

2011 CAS Annual Meeting

Our Estimates Are Cyclical. Are We Being Fooled?

Prepared by: **Brian Z. Brown, FCAS, MAAA**
Principal and Consulting Actuary

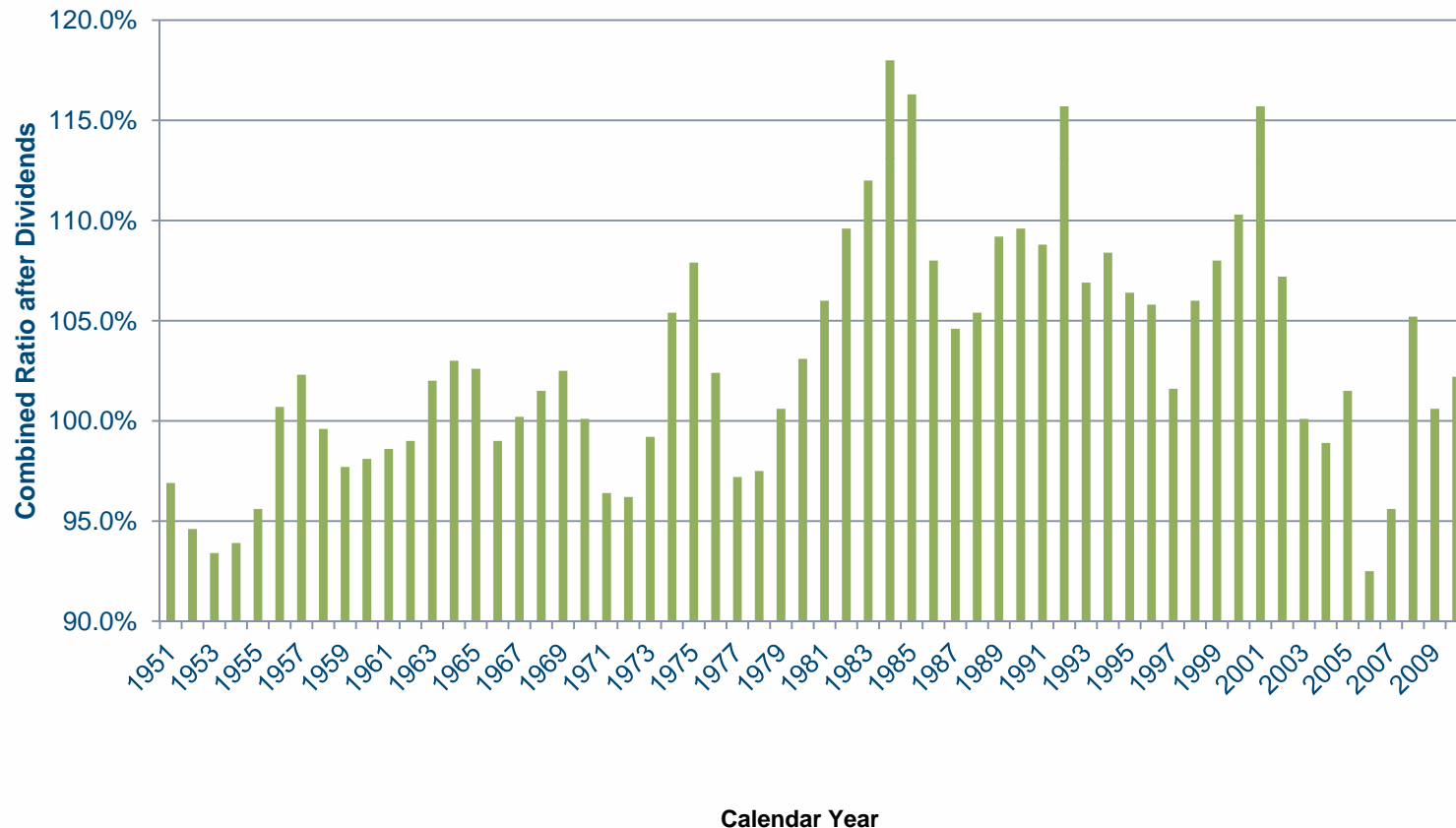
Brian.Brown@Milliman.com
(262) 796-3391

Date: November 7, 2011

Results for Total Industry

