

# *The Underwriting Cycle*

*Are Loss Reserves Reasonable in Light  
of Potential Underwriting Cycle  
Biases?*

October 2011

PwC  
Actuarial and Insurance Management Solutions (AIMS)

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# *Agenda*

- **Introduction**
- **Pricing trends**
- **Inspection of reserve adequacy**
- **Implications on profitability**

# *Introduction*

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## *What is the underwriting cycle?*

### Soft market

- Excessive capital
- Highly competitive
- Inadequate premiums
- Easing of terms & conditions

### Hard market

- Less capital available
- Less competition
- Better price adequacy
- Stricter terms & conditions

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*How does the underwriting cycle impact reserves?*

**Pricing  
Bias**



**Potential  
Reserving  
Bias**

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*How does reserve adequacy impact pricing?*

**Pricing  
Bias**



**Potential  
Reserving  
Bias**

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*Inherent link?*

**Pricing  
Bias**



**Potential  
Reserving  
Bias**

# *Pricing trends*



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## *Pricing trends poll*

According to MarketScout's "Market Barometer Report", what is the average monthly composite P&C rate change for 2011?

- a) +5% or more – happy days are here again
- b) 0% to +5% – rates are moderately up
- c) 0% to -5% – rates are moderately down
- d) -5% or less – where is the bottom?

