

# MERCER



7 July 2008

## **Introduction to Incurred But Not Reported (IBNR) Claims**



# Outstanding Claims Reserves

## Delay

- The need for outstanding claim reserves arises from the delay in time between the event resulting in the claim to the reporting of that claim to an insurer and the subsequent settlement of that claim. This is irrespective of whether the settlement involves the payment of an amount by the insurer, or whether no payment is made as when a liability is successfully denied.
- Sequence:
  - Loss/Accident
  - -> Report claim to Insurer
  - --> Insurer sets up reserve
  - ---> Insurer revises reserve as more information is available
  - ----> Insurer settles claim



# Outstanding Claims Reserves

## Delay

- For example, in the case of Motor insurance,
  - a claim in respect of Accidental Damage to the insured vehicle may require a few weeks between notification of the claim to the insurer and final settlement of the repair bill with the repairer;
  - on the other hand, a claim involving severe Bodily Injury to a third party may require the lapse of several years between notification and final agreement as to who is at fault, the extent of the resulting disability and its quantification in monetary terms.



# Outstanding Claims Reserves

## Types of reserves

- The outstanding claims reserves can be divided into
  - **Case estimates/reserves** for claims known to the insurer at the valuation/reserving date
  - **Claims not yet known to the insurer**, but for which a liability is believed to exist at the valuation/reserving date
- Subsequent development in case reserves for known claims gives rise to **“IBNER”** or **“Incurred but not enough reserved”** in the former
- **“IBNR”** or **“Incurred but not reported”** refers to the latter
- IBNER can be estimated by taking the total of case reserves, plus some adjustment for future development while IBNR can be estimated by a statistical method



# Composition of Projected Ultimate Claims

- Projected Ultimate Claims consist of:
  - Claims paid to date of projection
  - Case Estimate in respect of claims intimated but not yet settled
  - Pure IBNR being claims not yet reported by date of projection
  - IBNER being the statistically computed adjustment whether positive (case reserves inadequate) or negative (case reserves more than adequate)
- **Unless there are good statistics on claims number and reasonably homogeneous data is available, normally IBNR is calculated to include pure IBNR and IBNER**



# Pure IBNR

## Definition

- IBNR claims are incurred before the reserving date, but not reported until after it. They are the claims for which  
accident date < reserving date < reporting date
- The picture is simple enough, but as always in General Insurance some complications enter
- The only certainty is that such claims will come in, and that there is a duty to make provision for them
- The premium corresponding to these events has already been recognized as earned premium – these claims should not be paid out of future premium (cash underwriting)