Combined Ratio After Dividends – Total Industry

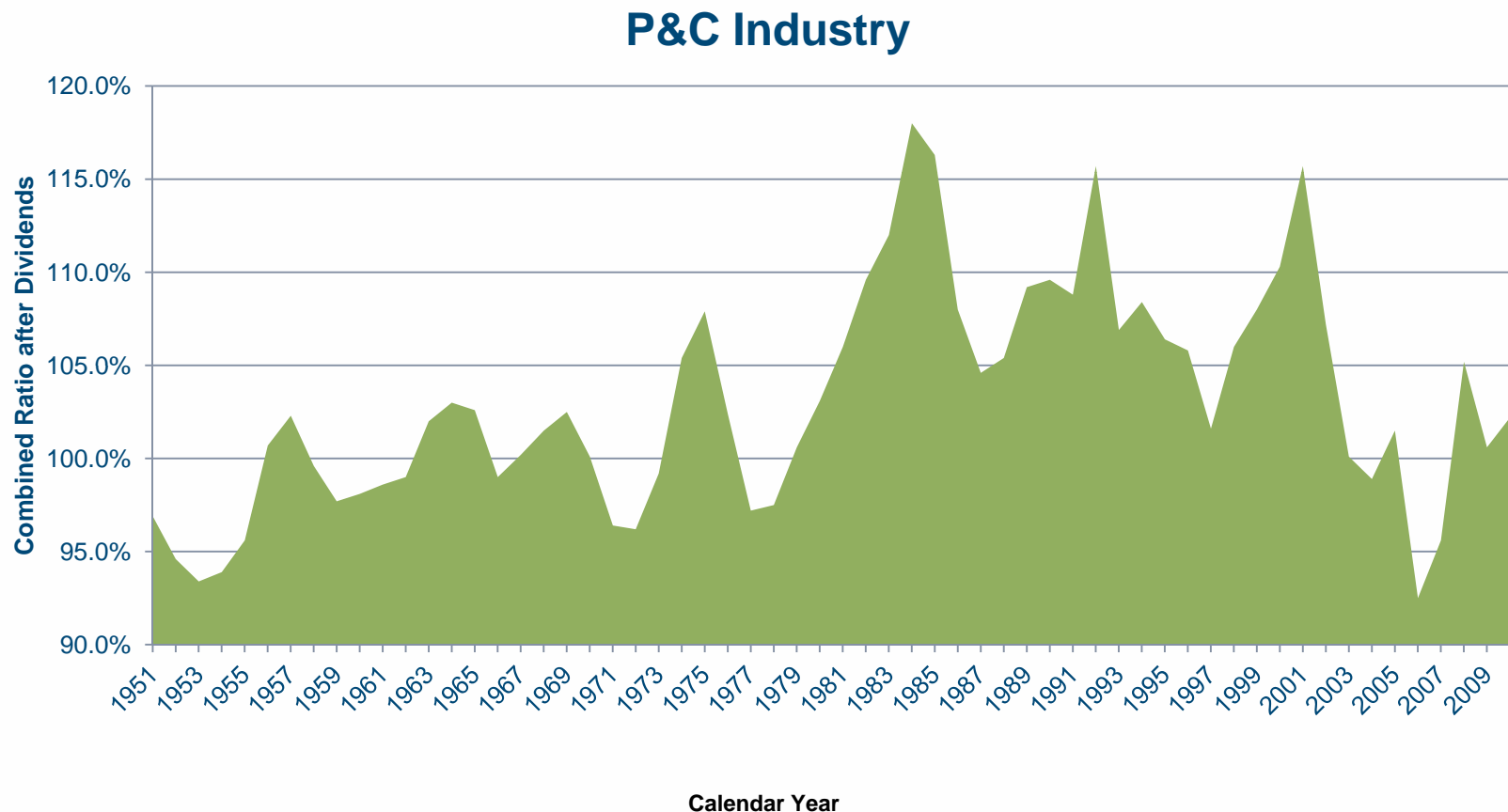
P&C Industry



Clearly a cycle – will it continue?

Results for Total Industry

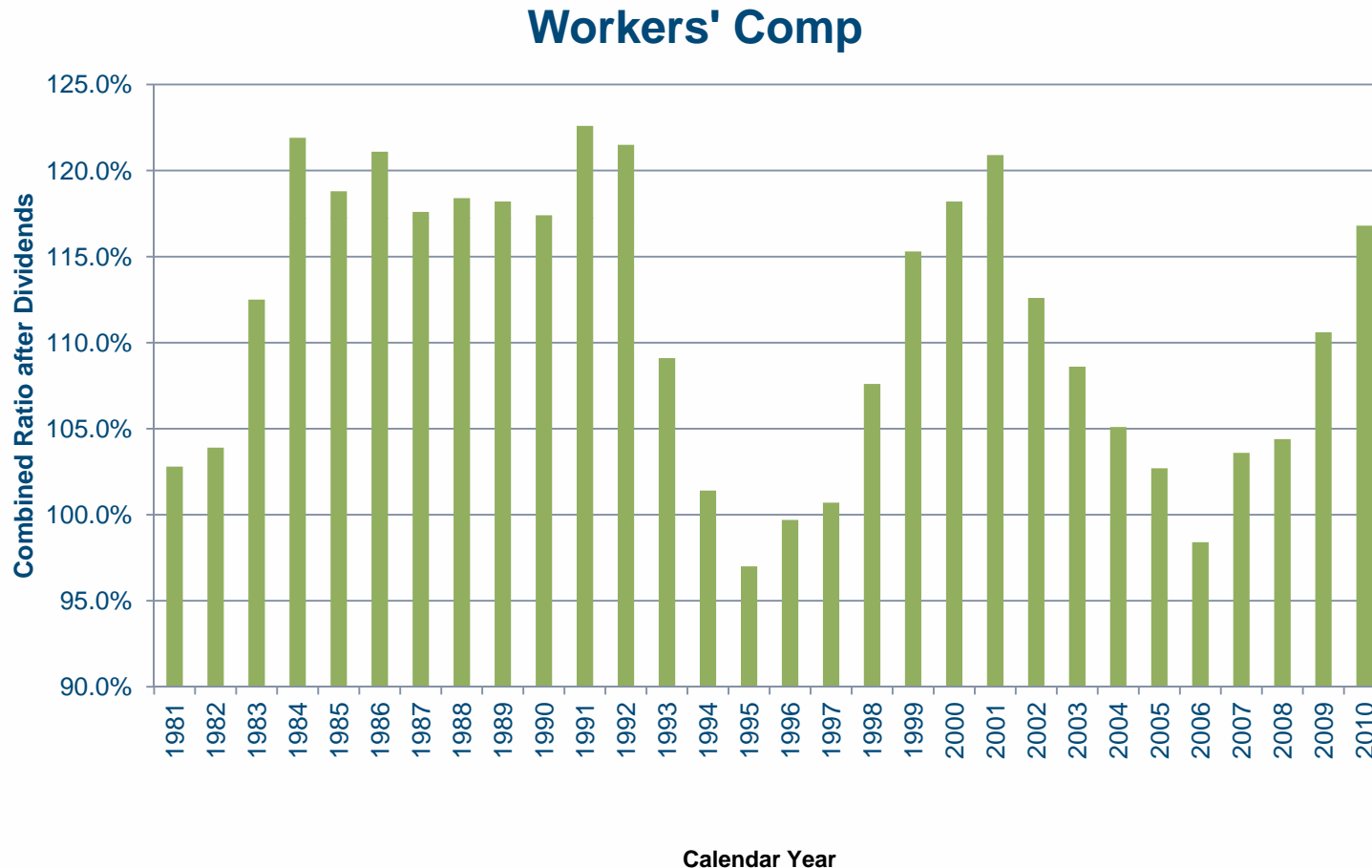
Combined Ratio After Dividends – Total Industry



Clearly a cycle – will it continue?