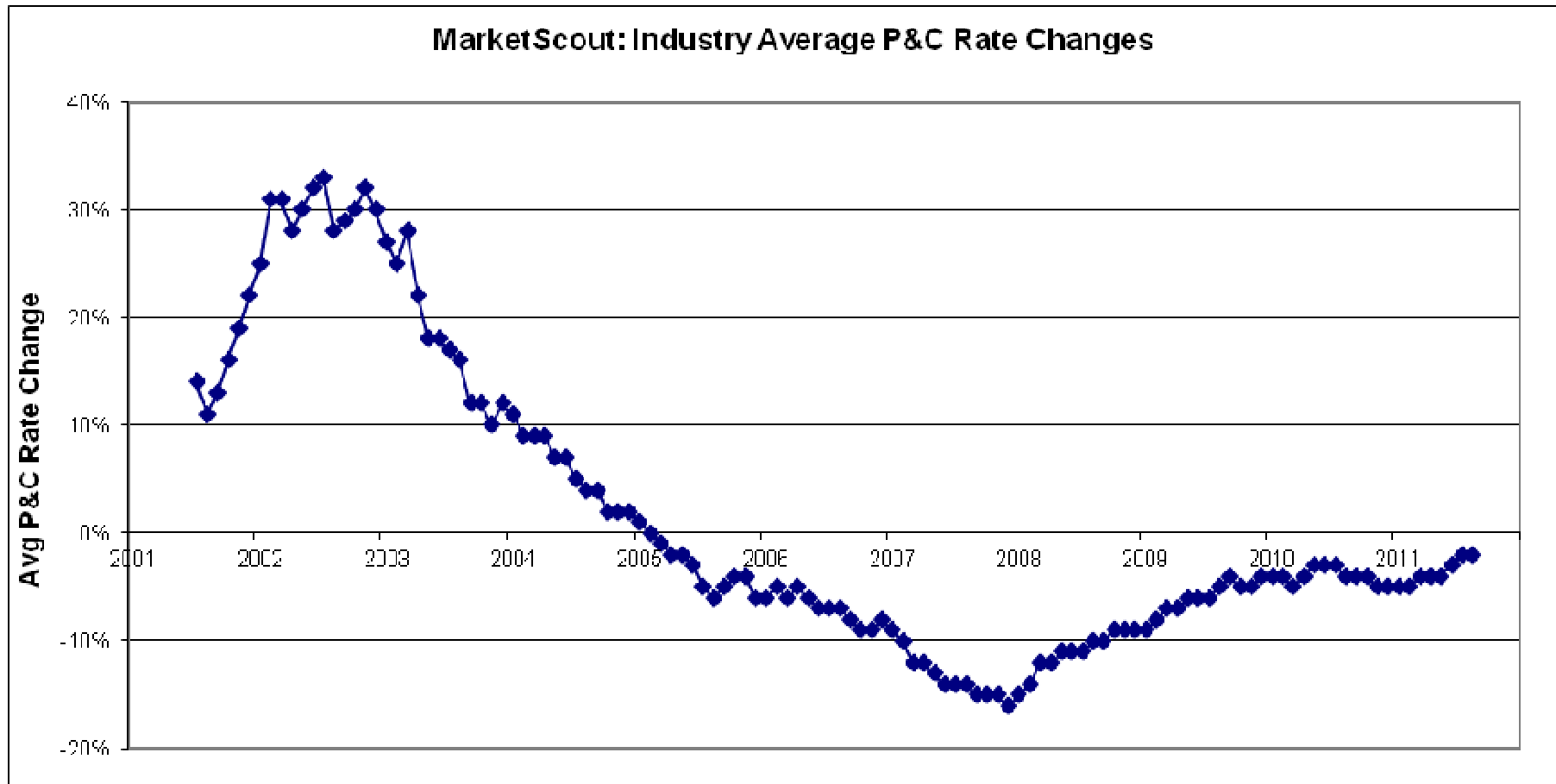
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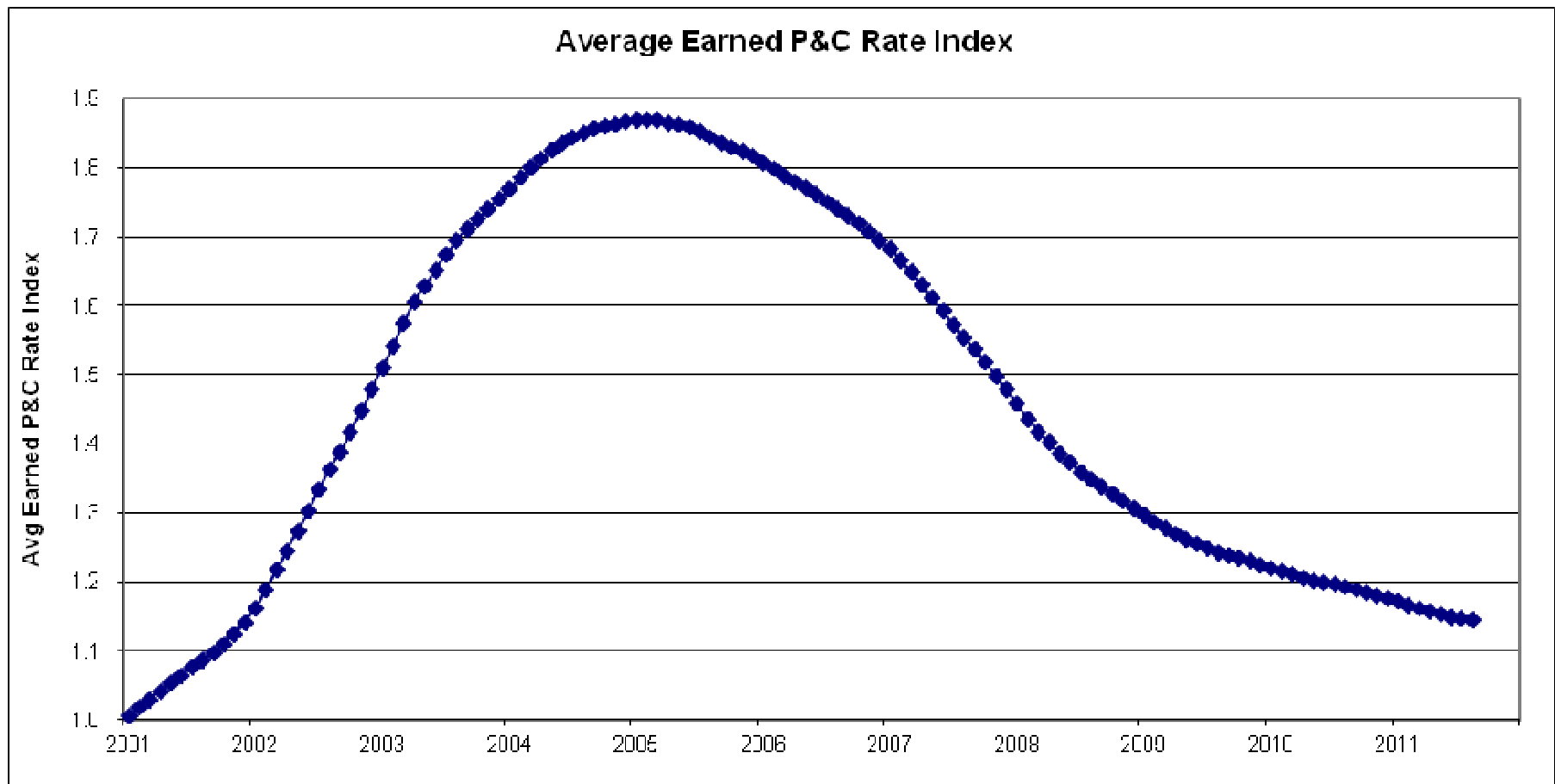
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## *Industry average rate changes*



