



ISO Study of P-C Industry LLAE Reserve Adequacy

John J. Kollar
Vice President



ISO P-C Industry Loss Reserve Study

- Schedule P data as of year-end 2006 purchased from A.M. Best
- More than 850 insurer groups included
- More than 95% of LLAE reserves for studied lines

Lines Studied

- PP Auto Liability
- HO/Farmowners
- Com. Auto Liability
- Other Liab.
Occurrence
- Products Occurrence
- Other & Products
Liab. Claims-Made
- Comm. Multi-Peril
- Workers
Compensation
- Med Mal Occurrence
- Med Mal Claims-
Made
- Reinsurance (Non-
Proportional Liability)

Some Key Points

- Excludes reserves for environmental and asbestos (E&A) claims
 - *Possibly \$20B to \$30B deficient*
- Assumes losses from 9/11 were fully developed at year-end 2006
 - *Est. direct insured losses: \$25B*
 - *U.S. net insured losses: \$7B to \$8B*
- Adjusts for 2005 hurricane losses

Methodology

- Industry paid and case-incurred triangles, with some editing to assure data quality
- Multiple link-ratios (e.g. 3-year average, modified Bondy best 3 of 5, etc.)
- Multiple tail factors (conversion factors, modified Bondy, power curves, etc.)
- Professional judgment
- Consistent with prior ISO studies

Conventions

- Each deficiency/redundancy expressed as a percentage of ***indicated full-value*** reserve
 - Positive numbers indicate ***deficiencies***
 - Negative numbers indicate ***redundancies***

Summary of Preliminary Indications

	<u>Paid</u>	<u>Case Incurred</u>
• Lines Studied	- 7%	- 4%
• All Other Lines	- 3%	- 3%
• Total – all lines	- 6%	- 4%
– In Dollars	-\$27B	-\$18B

Note: Excludes potential deficiencies in reserves for E&A losses.

Preliminary Indications by Line

	<u>Paid</u>	<u>Case Incurred</u>
Priv. Pass. Auto Liability	-2%	-6%
Homeowners/Farmowners	-10%	-11%
Commercial Auto Liability	-11%	-6%
Other Liability – Occurrence	-15%	-11%
Products Liability – Occurrence	-14%	+1%
Other & Prod. Liab. – Claims Made	-4%	-9%
Commercial Multi-Peril	0%	-1%
Workers Compensation	-2%	0%
Med. Malpractice – Occurrence	-25%*	+2%
Med. Malpractice – Claims Made	-35%	-24%
Reins. – Nonproportional Liab.	- 1%	+10%

* Largely reflects sparse data for 2006, the least mature accident year.

