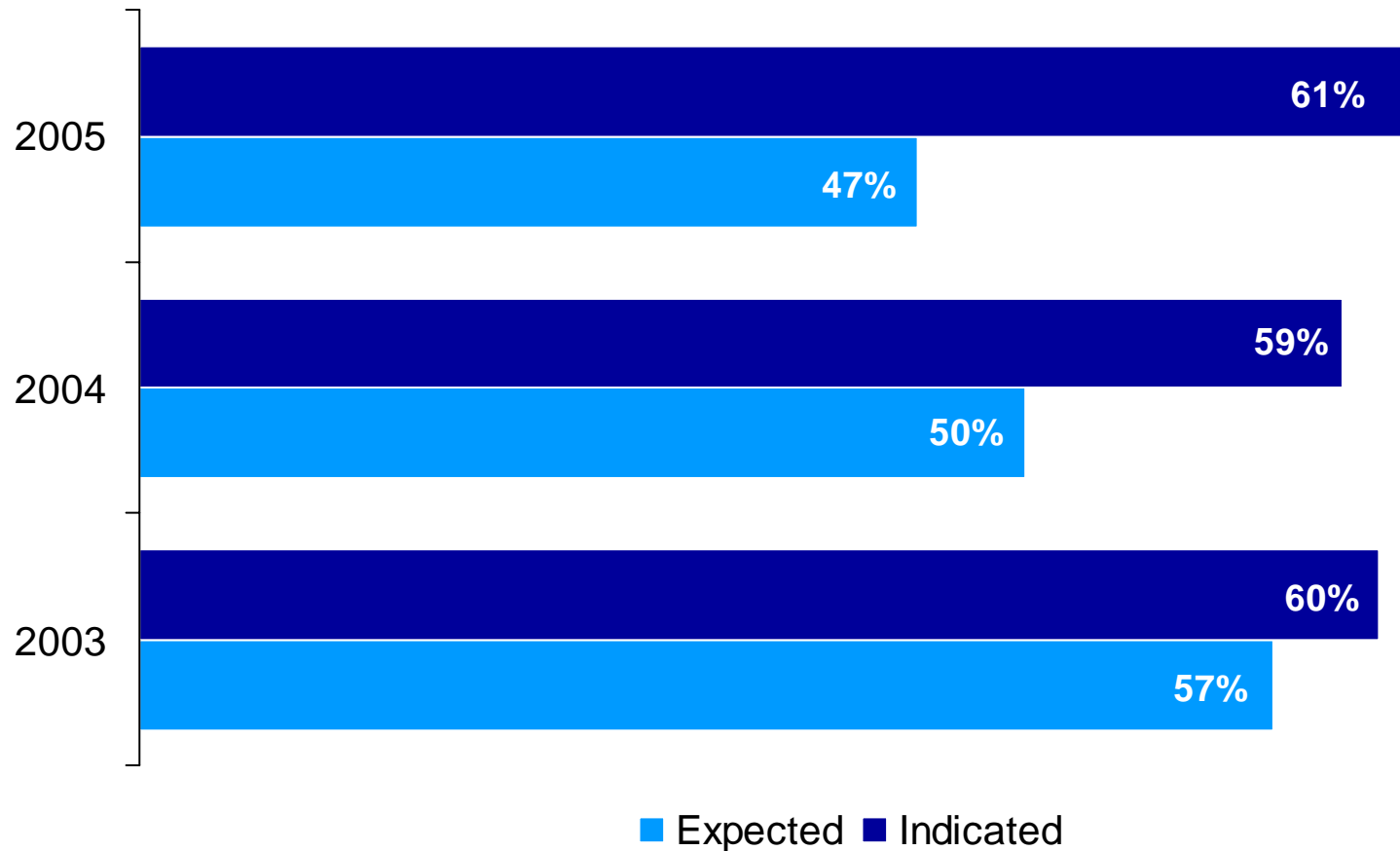


A decreasing ratio of paid to reported losses suggests an increase in case reserve levels.