# IBNR

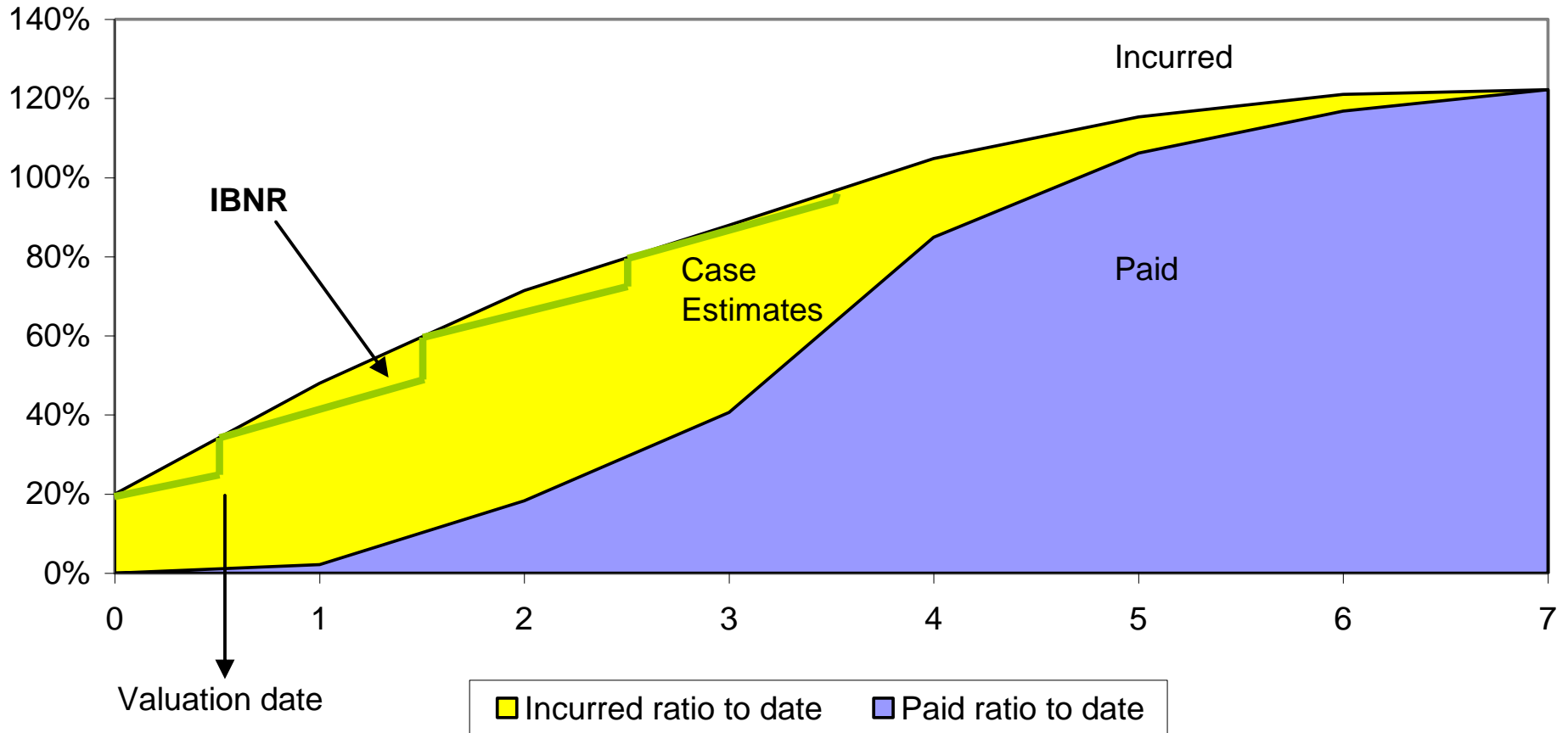
## Method of Estimation

- Although IBNR claims are at first unknown, at some time in the future they must become manifest.
- At this stage, values can be recorded for them — for example payments, numbers, case reserves, and incurred amounts
- Data can be built up on their **development patterns**, and used in projections.
- Some of the methodologies normally used :
  - Link ratio / Chain-Ladder method
  - Bornhuetter-Ferguson method