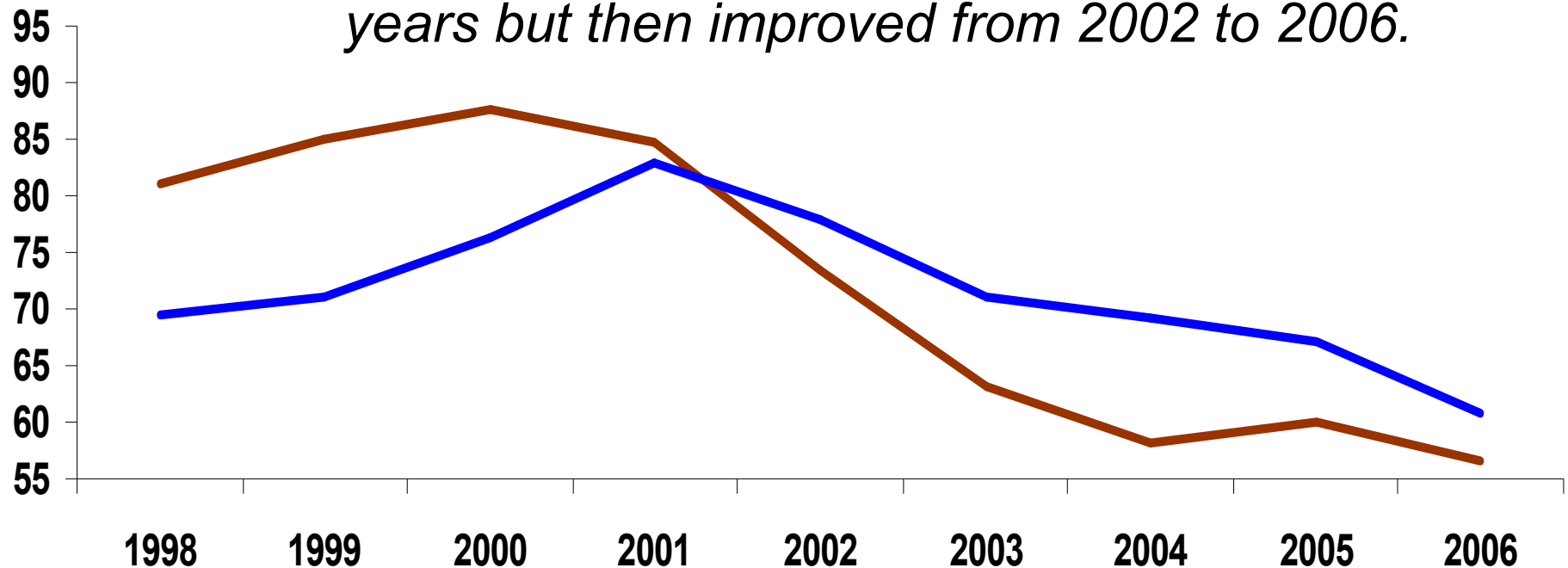
Perspective

- **Reserve adequacy has improved for 5 consecutive years**
 - Reserves were about 3 percentage points more adequate at year-end 2006 than at year-end 2005
 - Reserves were about 25 percentage points more adequate at year-end 2006 than at year-end 2001

LALAE Ratios: Accident Year vs. Calendar Year

Percent

Reserve adequacy deteriorated for at least 4 years but then improved from 2002 to 2006.



