Institute of Actuaries
Mortality and Longevity Seminar 2012

Longevity de-risking in action –
what are the motivations and practicalities of a longevity swap trade

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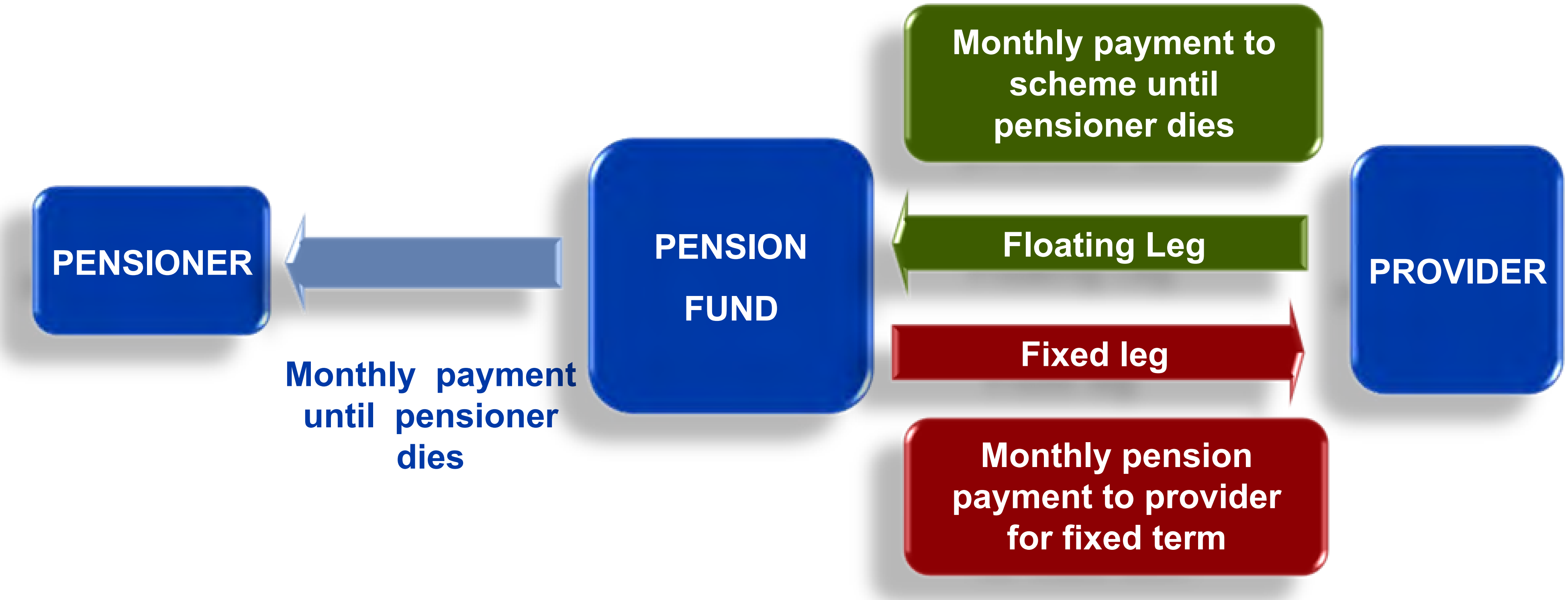
Agenda

- Longevity swaps – the basics
- The distribution model
- Recent case studies
  - Rolls Royce deal
  - Pilkington deal
- Observations on successful transactions

