



Institute of Actuaries of Australia

XIth Accident Compensation Seminar 2007

The Superimposed Inflation Landscape

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Aims of paper

- Picture of the SI landscape for Australian accident compensation schemes in 2007
- Looks at the “big picture” to give a better understanding of the issues
- Not technical - those expecting mathematical formulae will be disappointed, there are none

Overview of paper

- A publication search on the topic of SI
- Presentation of the results of two past Australian and one international study of SI
- Two brief case studies – WA workers compensation in the late 1990s and NSW CTP in the 1990s
- Survey of Australian accident compensation schemes and a number of actuaries on their current views of SI

Publication search (1)

- Challenges
 - Greg Taylor (editorial BAJ 2002)
- Dangers of Superimposed Inflation
 - Ben Zehnwirth et al (article Jan/Feb2004)
 - Geoff Atkins (paper for Aon Re Conference 2001)
- Disputes
 - Law Society of NSW and NSW WorkCover
 - James Hardy
 - HIH Royal Commission

Publication search (2)

- Measurement
 - Andrew Smith and Mitch Prevett (Stochastic Reserving Methods paper –IAA Reserving for GI Sept 2006)
- Regulatory, Actuarial and Accounting Standards
 - APRA GPS310
 - Institute of Actuaries of Australia PS300
 - Accounting Standard AASB1023
 - Singapore Actuarial Society Guidance Note G01
 - Swiss Association of Actuaries

Superimposed Inflation studies (1)

- Greg Fester 1992 publication on large common law awards
- Conclusion
 - *significant levels of superimposed inflation over the last twenty years, mainly due to increases in the amounts awarded to cover the injured person's needs*
 - *a new class of injury, the ventilator-dependent quadriplegic, has emerged. This has resulted in a significant jump in the size of the largest awards made*

Superimposed Inflation studies (2)

- Trends in Large Common Law Personal Injury Claims (Gae Robinson and Gillian Harrex XIV General Insurance Seminar November 2003)
- Conclusion -
 - *The highest award made in each year has averaged \$11.2 million in the ten years to 2002, compared with \$4.3 million in the previous ten years*
 - *Improved survival of more seriously injured individuals*
 - *Expansion in the heads of damage awarded and the elements of loss compensated*
 - *Compensation better reflects the true needs of the individuals*

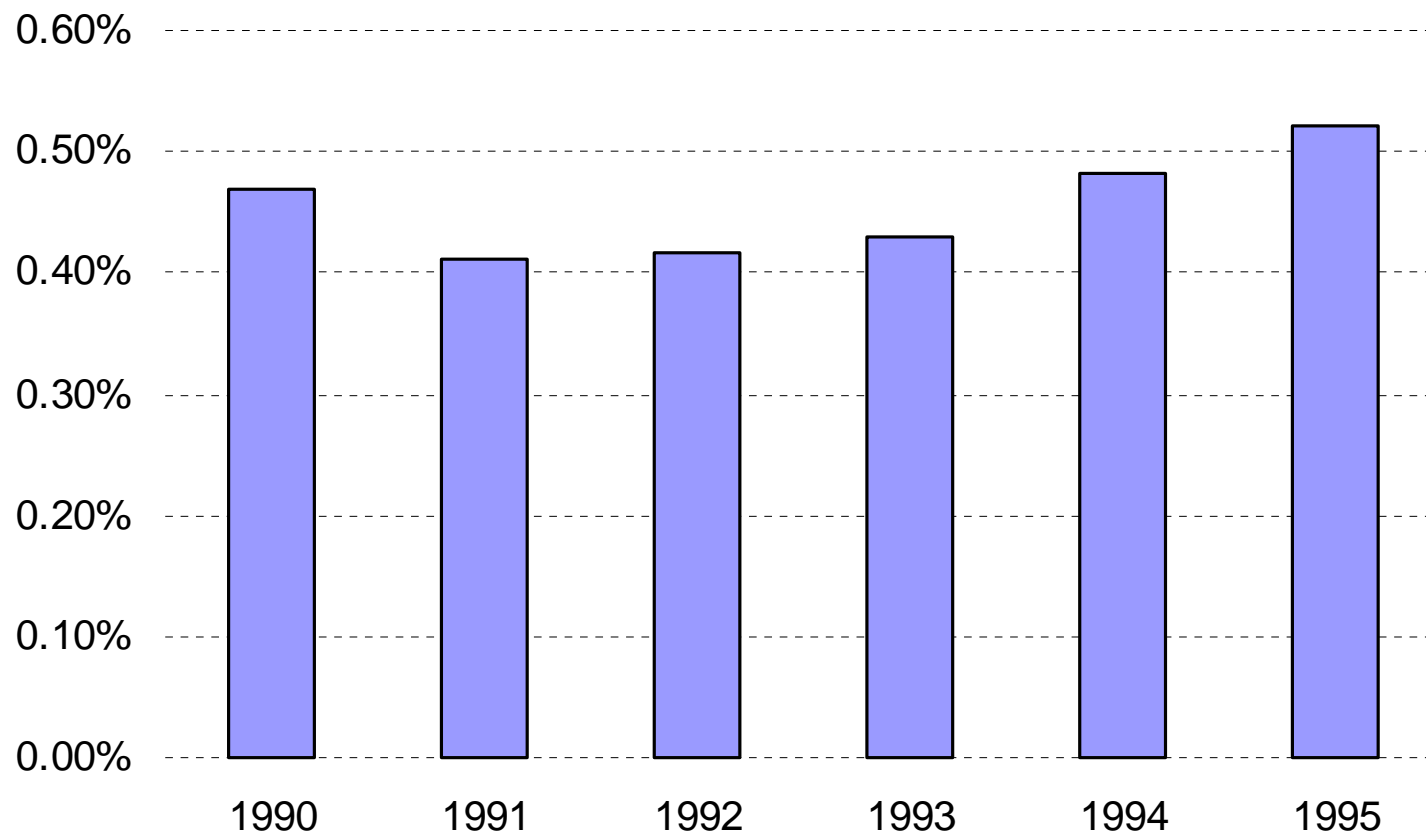
Superimposed Inflation studies (3)

- Swiss Re European Motor Markets 2003
- Focus on insurance damages for seriously injured benchmark case 1990 to 2003
- SI ranged from 1.4% pa (Poland) to 9% pa (UK and Italy)
- Variety of causes – higher p&s, changes to social security, decrease in discount rates, changes to mortality tables, higher care costs and increase in average number of carers,

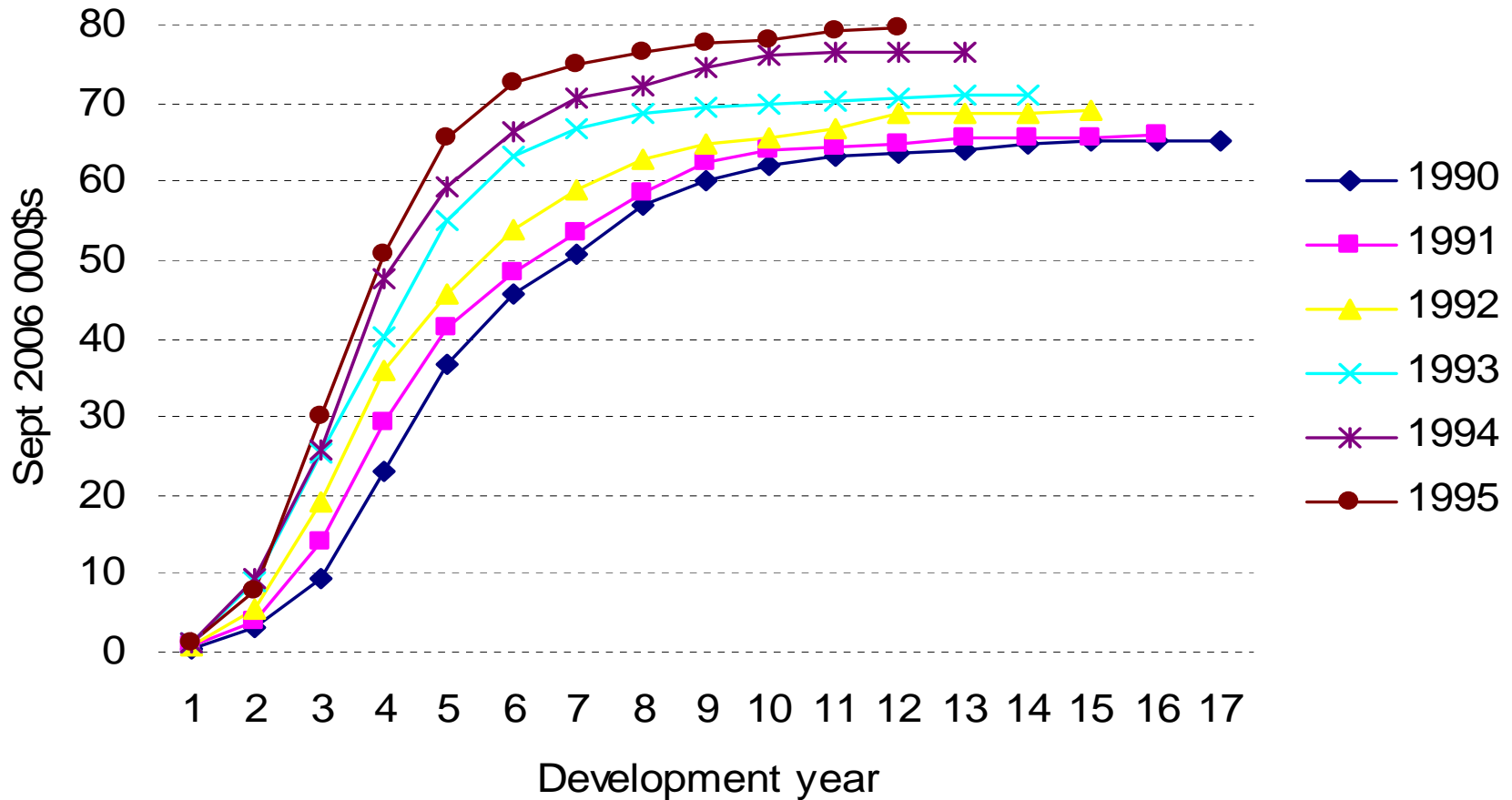
Case study 1 – NSW CTP in mid 1990s

- Hindsight observation of impact of SI on accident year average claim size and frequency
- SI thought to be due to an erosion of threshold and deductible for general damages

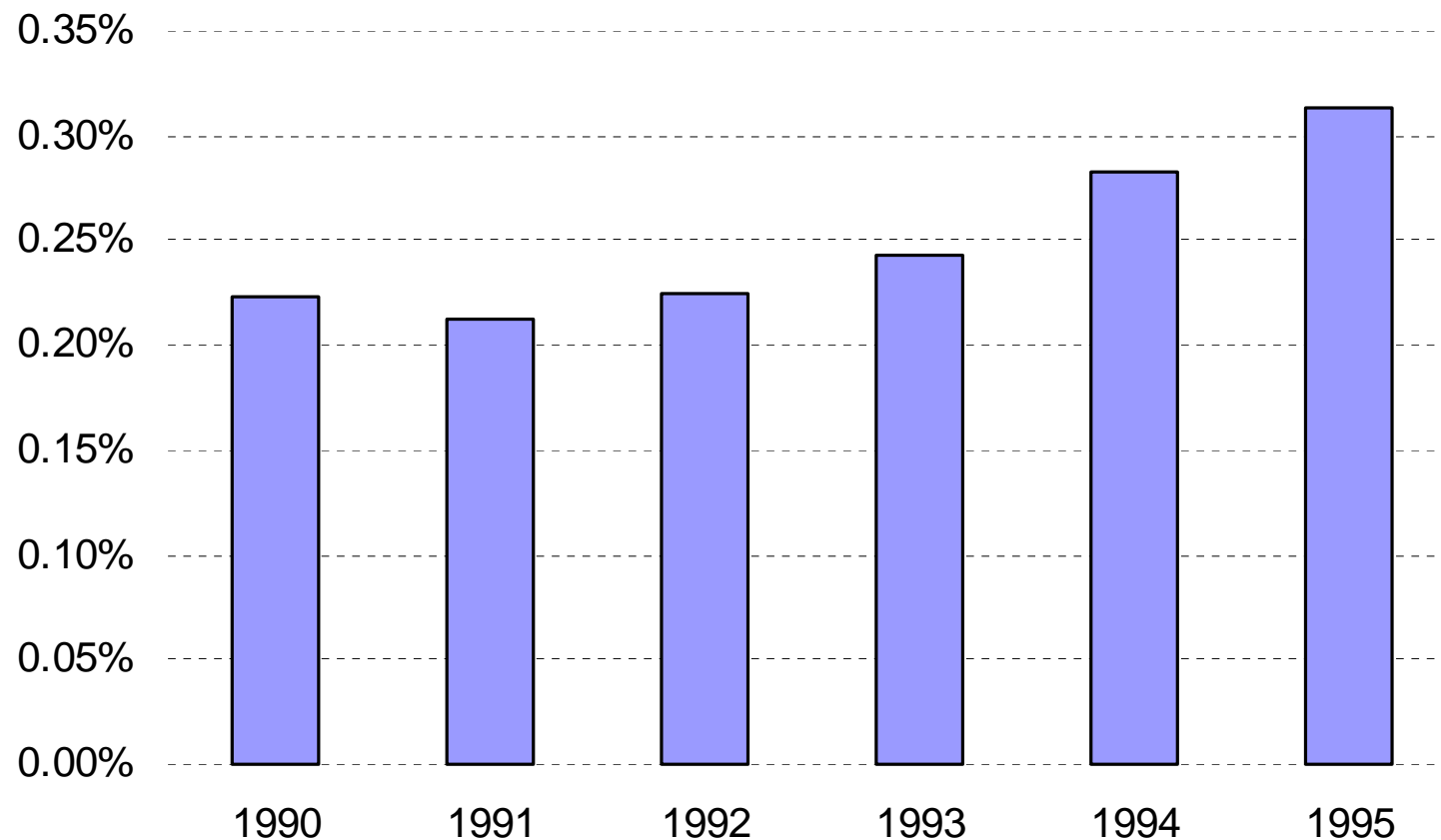
Claim frequency per 1,000 vehicles by accident year (1990 to 1995)



