

OLIVER WYMAN

Financial Services

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Cycle Drivers and Strategies

CAS Cycle Seminar

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Four Parts

1. History
2. Theory
3. Prognosis
4. Possible management responses

1. History

ROE History

P&C Industry ROE from 1950

- Not really a cycle

- Not regular

- Sharp rises and gradual declines

- Capacity crunch creating hard market followed by gradually increasing competitive pressures

- Pre -1970 regulatory cycle

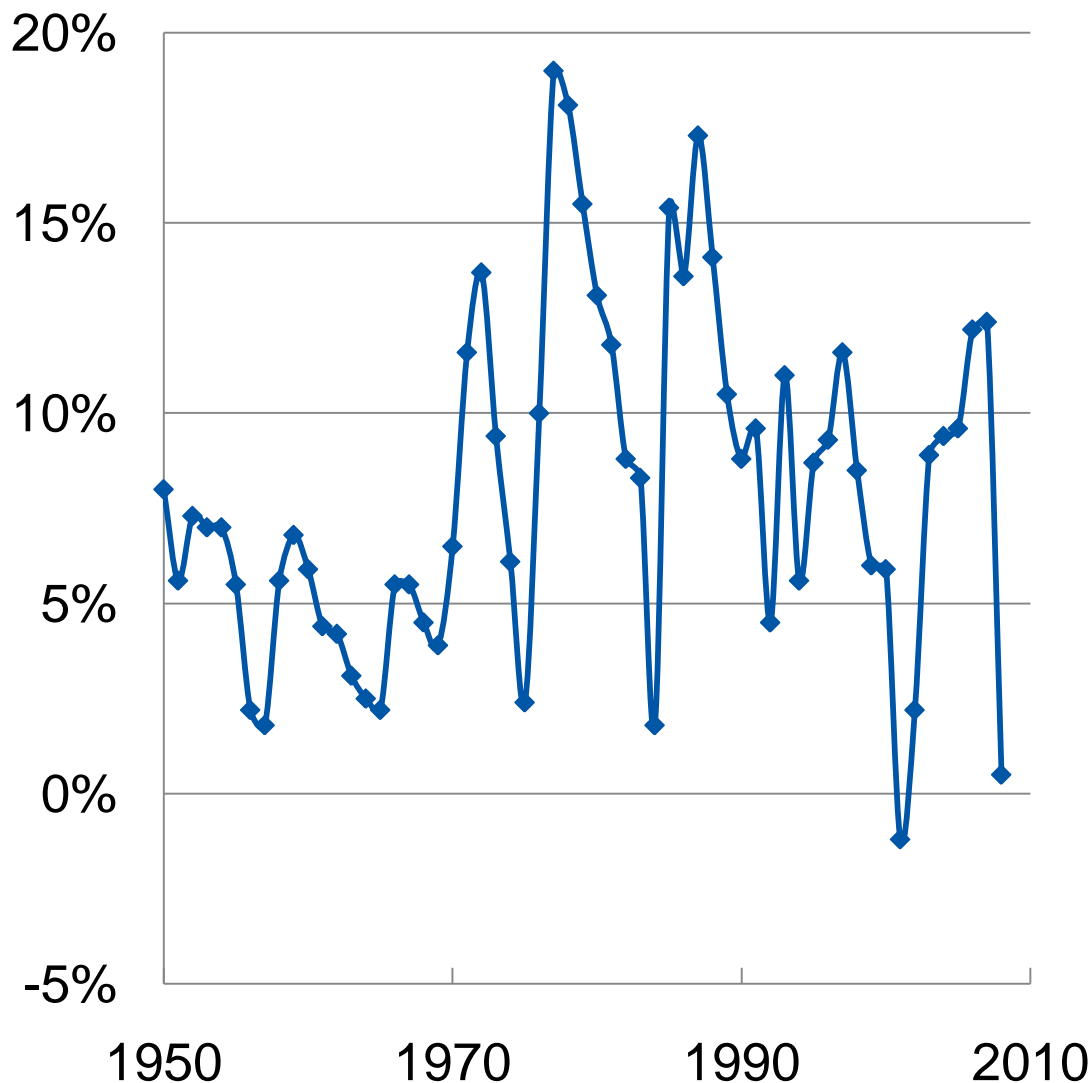
- Regulators in charge of rates and solvency

- Conflicting goals pushed rates down until solvency crisis appeared

- Panic increase in rates

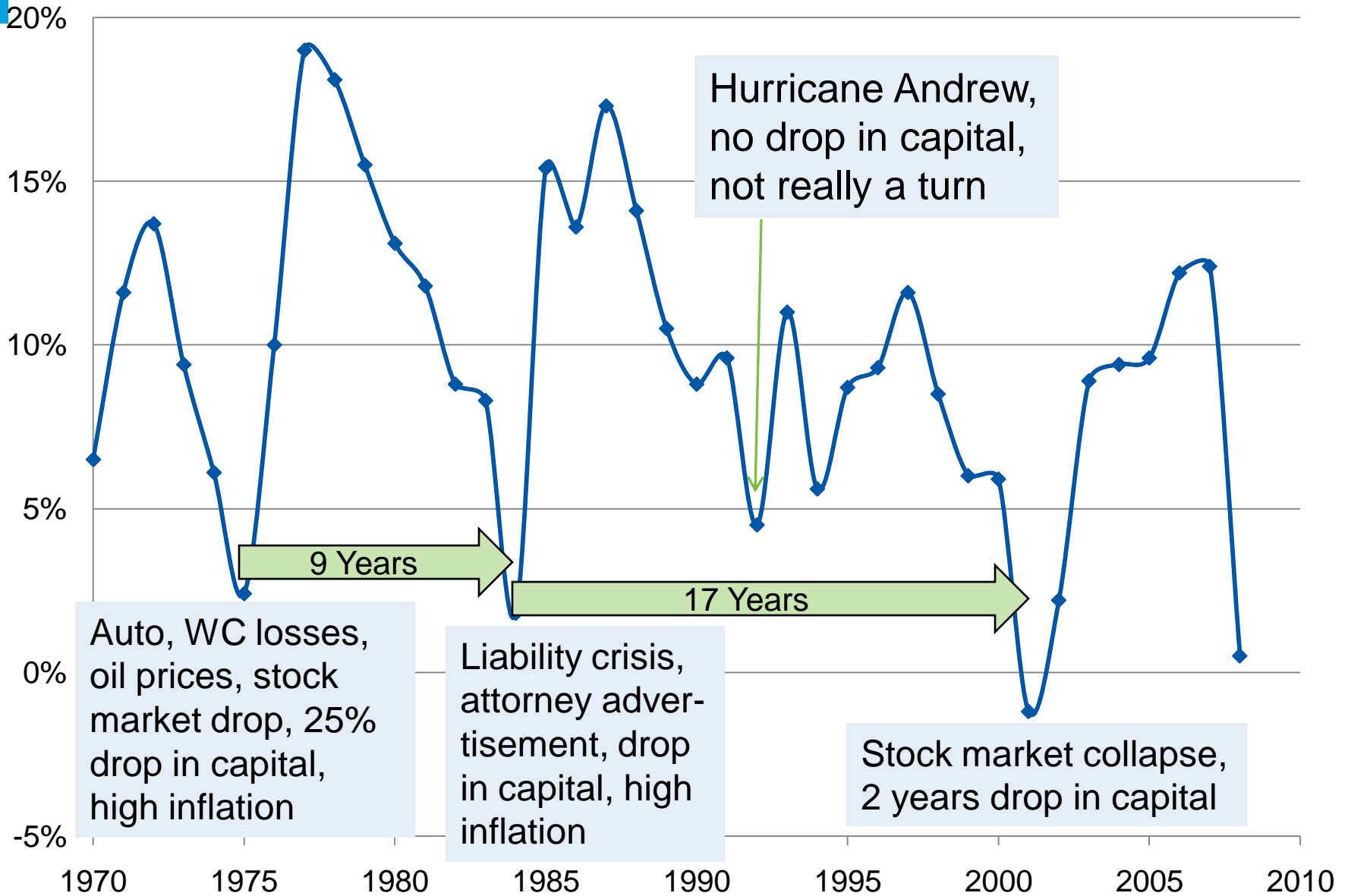
- Similar shape to later periods but more modulated fluctuations