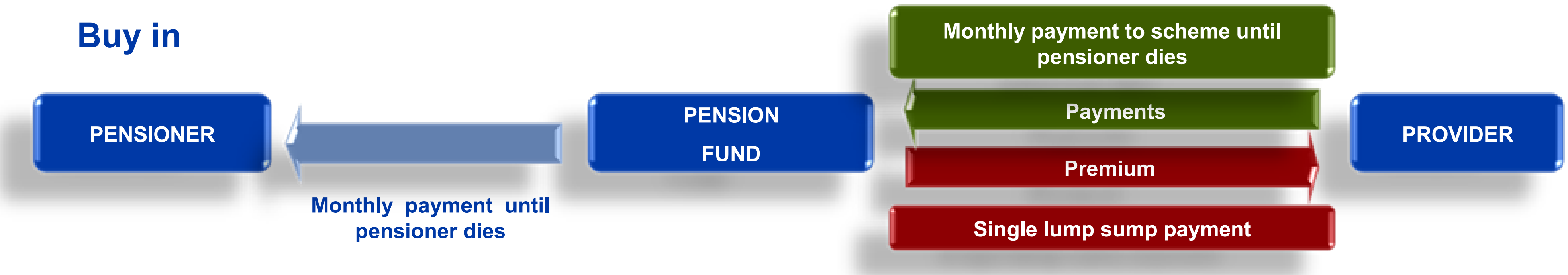
Longevity swaps



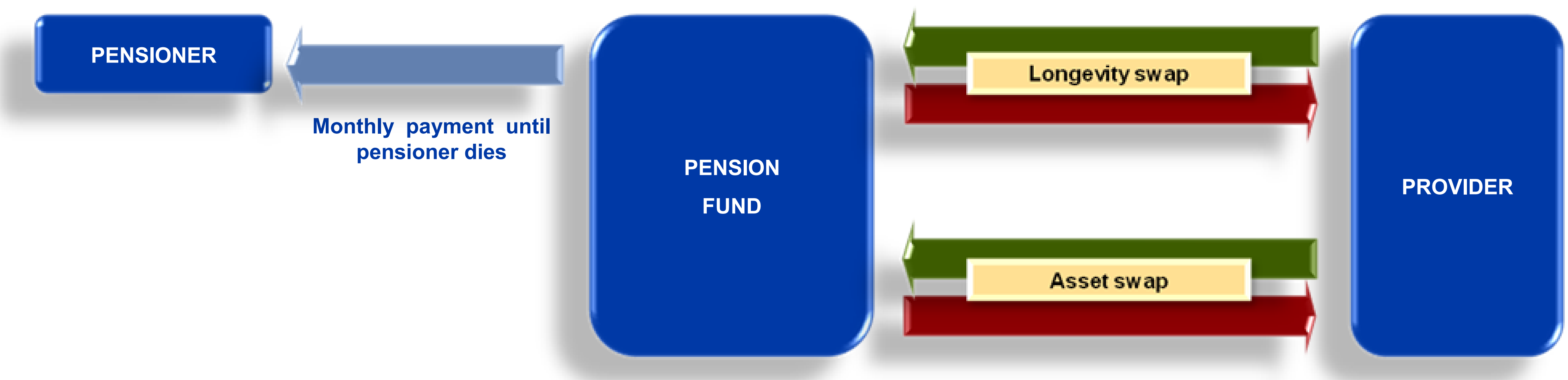
- Unfunded structure – no up front asset payment to the provider, structure is a cashflow swap
- Members continue to receive pensions from the fund – the provider pays those same amounts into the fund
- Fund is exposed to the credit risk of the provider – however several credit mitigation structures are available
- Fund also retains the investment risk of the assets, inflation risk can be retained or transferred

Other solutions?

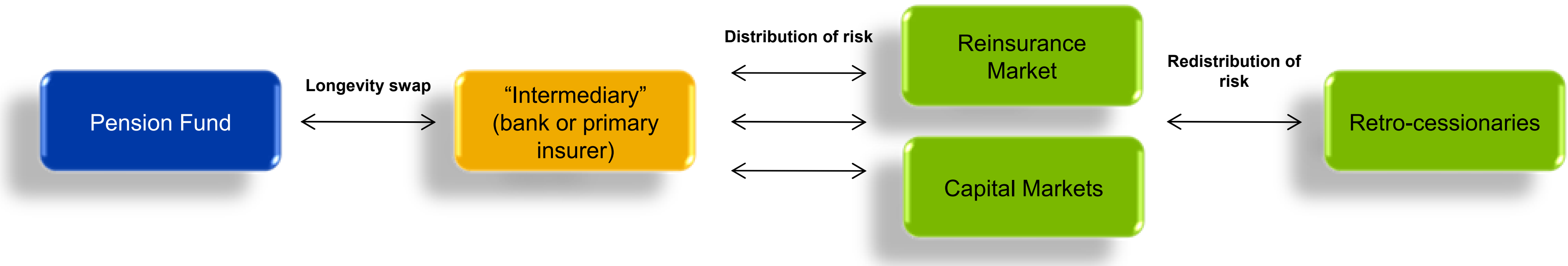
Buy in



Synthetic Buy in



The longevity risk transfer chain



- The fund has a single contract with the intermediary
- The intermediary will distribute that risk to reinsurers (and in the case of the banks, potentially also to the capital markets)

