Valuation of Long Term Claims in a Stable Environment

1. The method described below makes the following implicit assumptions;

   (a) The question of claims is known reasonably accurately (or can be simulated) and is relatively stable.

   (b) The assets held in respect of such claims are separately identifiable and segregated.

2. Long term claims have particular features;

   (a) They tend to be overvalued if inflation is taken into account.

   (b) If inflation is not taken into account (effectively discounting (a) at the rate of inflation) then the accounts may be queried.

   There has been a case made for discounting inflated claims estimates. The problem is, how do you incorporate matching.

3. For each year an estimate is made of

   Ci - the claims made in year i

   Ii - the gross investment income in year i

   Mi - the maturity values in year i

4. The profit for year i is then calculated on Ii + Mi - Ci = Pi
   and total profit calculated on the sum of the Pi;
   The value today of the profit is then assessed on $\sum ViPi = TP$

5. If the assets are taken at value X in this account, then it is clear that the liability value should exceed X-T.P.

6. The method could be used to

   (a) test matching

   (b) test volatility of the reserve

   (c) test reinsurance levels

These are questions which should be discussed;

(i) What rate of interest should be used for discounting?

(ii) What are the tax implications (this could has a consequence on calculation of Pi)?

(ii) Should we look at Ii + Mi and Ci separately?

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