Results for Industry Segments

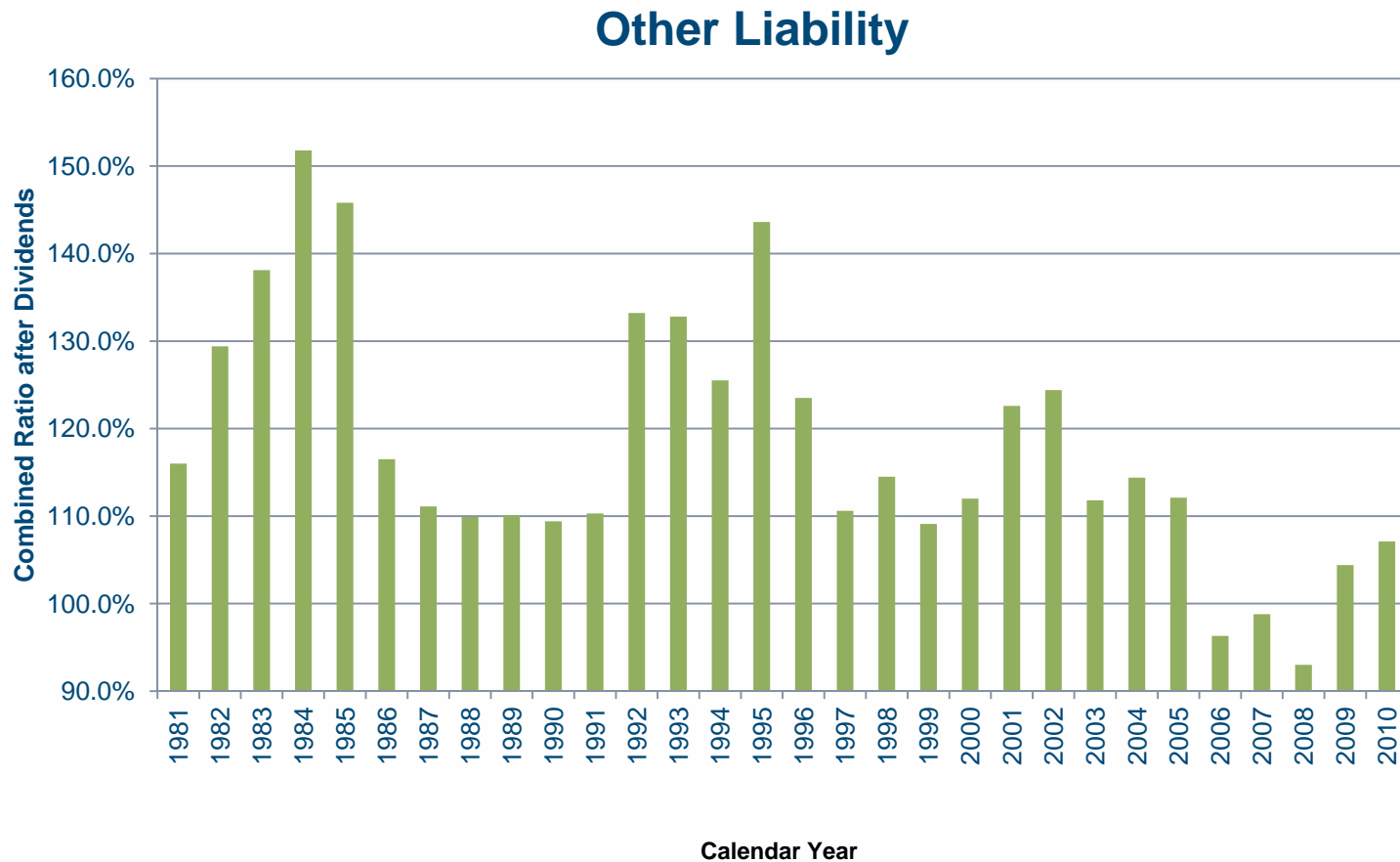
Combined Ratio After Dividends – Workers' Compensation



Very dramatic cycle

Results for Industry Segments

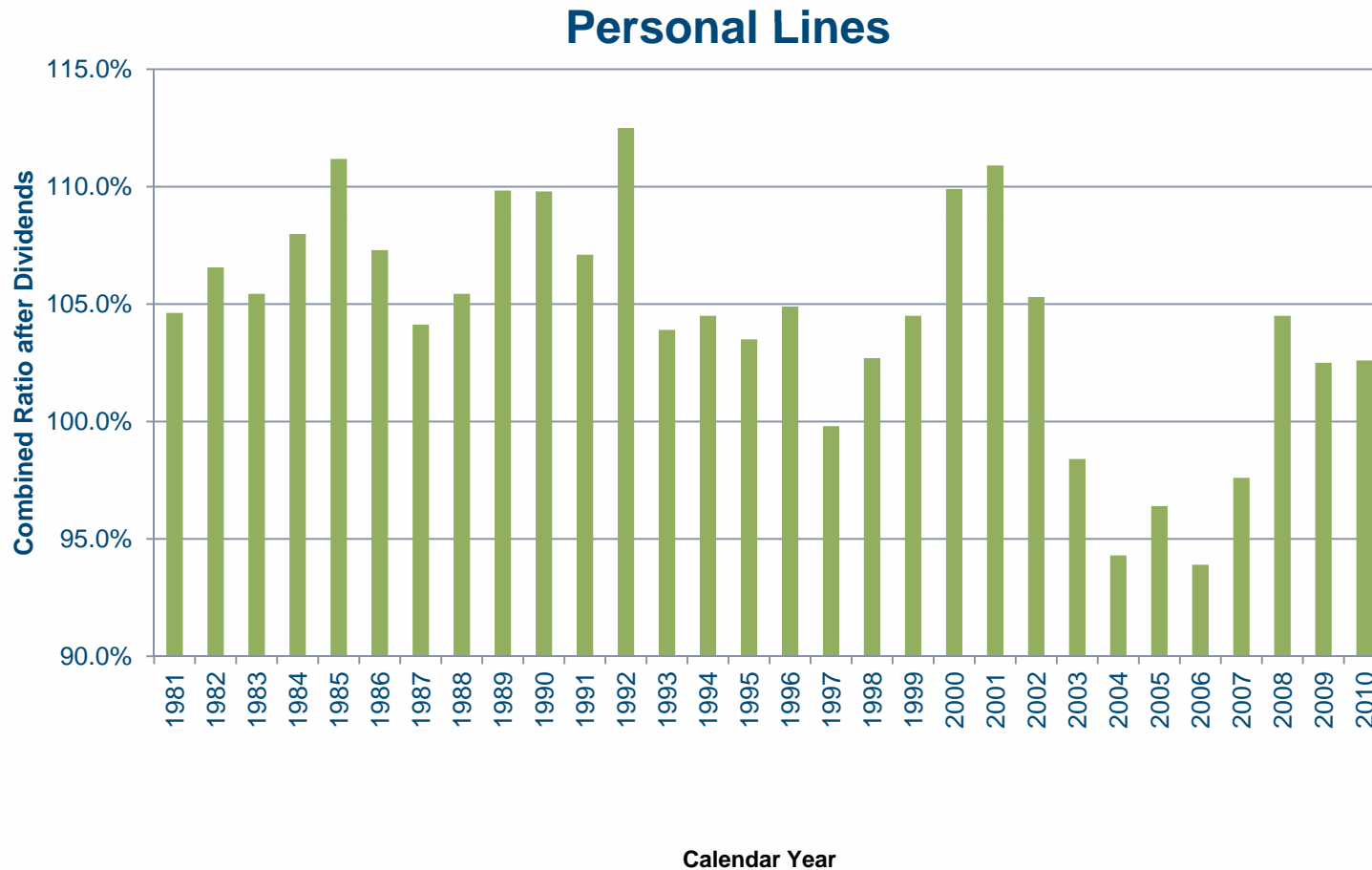
Combined Ratio After Dividends – Other Liability