- Will focus on 1970s on



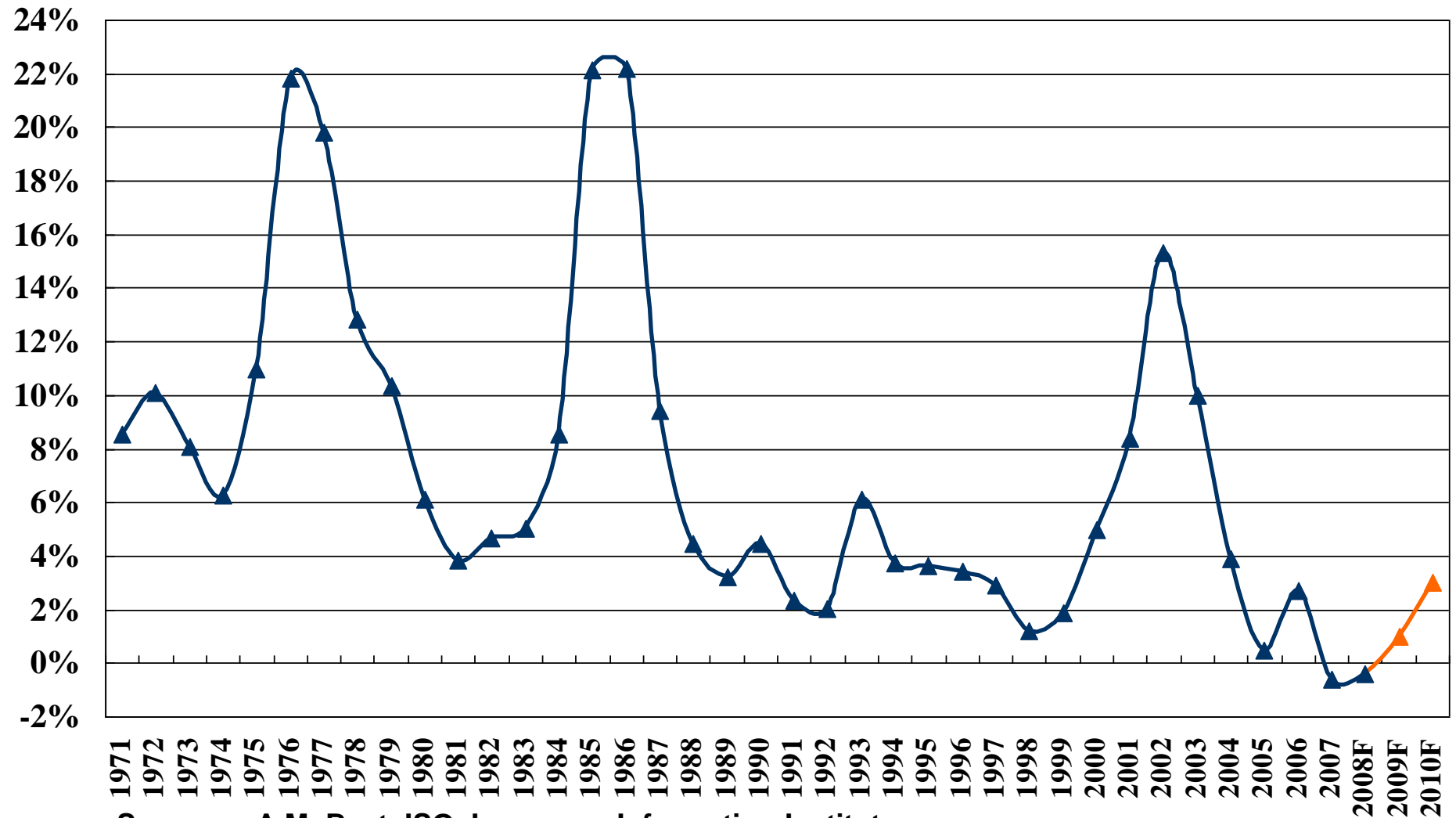
Turns in Cycle

P&C Industry ROE from 1970



Premium Growth in Cycle

2007, 2008 first declines in industry premium since 1943