— Accident Year

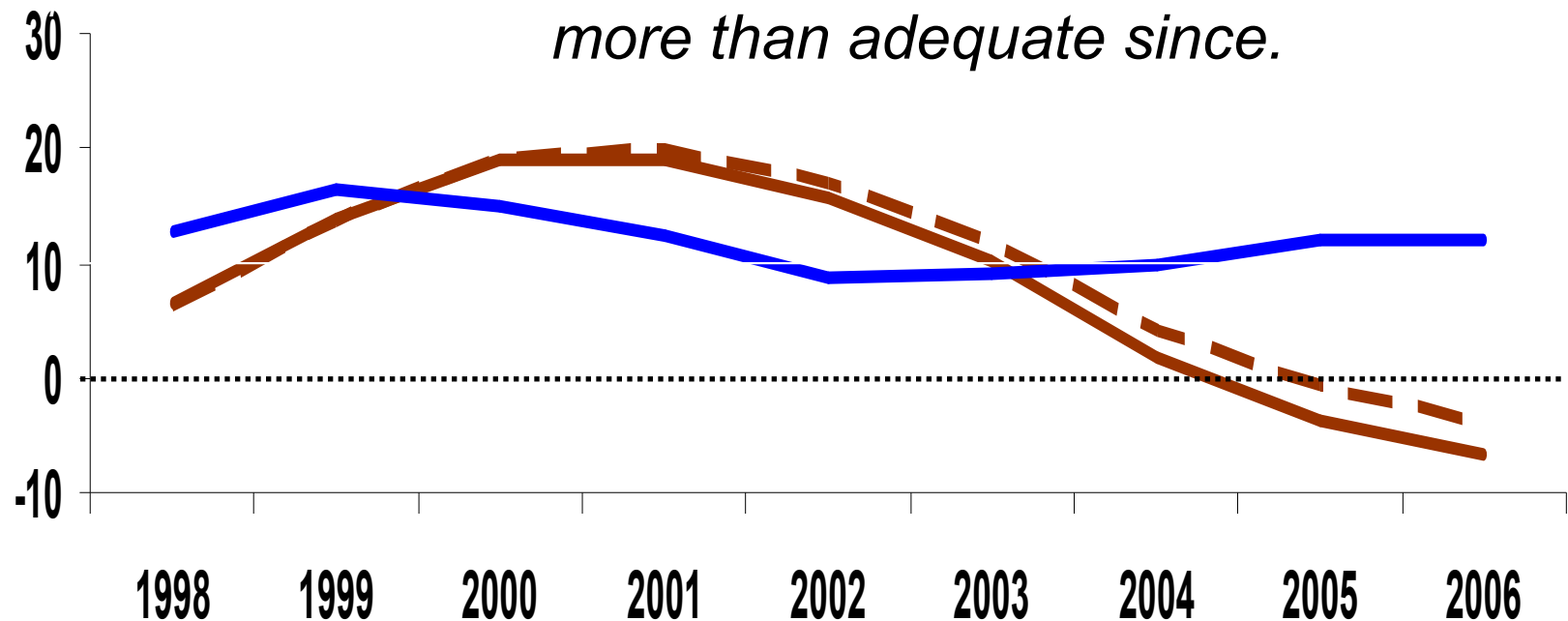
— Calendar Year

Note: Data for ISO studied lines.

Retrospective Estimated Deficiencies & Economic Discount, All Studied Lines

Discounted reserves were inadequate from 2000 to 2003, but have been more than adequate since.