Estimated severity by accident year is increasing more than the underlying trend. What is driving the increase?

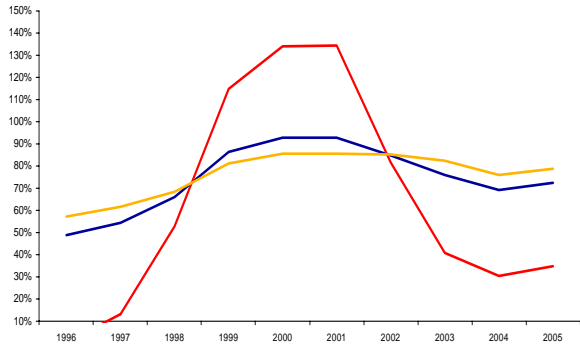
Hypothetical: Recent years' loss and ALAE ratios exceed the levels expected by the Company

All Lines
Loss and ALAE Ratio Analysis



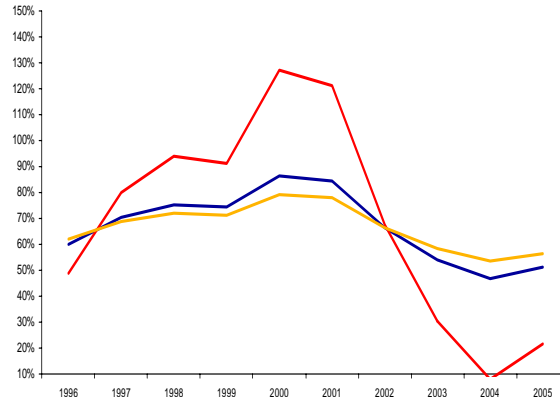
Hypothetical: Gross, net and ceded loss ratios provide insights into the reinsurance program

Ultimate Loss Ratio

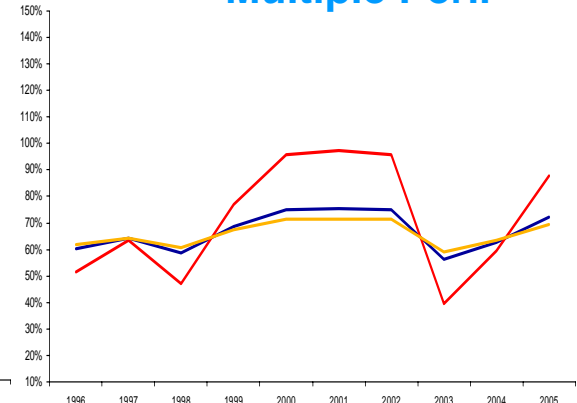


Workers Compensation

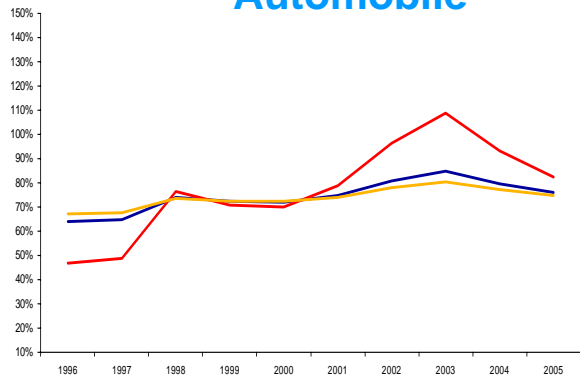
General Liability



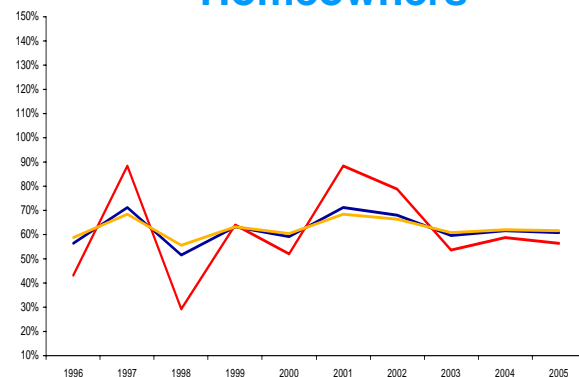
Commercial Multiple Peril



Automobile



Homeowners






— Gross — Net — Ceded

Observations

- Ceded loss ratios track gross and net for each coverage
 - Exceptions may be for WC and GL
- Additional analysis required for firm conclusions