150% Combined Ratio in 1984

Results for Industry Segments

Combined Ratio After Dividends – Personal Lines



Less cyclical

Results for Industry Segments

Ultimate Loss & ALAE Ratio Initial vs. Developed

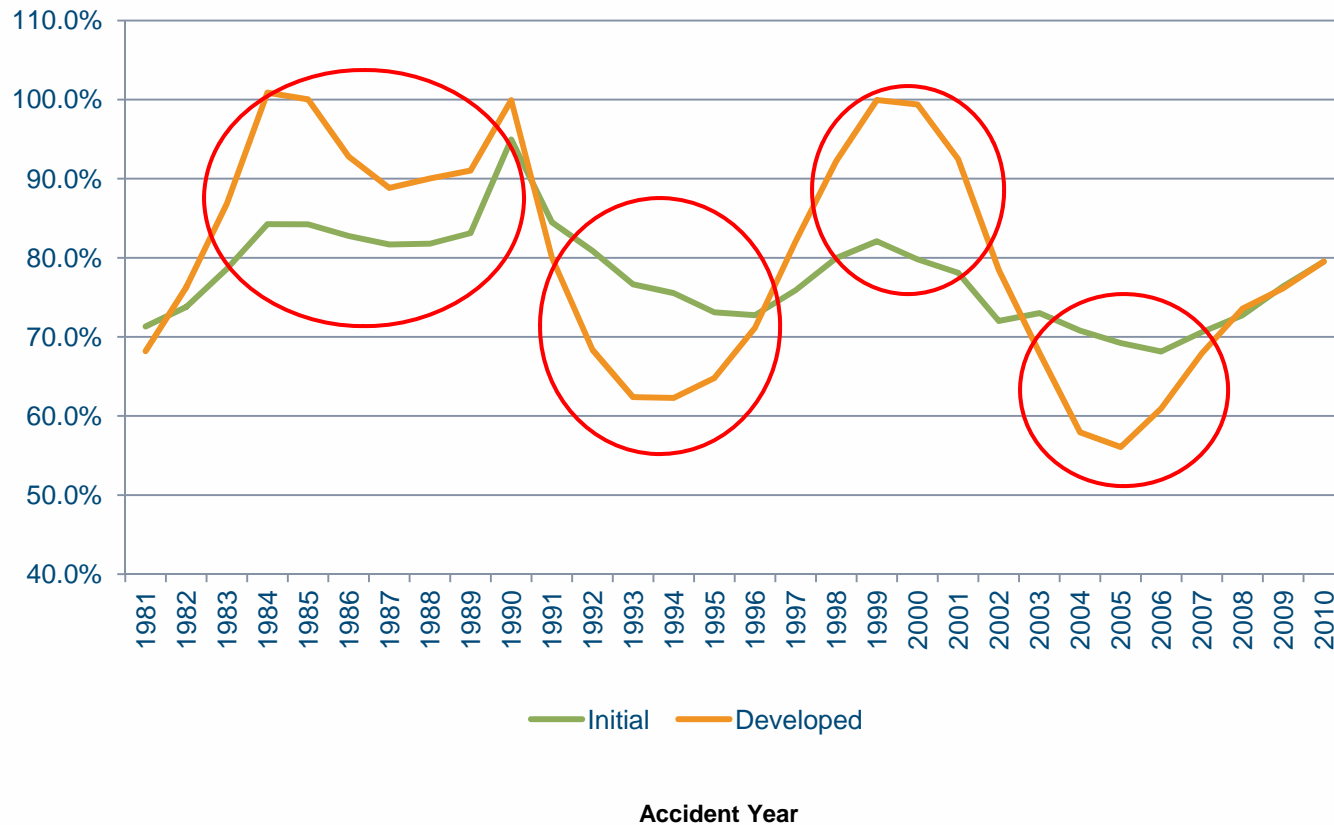
P&C Industry



Clear pattern

Results for Industry Segments

Ultimate Loss & ALAE Ratio Initial vs. Developed Workers' Compensation



Dramatic pattern



Source: AM Best Aggregates & Averages

Modified Bornhuetter – Ferguson Methods

- **The Modified Bornhuetter – Ferguson (BF) methods is very similar to the traditional BF methods but utilizes an A' priori ultimate that is based on the selected ultimate loss ratio from the preceding year**
- **The Modified BF methods are much more responsive to changing dynamics in the underlying data**
 - **For example, when there are changes in the cycle, either good or bad, this method will react to this change much quicker than the traditional BF methods**

Method Indications

Other Liability - Occurrence

Indicated Ultimate Loss & ALAE (000's)

Indicated Ultimate Loss & ALAE based on:

Accident Year	Loss Development Methods:		B/F Methods: 70% A' Priori:		Modified B/F Methods:		10 Year Developed
	Incurred	Paid	Incurred	Paid	Incurred	Paid	
1996	\$8,671,975	\$8,746,529	\$8,603,717	\$8,590,712	\$8,657,419	\$8,700,460	\$9,172,431
1997	10,043,109	10,260,417	9,813,066	9,725,461	9,916,174	9,935,823	10,767,162
1998	10,943,583	11,441,786	10,378,296	10,130,248	10,699,857	10,758,589	12,820,069
1999	11,462,828	12,789,385	10,420,244	10,184,815	11,270,739	11,693,907	12,742,212
2000	11,612,784	13,764,122	9,999,584	9,707,570	11,620,177	12,173,829	12,157,928
2001	12,856,148	15,474,499	9,911,416	9,405,675	12,513,050	12,712,622	13,187,711
Total	\$65,590,427	\$72,476,738	\$59,126,323	\$57,744,481	\$64,677,416	\$65,975,230	\$70,847,513