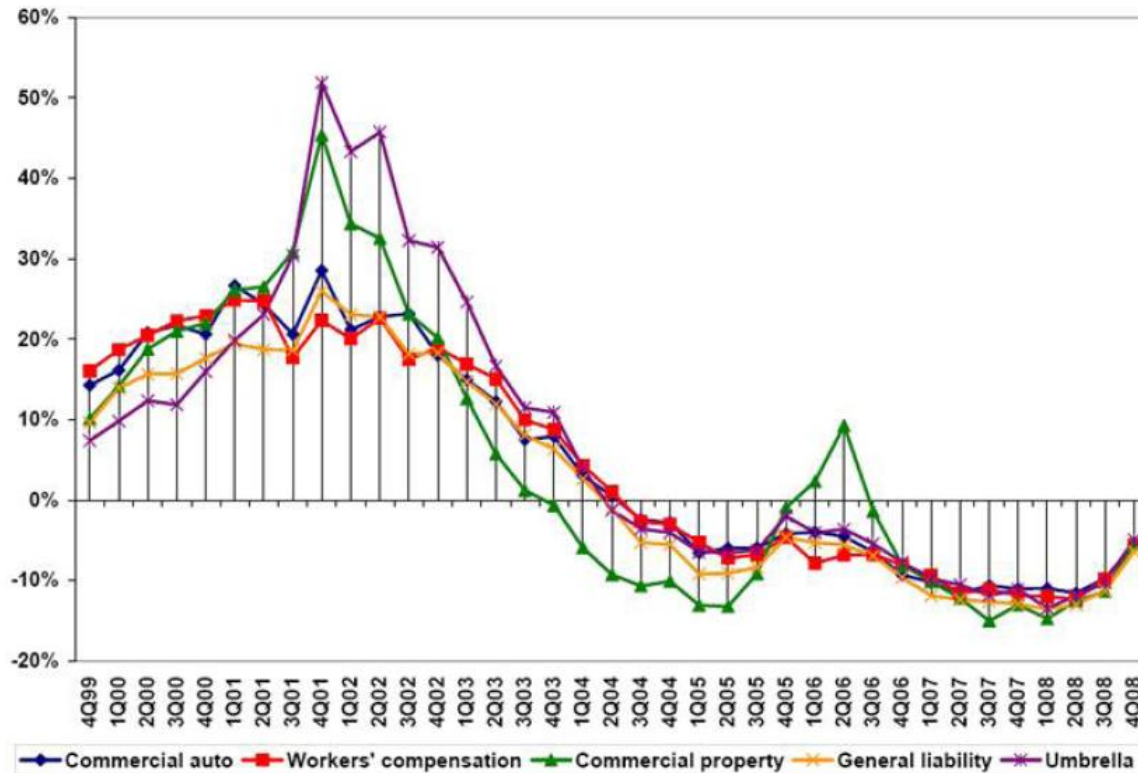
Sources: A.M. Best, ISO, Insurance Information Institute

Recent detail

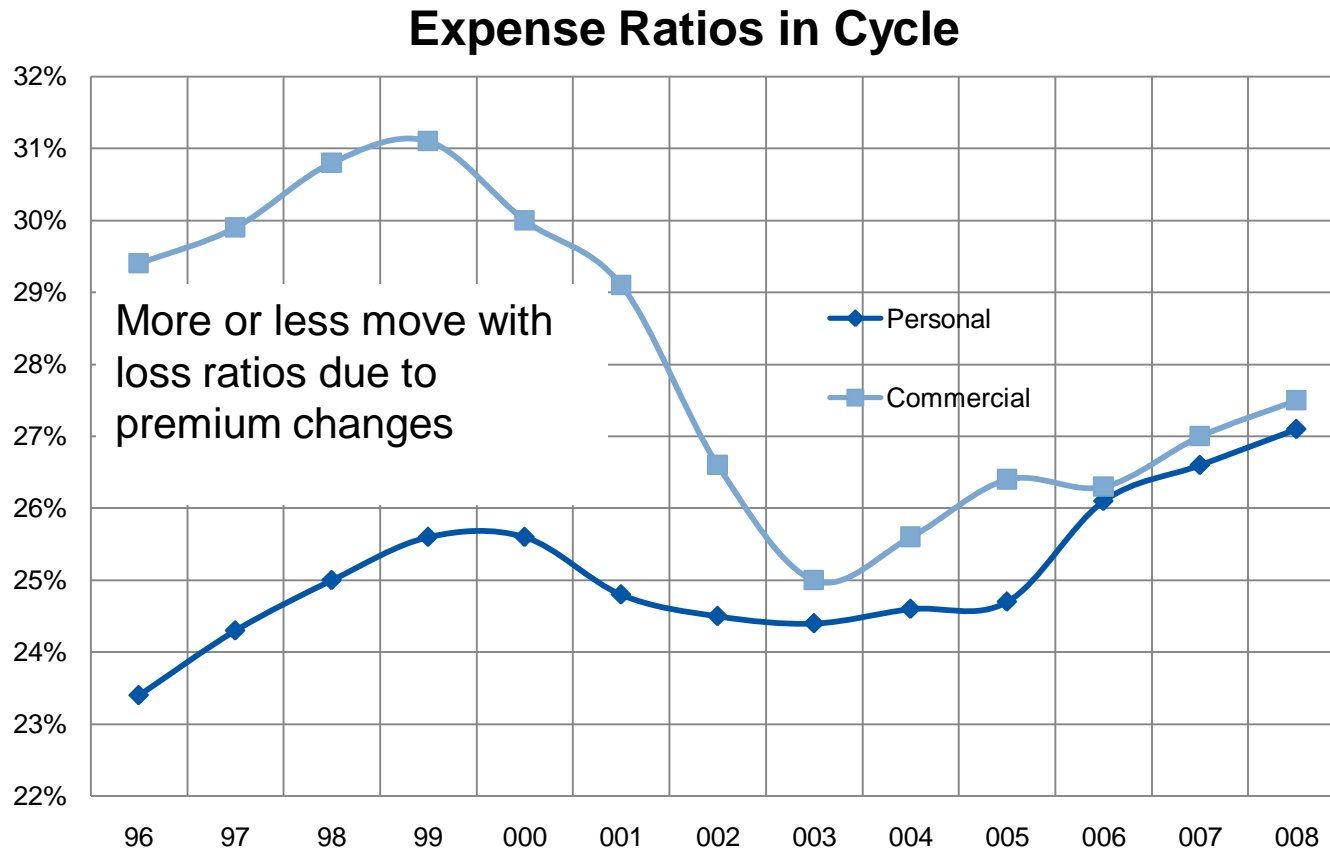
Pricing declines showing signs of easing