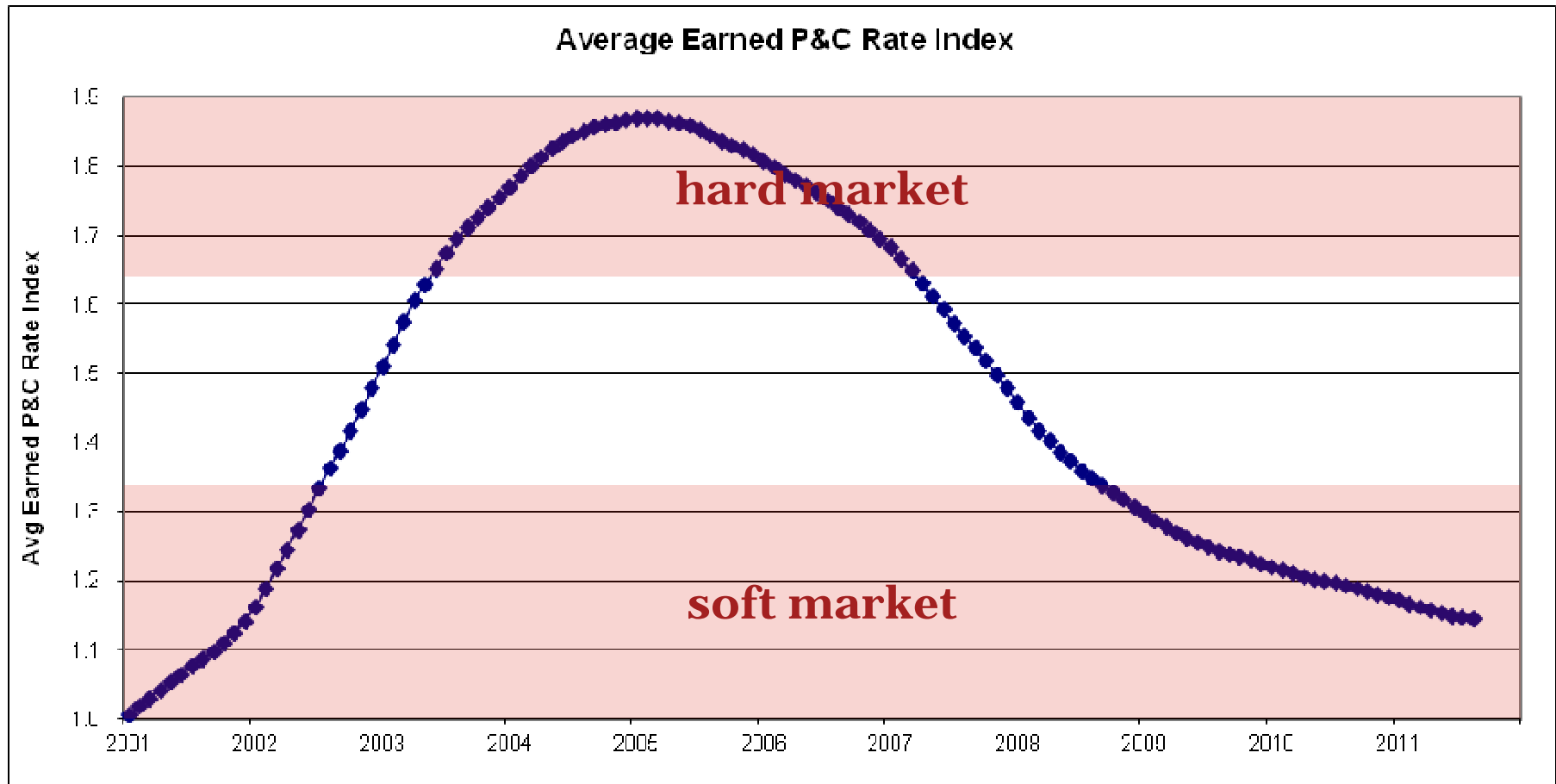
Source: [www.MarketScout.com](http://www.MarketScout.com)