Method Indications

Other Liability - Occurrence

Indicated Ultimate Loss & ALAE Ratio

Accident Year	Indicated Ultimate Loss & ALAE Ratio based on:						10 Year Developed
	Loss Development Methods:		B/F Methods: 70% A' Priori:		Modified B/F Methods:		
	Incurred	Paid	Incurred	Paid	Incurred	Paid	
1996	75.6%	76.2%	75.0%	74.8%	75.4%	75.8%	79.9%
1997	82.8%	84.6%	80.9%	80.2%	81.8%	81.9%	88.8%
1998	92.5%	96.7%	87.7%	85.6%	90.4%	90.9%	108.3%
1999	97.7%	109.0%	88.8%	86.8%	96.1%	99.7%	108.6%
2000	97.8%	115.9%	84.2%	81.7%	97.8%	102.5%	102.4%
2001	104.1%	125.3%	80.3%	76.2%	101.4%	103.0%	106.8%
Total	91.9%	101.5%	82.8%	80.9%	90.6%	92.4%	99.2%

Method Indications

Other Liability - Occurrence Incurred Loss & ALAE as of 12/31/01

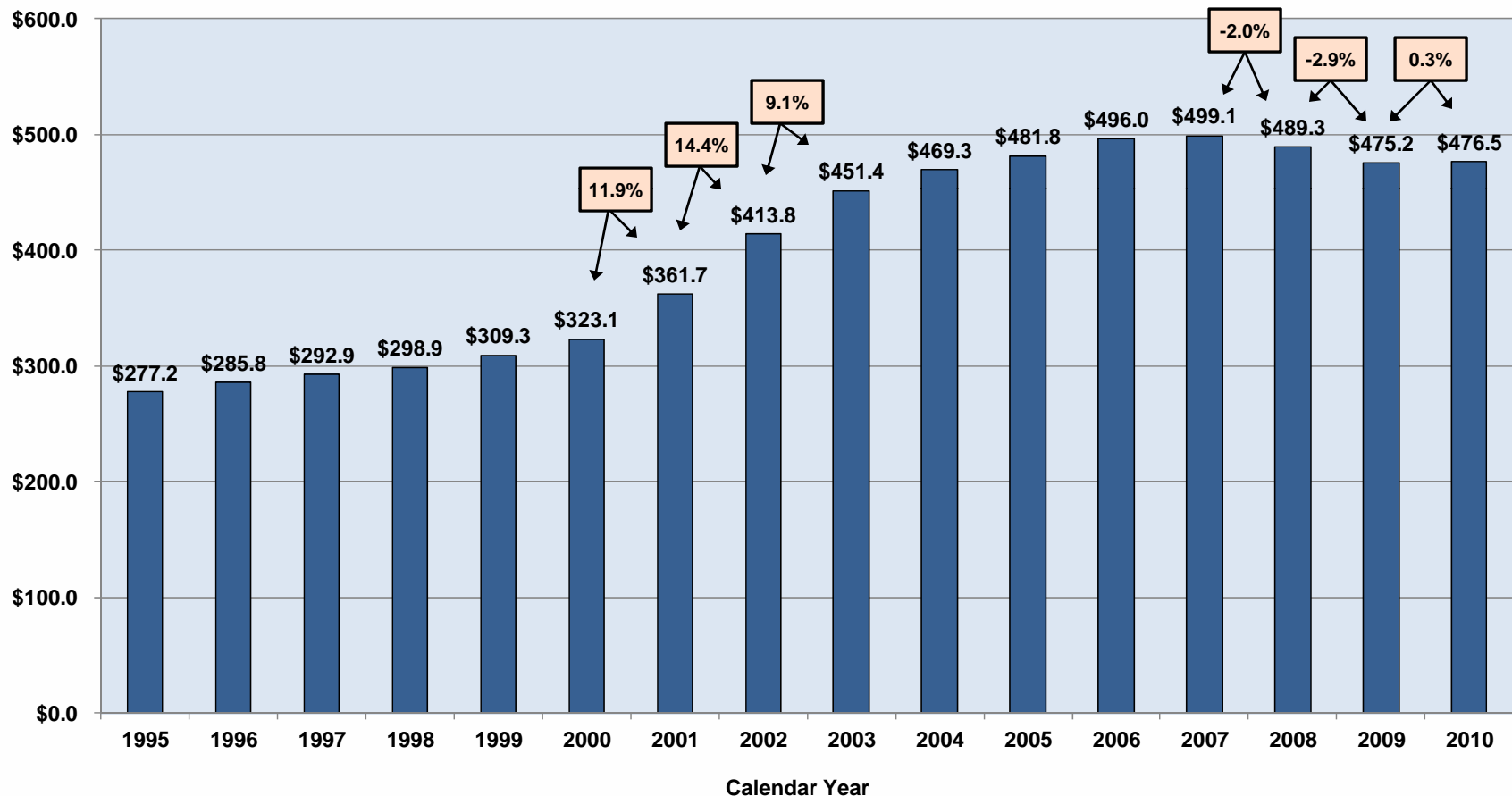
Accident Year	Months of Development									
	12	24	36	48	60	72	84	96	108	120
1992	2,349,950	3,892,042	4,978,176	5,846,825	6,358,252	6,780,418	6,946,727	7,031,582	7,111,726	7,182,685
1993	2,659,027	4,187,836	5,366,904	6,306,393	6,781,580	6,933,743	7,120,116	7,247,425	7,357,335	
1994	2,486,434	4,377,154	5,820,583	6,658,178	7,108,481	7,512,322	7,670,814	7,823,596		
1995	2,869,498	4,511,034	5,935,070	6,662,476	7,154,187	7,525,879	7,871,463			
1996	2,662,506	4,495,986	6,022,674	6,886,521	7,431,190	7,743,062				
1997	2,863,303	4,999,394	6,705,649	7,743,361	8,556,607					
1998	3,339,966	5,436,956	7,213,677	8,617,191						
1999	3,035,149	5,554,715	7,787,795							
2000	3,321,546	5,932,086								
2001	3,872,185									

Accident Year	Months of Development									
	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - Ult
1992	1.656	1.279	1.174	1.087	1.066	1.025	1.012	1.011	1.010	
1993	1.575	1.282	1.175	1.075	1.022	1.027	1.018	1.015		
1994	1.760	1.330	1.144	1.068	1.057	1.021	1.020			
1995	1.572	1.316	1.123	1.074	1.052	1.046				
1996	1.689	1.340	1.143	1.079	1.042					
1997	1.746	1.341	1.155	1.105						
1998	1.628	1.327	1.195							
1999	1.830	1.402								
2000	1.786									
WA	1.696	1.330	1.159	1.082	1.048	1.030	1.017	1.013	1.010	
WA L3	1.745	1.357	1.166	1.087	1.050	1.031	1.017			
Avg	1.694	1.327	1.158	1.081	1.048	1.030	1.017	1.013	1.010	
WA 96 & Prior	1.648	1.310	1.151	1.076						
WA 97 & Sub	1.745	1.357	1.175	1.105						
Select	1.696	1.330	1.159	1.082	1.048	1.030	1.017	1.013	1.010	
Cumulative	3.320	1.958	1.472	1.270	1.174	1.120	1.087	1.069	1.055	1.045