Commercial Insurance Pricing
Average Rate Change by Line
4Q1999–4Q2008

Source: Council of Insurance Agents & Brokers



Expense Ratios in Cycle



*Ratio of expenses incurred to net premiums written.
Source: A.M. Best; Insurance Information Institute

Combined Ratio vs. By-Line Premium Growth

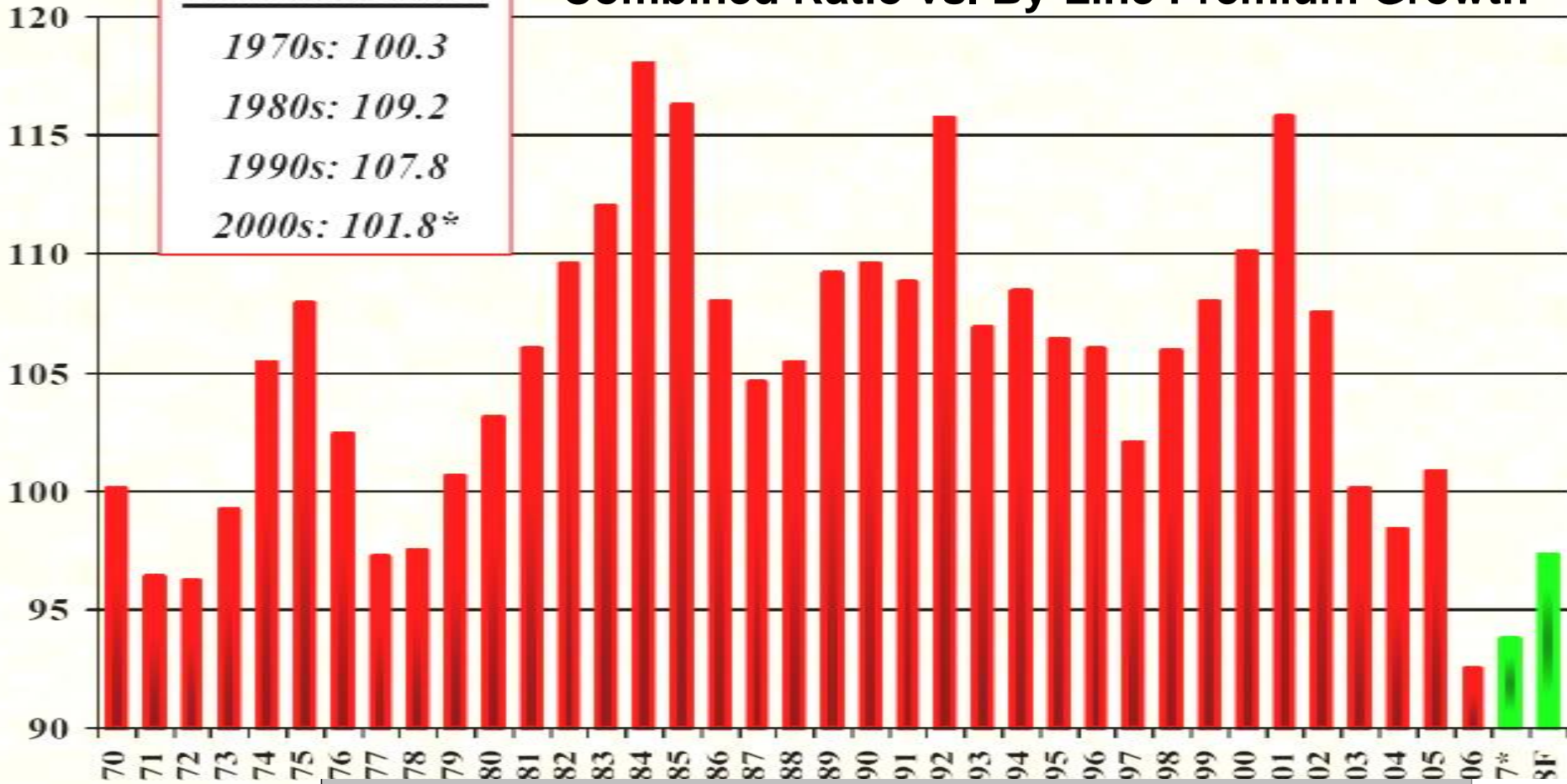
Combined Ratios

1970s: 100.3

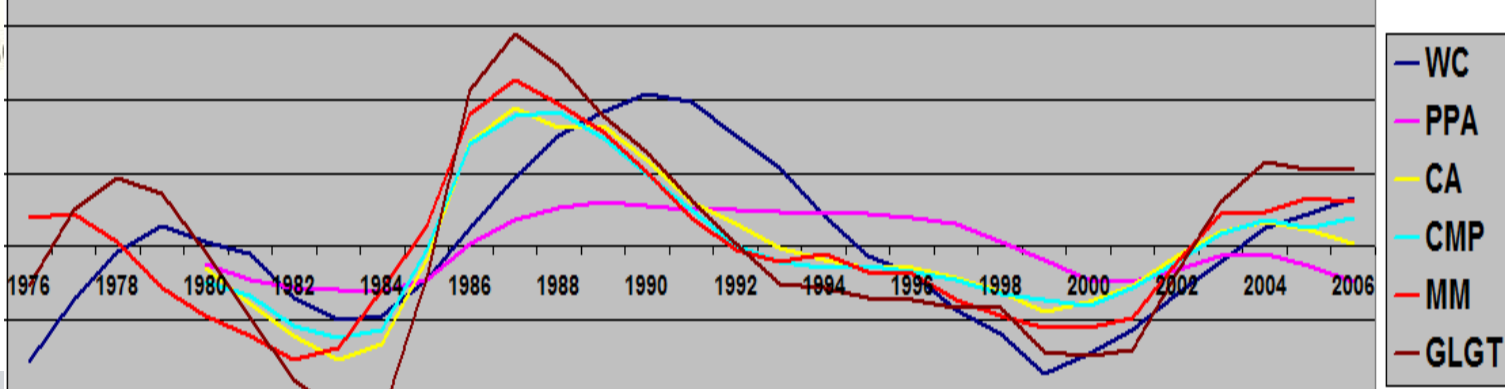
1980s: 109.2

1990s: 107.8

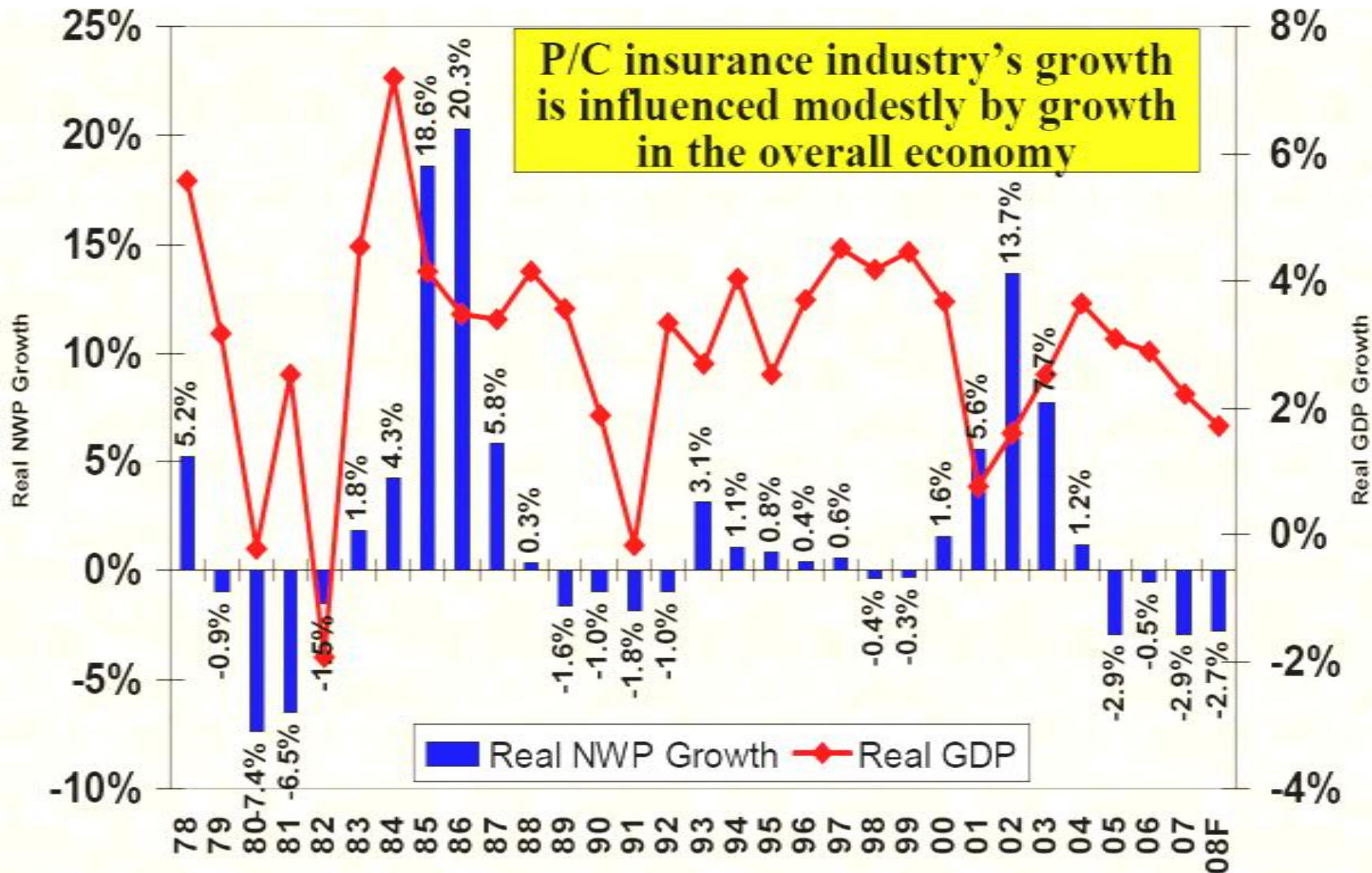
2000s: 101.8*



Sources: A.M. Best; IS



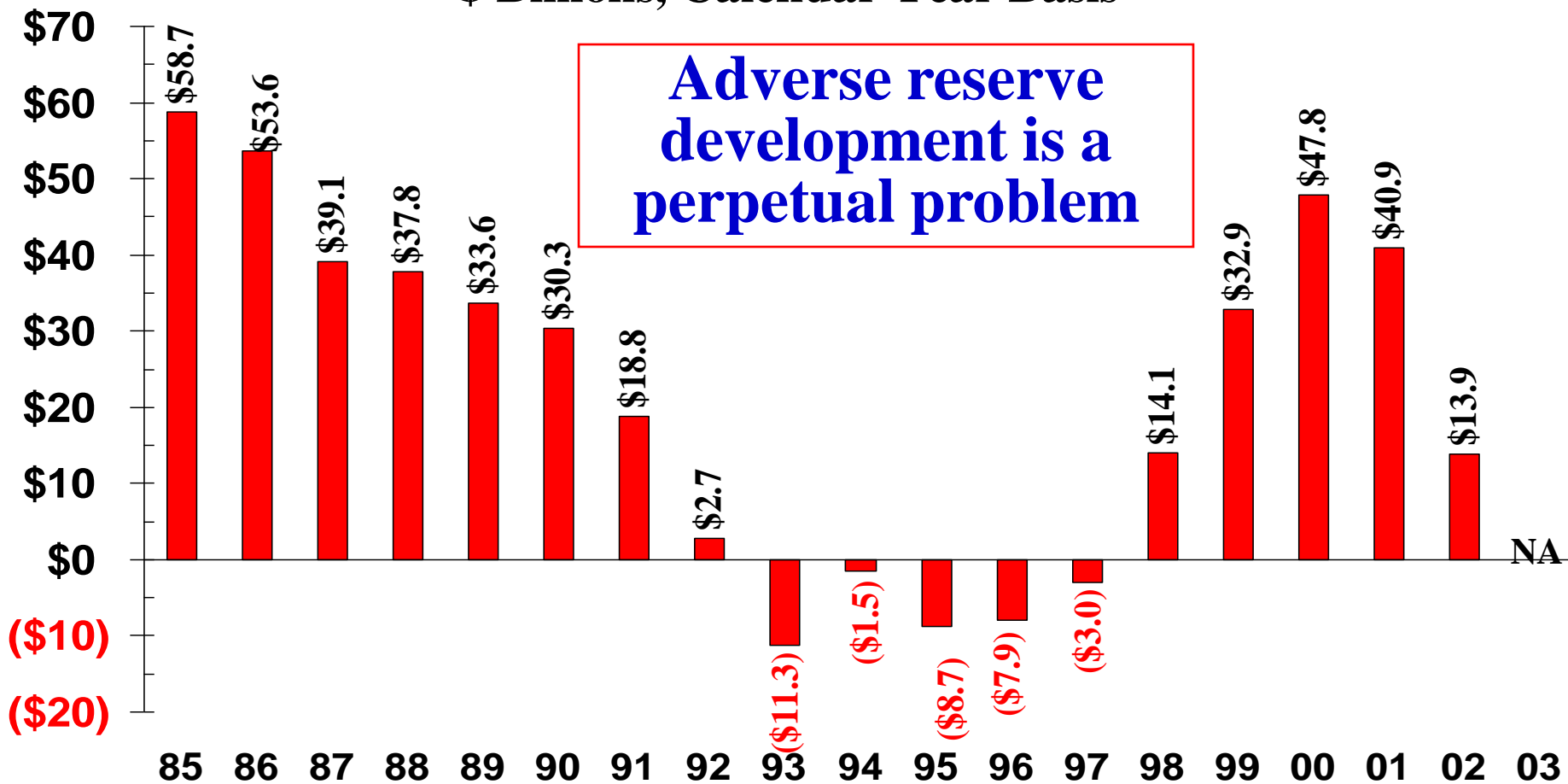
Premium Growth Linked to Economic Growth