Percent



— Paid Link Ratio

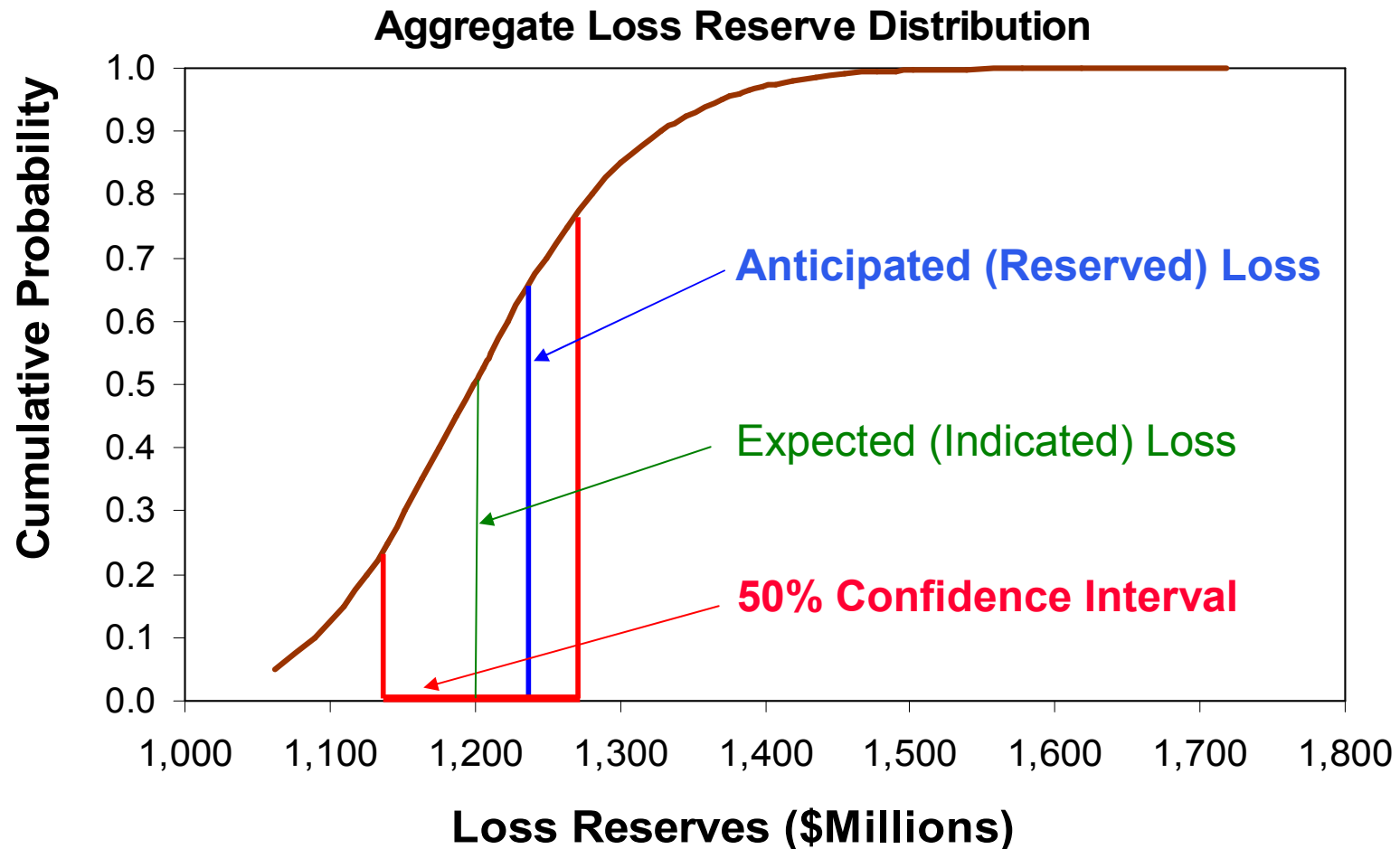
- - Case-Incurred Link Ratio

— Compound Discount Factor

Has the Pendulum Swung Too Far?

- Uncertainty about ultimate losses – are redundancies *real* or merely *apparent*?
- Recent experience has benefited from tort reform and benefit changes, but the legal and political pendulums swing both ways.
- Reserving correlated with underwriting cycles and overall industry profitability.

Confidence Interval and Aggregate Loss Reserve Distribution - Illustrative

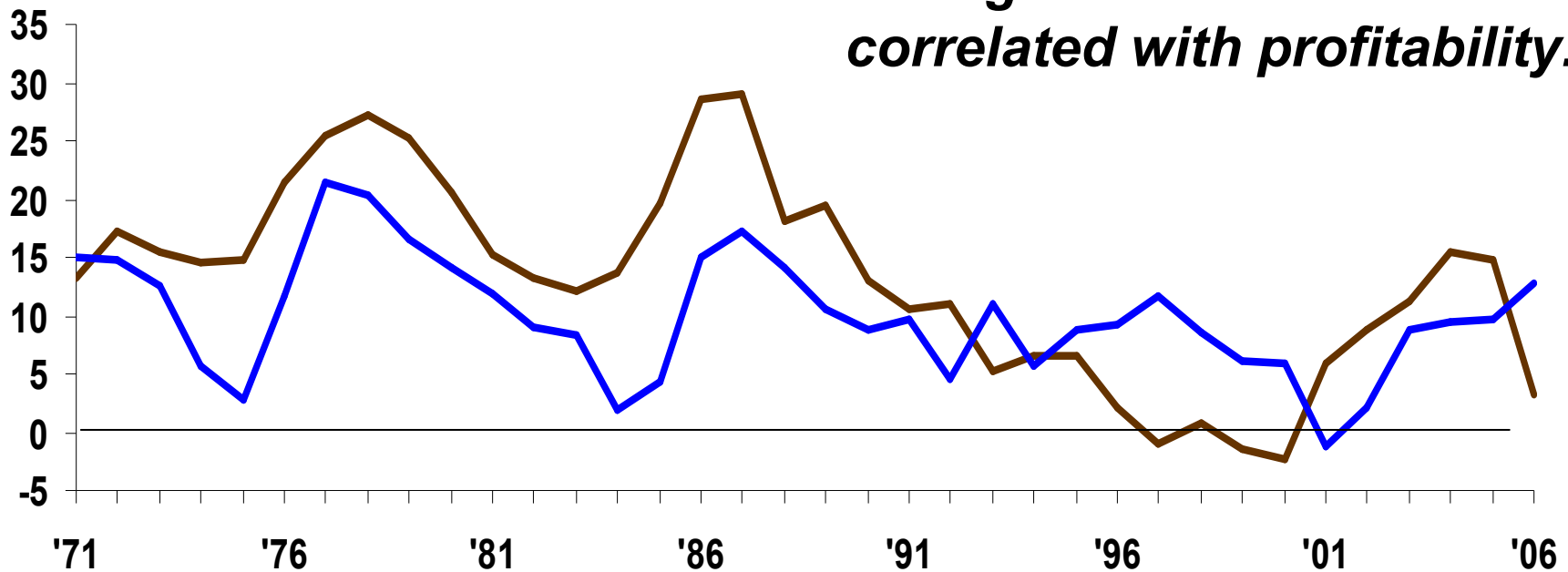


Tort Reform & Benefit Changes

- U.S. Supreme Court has limited punitive damages.
- Many states have enacted tort reforms, particularly w.r.t. medical malpractice claims
- California & some other states have enacted benefit changes curtailing workers comp claim costs.
- Other reforms and judicial decisions have reigned in asbestos costs, at least for the moment.
- But the trial bar and populist politicians will respond, and insurers remain exposed to risks that have yet to emerge.

