Commutations & Run-off Solutions

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P w C

Definition

"A commutation is an agreement between a reinsurer and a cedant in which one payment or a series of payments settles contractually covered claims that are currently due or will become due in the future."

More definitions!

- An unwinding of the risk transfer mechanism
  - for the payment of a premium the original insurer will reassume all of the liabilities that were previously transferred to the reinsurer.
- A re-underwriting of the risk
  - it is an opportunity to recapture the business with the benefit of hindsight.
- ‘Reinsurance to Close’
  - this is a special case of a commutation on non-confrontational terms

Commutation Issues

“Commutations are commercial transactions. They therefore involve a buyer and a seller of risks. Each with its own agenda and each measuring the risks is a different way.”

Types of commutations

- Global Commutations
- Inwards only commutations
- Specific contracts or programmes
- Market-wide commutations
- Contractual commutations

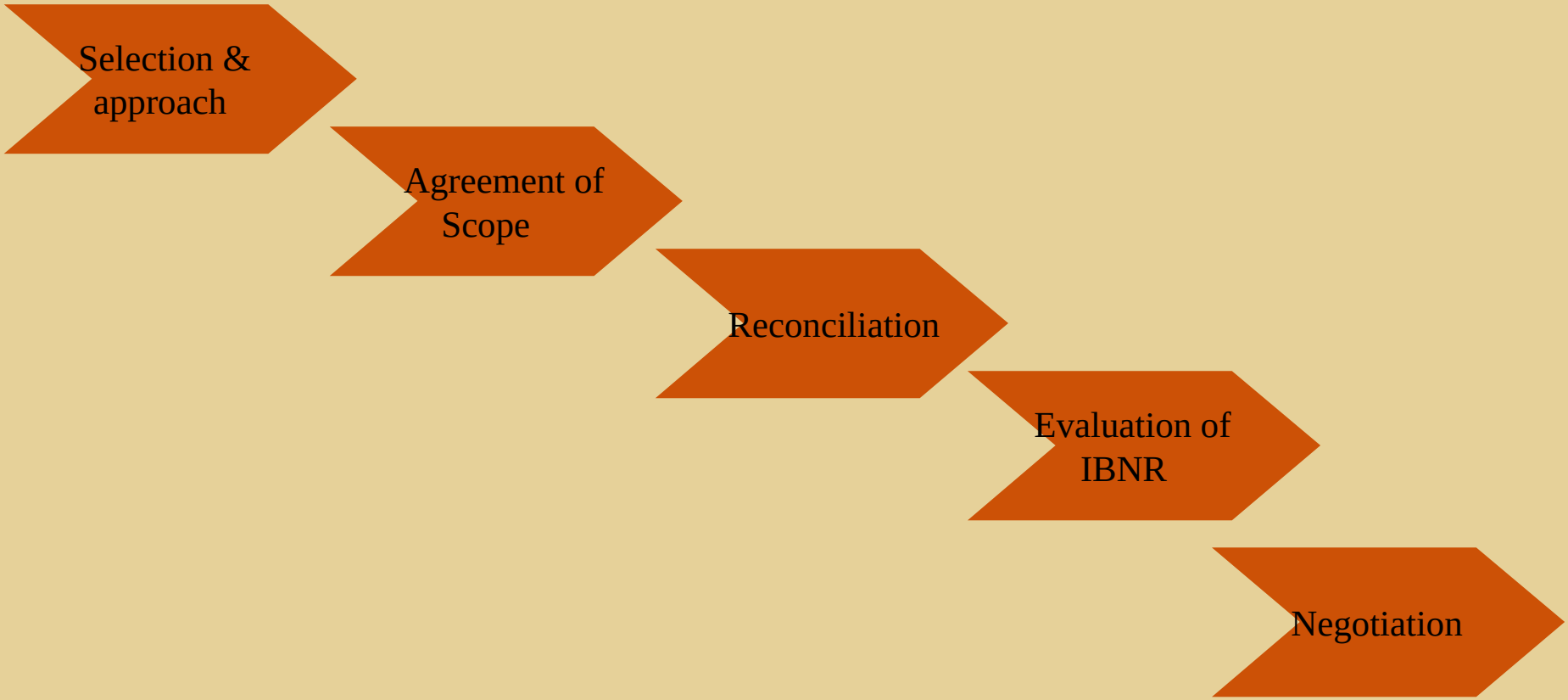
Components of a commutation

- Accruals
  - payments that have been made by one counterparty but have yet to be received by the other.
- Outstanding Claims and IBNR
  - this value is normally estimated by the actuaries of each counterparty
- Reinstatement premiums due
- Price for uncertainty
- Unutilised cover