Sources: A.M. Best, US Bureau of Economic Analysis, Blue Chip Economic Indicators, 2/08; Insurance Information Inst.

Reserve Strengthening Dampens Cycle CALENDAR Year Loss & ALAE Reserve Development

\$ Billions, Calendar Year Basis

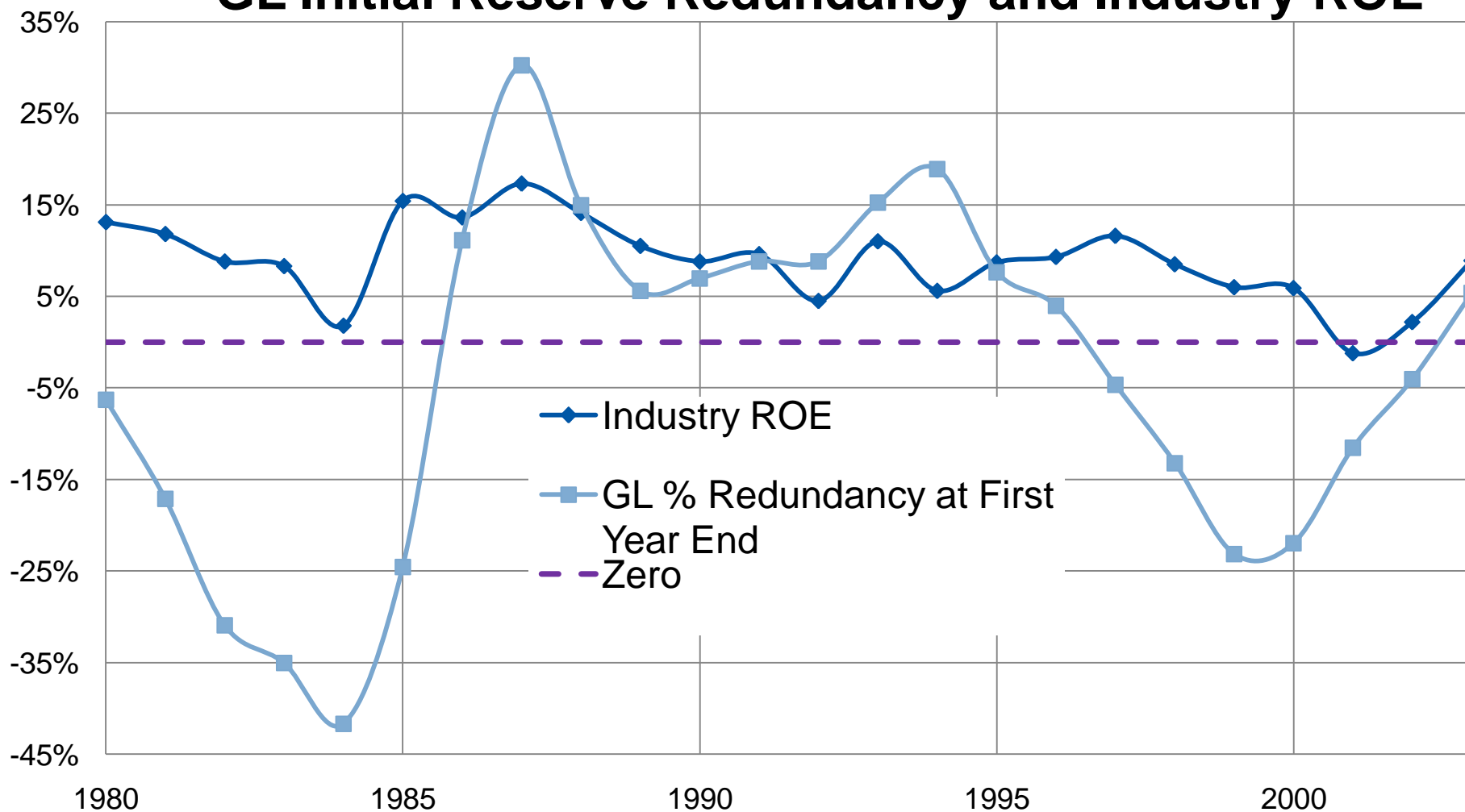


*Negative numbers indicate favorable development; positive figures represent adverse development.