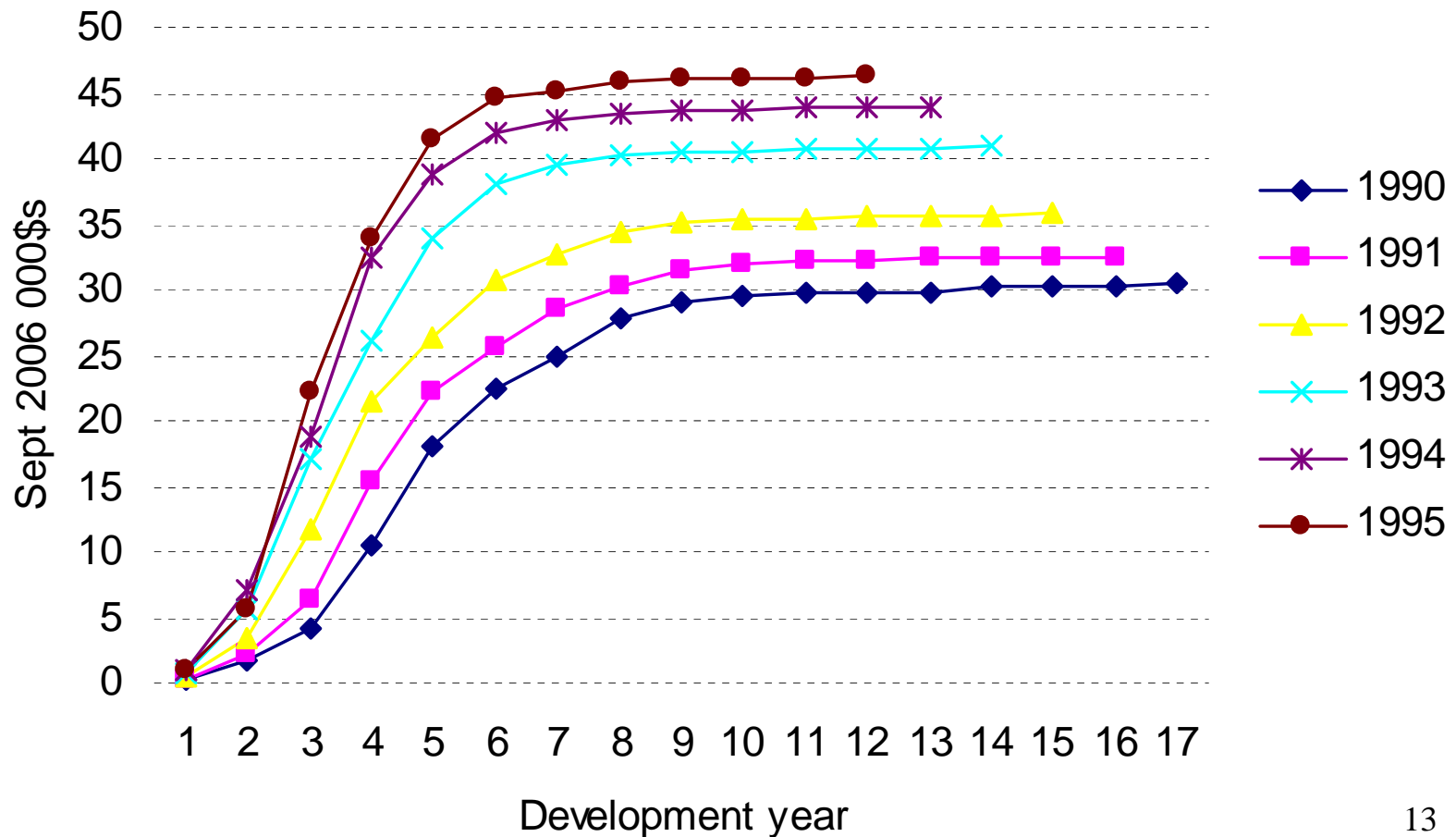
Cumulative PPCI by accident year (1990 to 1995)



Claim frequency per 1,000 vehicles Sev 1 claims by accident year (1990 to 1995)



Cumulative PPCI – Sev 1 claims by accident year (1990 to 1995)



Cumulative PPCI by HoD for 1990 and 1995 accident year

HoD	1990	1995	Change
General damages	21,208	25,344	120%
Economic loss	17,390	18,687	107%
Medical	11,876	16,711	141%
Legal and inv	11,096	17,612	159%
Other	3,512	1,123	32%
Total	65,083	79,478	122%

Cumulative PPCI by HoD – Sev 1 claims for 1990 and 1995 accident year

	1990	1995	Change
General Damages	11,181	17,496	156%
Economic loss	7,296	9,268	127%
Medical costs	3,525	5,587	159%
Legal and Inv	7,585	13,268	175%
Other	781	642	82%
Total	30,369	46,262	152%

Findings

- Impact of SI apparent in all HoD particularly for less severe claims (severity 1)
- Impact particularly large for legal, medical and GDs
- Key driver of SI erosion of GD threshold and flow on impacts to legal and medical costs
- Other drivers of SI also present
- SI led to increases in claim frequency
- Faster payment pattern may have resulted in over estimation of SI

Case study 2 – WA WC in late 1990s

- Scheme Benefits changes in 1993 because of cost pressures
- Thrust of legislation to contain costs by
 - Reducing the potential for workers to make Common Law claims, and
 - Place restrictions on lump sum redemptions
- Changes worked initially but after a “Honeymoon” period costs escalated rapidly

Common law thresholds

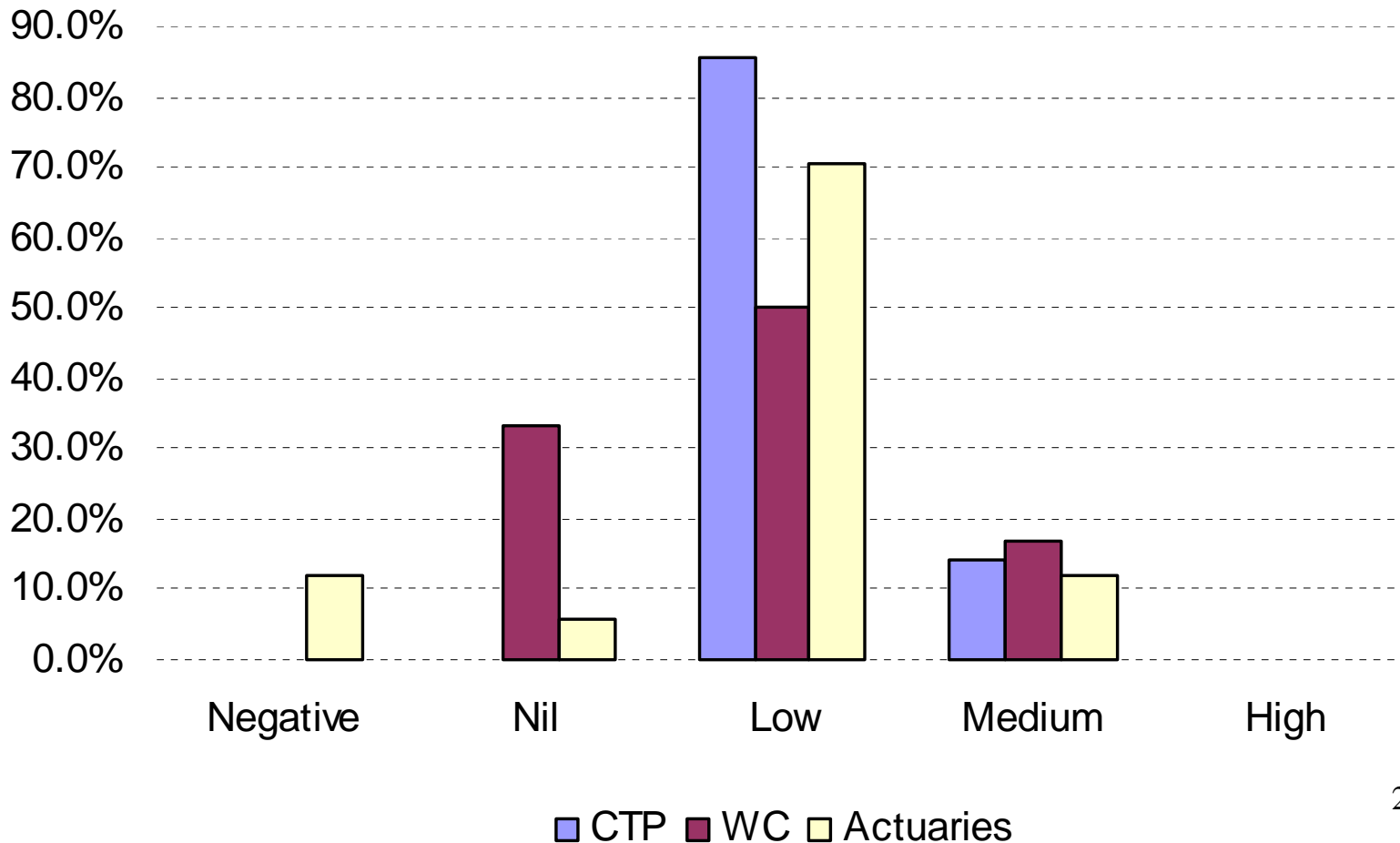
- Escalating costs due to Common Law. Access to CL
- **1st Gateway**
 - 30% disability of the body as a whole
- **2nd Gateway**
 - If 1st Gateway threshold not established **pecuniary loss** must be greater than the “Prescribed Amount”.
- 2nd Gateway was only expected to be used in rare circumstance and thus cost little

What happened?

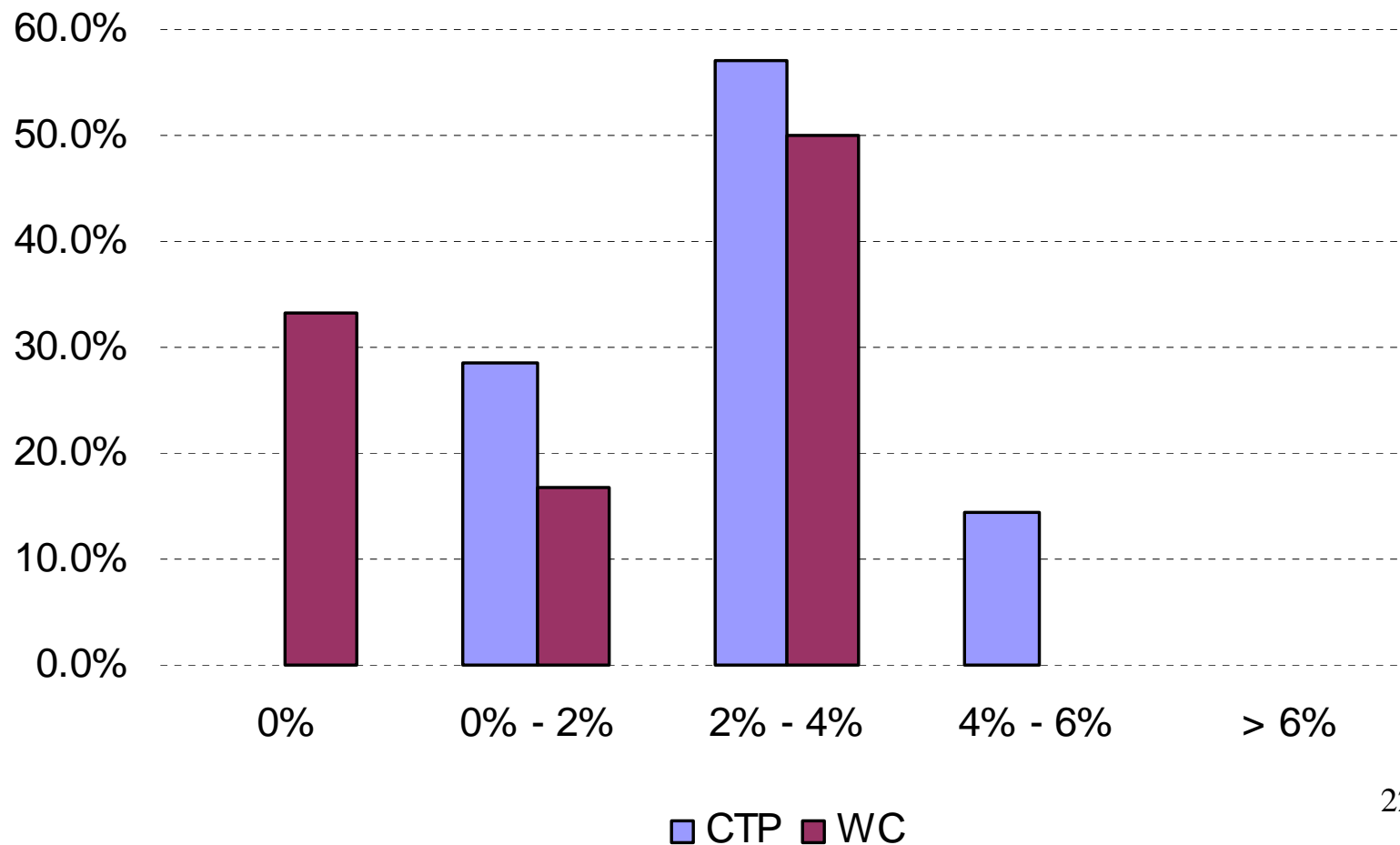
- Courts gave expansive and liberal interpretation to ***pecuniary loss*** for 2nd Gateway
- Far more 2nd Gateway claims than intended
- Timeframe for potential ***pecuniary loss*** taken as working lifetime of the claimant
- Applications for access to Common Law through the District Court grew from 148 in 1994 to 2,409 in 1998
- Numbers of Common Law claims back to pre-amendment levels but with higher average cost

Superimposed inflation surveys

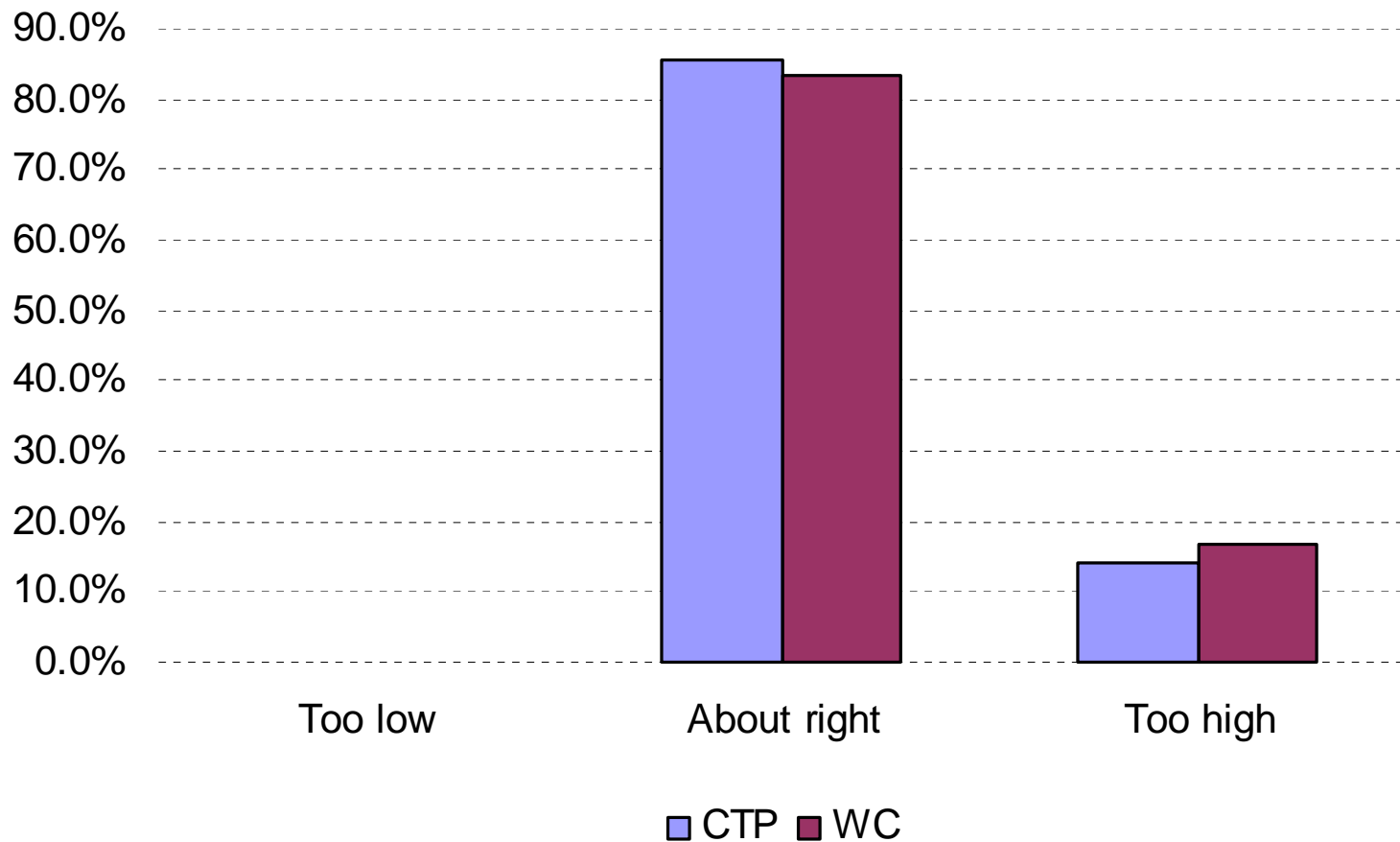
What is the level of superimposed inflation currently being experienced?



