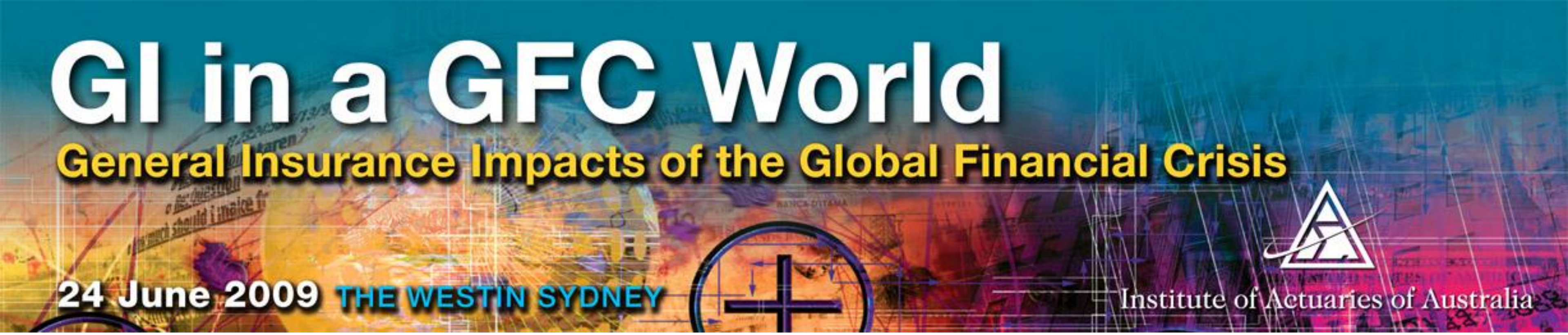
GI in a GFC World

General Insurance Impacts of the Global Financial Crisis

Institute of Actuaries of Australia

Wednesday, 24 June 2009

THE WESTIN SYDNEY 1 MARTIN PLACE, SYDNEY



Discount rates, Inflation and Risk Margins

Scott Collings

Presentation Outline

How has the selection of liability valuation assumptions been affected by the GFC?

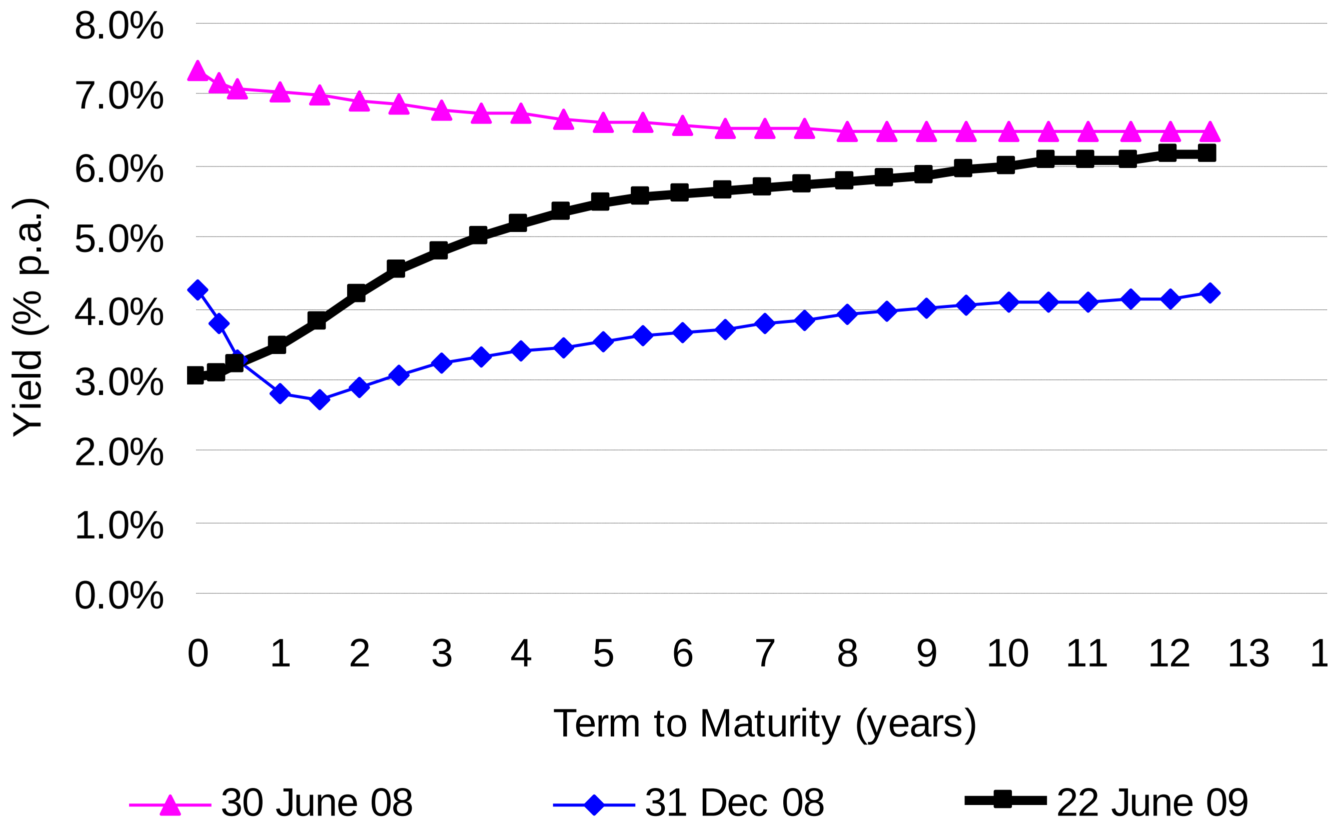
- Discount rates
- Future economic inflation rates
- Risk Margins