LDF vary depending on the point in the cycle

Results for Total Industry

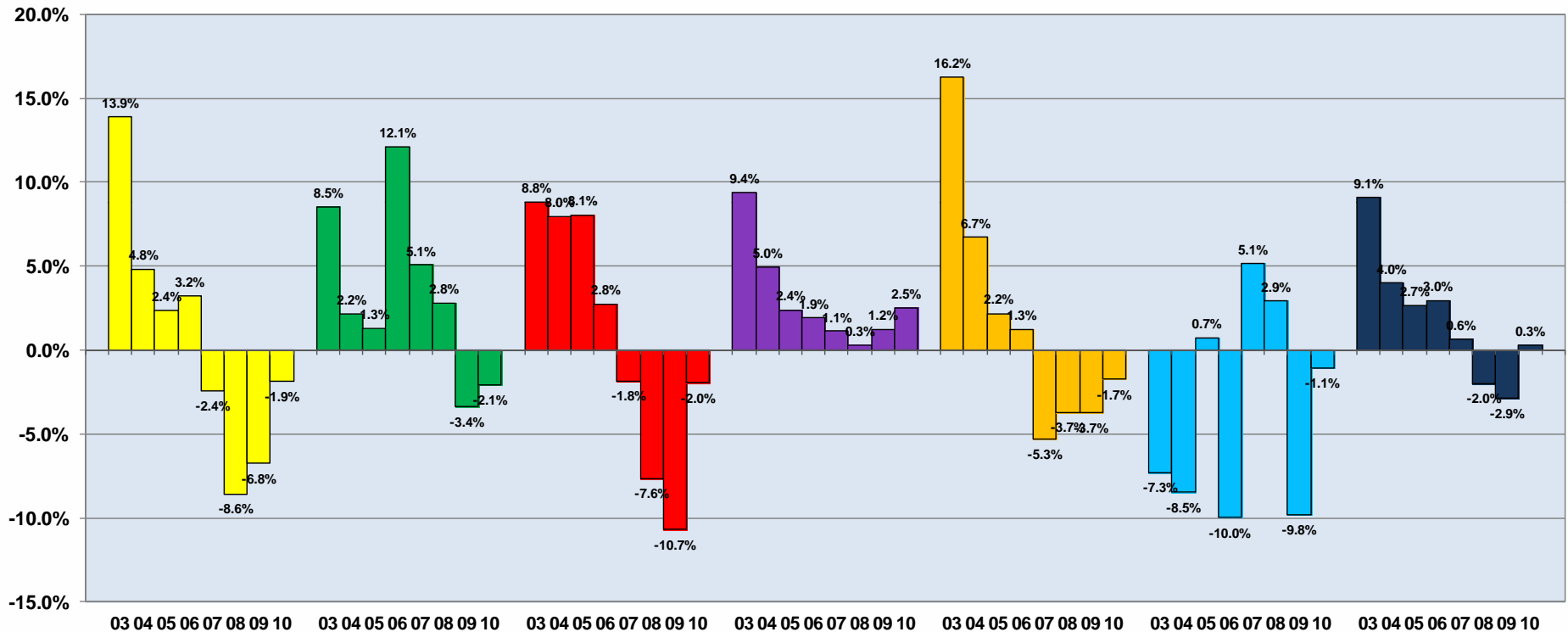
Direct Written Premium – Total Industry (\$ Billions)