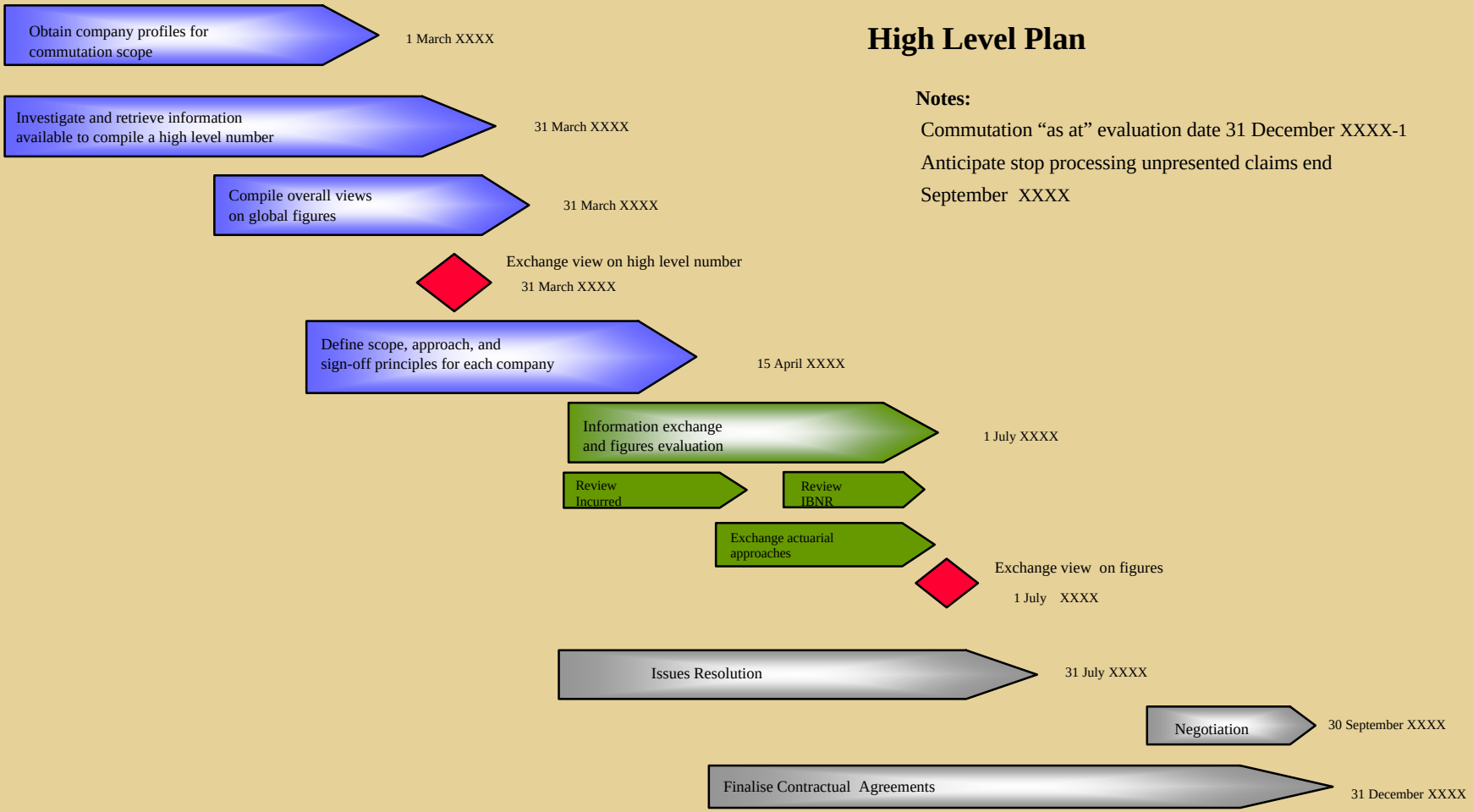
Components of a commutation (ii)

- Broker balances
- Broker funding
- Letters of Credit
- Deposited reserves
- Unexpired risk reserves (including unearned premium reserves)
- Deferred acquisition costs

Stages of a commutation



The process in more detail



High Level Plan

Notes:

Commutation “as at” evaluation date 31 December XXXX-1

Anticipate stop processing unpresented claims end September XXXX

Actuarial evaluation

- Different considerations for valuing inwards and outwards business
- Valuation affected by the motives of each counterparty
- The actuary must be familiar with the types of policy and business
- Broad-based averages may no longer be appropriate

