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THE OPTIMAL SYNDICATION OF LONGEVITY RISK

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BUILDING TEAM SPIRIT TOGETHER

SOCIETE GENERALE
Corporate & Investment Banking

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VALUE CHAIN

- A palpable global value chain is emerging for longevity risk transfer.

- Pension funds are hedging longevity exposure with a small number of:
  - Life insurers;
  - Life reinsurers; and
  - Sometimes with banks as the initial counterparty which then hedge with the same insurers and reinsurers

- These insurers and reinsurers, which accumulate portfolios of longevity risk, in turn, **seek out-of-the-money hedges to potentially improve the return on capital for their businesses by potentially reducing capital charges.**

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OPTIMAL SYNDICATION OF LONGEVITY RISK

The optimal syndication of these out-of-the-money hedges would take advantage of the different capital paradigms for:

- **Hedgers** whose capital requirements are usually a function of the:
  - Economic capital; and/or
  - Regulatory/rating agency capital charges for longevity risk.

And

- **Risk takers** whose capital charges often reflect:
  - An existing overweight position in mortality (relative to longevity); and
  - Longevity as a causally uncorrelated risk for capital markets risk takers.

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THE POWER OF CORRELATION MATH

- There has been published research showing support of the view that for a lightly correlated position that is a small part of a capital markets participant's portfolio, the addition to the second and higher moments around the mean for the overall portfolio return are de minimis.
- If we assume that longevity has a zero correlation with capital markets, then the capital required for adding in a small amount of longevity risk should only be the expected loss.

Hypothetical Example*
▪ If an upfront premium of 20% is paid for buying protection with an upfront pv of expected loss of 2.5%, then the expected cumulative return on capital should be: ▸ (20% - 2.5%) / 2.5% = 700%

**The hypothetical example is provided for illustrative purposes only and not as an estimate or forecast of future performance.*

MARKET GROWTH

- In order to optimally syndicate longevity risk, banks need to source risk takers who are:
  - Overweight mortality risk, or
  - Capital market participants (who can benefit from the correlation math)

  to put them into competition to provide desirable pricing and terms for insurer and reinsurer transaction sponsors

- For the benefit of all market participants, banks need to also develop:
  - Standardized modeling and documentation approaches (which can potentially help promote liquidity);
  - Efficient credit mitigation techniques; and
  - Efficiently priced leverage

- All of the necessary tools currently exist to potentially increase the size and frequency of transactions.
- It is now up to the banks to execute on these points in a transparent, value-added basis that makes it more attractive for potential transaction sponsors to bring more and larger deals to market

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