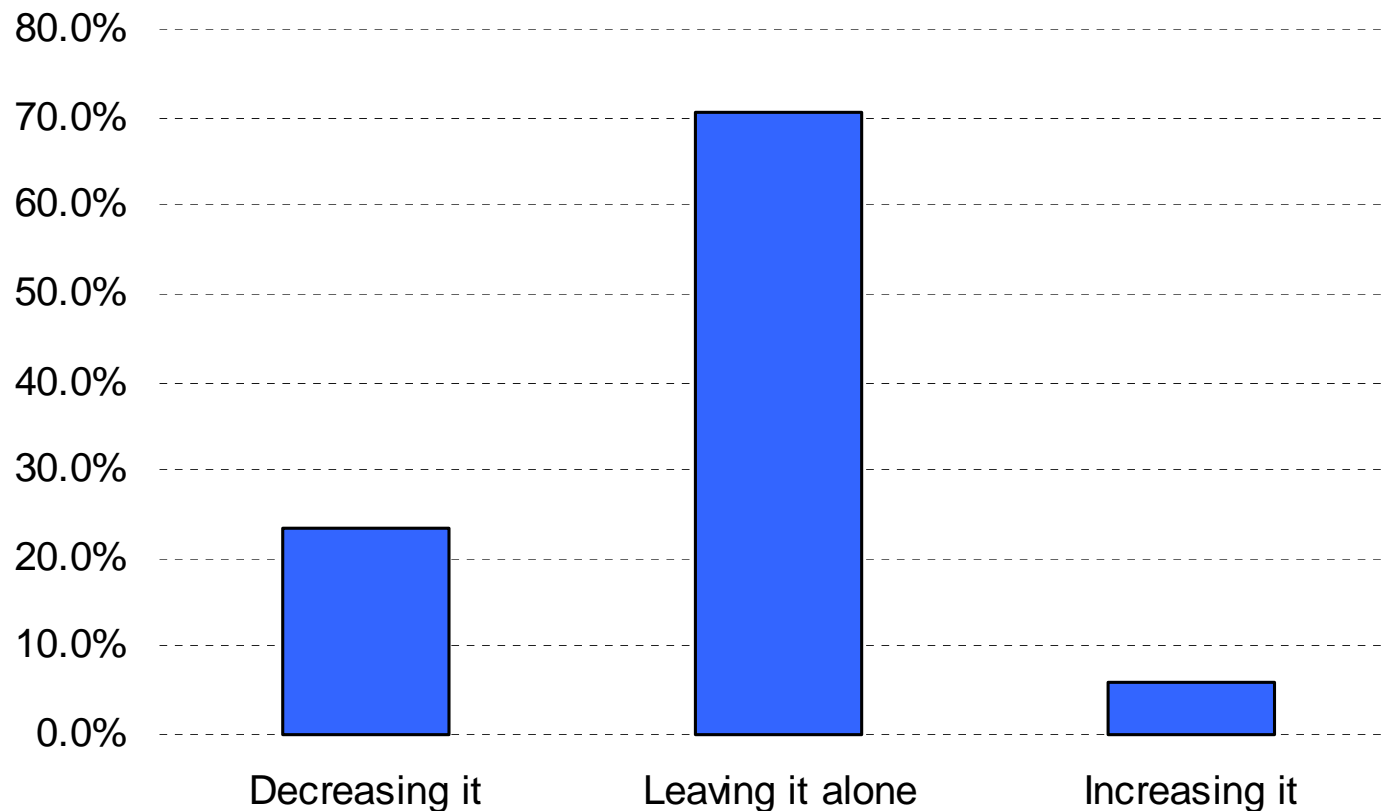
What level of superimposed inflation is included in current premiums?



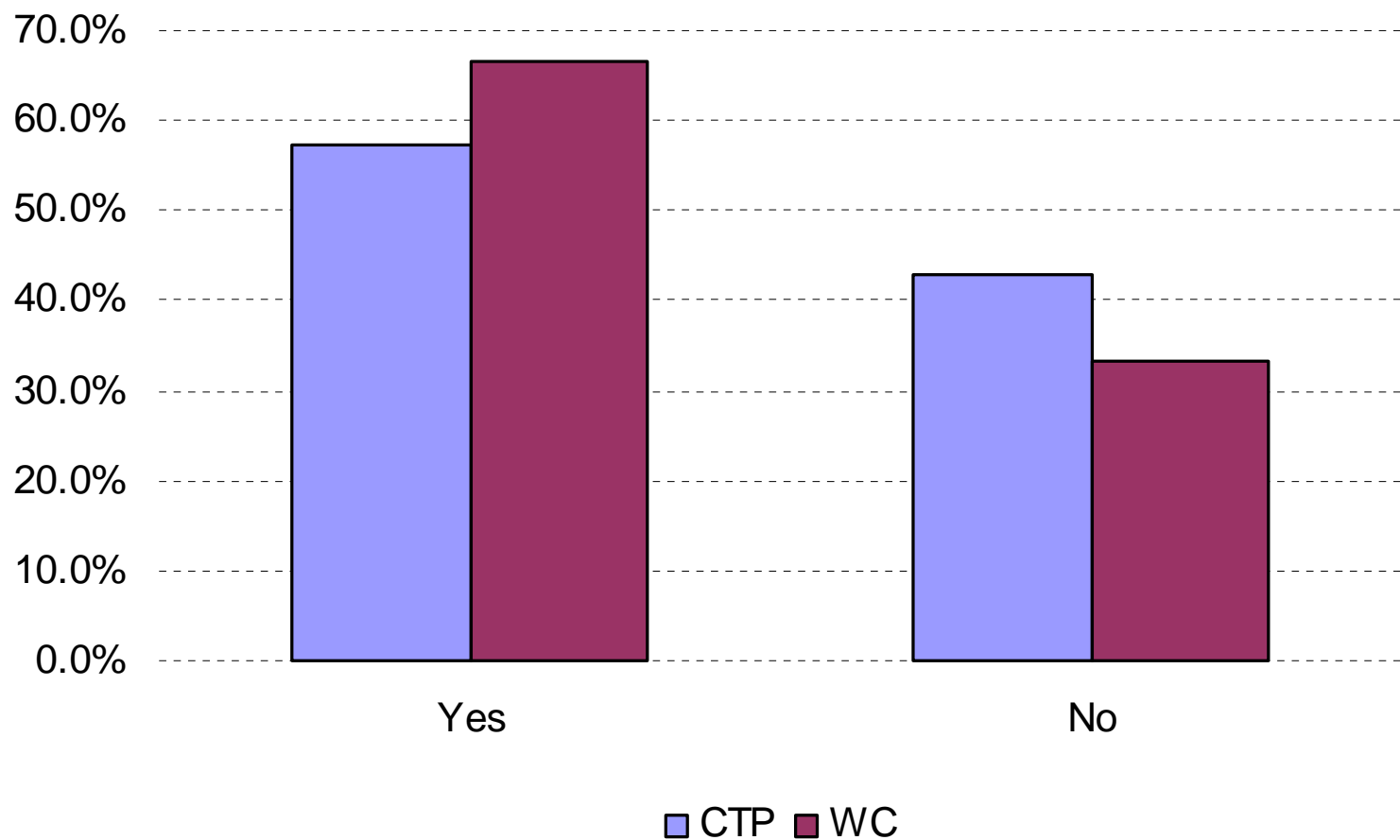
Is the level of SI being made in reserving and/or pricing too low, about right, too high?



What have you generally been doing with the SI assumption in the last couple of years?

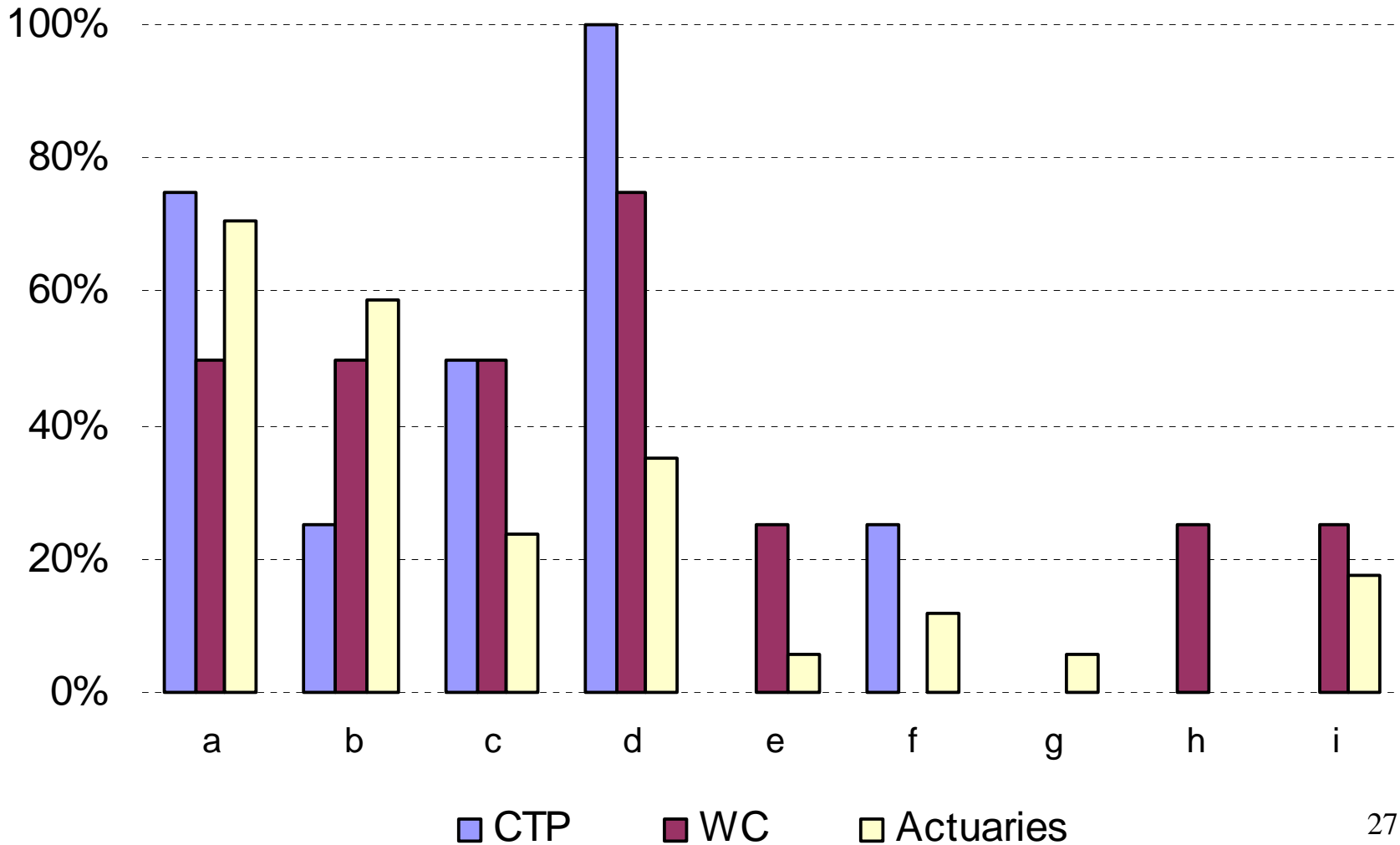


Has your scheme been subject to high levels of superimposed inflation in the past?



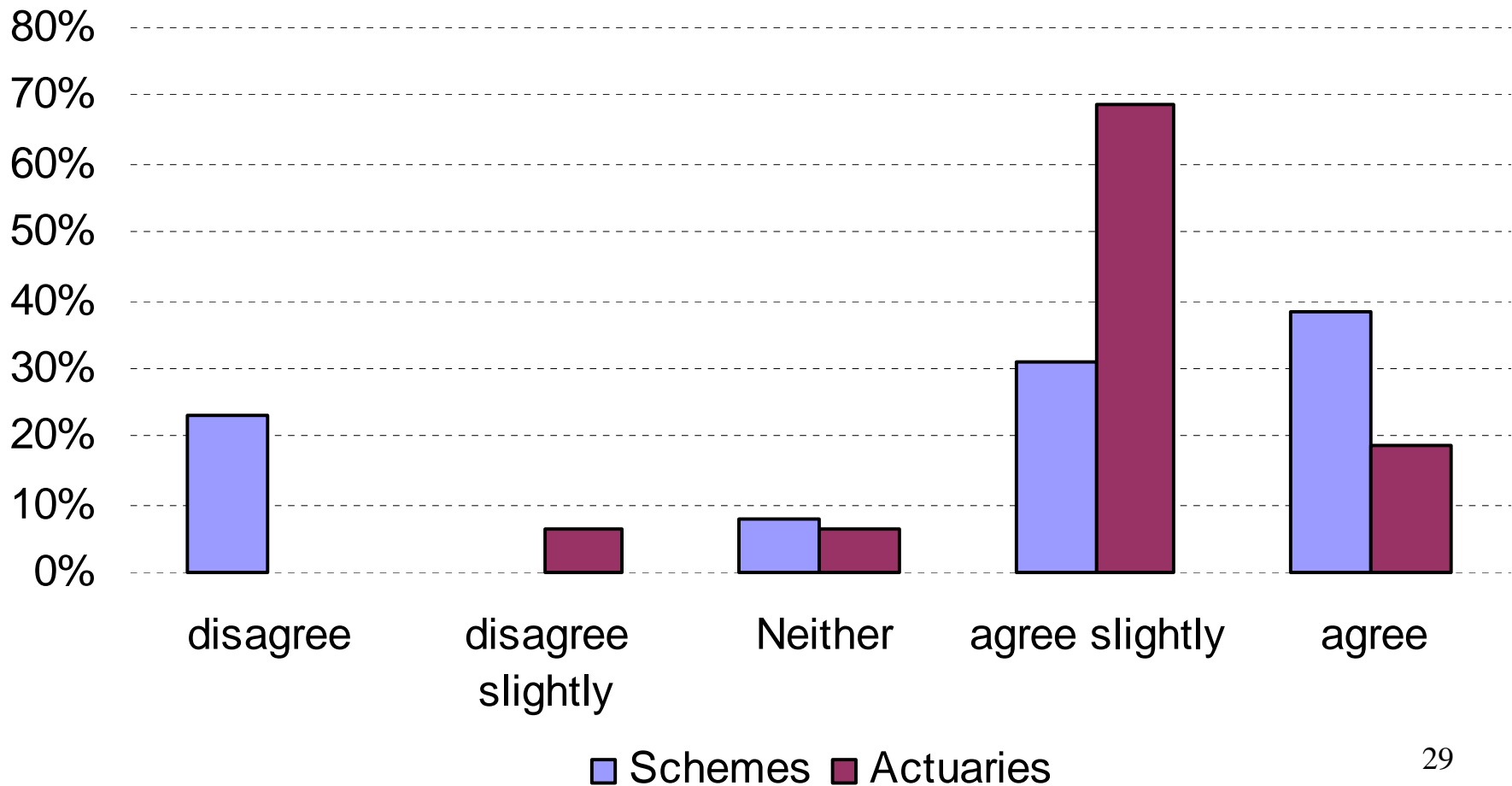
What has made past high levels of SI stop?