Figures represent total development relative initial calendar year reserves

GL Reserve Adequacy and Cycle

GL Initial Reserve Redundancy and Industry ROE

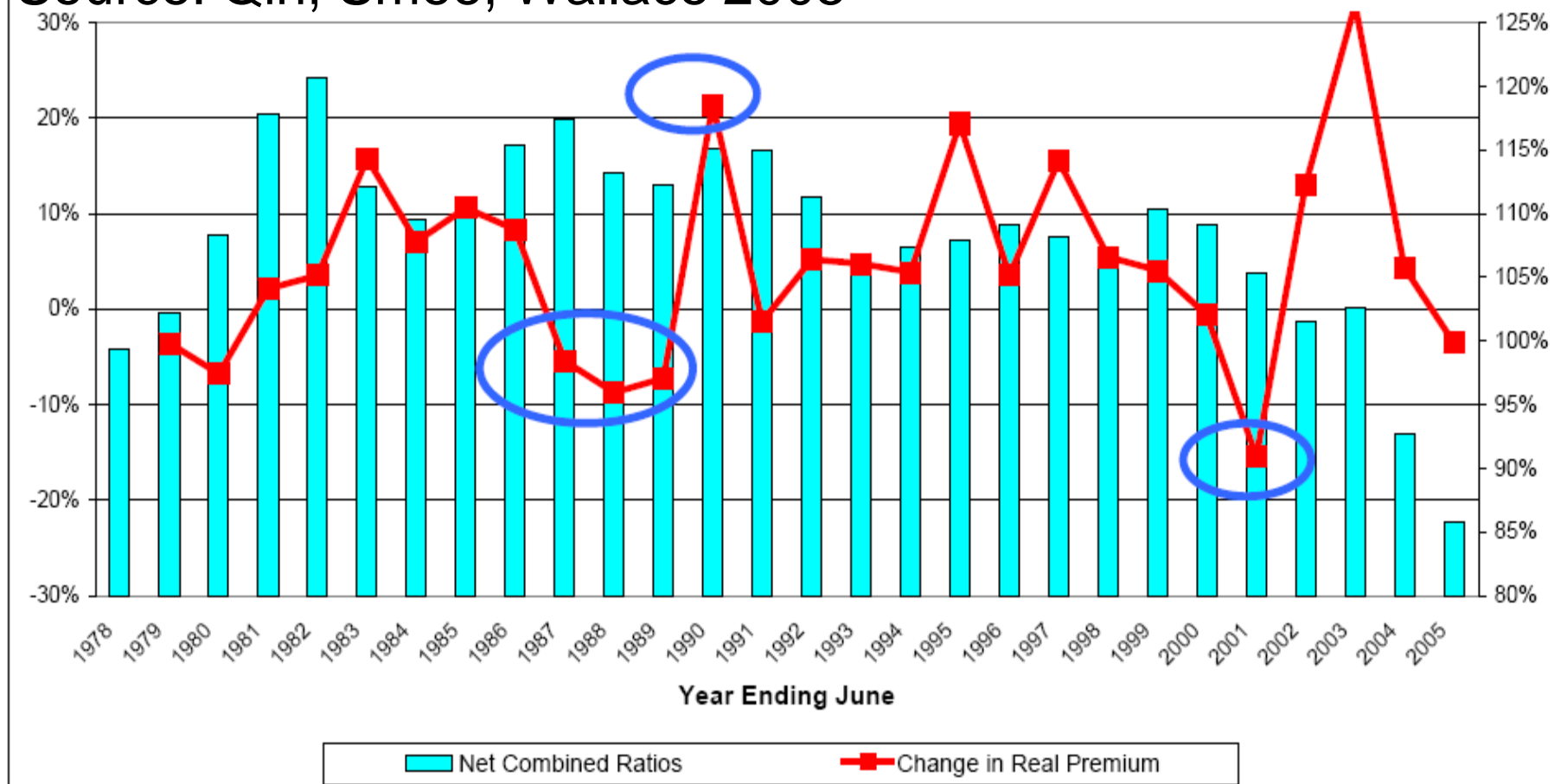


Source: Underwood and Zhu *Variance* paper.

Not Just US – e.g., Australian Cycle

Combined Ratios vs Change in Real Premium

Source: Qin, Smee, Wallace 2005



Note: The left scale is % Change in Real Premium, and the right scale is Net Combined Ratio.

2. Theory

Basics

- Not a cycle
 - Not fixed time period, like full moon
 - More like bull and bear markets for stocks
 - Hard and soft markets exist but for varying periods
- Drivers
 - Capital level of industry
 - Hard market after capital shocks
 - Gradual softening as capital grows and enters
 - Macro factors
 - GDP growth
 - Inflation
 - Asset returns
 - Cat events
 - Information lags
 - Time for new trend to get into rates and reserves could be a few years
- Pessimistic (realistic?) view
 - Soft market is norm in mature industry, with occasional hard markets
 - Need long-term growth strategy recognizing this

Modeling the cycle

- Time series model
 - AR1 model says autocorrelation, AR2 can be cyclical
 - For 1970 – 2008 ROE, best AIC is AR1 model
 - Really not a cycle
 - “a dynamical system with feedback and/or external shocks but slow adjustment and possibly inadequate damping (momentum and overshoot)” (John Major, Guy Carpenter book)
- Information lag modeling since Venezian 1985 JRI
- Investment income as a source since Wilson 1981 CPCU
- Capacity shocks – Gron MIT PhD 1990, Rand 1994
- Competitive pressures since Feldblum 1990 Spring Forum
- Combined models:
 - Fung et. al. 1998
 - Schnieper 2005

Schnieper 2005 Model

- Insurance markets are driven by supply and demand
- Supply is driven by the amount of capital (retained earnings, capital flows)
- Demand is driven by the size of the economy
- External factors (changes in the value of financial assets, adverse loss developments)
- Profits are defined by the equilibrium of supply and demand
- Profits feedback into capital

Fung, Lai, Patterson, Witt JRI December 1998

Multivariate time-series regression for several lines

- Loss shock – explains 57% of variability in premiums from time-series prediction
 - Little effect in next year
 - Increases premiums for three years after that
- Changes in surplus – explains 14% of variability
 - But often only one or two years later
- Changes in interest rates – explains 11% of variability
 - More in long-tailed lines – up to 23% in comp
 - But there higher rates give higher premiums, perhaps inflation related
 - Less to none in property lines
 - Lagged effects here too
- Uncertainty (measured by variance of losses and interest rates) explains 10% of the variance overall and more by line
 - It looks like insurers tend to increase rates in times of greater uncertainty

3. Prognosis

Cyclical Indicators

- Capacity
 - Significant drop in surplus in 2008
 - Usually leads to hardening of market, but often with a lag
 - AIG rescue turned what would have been a capacity crunch into increased competition
 - Different numbers ex-Berkshire
- Reserves
 - Reserve drawdowns probably used up already
 - \$5.7B 2007
 - \$11B 2008
 - (Source: S&P Research)
- Investments
 - Hit for some companies in 2008
 - Cash-flow underwriting not likely soon
- Little room for softening and any shock could cause crunch

Inflation Shock Ahead?