Hypothetical: Summary of operational insights derived from the loss reserve analysis

Area	Opportunity for Improvement	Comments/Observations
Claims		<ul style="list-style-type: none"> ■ Case reserve strengthening appears to have occurred ■ Average settlements also increased <ul style="list-style-type: none"> ■ Appears to be more than severity trend ■ May be related to recent changes in authority levels <ul style="list-style-type: none"> ■ Higher case reserves driving higher settlements
Underwriting/Pricing		<ul style="list-style-type: none"> ■ Recent years' loss ratios do not track with Company expectations <ul style="list-style-type: none"> ■ Estimates show higher loss ratios than expected ■ Price monitoring system may be part of the cause ■ Quality of business may have slipped
Reinsurance		<ul style="list-style-type: none"> ■ Recent years' ceded ratios very favorable for two coverages (WC and GL), and improving <ul style="list-style-type: none"> ■ May be an opportunity to discuss possible revision in terms

 Low
  Medium
  High

Underwriting Perspective

Kevin Rehnberg

Senior Vice President, OneBeacon

Contributions of underwriting to the actuary

- Environment update
- Discussion of pricing reality
- Shifts in market trends and coverage grants
- Changes in book profile
- Changes in jurisdiction
- Opinion of claim claims
- Reinsurance issues

Contributions of the actuary to underwriting

- Identify apparent operational gaps
- Discussion of pricing reality / price monitors
- Opinion of claim review
- Changes in patterns or trends
- Opinion of reinsurance
- Opinion of jurisdiction issues
- Identify weakness or conflicts in the stories

Claim Perspective

Becky Kenyon

**Second Vice President, Healthcare Claim, St. Paul
Travelers**

Contributions of claim to the actuary

- Claim attributes might not be easily discerned from cause of loss coding
- Trends shifting in a particular jurisdiction or venue
- Changes in new inventory
- “Codes” buried in the reserves

Contributions of the actuary to claim

- Estimates of future claim inventory assists with staffing level and budget projections
- Data comparing settlement values to reserves helps us discern reserve adequacy by line of business, geographic territory or claim handler
- Data comparing paid loss over time based upon key claim attributes helps us determine loss trends that might require additional attention or create training need for claim staff
- Data comparing ALAE to paid loss can assist us in identifying trends as well as give us information to target key firms for additional expense management efforts
- Case age data helps us to identify trends and to determine what is causing the case age to creep up



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Dialogue

Hypothetical #1

- You're the head of claim operations
- You have a good working relationship with the reserving actuaries and are fortunate enough to have an actuary within your claim finance organization
- The company's auditor comes directly to you and asks why average case reserves are up across most lines
- You have had some recent retirements among claim field management, but no changes in reserving practices
- What are your expectations of the role of the actuary?

Hypothetical #2

- You are the appointed actuary for a small regional P/C company, who is a long term client
- In the middle of 2004 a new SVP of underwriting was appointed
- At YE 2004 there were no pattern changes appearing in the data
- Now at YE 2005 the numbers along the most recent diagonal appear to have a different pattern than historical diagonals
- What would you do?

Hypothetical #3

- You are the head of an underwriting business unit for a large P/C carrier and you have a business unit actuary
- The new CFO has just hired a new SVP of reinsurance
- The former head of reinsurance used reinsurance as a tool to manage volatility without regard to cost (this last is only a slight exaggeration)
- The new SVP of reinsurance (and the CFO) are focused on the dual goals of cost effectiveness and preserving capital adequacy
- What's your expectation of the role of the business unit actuary?