## *Industry average earned rate index*



Source: [www.MarketScout.com](http://www.MarketScout.com)

## *Industry average earned rate index*



Source: [www.MarketScout.com](http://www.MarketScout.com)

# *Inspection of reserve adequacy*

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## *Reserve accuracy poll*

**At year-end 2010, what percentage of US P&C insurance companies' hindsight reserves from year-end 2004 were within -10% to +10% of their originally recorded value?**

- a) 73% – isn't it called actuarial “science”?**
- b) 52% – but on the other hand, there's loads of judgment**
- c) 37% – loads and loads of judgment**
- d) 12% – but at least it can't be negative**

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## *Percentage of companies with 2010 hindsight reserves within X% of initial recorded reserves*

Companies with initial recorded reserves in excess of \$1 million

<b>Calendar Year End</b>	<b>Within +/- 5%</b>	<b>Within +/-10%</b>	<b>Within +/- 25%</b>
2001	14%	26%	58%
2002	14%	30%	64%
2003	19%	34%	68%
2004	20%	37%	67%
2005	17%	35%	66%
2006	15%	33%	67%
2007	15%	37%	71%
2008	26%	49%	79%
2009	39%	64%	87%

Source: SNL, 2010

## ***Percentage of companies with 2010 hindsight reserves within X% of initial recorded reserves***

**Companies with initial recorded reserves in excess of \$500 million**

<b>Calendar Year End</b>	<b>Within +/- 5%</b>	<b>Within +/-10%</b>	<b>Within +/- 25%</b>
2001	13%	23%	51%
2002	11%	32%	64%
2003	24%	39%	77%
2004	29%	49%	80%
2005	24%	55%	88%
2006	22%	48%	87%
2007	21%	52%	92%
2008	35%	71%	98%
2009	60%	82%	98%

Source: SNL, 2010

## *Percentage of companies with 2010 hindsight reserves within X% of initial recorded reserves*

Companies with initial recorded reserves in excess of \$1 million, ex 2000 & prior

<b>Calendar Year End</b>	<b>Within +/- 5%</b>	<b>Within +/-10%</b>	<b>Within +/- 25%</b>
2001	20%	38%	70%
2002	20%	38%	70%
2003	20%	38%	69%
2004	14%	32%	66%
2005	13%	28%	65%
2006	14%	26%	65%
2007	14%	29%	71%
2008	24%	46%	79%
2009	37%	63%	87%

Source: SNL, 2010

## *Percentage of companies with 2010 hindsight reserves within X% of initial recorded reserves*

Companies with initial recorded reserves in excess of \$500 million, ex 2000 & prior