- a) Changes to benefits**
- b) Exclusion/limitation on participation of lawyers from the system**
- c) Changes to other aspects of the scheme**
- d) Changes to the management of claims**
- e) Changes to management**
- f) Changes to the actuarial models**
- g) It just stopped**
- h) It has not stopped yet**
- i) Other**

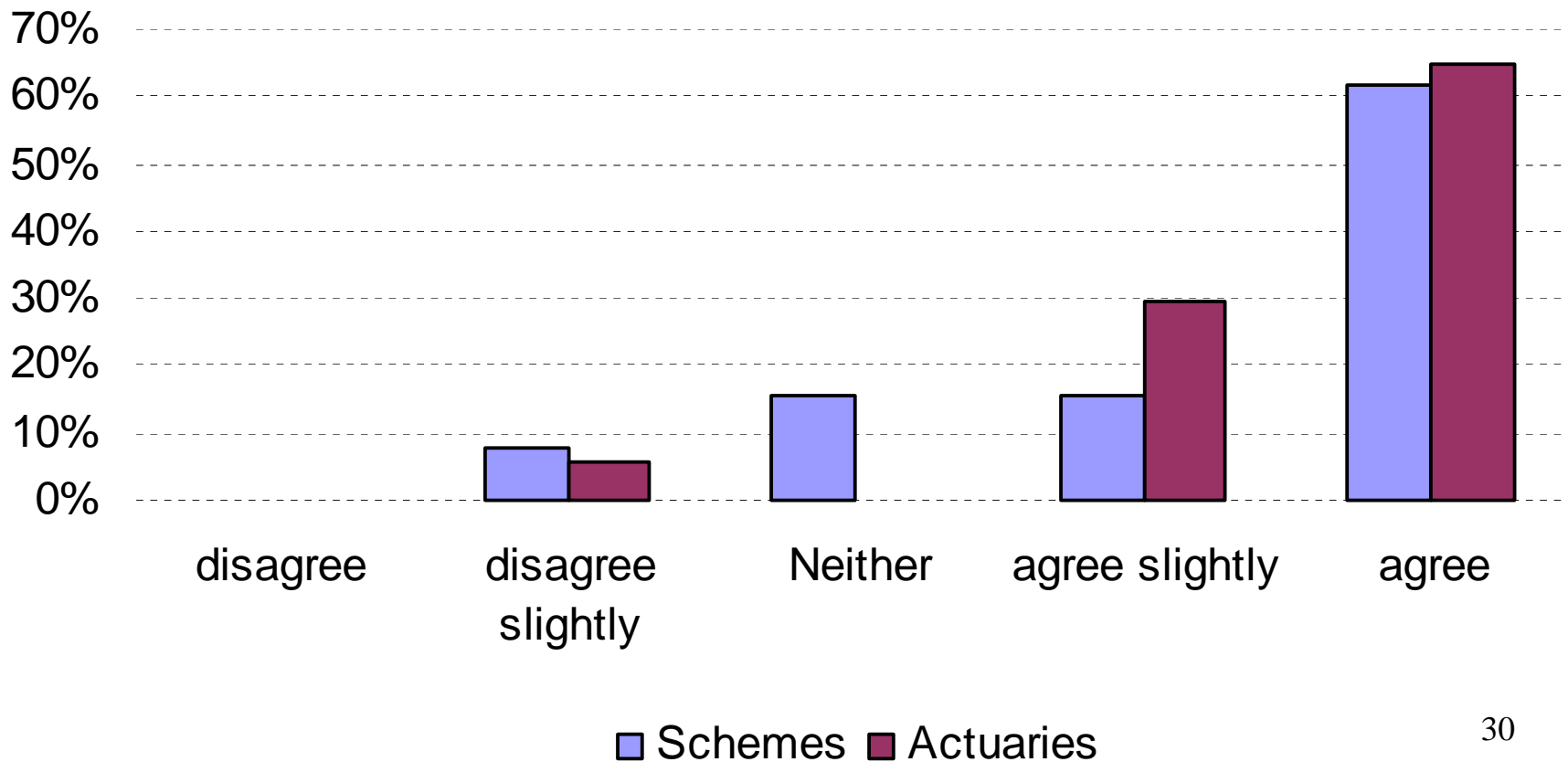


Respondents were asked to rate certain statements about superimposed inflation on a scale from disagree to agree. The responses from the schemes and the actuaries are compared below.

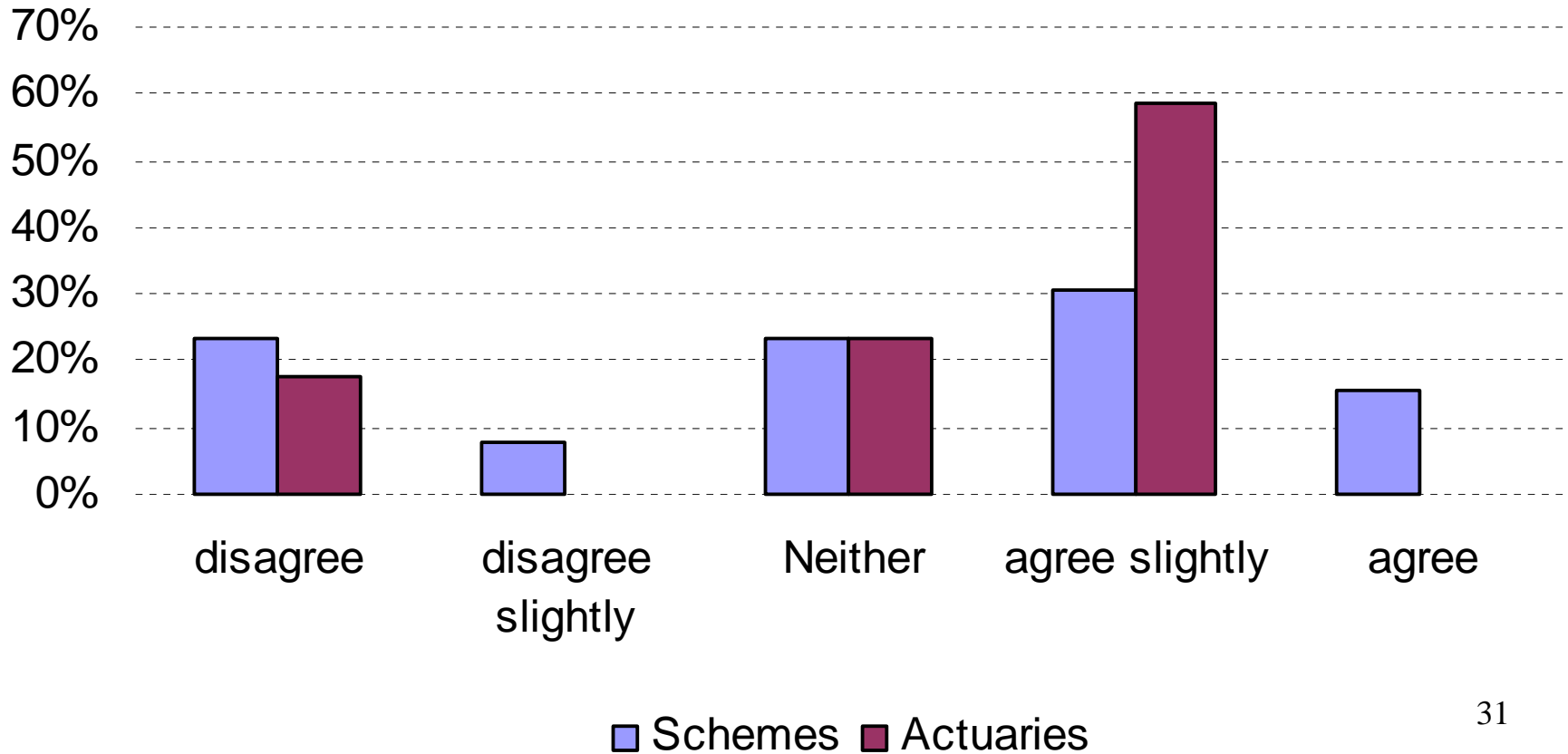
Superimposed inflation is inevitable in a personal injury scheme



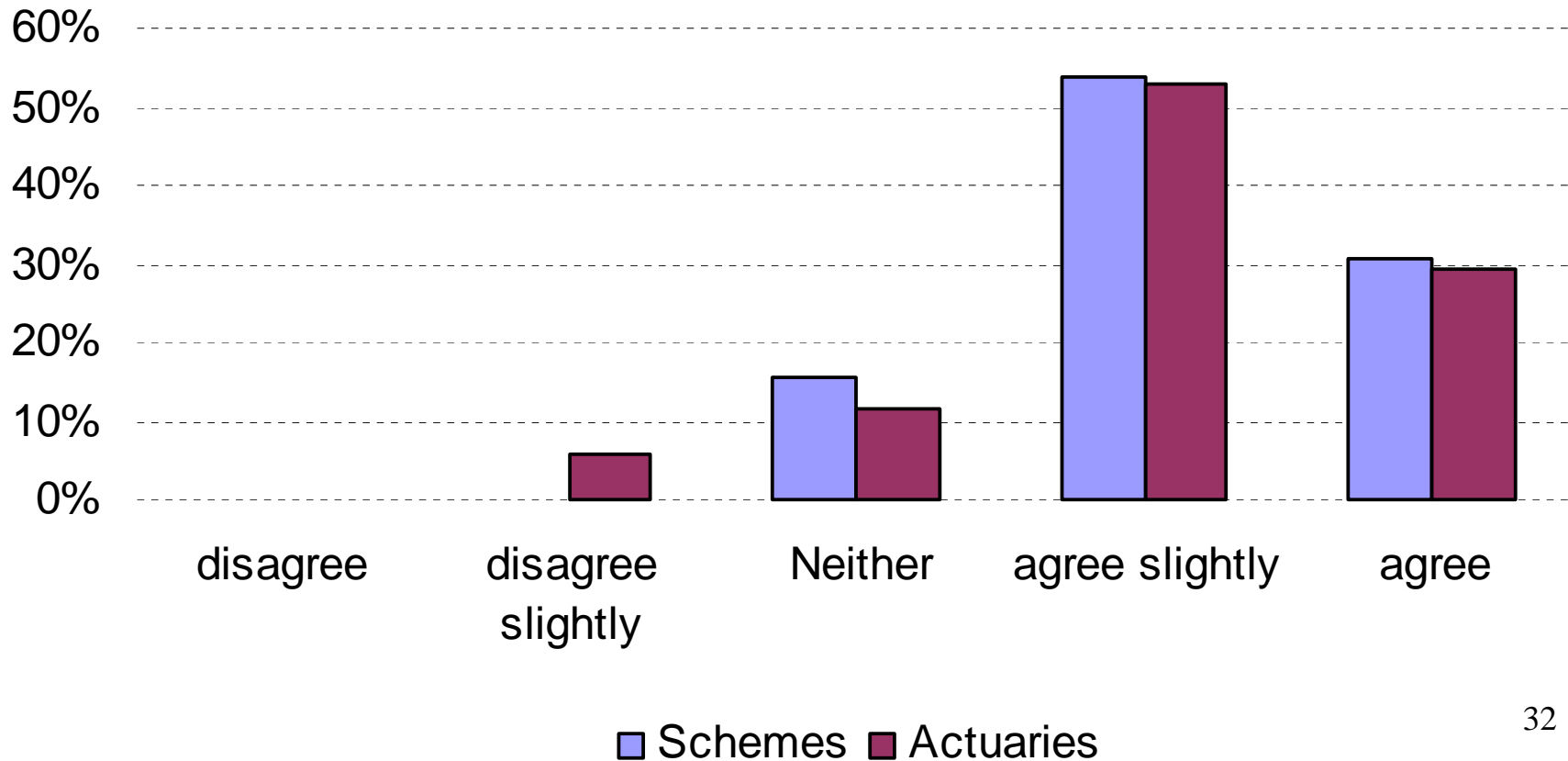
Superimposed inflation is inevitable in a common law personal injury scheme



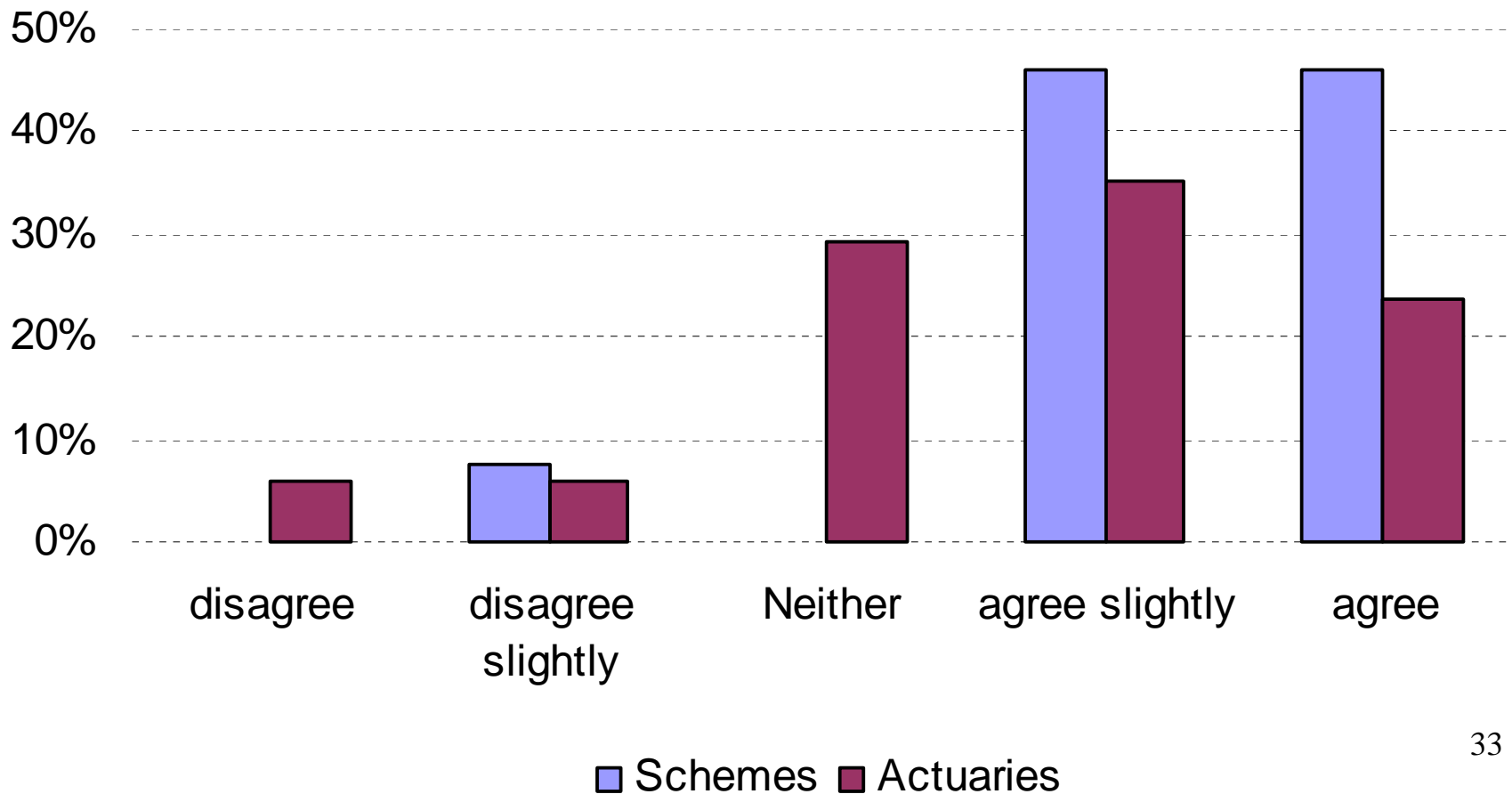
Superimposed inflation is caused by poor legislation and scheme design