Discount Rates

- Standard practice is to use Com Govt bond yields to derive a z-c yield curve that can be used to discount future cashflows
- There were already pre-existing issues regarding what assumptions to use for cashflows beyond the term of the pool of CG bonds
  - Wider range of existing practice due to subjectivity involved
- GFC impact:
  - Govt drove down cash rates
  - Market drove down CG long rates in ‘flight to safety’
  - CG bond yield curve dropped 3% in space of a few months
  - Market drove up spreads for corporate debt instruments as concerns over credit worthiness grew

Discount Rates

CG Bond zero-coupon yield curves



Discount Rates

- Did the GFC make the discount rate assumption any harder to select?
  - APRA requirement is very specific (CG bond yields)
  - IAA requirement describes in same terms as APRA except substitutes 'securities of highest rating' for 'CG bonds'. Difficult to see how these 2 definitions differ
  - AASB requirement specifies 'risk-free' and recommends CG bond yields BUT does leave the door slightly ajar for other undefined approaches that also achieve 'risk-free'
- The main uncertainty of approach brought about by the GFC revolves around the term 'risk-free' and its interpretation under the AASB standard
  - In theory no benchmark asset return is totally risk-free
  - Some argue CG bond yields not always most appropriate benchmark
    - Arguments focus on apparent shortage of supply
  - Proposed alternative (use of long-term swap rates) has its own issues
    - Adjusting for credit and other risk premiums