Loss Reserve Changes vs. Industry Profitability, All Lines

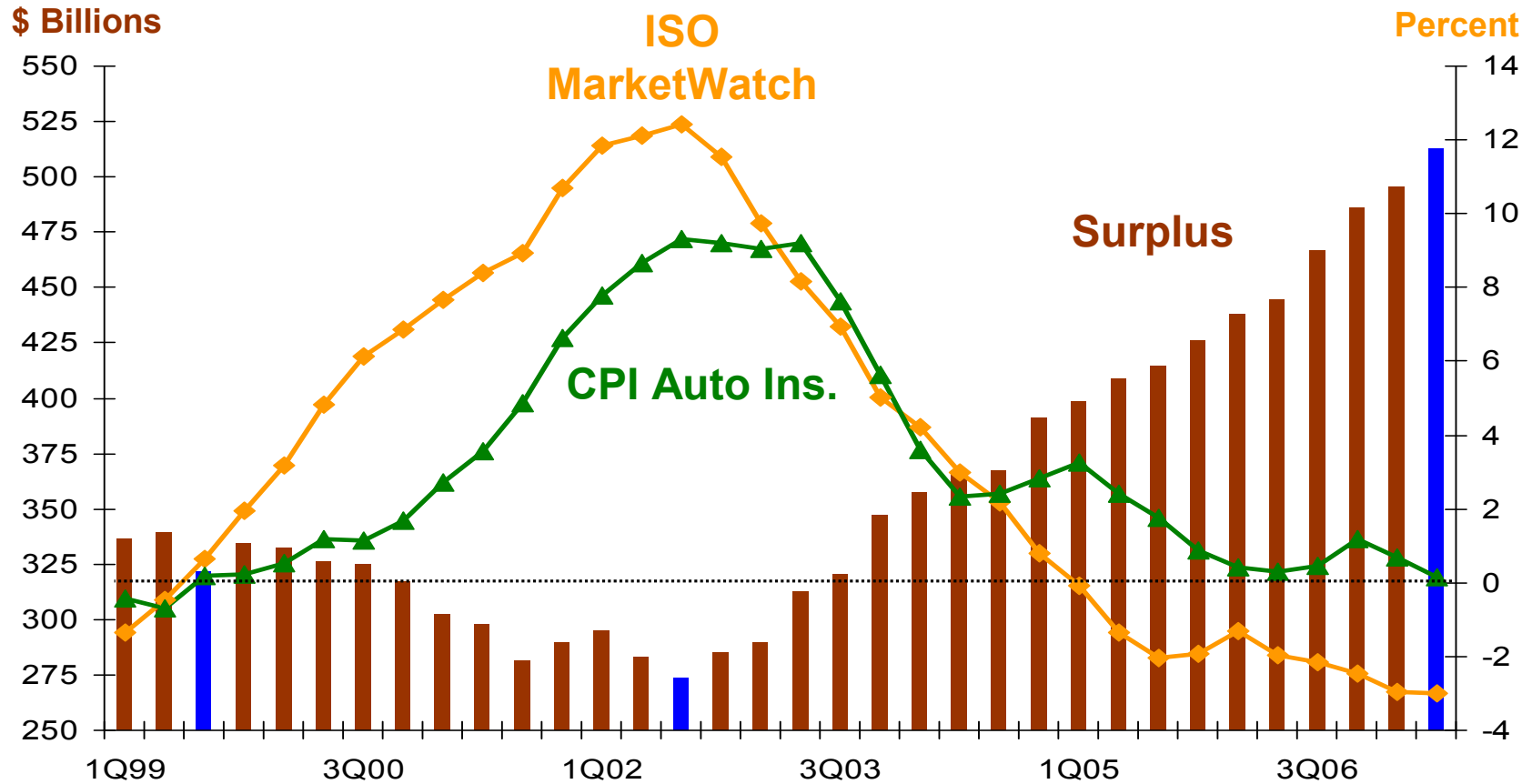
Percent



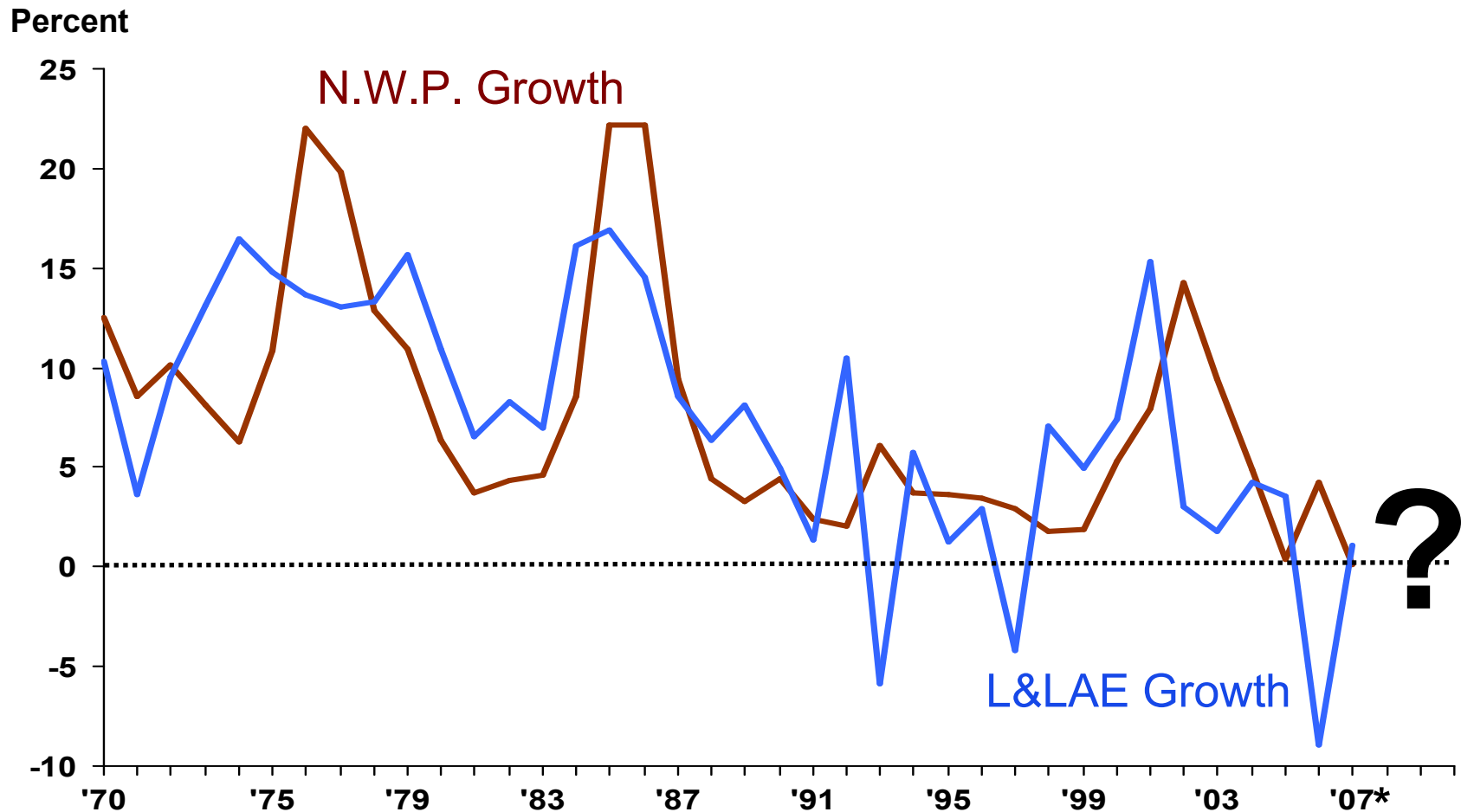
— Change in LLAE Reserves / Paid LLAE

— GAAP Return on Average Net Worth

Surplus vs. Changes in ISO MarketWatch Commercial Premiums on Renewal and the CPI for Auto Insurance



Net Written Premiums vs. Loss and Loss Adjustment Expenses Incurred, 1970 to 2007



* Based on data through 6-months.