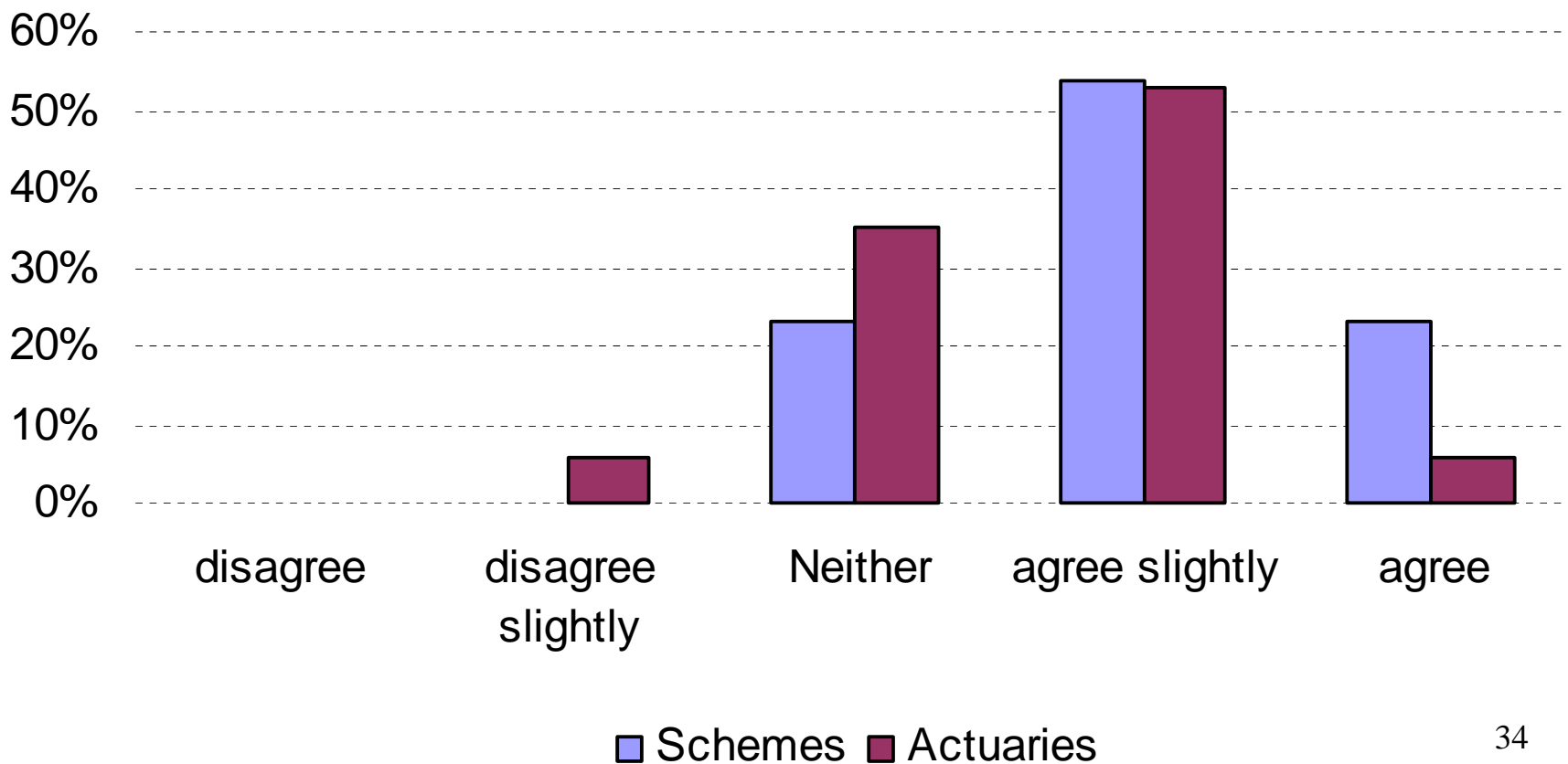
Superimposed inflation is caused by the behaviour of lawyers and the courts



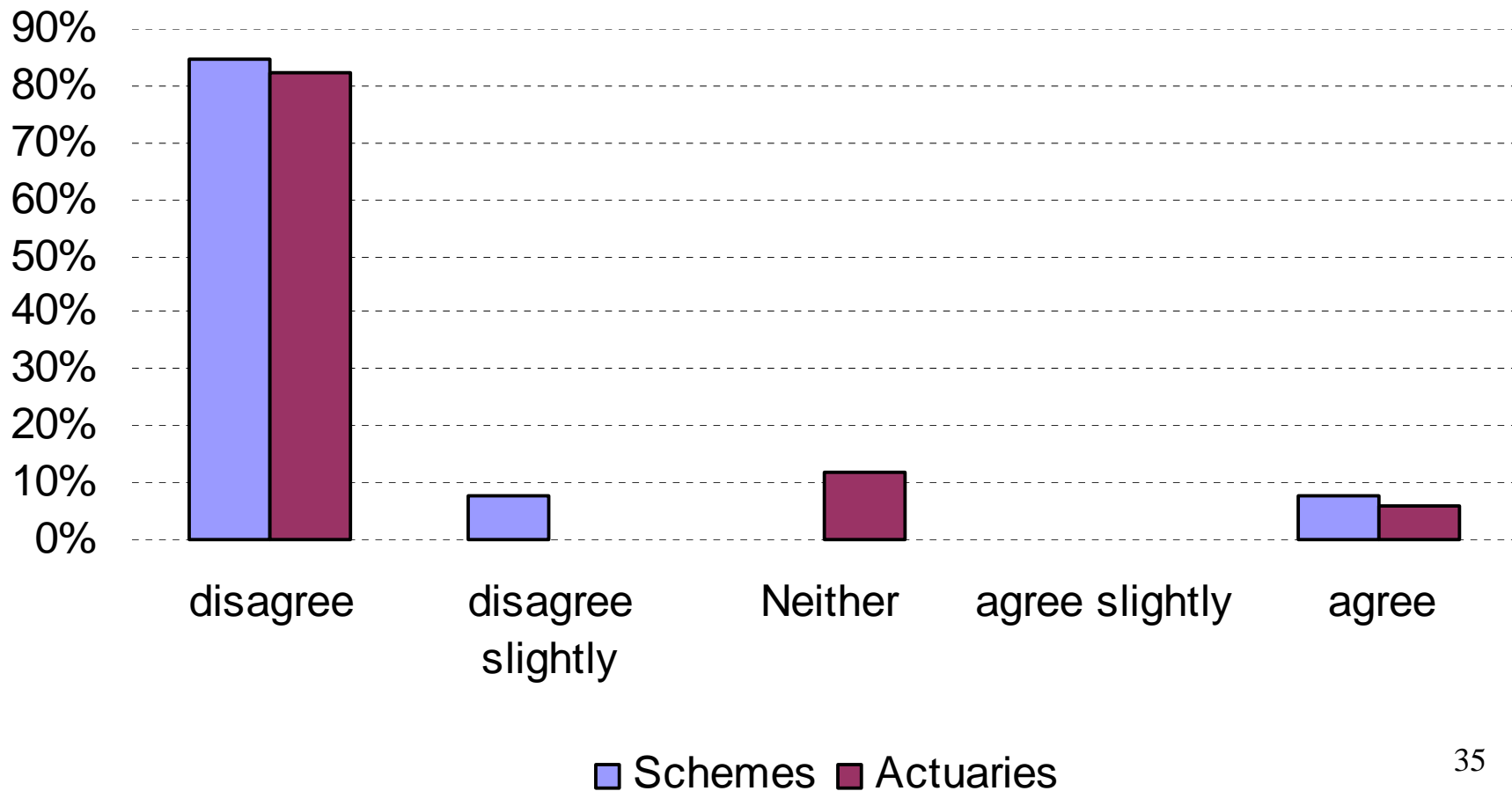
Superimposed inflation is caused by poor claims management



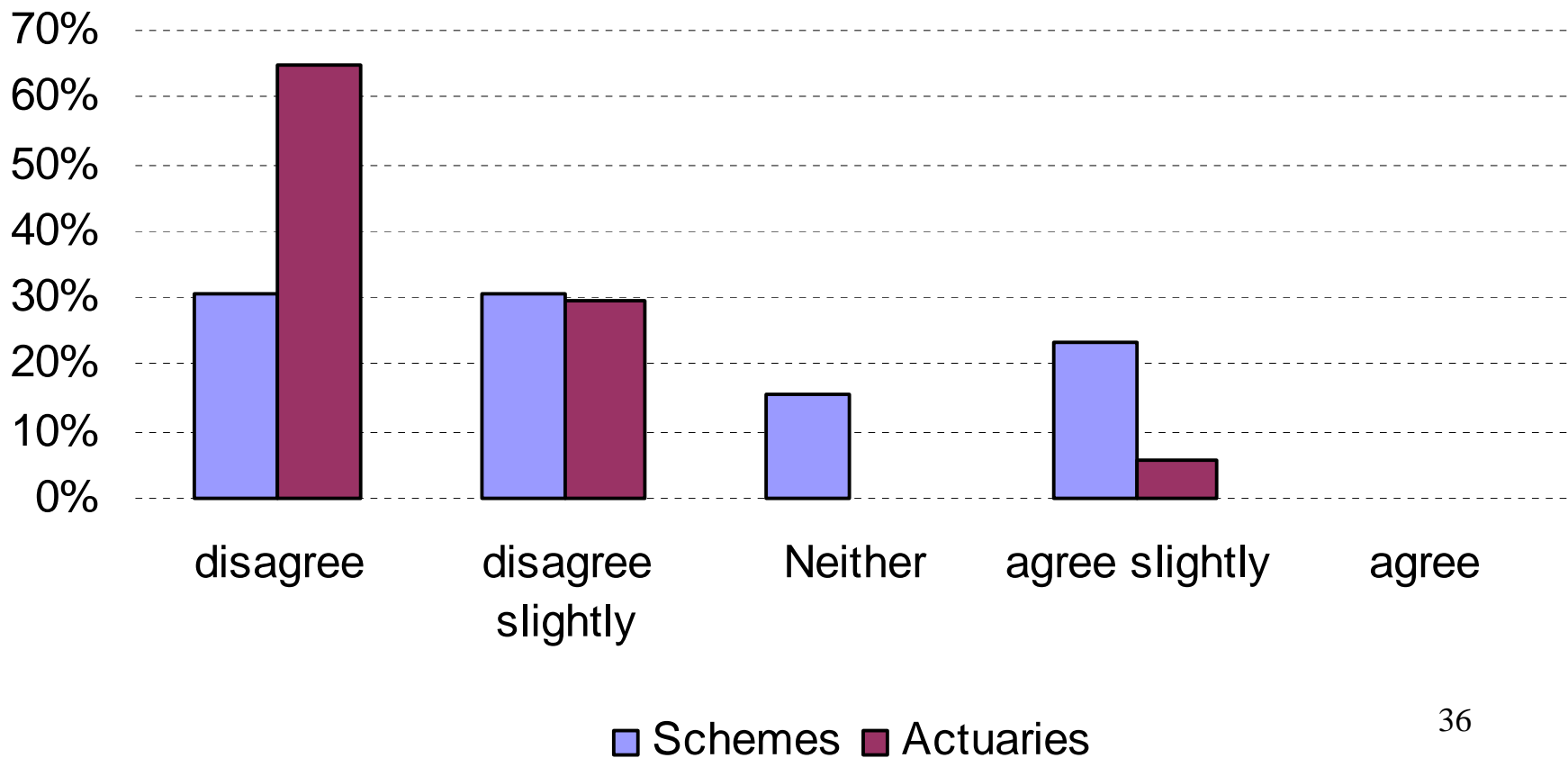
Advances in medical technology is a cause of superimposed inflation



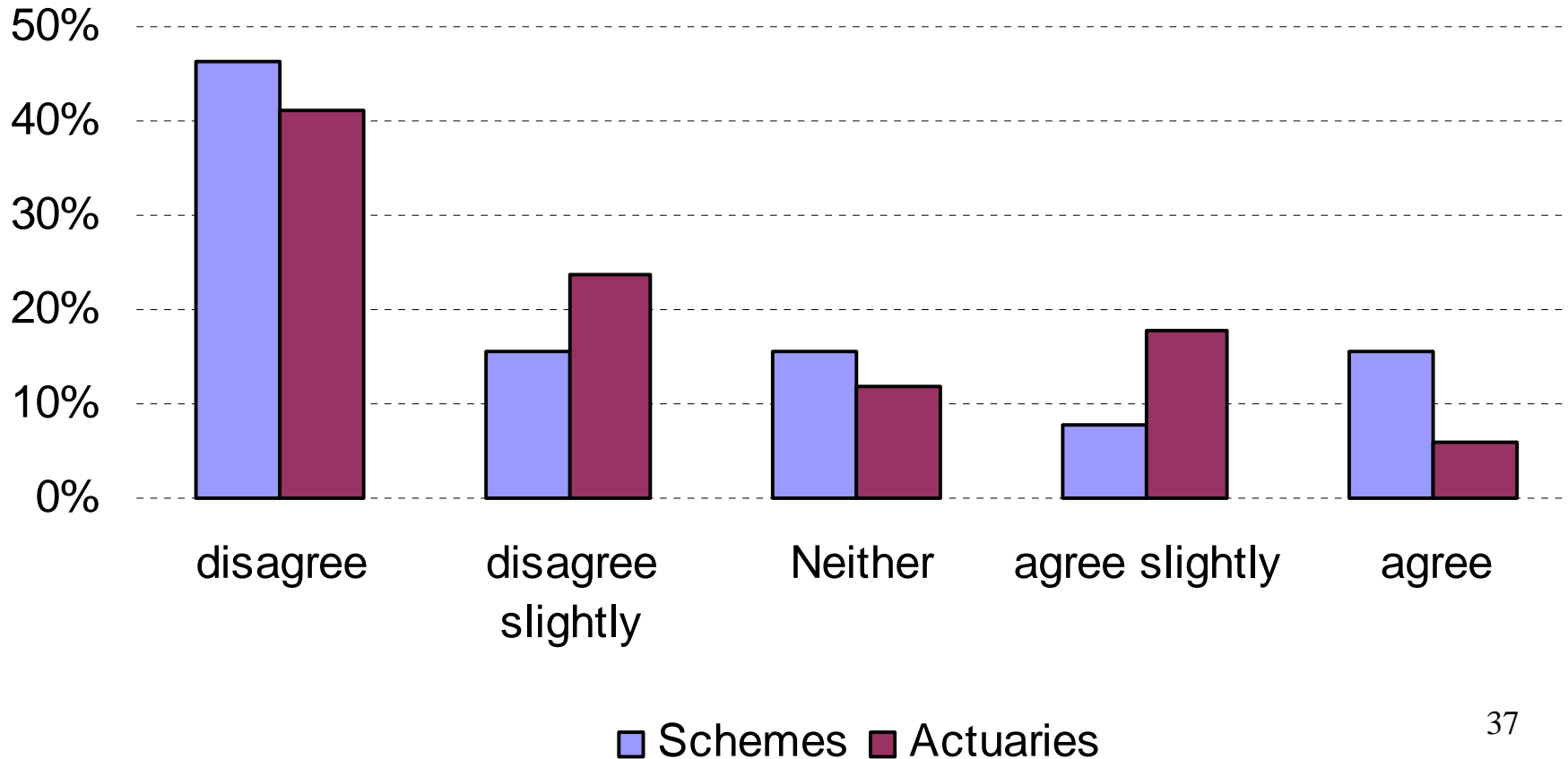
Superimposed inflation is a figment of actuaries' imagination