- Inflation low now – 2% annual deflation in July lowest in 60 years
- Economic expansion expected to be slow
- But:
 - Fed has expanded monetary base extraordinarily
 - Theoretically can draw down when it needs to
 - But there will be pressure not to
 - Accommodate growing Federal deficit
 - Don't choke off recovery
 - Dollar could decline producing inflation in \$ terms
 - Commodity spot prices up 20% in 6 months (not annual rate)
 - 3 month CPI growth 5% annual rate
 - Wage levels up during recession
 - Public discontent could be used to increase jury awards
 - No medical cost containment in sight
- Even inflation shock in 2012 could make 2009 unprofitable
- Increased risk of inflation in itself changes capital costs by line

Will It Be Different This Time Around?

- New Management: Benefit of 20/20 Hindsight
 - Most (re)insurer CEOs have been replaced over past 5 years
 - New management teams not eager to repeat past mistakes
 - Management mantra: preaching disciplined UW & pricing
 - But: level of competition not under management control
- Information Flow:
 - Many insurers have now implemented MIS systems that reduce recognition lags & reaction times and increase info flow
 - But: nature of business has information lags
- Compensation Structure: Not Just Volume Based
 - Stock incentives playing a lesser role
 - Strict adherence to UW manual and pricing
- In US, Sarbanes-Oxley
 - CEO/CFO's personal assets on the line
 - Board of Directors quality enhanced; less chummy
 - Reserves become more adequate
 - Actuaries, UWs, accountants all on board & getting tough

Will It Be Different This Time Around?

- Ratings agencies
 - Have become *de facto* regulators
 - Keeping a tight leash on upgrades and paying a lot of attention to capital/reserve adequacy & profitability
- Investment analysts
 - Subject insurers to greater scrutiny
- Regulators
 - More sensitive to problem of low prices (or are they?)
- Quasi-Regulators
 - AGs, SEC greater focus on industry
- Better capital management
 - Cat bonds, side-cars, venture capital can move capital in and out easily
- Better at managing existing risks/reducing volatility and anticipating new/emerging risks
 - But: still hit by a lot of big risks and unanticipated exposures

4. Possible Management Responses

If You Are a Bermuda Cat Reinsurer

- 5 employees and some consultants and brokers handle the business
 - So no expense ratio problem
- A fair amount of your capital is from private capital funds that are happy to take it back when prospects are bleak and give you more when opportunities improve
 - You can be ready to jump into the next hard market
- Brokers will give you as much business as you want when the market tightens
 - Don't need to maintain volume now
- Extreme case: you are a sidecar

If You Are Not a Bermuda Cat Reinsurer

- When market prices drop, expense ratios will increase
 - Will be worse if you let go of market share
 - May be possible to outsource some claims handling and underwriting
- If you return capital to investors it may be difficult and expensive to raise more
 - Good chance you will lose more capital as market softens
 - Possibly can set up contingent capital arrangements based on industry conditions or get tight with some investors
- You don't really know if you will be able to grow in a hard market if you give up business and keep capital now
 - Suspect it will not be too easy
 - Renewal business more profitable, so want to at least keep that
 - Buying more reinsurance as market softens may help keep business and have less exposure to market pricing

Personal vs. Commercial Markets

- Commercial cycles tend to be more extreme
- 6 month personal auto policies help manage information lags
- Personal lines use purely actuarial prices
 - Less exposure to underwriter price flexibility
- Business is almost all motor, so can't count on subsidies from other lines
 - Stronger motivation for pricing discipline
- Dominance of few large companies who will more readily walk away from underpriced business

What Can Commercial Lines Learn from Personal?

- Understanding risks
 - Better coding of exposure information and management information systems
- Consider shorter term policies or mid-term rating changes
- Don't lose control of the business
 - Losing control influences cycles in many industries
 - Have quick monitoring of judgment pricing adjustments
 - Be able to monitor changes in terms and conditions
 - Don't incentivize growth during soft markets
 - Try to reward ultimate accident-year results, not calendar-year
- Be sensitive to changes in risk
 - Listen to actuaries' concerns about those little blips in loss costs
 - If you are pressuring reserves down to maintain profits, don't believe your own story

Managing for the Long Term

- In competitive, mature industry, profits will usually be under pressure
 - Hard markets are rare and short
- Managing to survive until the next hard market will not be optimal long term
- Three long-term growth strategies:
 - Acquisition
 - Niche
 - Outperform

Three Strategies

- Acquisition
 - Many insurance markets could stand some consolidation
 - This has been a traditional method of growing business
 - Could lose some market share keeping powder dry for well-timed acquisitions
- Niche
 - Find business segments no one else is in. Some historical examples:
 - Farmer's cars, or those of government employees or ex-military
 - D&O or medical malpractice or other line no one wanted
 - High-status insurer for houses of rich people
 - Actor's faces, pianist's hands, 50th wedding anniversary annuity
 - In general, be able to innovate, charge high prices until competition arises
- Outperform – find some (possibly temporary) advantage
 - Low-expense writer
 - Better rating plan
 - Better risk selection
 - Better use of capital and understanding of risk
 - Improved ALM

Risk and Capital

- Changes in trend related to cycle also increase risk
- First basic issue is formally recognizing length of time capital is held in relationship to payout period
- One way to look at capital cost by line is to charge each line for the option it has to draw down on firm capital if the line's funds are depleted
 - Requires option pricing, but not Black-Sholes, as not normal
 - Price option using mean weighted towards adverse events
 - More uncertainty means higher volatility and so higher option price, so affected lines have relatively higher capital costs even if this is not recognized in the capital allocation
- Reflecting increased cost of capital gives more realistic view of costs and return of each line for strategic planning

ALM Issues

- Right asset management at each point in cycle helps keep odds in your favor
- ALM difficult for P&C
 - Generally positive cash flow needs to be recognized in process
 - Not discounting reserves cuts tie to asset durations
 - Inflation-sensitive liabilities not readily matched by assets
 - TIPS?
- Most reserve models do not explicitly separate payment lags from inflation effects
 - Makes it hard to put in explicit scenarios of inflation risk
- Standard capital allocation and reserve analysis tools send misleading signals

Summary

- Key drivers of cycle are capital, lags, economy
- Usually need drop in industry capital to get hard market
- Prices rise sharply then decline gradually
- Capital getting more flexible, may limit softening of market
- Problems in asset markets may as well
- Improved risk management can help
- Some management of cycle is possible
- Managing for the long-term likely to be more effective for typical insurance companies