

***American Academy of Actuaries
Long-Term Care
Risk-Based Capital Work Group***

Status Report

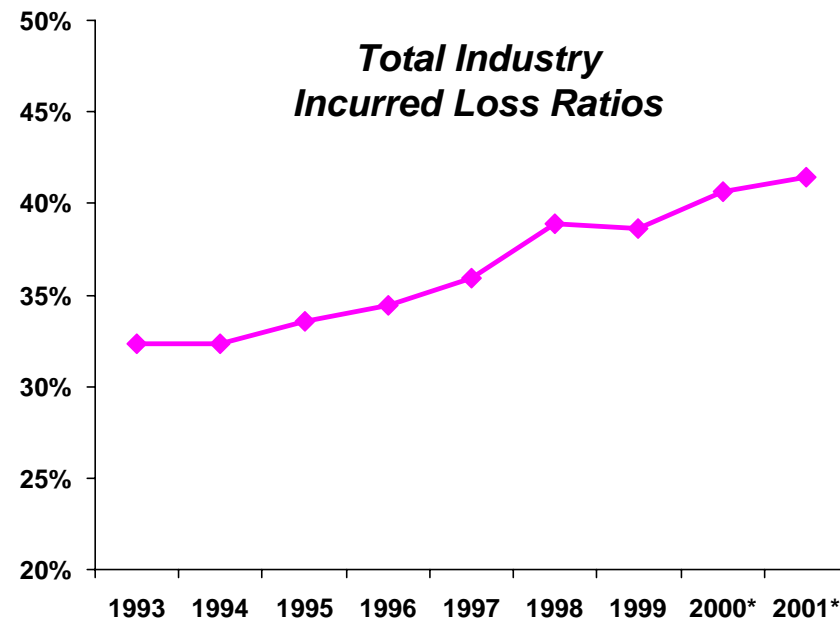
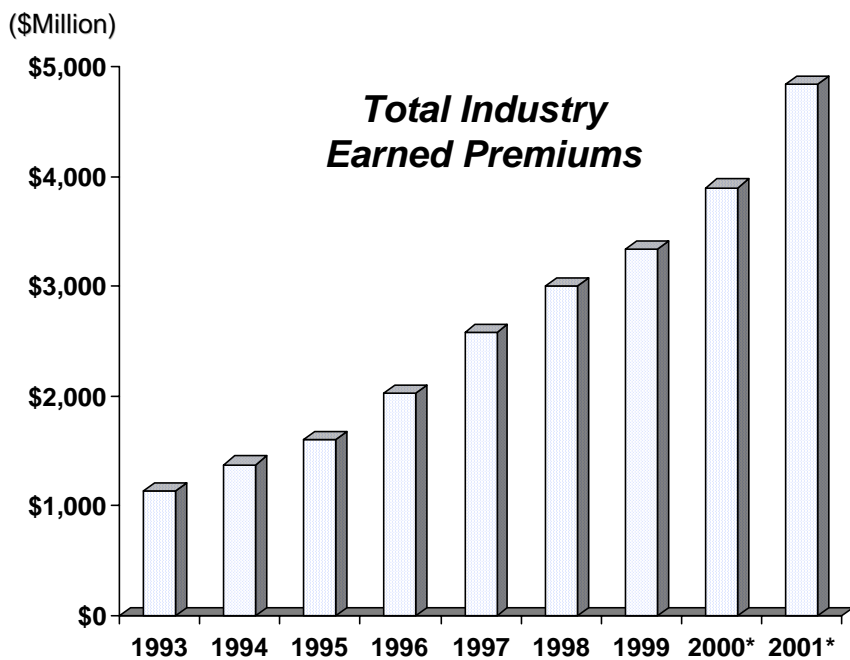
***Presented to
NAIC Risk-Based Capital Task Force***