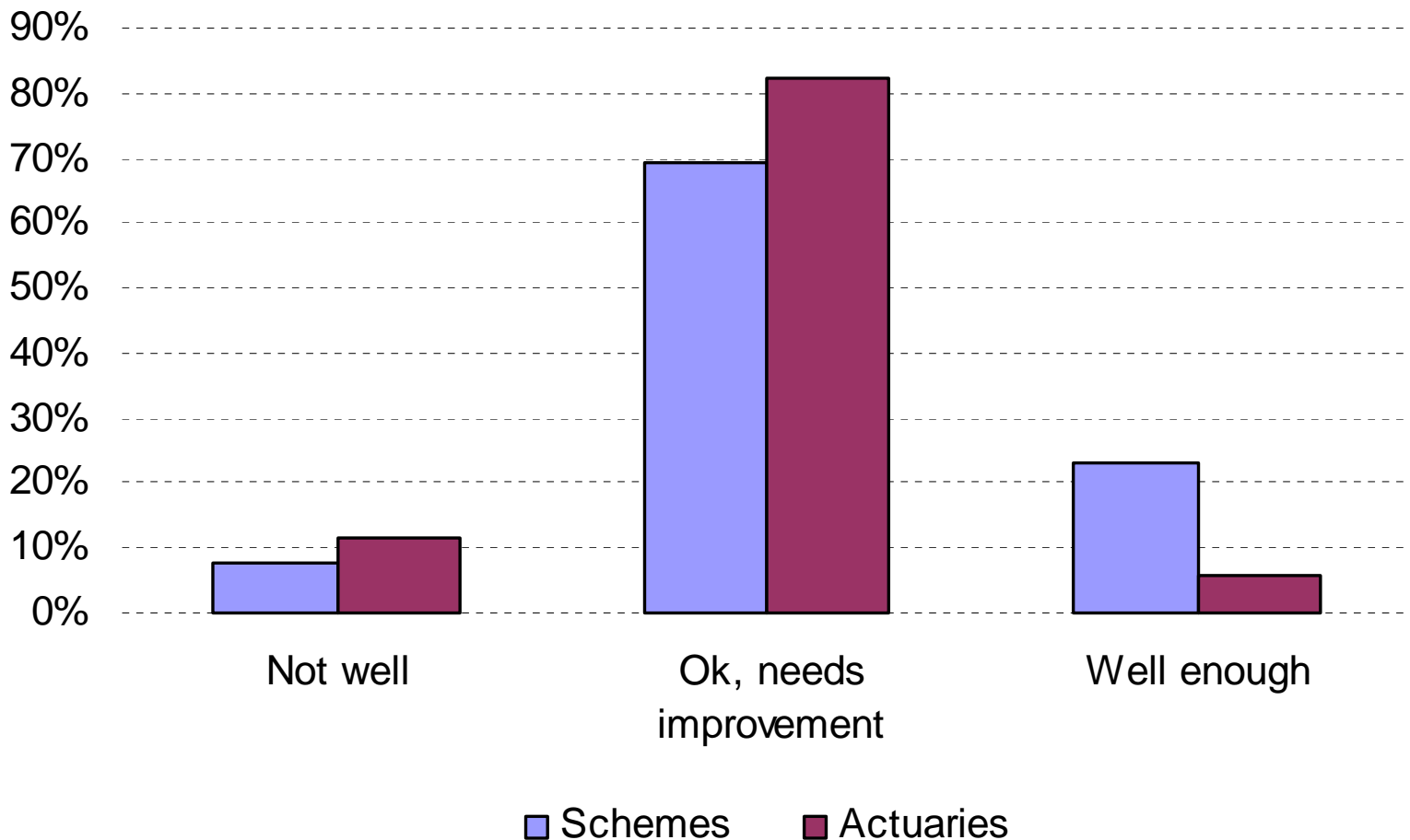
Superimposed inflation allowances are in reality additional risk margins



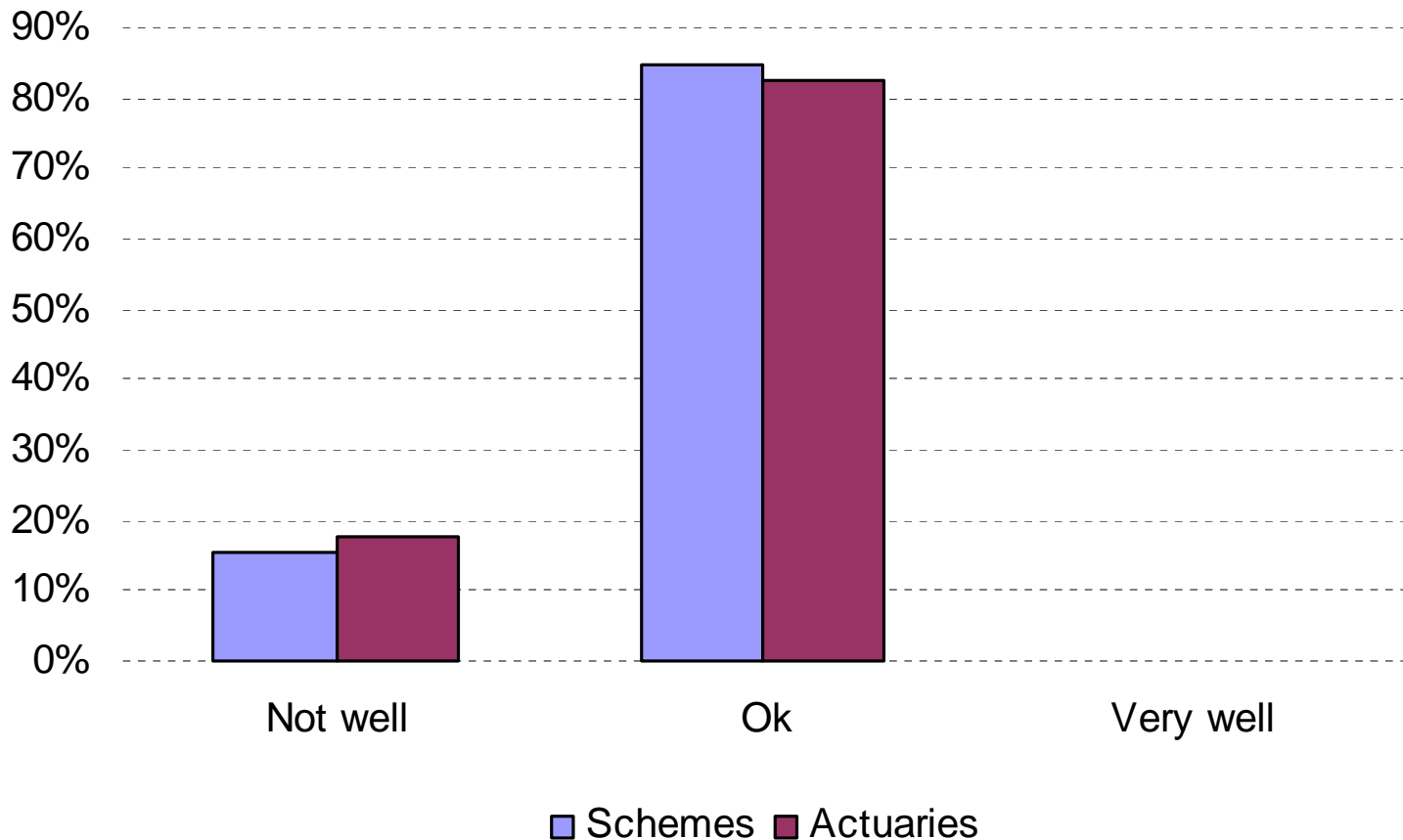
If actuaries had better models of the claims experience superimposed inflation would disappear



How well do you think that actuaries measure superimposed inflation?

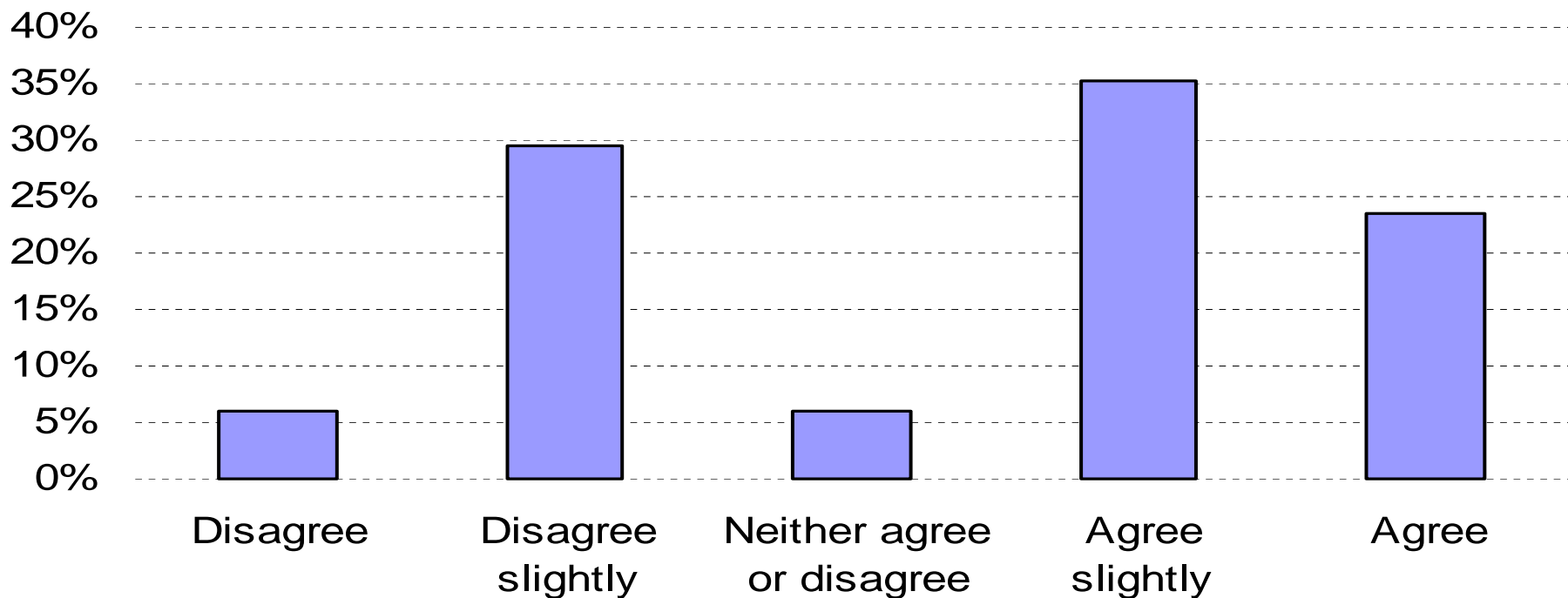


How well do you think that actuaries explain superimposed inflation?

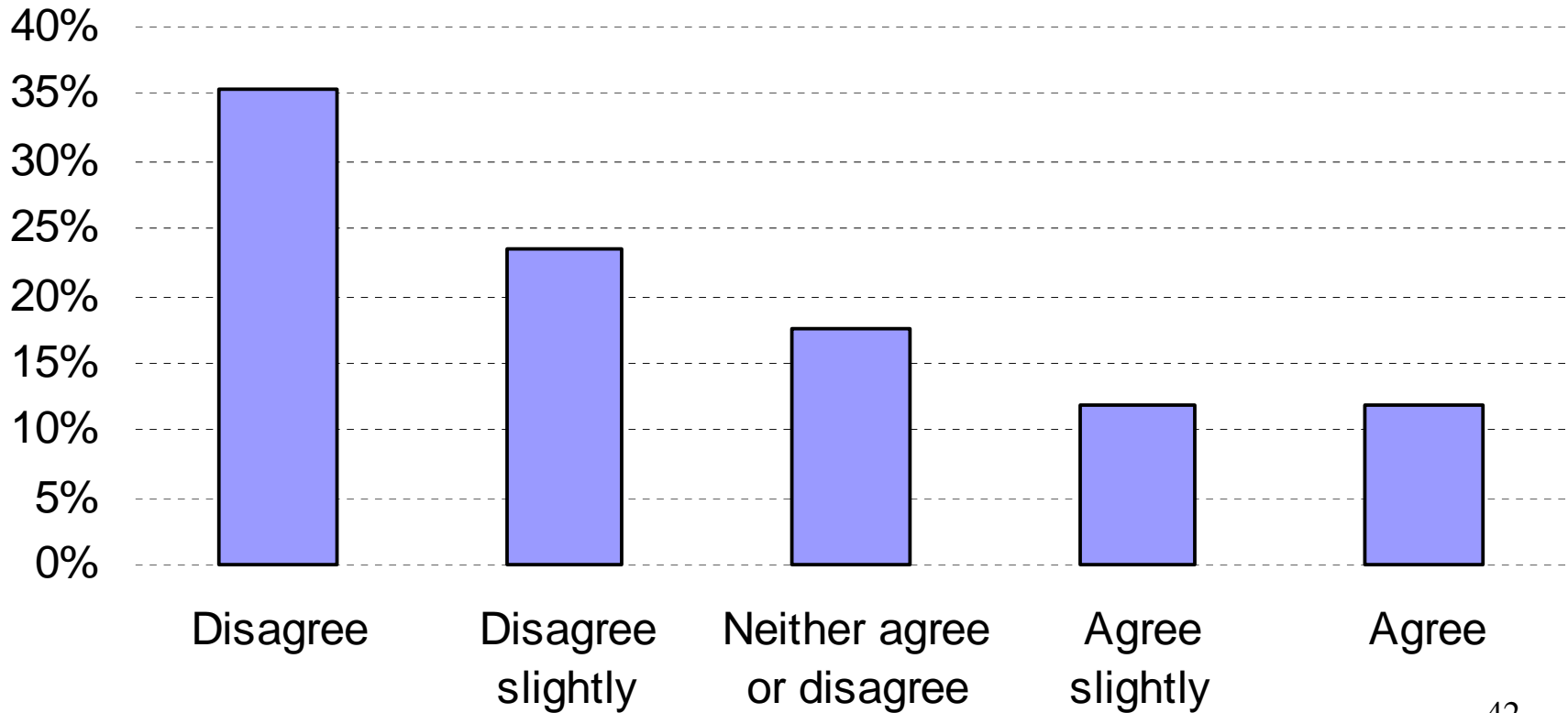


Typically superimposed inflation happens in bouts but actuaries model it as a single average future assumption meaning that over a one year time period the actuary is always likely to be wrong. Rate the following comments about this statement.

