Reinsurance as a Capital Management Tool

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Confidential

AGENDA

- Overview of pension risk transfer market
- Case studies
- Reinsurer's perspective

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Pension Risk Transfer Landscape

- Life expectancies have steadily increased over most of the past century
- Longevity risk represents the risk of paying out on pensions and annuities for longer than anticipated.
- Living longer also increases impact of other risks linked to pensions *(e.g. changes in future inflation-linked increases and interest rates)*
- The total global amount of pension-related longevity risk exposure is estimated to be $20 - $30 trillion
- Over $300 billion in pension risk transfer transactions completed over the last decade. Largest global markets for DB pensions are USA, UK, Canada, Japan & the Netherlands.
- UK has the most developed market for longevity de-risking transactions. 5,000+ DB Plans with estimated liabilities ~ £2 trillion. Most are closed to new members, have ceased future accrual and are on a path to wind up.

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Pension de-risking options – Group annuity contracts

Pension Buy-out:

- Pension Scheme pays an **upfront** premium to an insurer
- Insurer pays all future pensions **directly** to the insured members
- Full risk transfer – enables Scheme to wind up

Pension Buy-in:

- Pension Scheme pays an **upfront** premium to an insurer
- Insurer pays the pensions for the insured members **to the Scheme**
- Policy is an asset to the Scheme who continues to pay members

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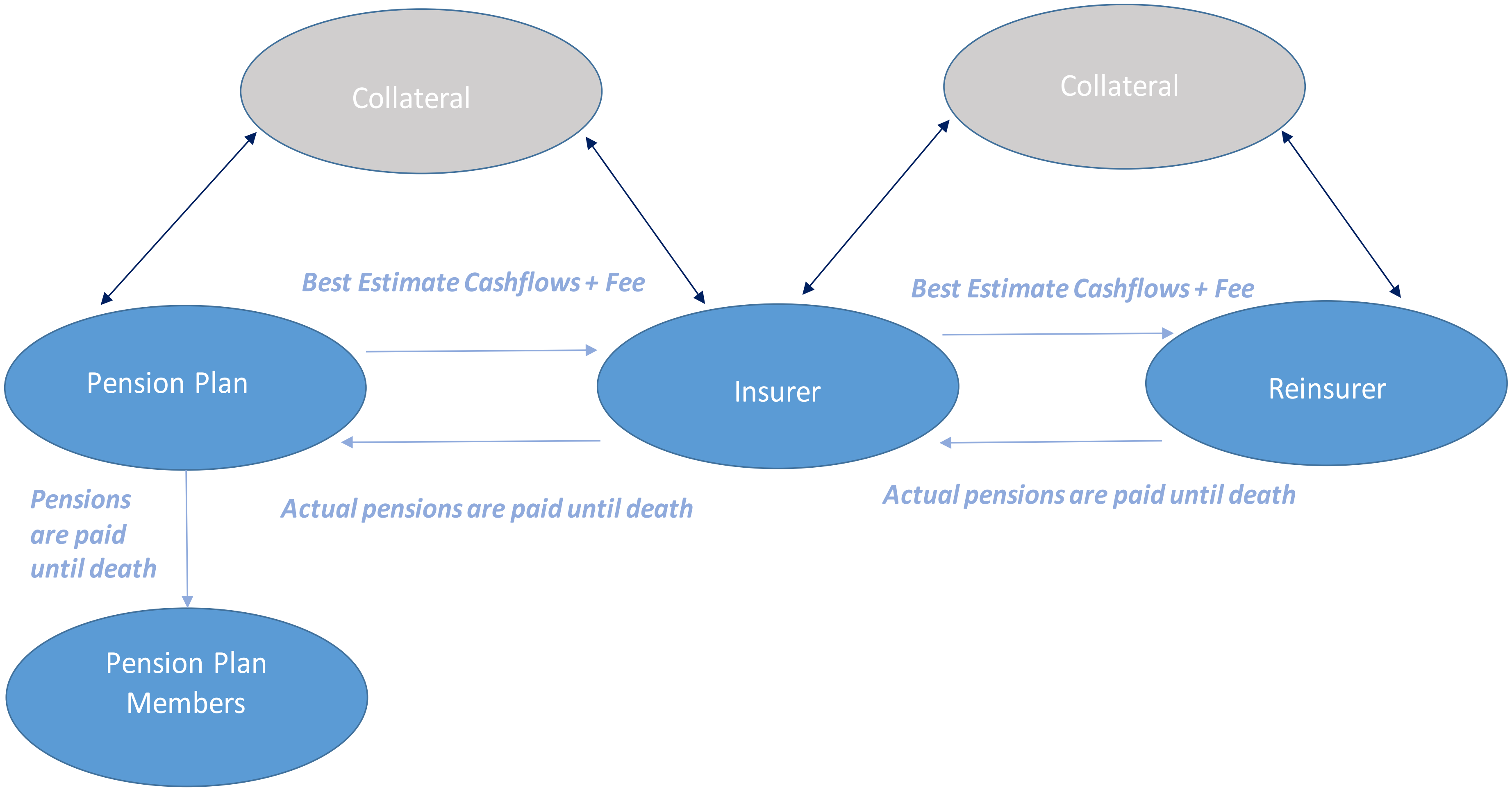
Pension de-risking options – Longevity Swap