<b>Calendar Year End</b>	<b>Within +/- 5%</b>	<b>Within +/-10%</b>	<b>Within +/- 25%</b>
2001	26%	46%	72%
2002	30%	47%	79%
2003	26%	53%	84%
2004	16%	41%	87%
2005	25%	44%	85%
2006	22%	34%	86%
2007	18%	39%	90%
2008	30%	59%	97%
2009	56%	83%	98%

Source: SNL, 2010

## *Percentage of companies with 2010 hindsight reserves within 10% of initial recorded reserves*

Companies with initial recorded reserves in excess of \$1 million – by line of business

Calendar Year End	Within +/-10%				
	All	Other Liab	CMP	WC	PP AL
2001	26%	14%	26%	20%	48%
2002	30%	14%	30%	21%	50%
2003	34%	21%	26%	30%	47%
2004	37%	25%	29%	43%	41%
2005	35%	28%	30%	41%	34%
2006	33%	20%	30%	39%	40%
2007	37%	28%	31%	44%	47%
2008	49%	37%	47%	59%	53%
2009	64%	59%	60%	77%	74%

Source: SNL, 2010

## *Calendar year-end hindsight (redundancy)/deficiency*

Emerged (redundancy)/deficiency as a % of initial booked reserves

<b>Calendar Year End</b>	<b>AI</b>	<b>Other Liab</b>	<b>CMP</b>	<b>WC</b>	<b>PP AL</b>
2001	29%	64%	26%	28%	3%
2002	22%	57%	18%	25%	1%
2003	13%	39%	7%	18%	-2%
2004	4%	18%	-2%	10%	-5%
2005	-2%	4%	-4%	3%	-7%
2006	-4%	-1%	-9%	0%	-5%
2007	-4%	-3%	-10%	1%	-4%
2008	-5%	0%	-6%	2%	-4%
2009	-2%	0%	-4%	1%	-3%