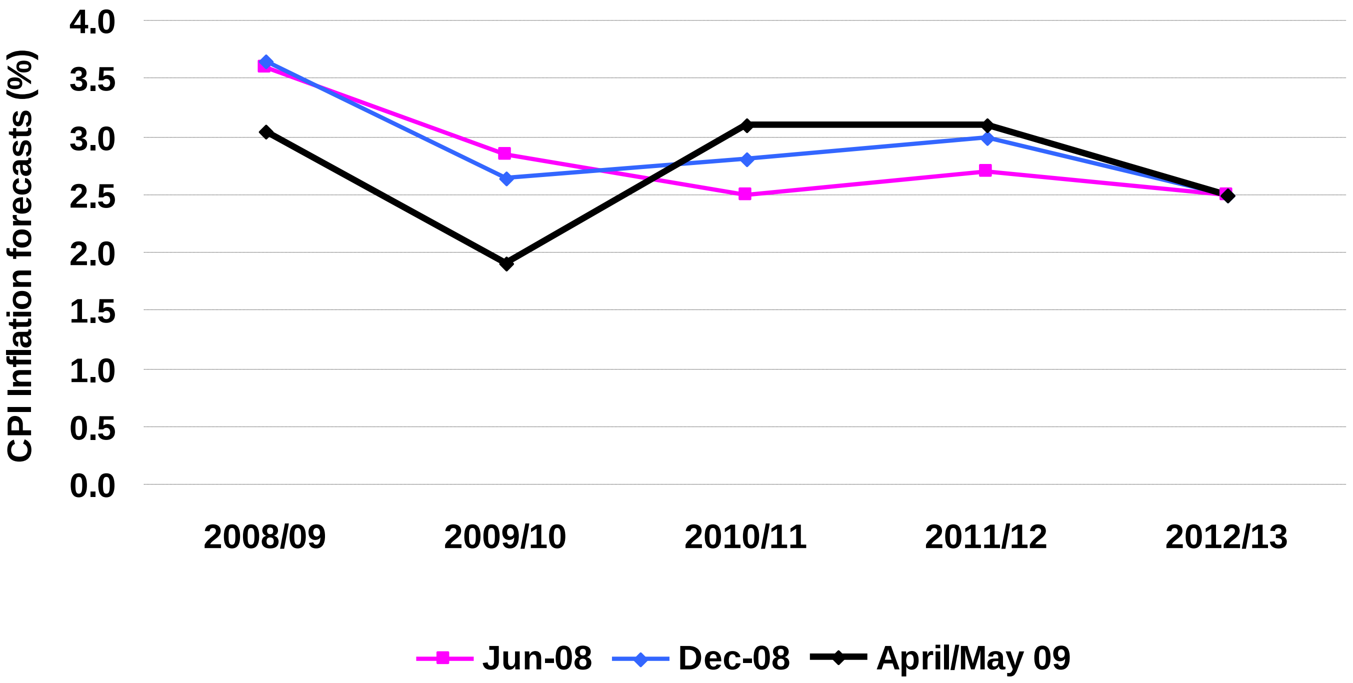
Discount Rates

- Asset-Liability mismatch
  - The drop in discount rates produced large increases in provisions
  - Only a pure CG bond asset mix would have nullified this effect
  - Many insurers suffered a net loss due to interest rate effects
  - Corporate bonds held were priced at yields reflecting greater credit risk than CG Bonds (e.g. ‘A’ or ‘AA’ rated)
    - these yields expanded by 100-300 basis points in the GFC
  - ‘Spread’ losses on corporate bonds were not offset by any related change in liability discount rates which only moved in line with Govt credit risk
  - This is not a ‘discount rate’ selection issue, it is just the result of less than ideal asset-liability matching

Future Inflation Rates

- Less consistency of practice in selection of this assumption:
  - This is mainly an issue for long-tail liability valuations
    - Workers compensation in particular, but also CTP and Liability
  - APRA and AASB provide no specific guidance on benchmarks
  - Variety of 'professional' economic forecasters used
    - 5 years max, forecasts range +/- 0.5%
  - Implicit inflation forecasts can be derived from market-traded assets
    - results distorted by market-risk premiums
  - For long-term (>10 years) cashflows a 'real rate' approach is often adopted for practical purposes
  - In most cases (i.e. apart from mainly W/Comp) claims costs are not directly linked to an inflation index, so this assumption is used as a proxy for a component of future claims inflation.
  - Superimposed inflation expectation then added

Future Inflation Rates



- GFC impact:
  - Indicators of past actual inflation are lagging, and remain high
  - Expectations of short-term inflation have been lower by 0.5%
  - Medium-term speculation is mixed: some talk of deflation and some talk of hyperinflation resulting from Govt intervention being overdone. Consensus is not clear, expectations generally slightly higher

Future Inflation Rates

Does this make the inflation rate assumption any harder to select?

- We have enjoyed a long period of relatively stable inflation
  - ➢ The range of expectations was previously quite narrow
- Now the outlook is considerably more uncertain
  - ➢ Short-term risks seem to be on the downside
  - ➢ Longer-term risks seem to be on the upside
  - ➢ There is a wider range of forecasts, however, average expectations have not changed greatly, at least so far

- Extra uncertainty in selecting the economic inflation assumption needs to be considered in light of the high degree of uncertainty that always exists in the superimposed inflation assumption.
- Materiality depends on view of how the total claims inflation has been affected

Risk Margins and PoS

- Risk margins can be decomposed into 2 parts:
  - An assumed distribution for the liability values
  - A chosen probability of sufficiency for the liability provision
- Only the distribution is an actuarial assumption
- The PoS is a decision made by an Insurer's Board
- GFC impact:
  - Greater uncertainty in liability outcomes
    - Economic inflation for long-tail classes
    - Economic activity levels feed into many different classes in different ways e.g. Motor vehicle use, H/H contents theft rates, return-to-work rates, propensity to claim etc
    - Unknown impact of socio-economic factors for all classes
  - Insurer decisions on desired sufficiency level of provisions
    - Some tempted to lower PoS to boost profits or alleviate losses
    - Others may increase PoS to reflect heightened risk sensitivity

Risk Margins and PoS

Did this make the risk margin assumption any harder to select?

- Liability distribution
  - GFC impacts on uncertainty are very difficult to estimate
  - Is it any different to other aspects of the risk margin basis?
    - Or are we just kidding ourselves if try to put a number on it?
  - The GFC impact on uncertainty could be expected to evolve rapidly over time, tending to fluctuate up and down
    - Any allowance would need to be re-examined regularly
      - unlike most aspects of the liability risk margin basis
    - Would it be significant at 75th %ile, 90th %ile, …
  - If we did include a GFC allowance would insurers then be entitled to claim 'we are provisioned against the effects of the GFC' ?
  - Most likely the 'GFC margin' would not be a large addition
  - Is the risk margin even the right place to hold capital against GFC-induced uncertainty?
    - Or is explicit capital more appropriate?