- Client agrees to pay regular premiums to Insurer or Reinsurer
- Premiums comprise of an agreed “Fixed Leg” plus Fee
- (Re)insurer then pays the actual future pensions (“Floating Leg”)
- Longevity risk is transferred while client retains asset ownership, with control and flexibility around investment strategy.
- There may be multiple counterparties to a swap
- Terms are set out in Insurance/Reinsurance Agreements
  - These set out the key obligations and rights of each party
  - Credit risks can be managed via collateral

Longevity Swap Illustration



European Case Studies – features of swaps

- Full or partial cover – future lifetime of members or fixed term, tranched portfolios, in/out of the money
- Intermediation routes
- Simplified benefits and contractual terms– reduces cost, speeds up execution
- Larger Sponsors still prefer bespoke transactions while more choice opening up for smaller schemes
- Cancellation/renewal options

Case Studies – Traditionally intermediated swap

- May 2018
- £2bn UK longevity swap
- Pension Plan Sponsor was National Grid Electricity Group
- Insured by Zurich
- Reinsured by Canada Life Re
- Longevity risk cover provided for future lifetime of 6,000 current pensioners as well as their future dependants
- Fixed and floating legs of the swap will be updated for the benefit escalation in payment as annual inflation rates are published in the UK

Case Studies – Captive insurer

- September 2017
- £1.6bn UK longevity swap
- Pension Plan Sponsor was British Airways
- This was BA's third longevity swap
- Insurer is a captive insurance cell owned by the Trustee
- Reinsurance was split into two - Canada Life Re and Partner Re
- Fixed and floating legs of the swap will be updated for the benefit escalation in payment as annual inflation rates are published in the UK

Case Studies – Index-based swap (Stop-loss)

- July 2015
- €6 billion Dutch longevity swap
- This was Aegon's third longevity transaction
- Portfolio included a material tranche of younger deferred lives
- This transaction provided partial longevity cover:
  - Reinsuring adverse movements in reserves due to lighter **future mortality improvements only** rather than base mortality and improvements
  - The experience is monitored against a **Dutch notional index** rather than specific portfolio of lives