Source: SNL, 2010

## *Accident year hindsight (redundancy)/deficiency*

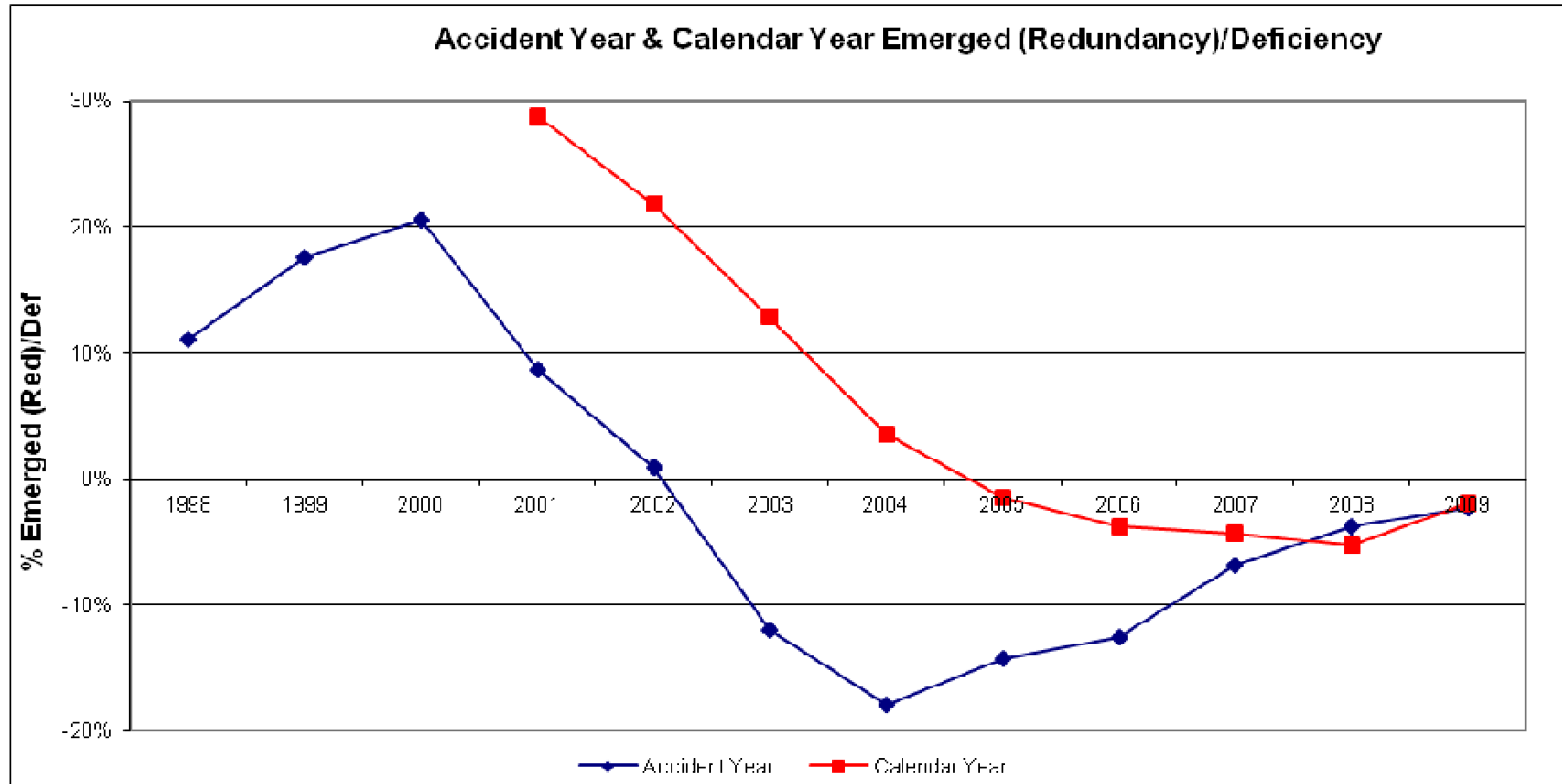
Emerg (redundancy)/deficiency as a % of initial booked reserves

<b>Accident Year</b>	<b>All</b>	<b>Other Liab</b>	<b>CMP</b>	<b>WC</b>	<b>PP AL</b>
1998	11%	26%	15%	23%	-4%
1999	18%	47%	17%	32%	0%
2000	21%	44%	23%	34%	2%
2001	9%	27%	4%	21%	-1%
2002	1%	23%	-5%	8%	-3%
2003	-12%	-8%	-13%	-8%	-9%
2004	-18%	-26%	-16%	-19%	-10%
2005	-14%	-22%	-12%	-20%	-9%
2006	-13%	-16%	-15%	-13%	-6%
2007	-7%	-7%	-10%	-4%	-3%
2008	-4%	-2%	-6%	2%	-3%
2009	-2%	0%	-2%	1%	-2%

Source: SNL, 2010

# Accident year and calendar year hindsight emergence

Emerged (redundancy)/deficiency as a % of initial booked reserves



Source: SNL, 2010



# *Implications on profitability*

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## *The current market*

- Lengthy soft market
  - Potentially inadequate rates on recent accident years
  - Possible optimistic pricing & reserving
- 5 consecutive years of reserve take-downs
  - Calendar year operating results propped up by prior year releases
  - Releases mask accident year profitability issues
  - Erosion of reserve redundancies
- Weak macro-economic environment
  - Low investment income

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## *What drives the move from a soft to hard market?*

According to the III, need the confluence of 4 criteria

1. Sustained period of large underwriting losses
2. Material decline in surplus/capacity
3. Tight reinsurance market
4. Renewed underwriting & pricing discipline

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## *Prospective implications of underwriting cycle*

- **Is trouble ahead?**
  - **Several consecutive years of inadequate rates**
  - **Reserve redundancies used up?**
  - **Low investment returns**
- **Market reactions before turn?**
  - **M&A**
  - **Coverage modifications**

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*Thank you*