Premium has been flat to down since 2006

Results for Total Industry

Growth in Direct Written Premium – By Line 2003 – 2010



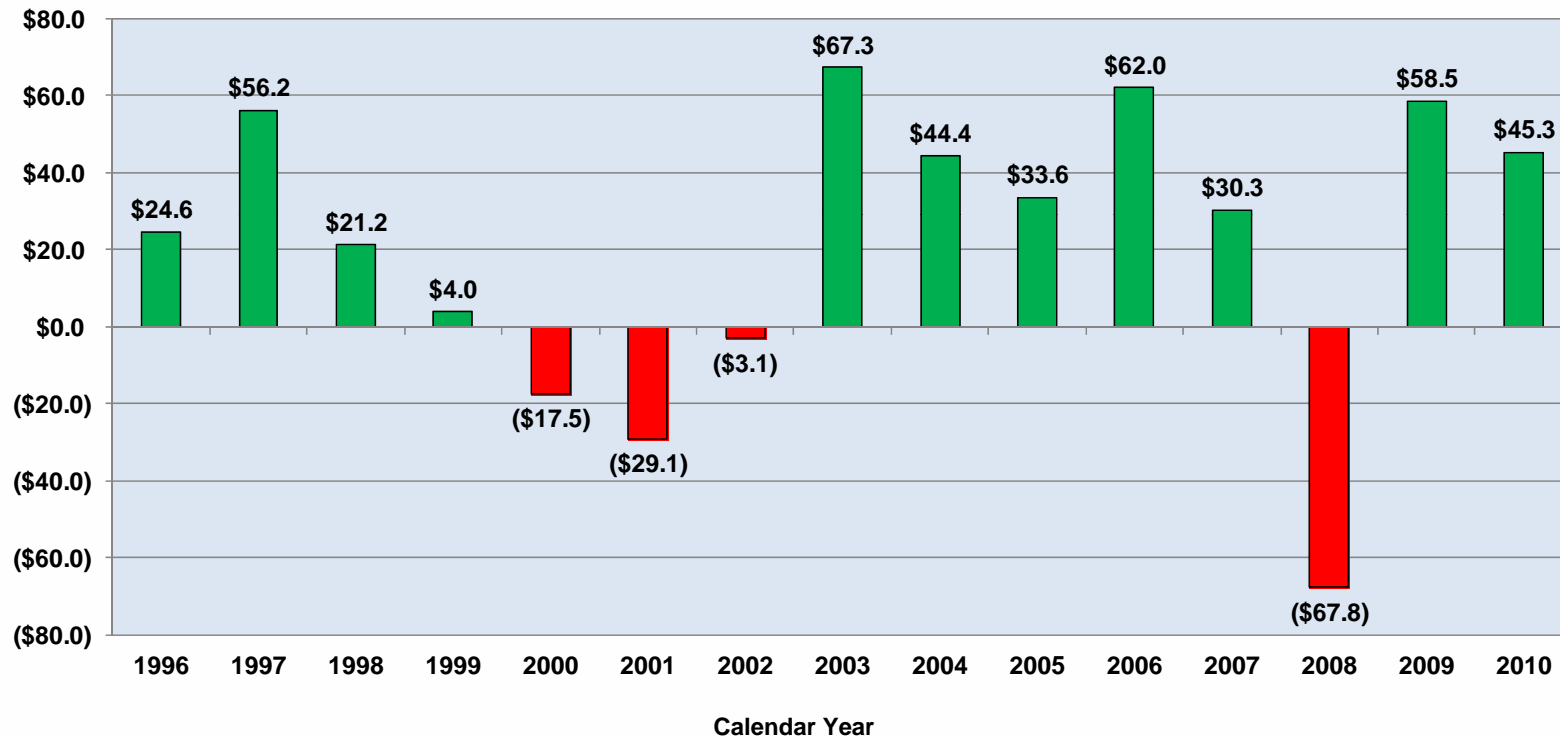
As rates fall loss costs increase

Calendar Year

- Commercial Liability
- Commercial Non-Liability
- Workers' Compensation
- Personal Lines
- Medical Professional Liability
- All Other
- Industry Total

Results for Total Industry

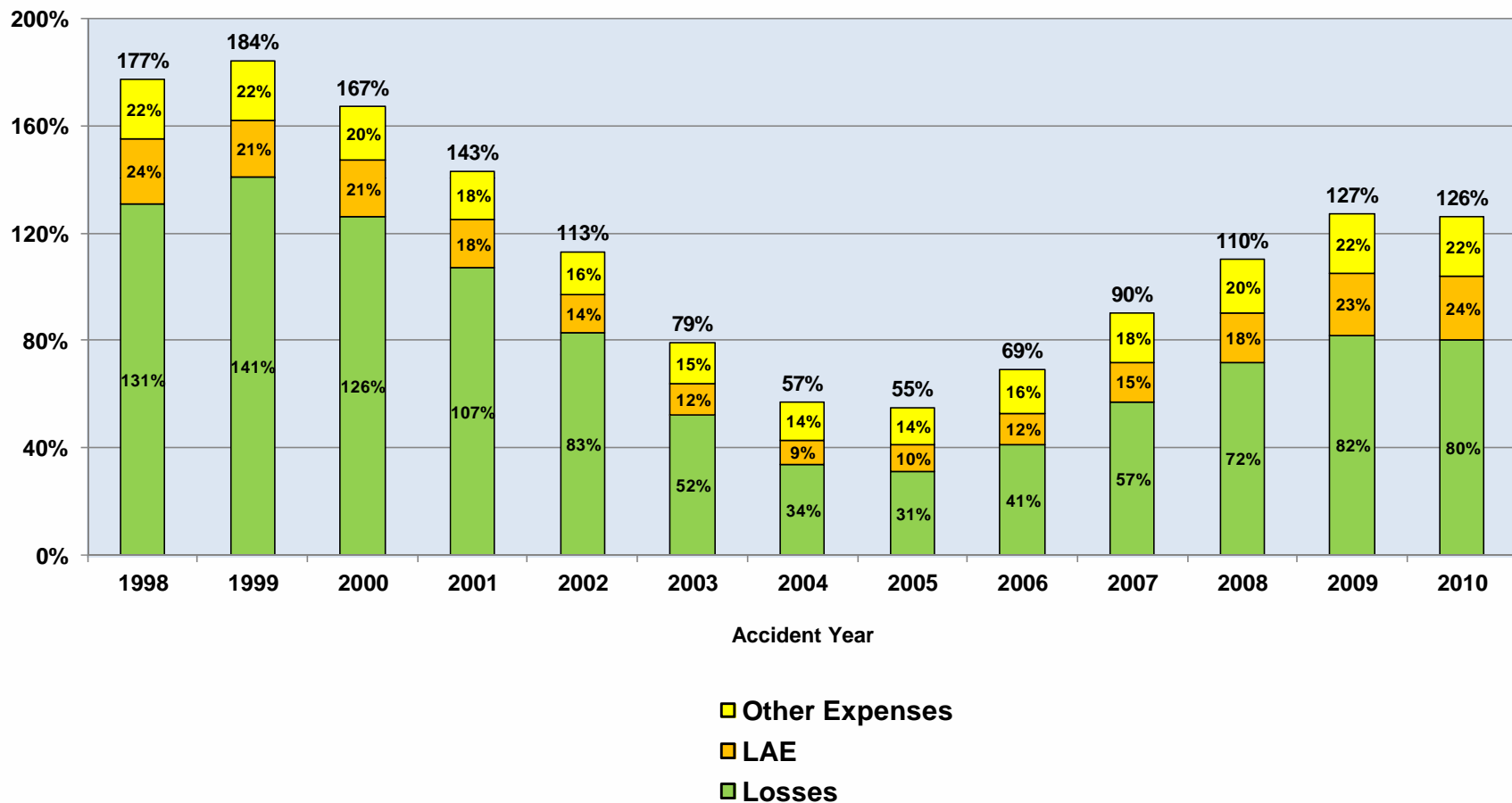
Calendar Year Change in Policyholder Surplus – Total Industry (\$ Billions)