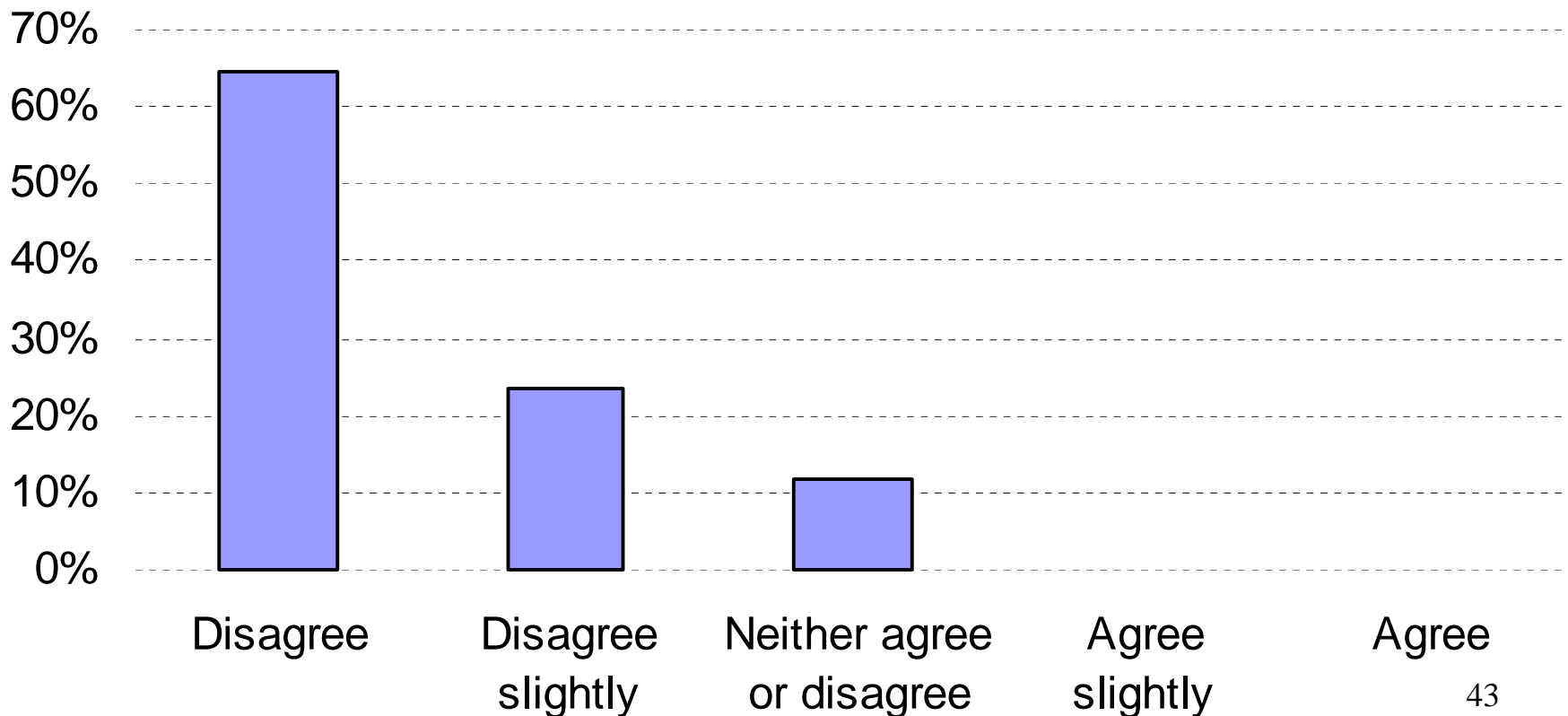
This is the only practical way of dealing with superimposed inflation and we should keep doing it this way



Actuaries should use different superimposed inflation rates for future years depending on where we are in the "superimposed inflation" cycle

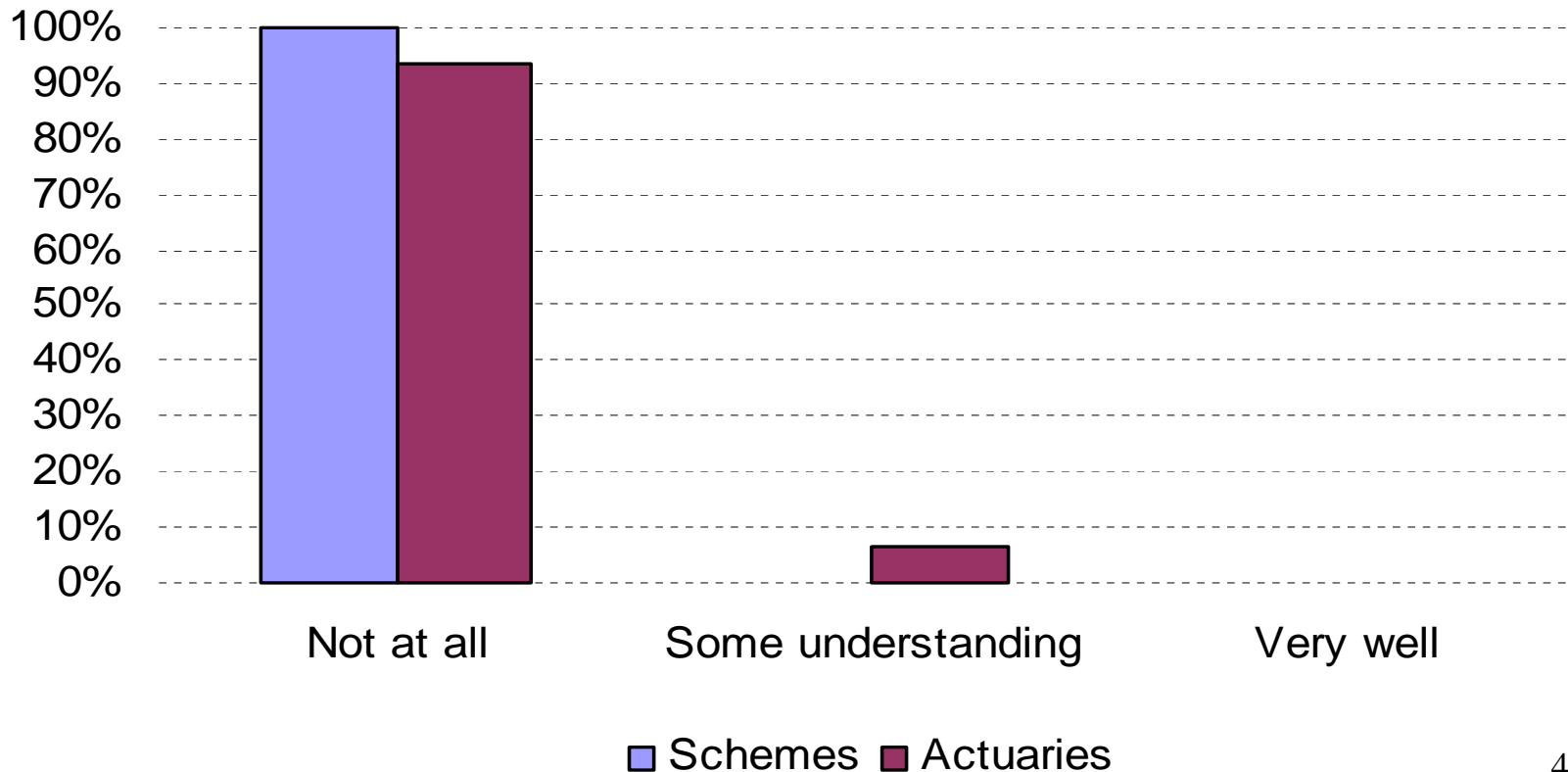


Actuaries should establish a superimposed inflation contingency reserve (ignore current accounting requirements in answering this)

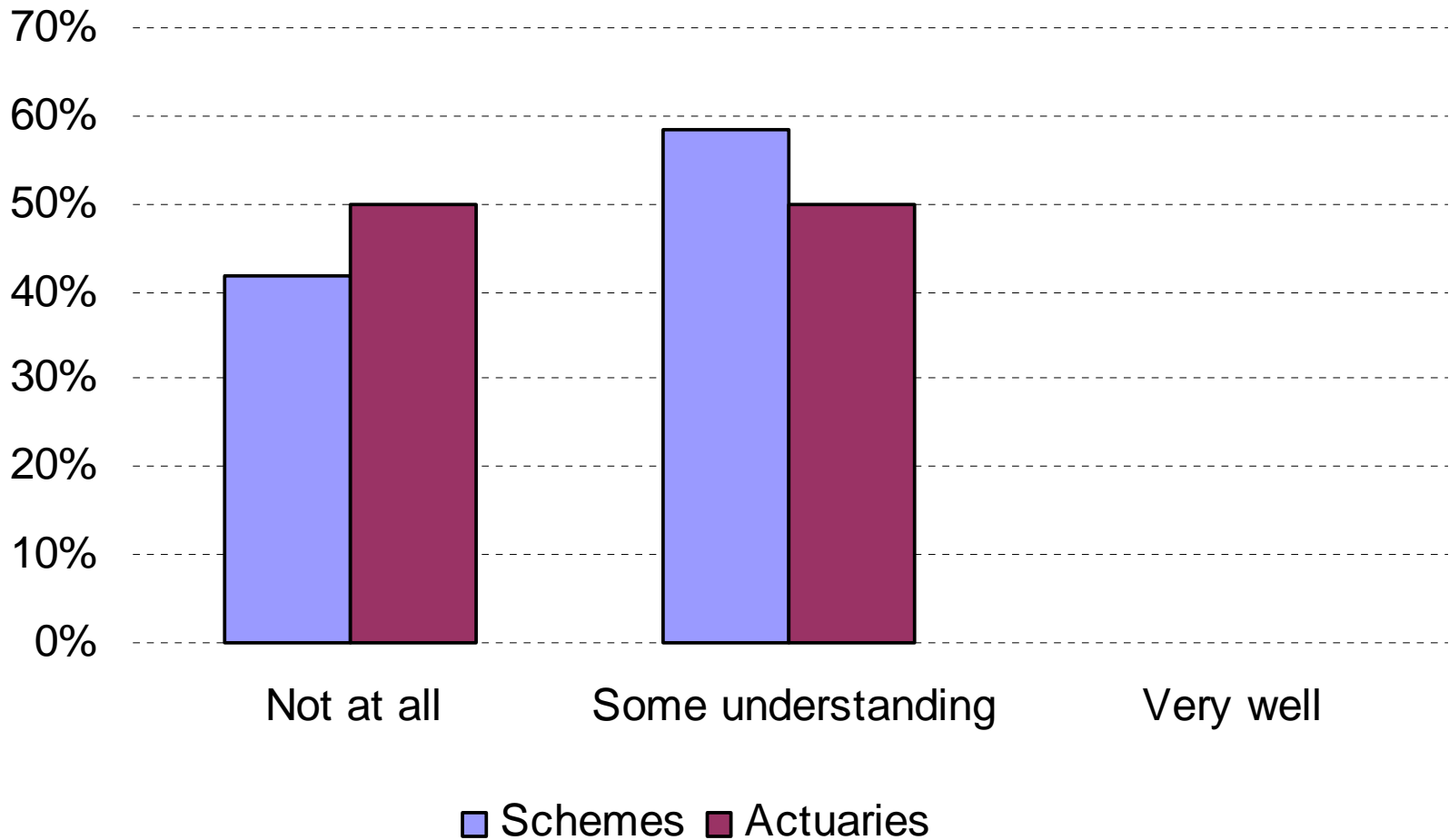


How well do stakeholders in accident compensation schemes understand SI?