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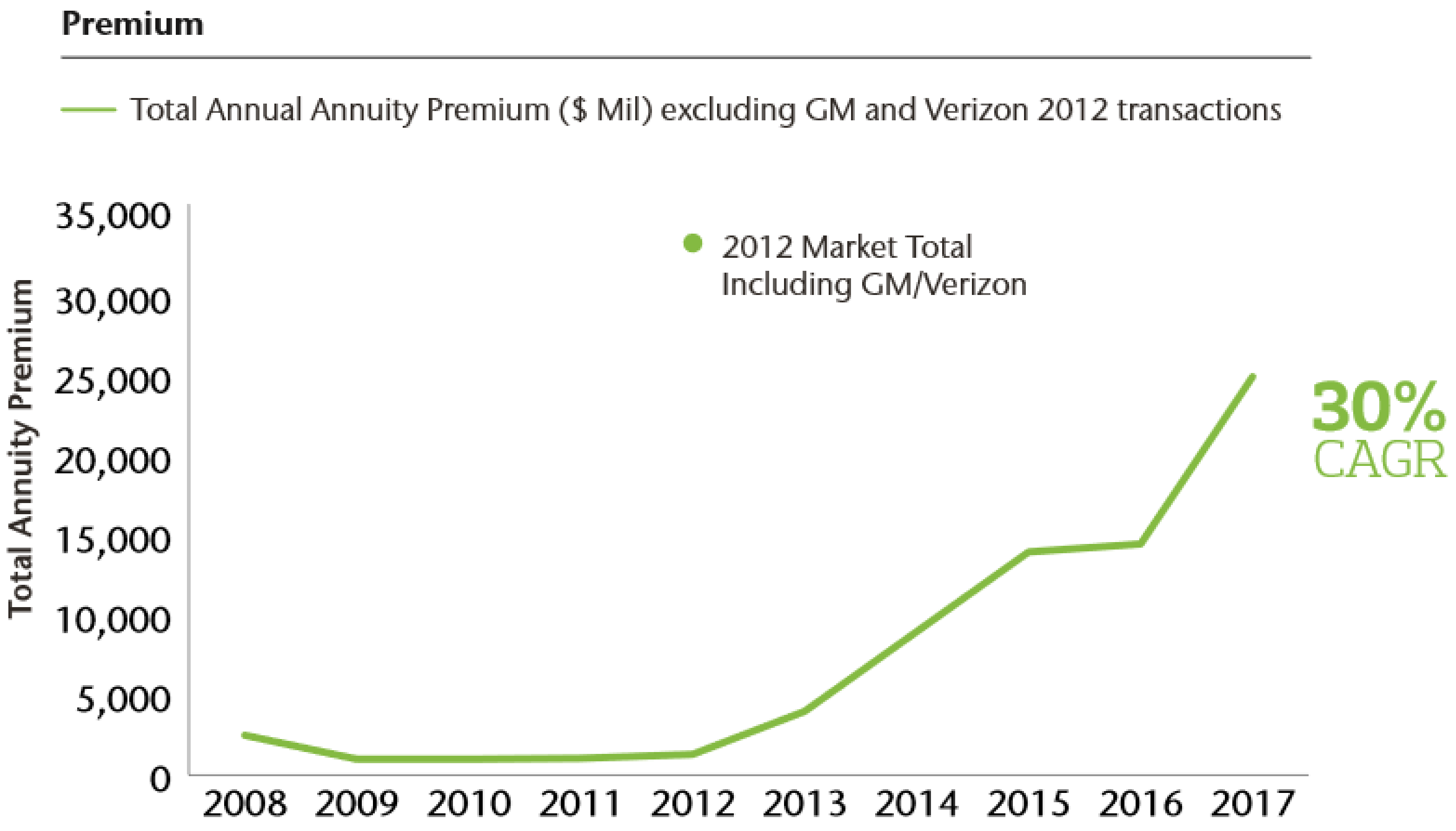
North American Case Study

- March 2015
- CAD$5 billion Canadian longevity swap
- The Bell Canada Pension Plan
- Insured by Sun Life Financial Inc
- Reinsured by SCOR Global Life and RGA Life Reinsurance Company of Canada.
- First longevity-only transaction in North America

US Market

- All public transactions in the U.S. have been pension buy-outs or buy-ins
- 2012 was the first bumper year – General Motors and Verizon transactions
- Steady growth since – USA now has an active Pension Risk Transfer market ($25bn transacted in 2017)



Source: Aon U.S. PRT Sales Survey data as of 12/31/2017.

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Reinsurer’s Perspective

- We have been active in the longevity market since 2008
- UK and Dutch market are now well developed and increasingly competitive
- Reinsurers are becoming more selective and looking overseas
- Canadian market is growing and the US is coming under increasing spotlight
- Different **regulatory regimes** has influenced de-risking appetites
- Increase in debate around **future mortality improvements** in recent years – slowdown internationally
- More analysis into different experience for different **socio-economic groups**
- Marked differences in long-term improvement assumptions used in different regions

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Questions?

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