December 6, 2002

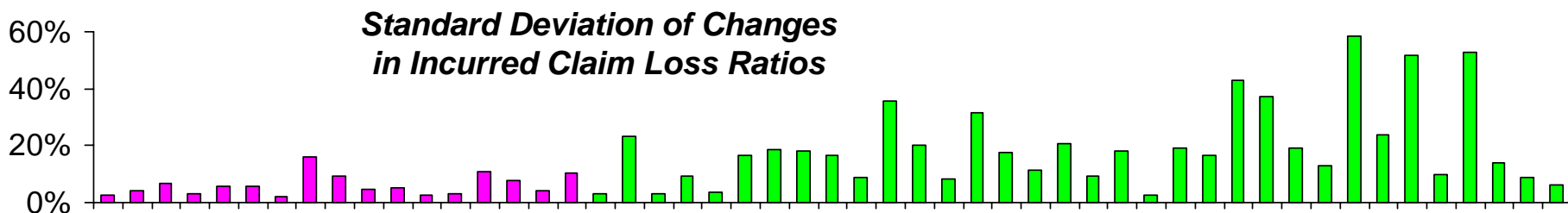
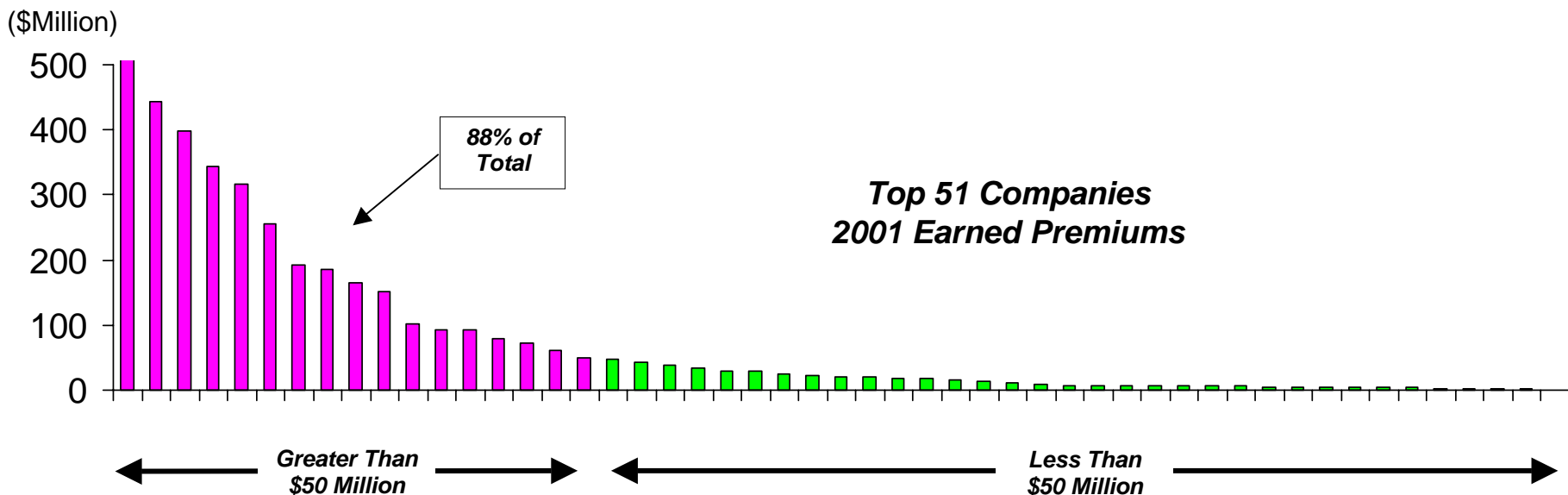
- Modeled for 2 to 12 Years into the Future
- Adopt DI Stimulation Model for Consistency

➤ A Growing Market

➤ Evolving Experience



- **LTC Loss Experience Form A - 51 Top Companies**
- **1995 – 2001 Earned Premiums, Incurred Claims, Expected Claims**



- **Large Size Blocks – Data Variation Provides Margins for Conservatism**
- **Small Size Blocks – Significantly Wide Variations**

- **Project Future Growth of Business**
 - Tested with 0%, 5% and 10% Annual Growth Rate
 - Loss Ratios Increasing by Year
- **Management Action for Rate Adjustments**
 - Rate Action Triggers
 - Time Lag in Implementation
- **Effect of Policy Termination not Modeled**
 - Generally Low Termination
 - Not Considered a Pricing Risk in the Future
- **Serial Correlation**
 - Tendency to Move Towards the Target Loss Ratio
 - Produces More Conservative Results if Ignored

APPROACH

METHODOLOGY

RESULTS

**Raw
Company
Data**

**Determine Each Company's
Standard Deviation & Serial
Correlation and Take
Premium-Weighted Average**

	Smaller Than \$50MM	Greater Than \$50MM	Aggregate
Standard Deviation	15.4%	5.4%	6.7%
Serial Correlation	-20.2%	-24.0%	-23.7%

**Model-Derived Loss
Ratios with
Management Action**

**Premium-Weighted
Standard Deviation & Serial
Correlation of Random
Changes of Loss Ratios**

	Smaller Than \$50MM	Greater Than \$50MM	Aggregate
Standard Deviation	14.6%	5.4%	6.5%
Serial Correlation	-32.6%	-34.5%	-34.3%

**Model-Derived Loss
Ratios with No
Management Action**

**Premium-Weighted
Standard Deviation & Serial
Correlation of Random
Changes of Loss Ratios**

	Smaller Than \$50MM	Greater Than \$50MM	Aggregate
Standard Deviation	15.4%	5.4%	6.6%
Serial Correlation	-20.2%	-23.6%	-23.6%

3 Approaches . . . Yielded Similar Results

	Raw Loss Ratios No Management Action			Model-Generated Loss Ratios			Raw Loss Ratios No Management Action No Serial Correlation		
	Less Than \$50MM	Greater Than \$50MM	Aggregate	Less Than \$50MM	Greater Than \$50MM	Aggregate	Less Than \$50MM	Greater Than \$50MM	Aggregate
Standard Deviation	15.4%	5.4%	6.7%	14.6%	5.4%	6.5%	15.4%	5.4%	6.7%
Serial Correlation	-20.2%	-24.0%	-23.7%	-32.6%	-34.5%	-34.3%	0.0%	0.0%	0.0%
RBC Requirement (% Premium)	71.2%	6.7%	12.6%	54.0%	4.9%	9.0%	90.8%	11.6%	20.5%
Less 5% Claim Reserves (% Premium)	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%
Remainder as % Premium	67.4%	2.9%	8.8%	50.2%	1.1%	5.2%	87.0%	7.8%	16.7%
Remainder as % Policy Reserve	20.7%	0.9%	2.7%	15.4%	0.3%	1.6%	26.8%	2.4%	5.1%

➤ **Current Formula is 5% Claim Reserve, 25% Premium Up to \$50MM & 15% In Excess**

- **Small In-Force Blocks**
- **Single Premium and Limited Premium Policies**
- **Premium vs. Reserve Factor**
- **Rate Stabilization Regulations**
- **Effect of Formula Change on In-Force Business**
- **Final Recommendations & Report**
- **Peer Review**