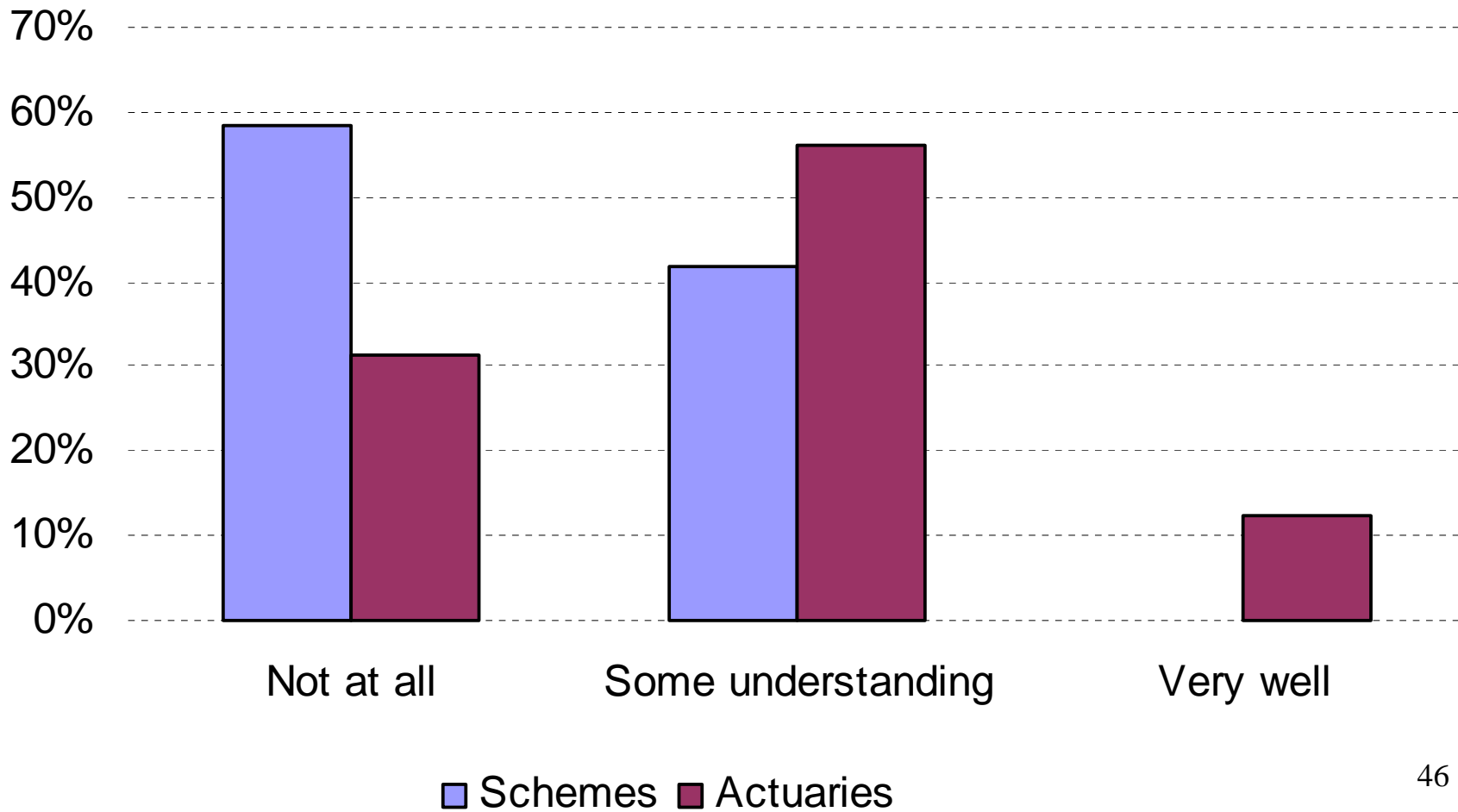
Policyholders



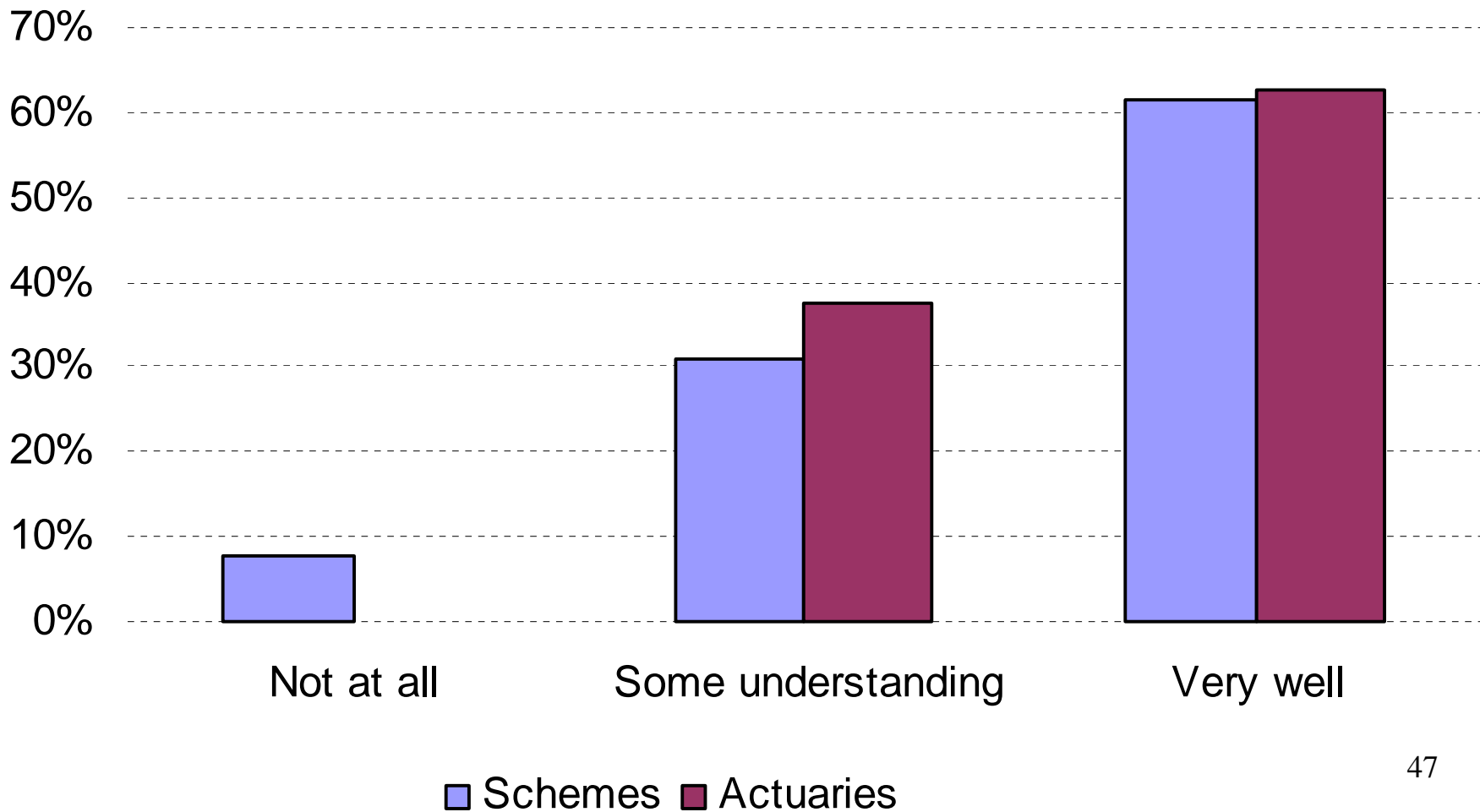
Politicians



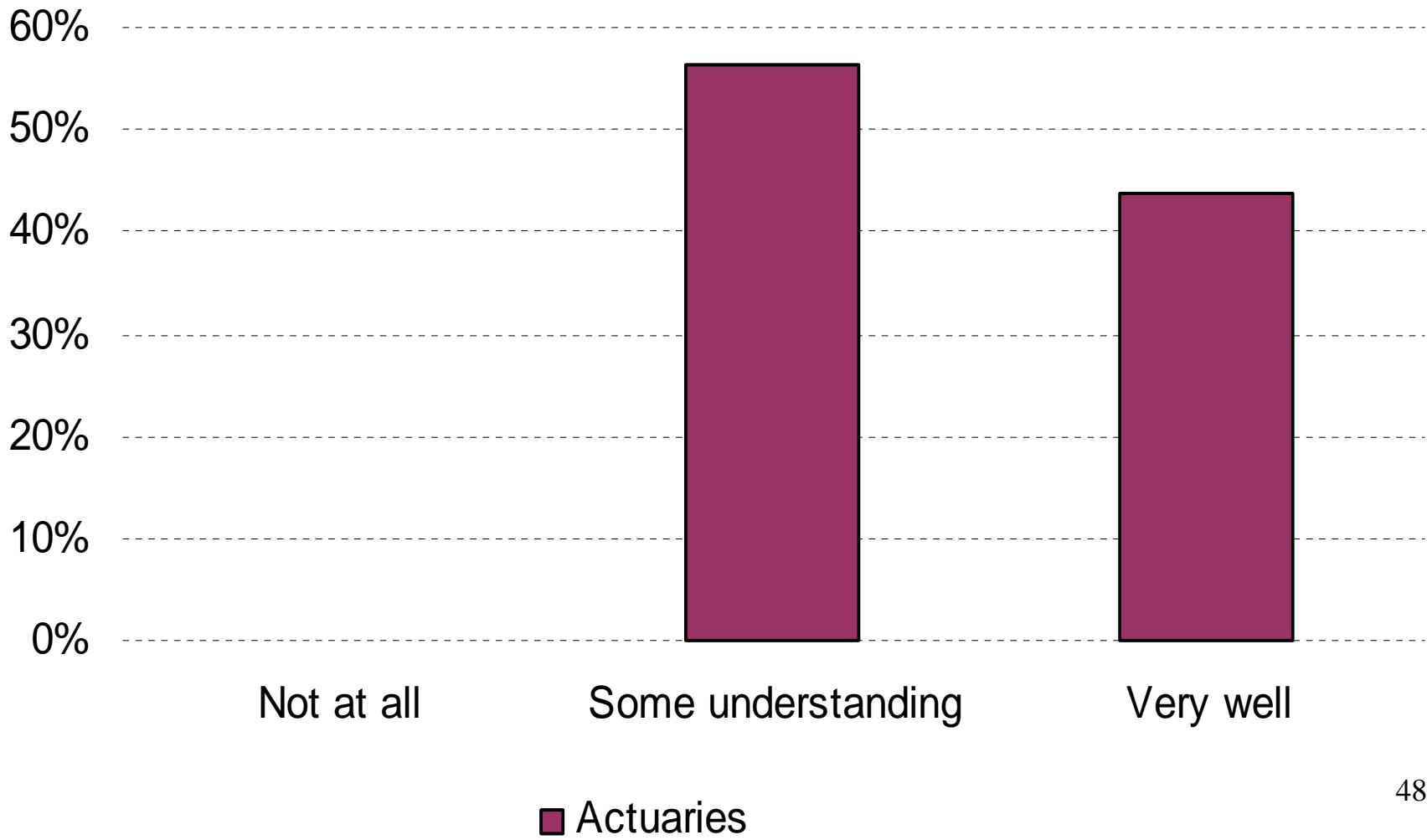
Legal Fraternity



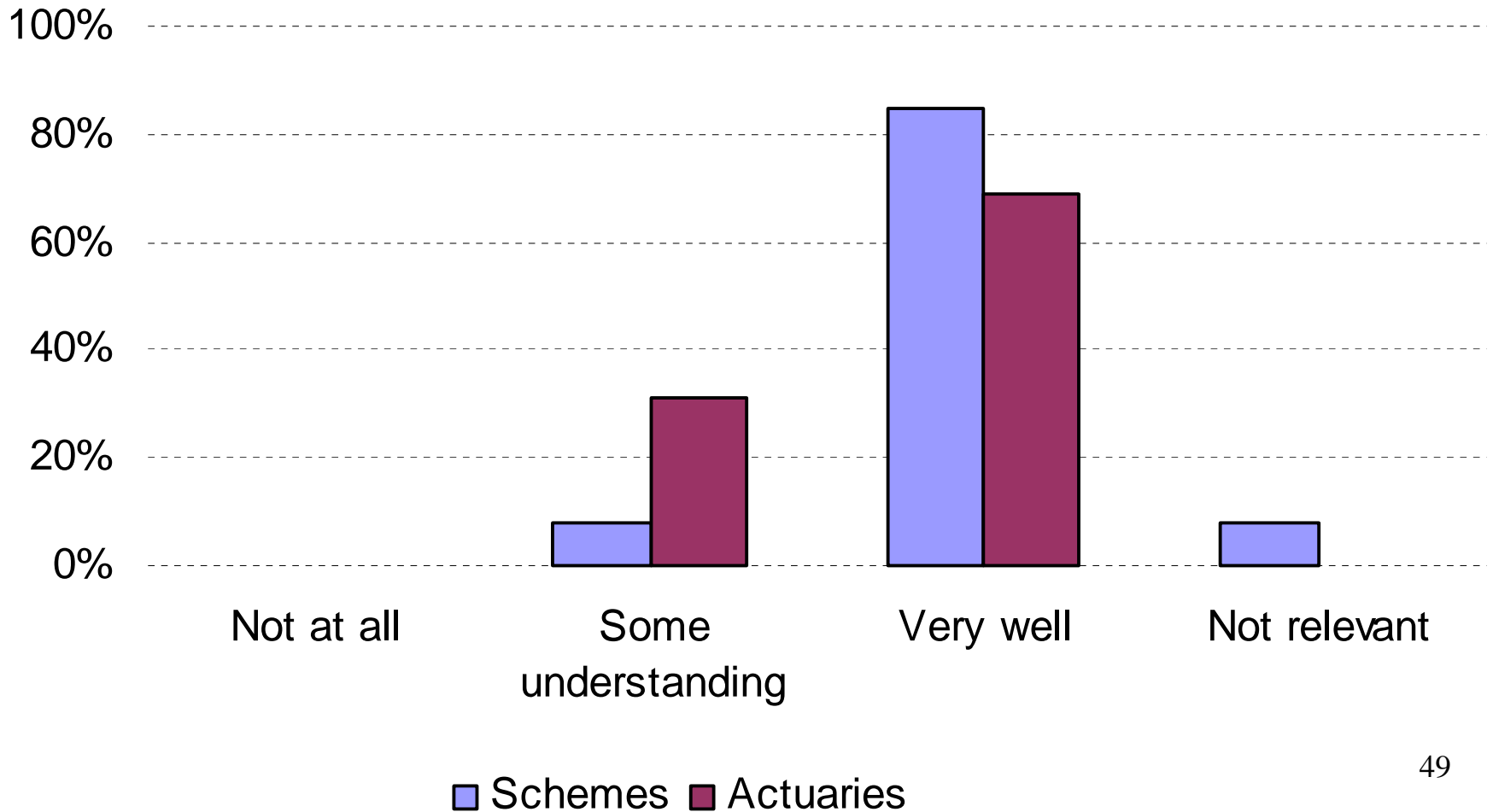
Scheme managers/regulators



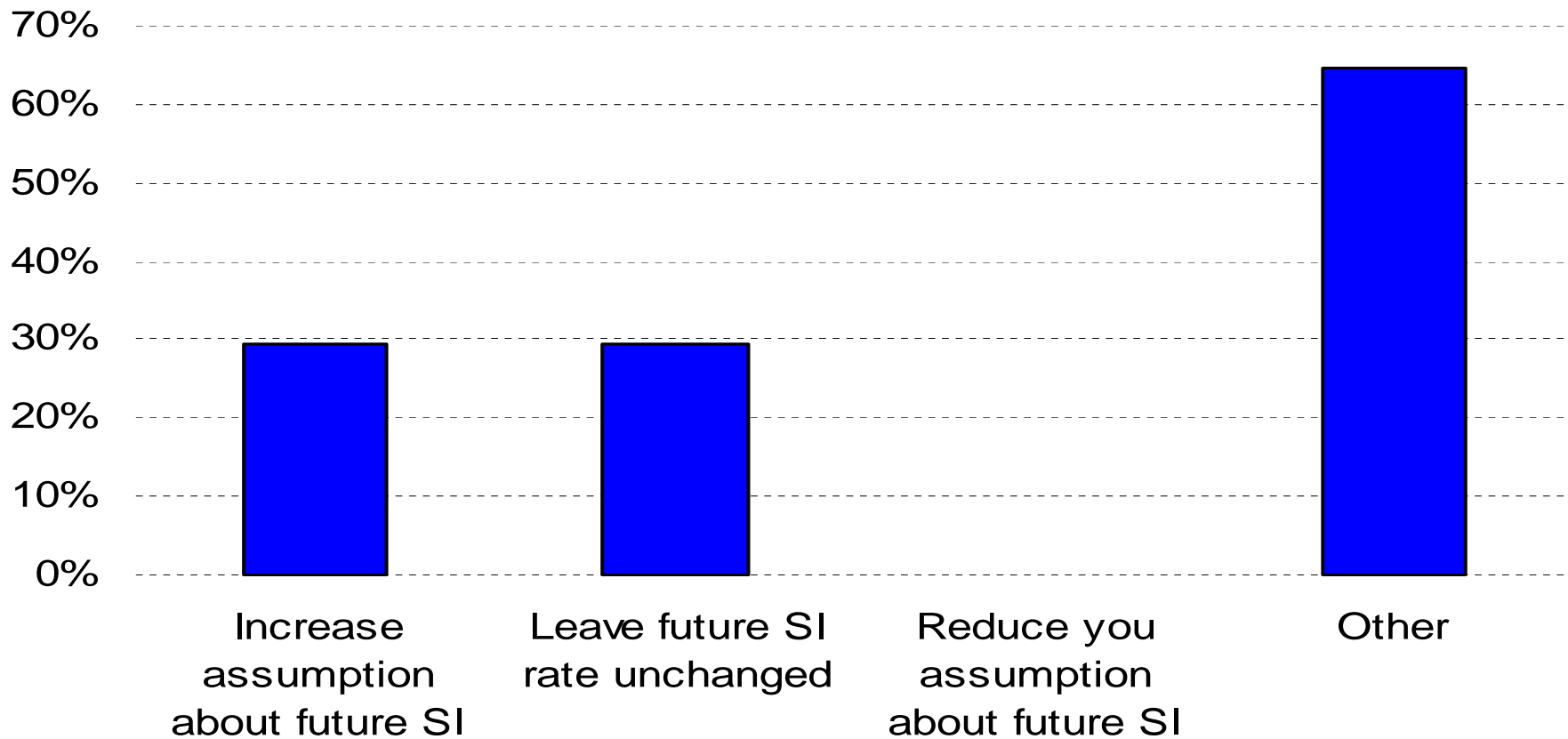
Insurance management



Actuaries



If you observed a very high level of superimposed inflation in the recent past what would you be most likely to do?



We offered a small prize for the best definition of superimposed inflation. The following summarises our top 3 choices

SI definition (1)

- *“SI is the increase in claims costs that exceeds inflation, is unrelated to increases in claim frequency and ignores higher claims costs emanating from legislation changes and the like”*
- *“SI is the increase in the average cost of similar claims over and above that which can be explained by measures of inflation such as the CPI and AWE”*

SI definition (2)

- *“Superimposed inflation is a projection of the difference between two things whose past levels are not measurable (ie “actual” inflation and “normal” inflation)”*
- *“A measure of the increase in claim values in excess of the rate of wage inflation. Alternatively, a term dreamt up by actuaries to explain away their miscalculations!”*

SI definition (3)

Conclusions

- Superimposed inflation does exist!
- Causes of superimposed inflation are varied and involve complex behavioural, social, legal and legislative forces
- Current levels of superimposed inflation are low
- Most effective “cure” for superimposed inflation is to change the benefits available to injured people
- Scheme managers/regulators and actuaries have a good understanding of SI
- To improve communication, understanding and projection actuaries need to
 - separate measurement issues from causes
 - focus on understanding drivers of SI

Food for thought

- *“1. I feel that insurers are inclined to always factor SI into their filings without a rigorous enough analysis of whether it is warranted. SI can occur in irregular bursts so there is not necessarily a justification for applying a similar percentage year in and year out.
2. One of the reasons SI is hard to measure is that it is at least partly due to the net effect of the behaviour of many different but interrelated groups within the personal injury compensation environment: claimant, solicitors, insurers, treatment providers”*

Food for thought

- *“SI is a very generic term that can hide the reality as it at times can be used to mask underlying problems. An actuarial report that states “we have observed SI in benefit XX” provides very little to react to. Understanding the drivers is key to allow appropriate management responses whether that is through changed claims management strategies, change process/policies and /or legislative changes”*

Food for thought

- *“Most of the work I do is for Self-Insurers where the volume of claims data is inadequate to detect SI. It would be helpful to have some published actuarial information on past SI for each scheme and current expectations for use on these small portfolios”*

Food for thought

- *“Focus on the phenomenon from an actuarial modeling perspective without adequate reference to the “real world” is not helpful”*
- *“There is a large amount of focus on measuring past superimposed inflation and improving models to do this. However, unless this is accompanied by an understanding of the behaviours driving the inflation then the actuary is no better placed in making an assessment of the appropriate allowance for prospective superimposed inflation”*