Large amount of surplus

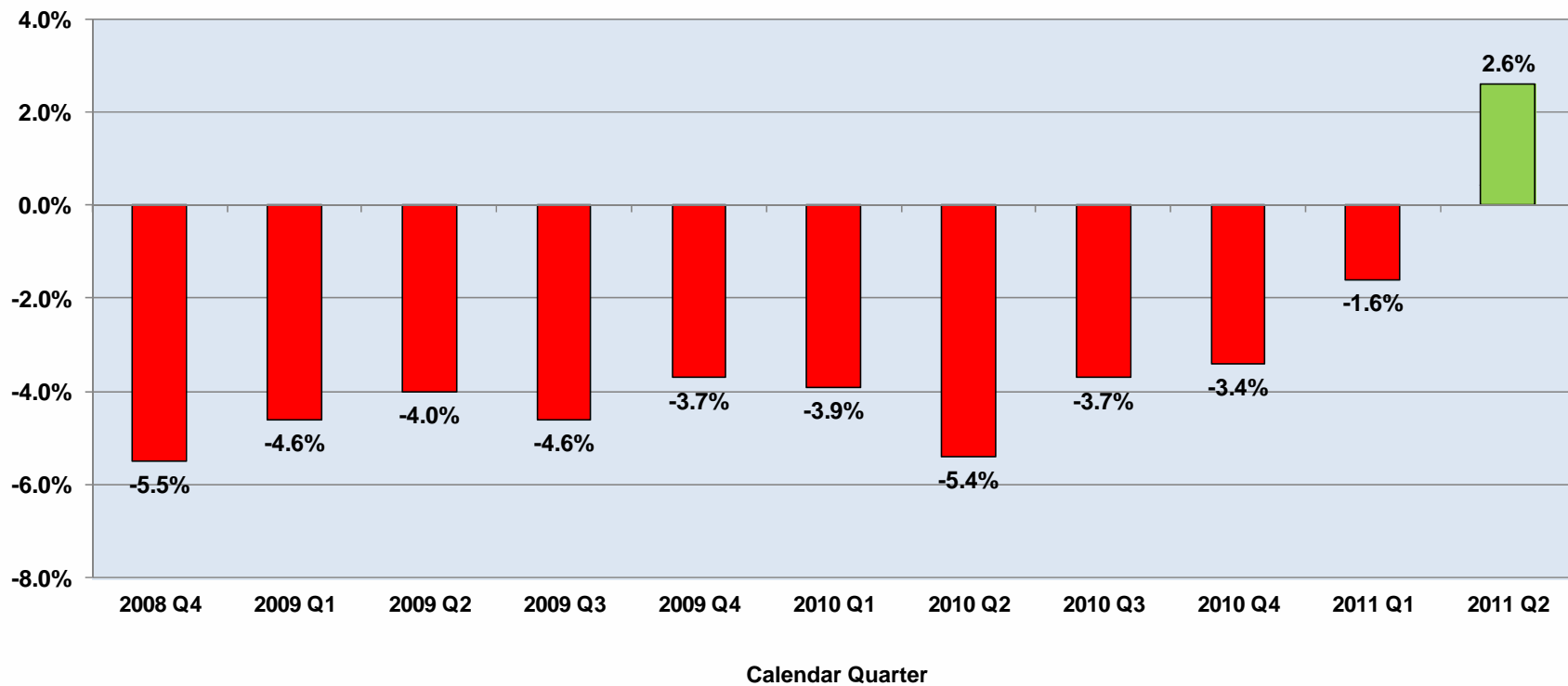
Results for Workers' Compensation

Accident Year Loss & Expense Ratios – CA Workers' Comp (California Only, as of March 31, 2011)



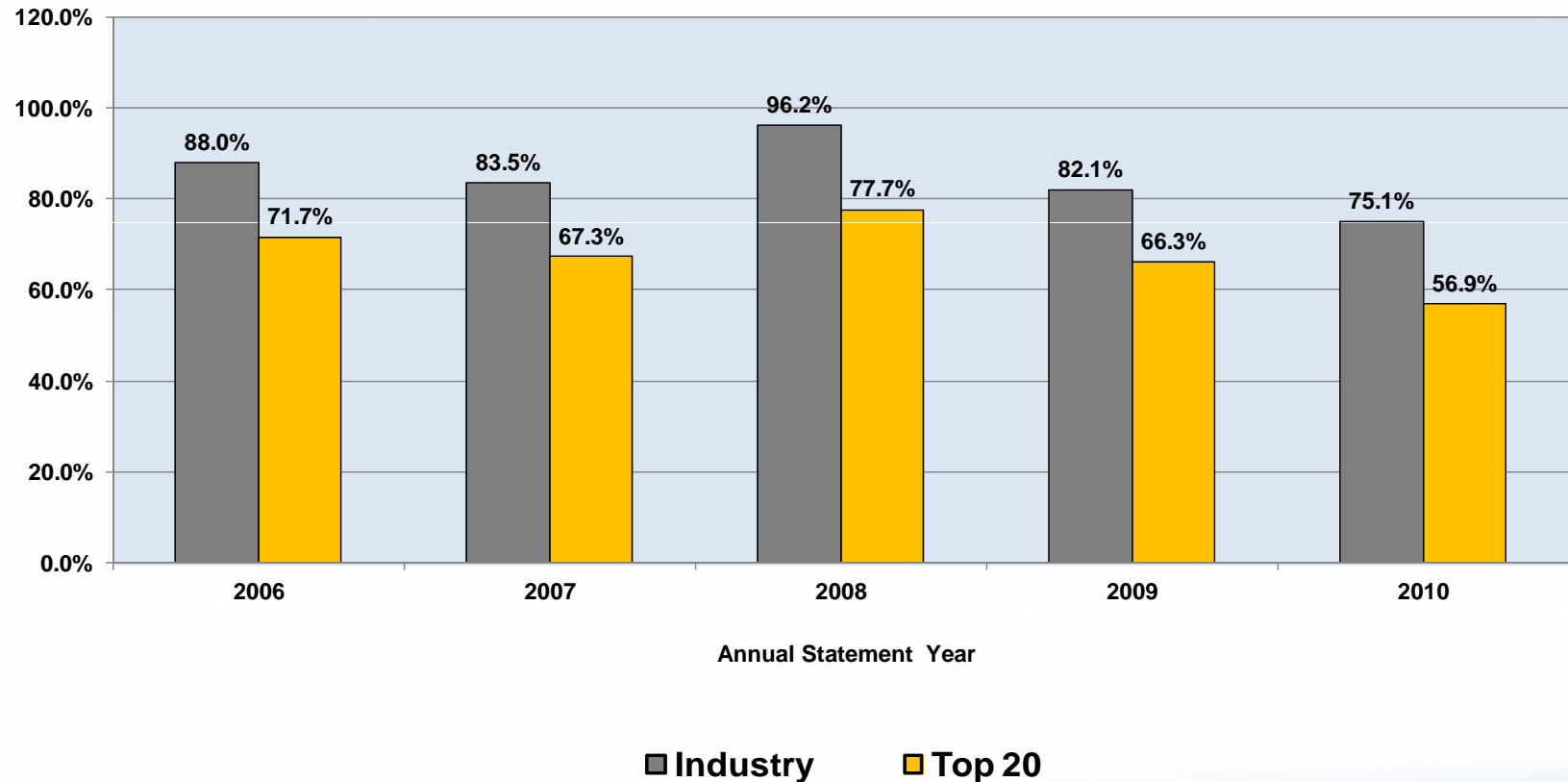
Results for Workers' Compensation

Rate Changes – Total Workers' Comp (All States, Quarterly Basis)



Results for Largest 20 Companies (by 2010 NEP)

Net Earned Premium to Policyholder Surplus





Other Considerations

Other Considerations

Oral Discussion

- This document is not complete without the accompanying oral discussion and explanation of the underlying projections, results and variability.

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