# **CS-19 Rate Monitoring**

2009 CAS Seminar on Reinsurance May 18, 2009 Hamilton, Bermuda

Louis Gariépy Senior Vice President and Chief Actuary ACE Bermuda Insurance Limited

#### **Antitrust Notice**

The Casualty Actuarial Society is committed to adhering strictly to the letter and spirit of the antitrust laws. Seminars conducted under the auspices of the CAS are designed solely to provide a forum for the expression of various points of view on topics described in the programs or agendas for such meetings. Under no circumstances shall CAS seminars be used as a means for competing companies or firms to reach any understanding – expressed or implied – that restricts competition or in any way impairs the ability of members to exercise independent business judgment regarding matters affecting competition. It is the responsibility of all seminar participants to be aware of antitrust regulations, to prevent any written or verbal discussions that appear to violate these laws, and to adhere in every respect to the CAS antitrust compliance policy.



# The Company

- Low Frequency / High Severity
- Relatively small number of policies
- Lines of Business
  - Excess Liability
  - Professional Lines
  - Excess Property
  - Political Risk

# **Excess Liability**

## Coverage/Form

- Occurrence First Reported
- Claims-Made
- Occurrence Follow Form

### Industry Segment

- Pharmaceuticals
- Petro-Chemical
- Consumer Goods
- Transportation

#### Product

- Up to \$150m in Limit
- Attachment above \$100m

## **Professional Lines**

- Coverage/Form
  - CODA
  - A-Side Follow Form
  - ABC
  - E&O
- Industry Segment
  - Fortune 1000
- Product
  - Up to \$75m in Limit
  - Attachment above \$100m

# **Monitoring Analytics**

- Monthly Process
- Rate Change

**Excludes** 

- New Business
- Multi Year Policies
- Possibly Outliers
- One-time Adjustments (e.g. Additional Premiums)
- Rate Adequacy
  - New and Renewal Business

# Rate Change

#### Phase 1 - Written Premium Report

- Produced one week prior to month end from internal systems
- Separately for each line of business
- Lists gross premium transactions that occurred during the calendar month
- Pass to underwriters to enter detailed characteristics of policies

#### Phase 2: Underwriter Input

Expiring vs. Renewing Premium

#### Quantify changes in

- Limits & Attachments (ILFs)
- Exposure
- Terms & Condition
- Coverage
- Other

# **Rate Change**

- Phase 3 Analysis
  - Check for abnormal or unusual rate changes
  - Premium ties with Finance reports

Information is broken down by

- Company
- Industry code (Professional Lines) or Business Class (Excess Liability)

# **Rate Change**

## Example

- Consolidated exhibit is created
- Compares Actual to Planned Rate Change
- Summarizes rate Changes by Month, Quarter and YTD

				Gross	Plan
Renewal	New	Other	Total	Renewal	Price
GWP	GWP	<b>GWP</b>	GWP	Price Change	Change

#### April 2009

Prof. Lines - TOTAL	14,000	1,700	1,000	15,700	5.3%	5.4%
Product A	6,000	200	-	6,200	3.4%	4.0%
Product B	2,500	1,250	-	3,750	-1.6%	0.0%
Product C	4,000	250	-	4,250	12.7%	10.0%
Product D	1,500	-	-	1,500	4.7%	7.5%

(Values in \$000s)

#### Target Rate per Mille

- Ratio of Gross Premium to Total Limit
- Set at the beginning of the year
- Developed by business class/industry group

#### Based on

- Historical Ultimate Losses
- Historical Pricing Information (adjusted for trend)
- Using on-Level Premiums

#### Adjusted for

- Changes in Limit and Attachment
- Inflation

- Compares Actual RpM to Target
  - Includes All Business (New, Renewal, APs, etc.)

Adjusts Monthly For

- Limit and Attachment Changes
- Change in Mix of Business

- Phase 1 Data Extraction
  - Create a Premium Extract Table

Group Data by

- Department
- Policy Year and Month
- Sum Gross Premium and Total Limits
- Phase 2: Calculate Individual RpMs
  - Each Policy allocated to proper Industry Code/Business Class

- Phase 3 Analysis
  - Compare Actual RpMs to Target by Industry Code/Business Class
  - Calculate Overall RpM based on each classes' % of Total GWP

#### Consider Anomalies/Outliers

- Policies that attach over a certain level (e.g. 1 Billion)
- Policies with Extremely Low/High RpMs

## Example

- Actual vs Target RpMs
- Total and separately for New and Renewals
- Show Current Month and Cumulative YTD

	TOTAL - MONTHLY	CLASS A	CLASS B
--	-----------------	---------	---------

2000					Rate	T	'arget	Actual	Actual %	Actual	Rate	Target	Actual	Actual %	Actual	Rate
2009	Tar	get RpM	Act	tual RpM	Adequacy	]	RpM	GWP	of Book	RpM	Adequacy	RpM	GWP	of Book	RpM	Adequacy
January	\$	5,800	\$	6,348	109%	\$	4,000	\$ 1,500	55%	\$ 5,000	125%	\$ 8,000	\$ 1,227	45%	\$ 7,995	100%
February	\$	5,405	\$	6,020	111%	\$	4,025	\$ 900	60%	\$ 4,000	99%	\$ 7,475	\$ 600	40%	\$ 9,050	121%
March	\$	7,563	\$	8,209	109%	\$	6,250	\$ 1,800	65%	\$ 7,500	120%	\$ 10,000	\$ 969	35%	\$ 9,525	95%
April	\$	8,352	\$	7,880	94%	\$	7,800	\$ 1,200	54%	\$ 6,500	83%	\$ 9,000	\$ 1,022	46%	\$ 9,500	106%

(Values in \$s)

# **Key Points/Issues**

- Actuaries cannot operate in a bubble
  - Interaction with Underwriting and their by-in is crucial
  - Management Support is needed
  - Timing is Everything

# **Questions?**