Pension fund longevity swap deals to date

Date	Fund	Provider	Approx size	Solution
May 2012	Courtaulds	Swiss Re	£1.4Bn	Pensioner bespoke longevity swap
January 2012	Pilkington	Legal & General	£1Bn	Pensioner bespoke longevity swap
December 2011	BA	Goldman Sachs / Rothesay Life	£1.3Bn	Pensioner bespoke longevity swap
November 2011	Rolls-Royce	Deutsche Bank	£3Bn	Pensioner bespoke longevity swap
August 2011	ITV	Credit Suisse	£1.7Bn	Pensioner bespoke longevity swap
February 2011	Pall	J P Morgan	£70M	Non-pensioners index based longevity hedge
July 2010	British Airways	Goldman Sachs / Rothesay Life	£1.3Bn	Synthetic buy-in (longevity swap plus asset swap)
February 2010	BMW	Abbey Life / Deutsche Bank	£3Bn	Pensioner bespoke longevity swap
November 2009	Royal Berkshire	Swiss Re	£1Bn	Pensioner bespoke longevity swap
July 2009	RSA Insurance group	Goldman Sachs / Rothesay Life	£1.9Bn	Synthetic buy-in (longevity swap plus asset swap)
May 2009	Babcock	Credit Suisse	£1.5Bn	Pensioner bespoke longevity swap (3 schemes)

Decision making

- Choice of product generally based on
  - Pricing
  - Security
  - Flexibility
  - Coverage
  - Implementation
  - Execution
  - ….. choice of legal format?

Overview – Rolls Royce deal

- Transaction with Deutsche Bank AG
- Bespoke Longevity swap covering all 37,000 pensioners and dependants in the Fund
- Pensioner liability of c£3bn and 37,000 pensioners
- Significant asset de-risking already in place
- Trustee and Sponsor aligned in wishing to further de-risk
- Range of solutions examined relative to risk reduction and self-insurance
- Security was as important as price – swap is fully collateralised
- Other key terms included termination, novation and additional security features

Rolls Royce - Project Timelines

Product	Risk analysis	Understand the risk profile of the Fund – including economic and longevity risks Identify those risks which are already managed/understood and those not
Product	Market analysis	Understand the derisking products available Obtain indicative pricing for buy-in, synthetic buy-in, longevity swaps
Product	Decision making	Allowing for level of longevity risk, indicative pricing and level of derisking already carried out, longevity swap was selected
Implementation	Broking	Deutsche Bank chosen on grounds of price, security and other key features DB and reinsurers worked with to further improve price
Implementation	Structuring	Adjusting key features of hedge to fit with Fund's appetite on cashflows, security and potential termination events
Implementation	Legal	Working closely with Fund's legal advisers to ensure commerically agreed structure reflected in swap documentation
Ongoing	Collateral	Ongoing verification of collateral calls from DB
Ongoing	Adminstration	Ongoing requirements to provide DB with member death data

Overview - Pilkington deal

- Transaction with Legal & General
- Bespoke longevity swap covering about 11,500 pensioners and current dependants of the Pilkington Superannuation Scheme.
- Liability of just under £1Bn on swaps basis
- Part of ongoing de-risking approach of Trustee and Company
- Security was important - collateralised in a very similar way to other derivative wrapped longevity transactions
- Other key terms included termination, novation and additional security features

General observations on successful transactions

- Joint working groups – alignment of interest between Trustees and Sponsor before engaging with market
- Data is key
- Strong project management required
- Clear decision making framework