Valuing outwards IBNR

- Methods include:-
  - reserving basis projection
  - booked costing
  - reserving class projection
  - reinsurer’s costing
  - industry average projection
  - layer analysis
  - total limit or aggregate evaluation

Valuing outwards IBNR (cont)

- Initial best estimate
- Adjustments to reflect commercial considerations
- A weighted average of results from different methods may be appropriate

Reserving basis projection

- Based on standard reserving data …….
- ……. but calculates IBNR at an individual contract level
- +/-
  - reserving basis may include margins
  - contracts being commuted need to be representative of whole class
  - complexity of allocating IBNR to individual non-proportional contracts
  - \+ relatively straightforward method for quota share reinsurance

Booked costing

- Based on accounting data
- +/-
  - + consistent with published accounts
  - + may be used to calculate breakdown profit or loss on accounting basis
  - – not necessarily consistent with economic value ……
  - – …… and therefore of limited practical use

Reserving class projection

- Uses historical claims development data split by treaty and class
- +/-
  - + highlights if treaty development is consistent with overall class
  - – sufficient data needed for credibility

Reinsurer’s costing

- +/-
  - + no data required
  - – reluctance of reinsurer to release projections

Reinsurer’s costing (cont)

Industry average projections

- Based on statistics eg. RAA, AM Best
- +/-
  - + limited data required
  - – statistics may not be appropriate for contracts

Layer analysis

- Appropriate for XOL and facultative reinsurances structured as layers of cover
- Techniques for evaluating such layers include:-
  - development of losses in layer
  - excess of loss factor methods
  - difference method
  - individual loss projection
  - frequency/severity based method
  - simulation model

Layer analysis - individual loss projection

- Requires historical claims development for individual large losses
- Individual large losses projected to ultimate
- IBNR allocated vertically by layer
- Contract limits applied to check for exhaustion
- Treats all IBNR as IBNER
- Refinement - separation of pure IBNR component

Layer analysis - frequency/severity based method

- Requires data on individual claims by layer
- Projects ultimate number of claims
- ……. and ultimate average claim size for each layer
- +/-
  - sufficient data required for credibility
  - volume of claim count data often insufficient ……
  - …….. and therefore statistical techniques may be required

Layer analysis - simulation model

- Requires extensive data
  - ground-up losses projected to ultimate
  - policy details
- Requires assumptions for
  - claim size probability distributions eg. LogNormal, Pareto
  - number and size of IBNR claims
- Method allows each claim amount to vary
- Projects estimated ultimate costs to each layer for a series of runs
- Expected loss to the layer derived as mean loss over all runs

Layer analysis - simulation model (cont)

- +/-
  - + output is a distribution of results
  - + theoretically superior to deterministic methods
  - – data requirements
  - – time consuming
  - – computing power required

Total limit/burning percentage

- “Burn probability” percentages applied to exposure
- +/-
  - + useful for higher layer XOL treaties
  - + limited data requirements

Valuing inwards IBNR

- Less data available ……...
- ……. therefore methods normally constrained
- Common approach - cedant calculates IBNR figure and presents it to reinsurer with supporting documentation
- Combination of reserving and pricing approaches required

Discount rate

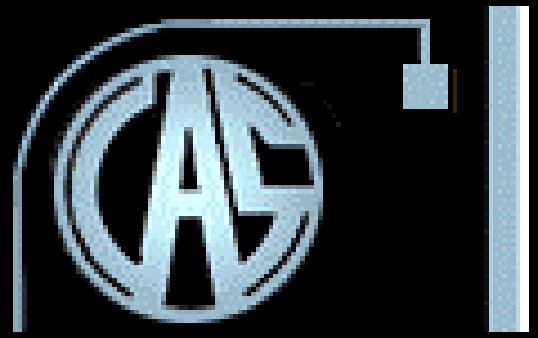
- Applied to outstanding and IBNR claims
- Allows for the time value of money
- Possible approaches
  - risk free rate of return
  - balance sheet or lower
  - assumed equity returns or higher
  - assumed rate of return on index linked bonds
- Payout patterns required - consistent with IBNR basis

Risk margin

- To reflect the transfer of uncertainty between counterparties
- Usually commercially driven
- Possible approaches
  - percentage of reserves
  - proportional to standard deviation of reserves
  - probability of ultimate sufficiency
  - expected return on notional capital employed
  - expected average reserve deficiency
  - decreased discount rate

Other evaluation issues

- Bad debt
  - for insolvent counterparties the ultimate payout level needs to be derived
- Set-off
  - allow for set-off before any bad debt calculations



Your worlds

Our people