# Development of Claim

## Paid vs Incurred

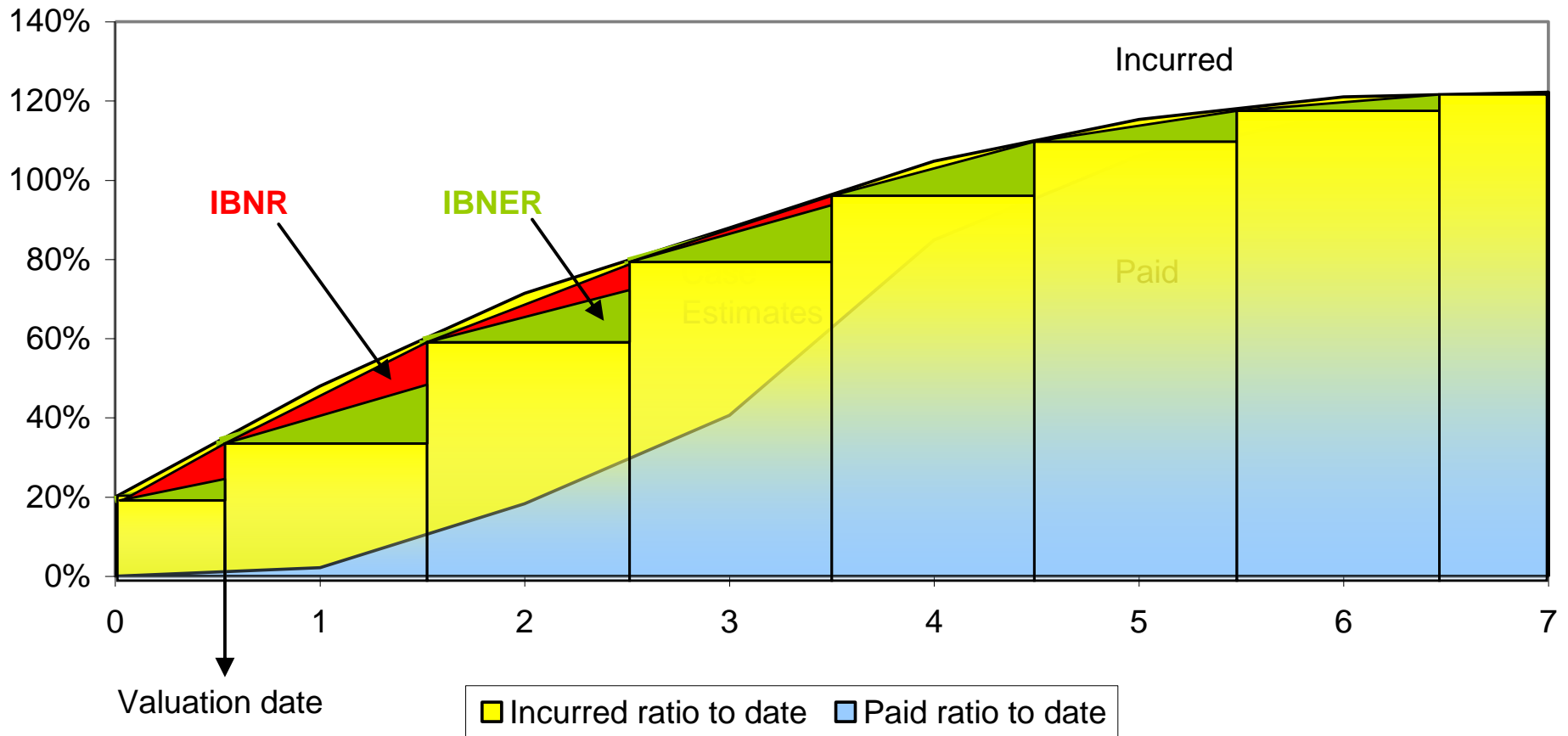






# Development of Claim

## IBNR vs IBNER





# Takaful

- Computation of IBNR especially is important in Takaful;
  - In conventional insurance an underestimation or overestimation of IBNR will affect solvency AND the distribution of profits to shareholders
  - In takaful an underestimation or overestimation of IBNR will affect whether a Qard will be needed, what and when profits will be distributed to participants
  - Where the shareholders share in the surplus in the Tabarru' fund an underestimation of IBNR will benefit shareholders as shareholders share in surpluses but not deficits



# Dynamic Financial Report

- IBNR is a basis of accrual accounting as opposed to cash accounting where claims are only recognized when they are paid.
- It is an “after the event reporting”.
- What is more important is determining what your future Financial position would be given the historical claims experience and your business plan
- What will affect your future financial position?
  - Your business composition (proportion in motor, fire, PA etc)
  - Your expected loss ratio for each class of business
  - Your wakala fee for each class of business
  - Your retakaful cost
  - Your acquisition cost and management expenses



# The Tabarru' Fund

- The Tabarru' fund receives the contribution net of wakala fee
- The Tabarru' fund should then not accept risks where the loss ratio is greater than (1 minus wakala fee).
- Loss ratio is defined as  $(\text{projected claims} + \text{retakaful cost} - \text{retakaful recoveries}) / \text{earned tabarru' contribution}$
- Depending on whether you have one Tabarru' fund or many, the intention is to plan such that each of your Tabarru' fund is generating a surplus at all times



# Shareholders Account

- The shareholders receive the wakala fee
- From this wakala fee they need to provide
  - For acquisition cost
  - For management expenses
  - For profit to service shareholders capital



# Malaysian specific issues

- There are tariffs on motor and fire – Are takaful companies bound by such tariffs?
- Motor Act class have a loss ratio ranging from (for private car) 180% to 270%. Should Takaful be writing such business? Is it fair to other participants?
- Fire (household) has loss ratios of 20 to 30%. Should a separate Tabarru' fund be set aside for these participants?
- How should surplus be shared between participants? By sum covered by contribution to surplus by tabarru' amount?



# Conclusion

- IBNR (including IBNER) is an important estimate to determine the solvency of a Tabarru fund and to determine the amount of surplus that can be distributed.
- A business plan for Takaful should aim for a surplus position for the Tabarru' fund as otherwise the management will not be earning its wakala fee.
- If shareholders are sharing in the surplus should shareholders also not share in deficits? Sharing in deficits is not allowed from the sharia perspective as it involves Gharar. It is suggested that shareholders should not share in underwriting surplus.



**End**