



The Actuarial Profession

making financial sense of the future

Current Issues in Pensions

Jerry Gandhi and Lynda Whitney



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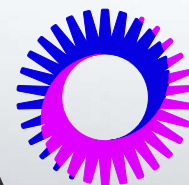
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De-risking at

RSA





Agenda

- About RSA
- RSA Pensions Legacy & de-risking timeline
- Risk reduction – what it looks like
- The effective buy in (Goldman Sachs/Rothsay Life Deal)
 - Aims
 - Actions
 - The Deal
 - The outcomes

About RSA & its Global Brands

At a glance...

- Capability to write business in over 130 countries, with major operations in the UK, Scandinavia, Canada, Ireland, Asia and the Middle East and Latin America.
- A FTSE 100 Company – and the UK's leading Commercial Insurer.
- A pure Property & Casualty Business – having “exited” all Life & Pension + Investment Management businesses in early 2000's.
- The Group made a profit before tax of £554m in 2009 and has shareholders' fund of £3.5 billion.
- In the top 100 companies of the Corporate Responsibility Index and employ around 21,000 people worldwide.

Global Brands

UK & Ireland



Canada



Scandinavia



Ireland





RSA Defined Benefit Schemes

RSA Schemes Details

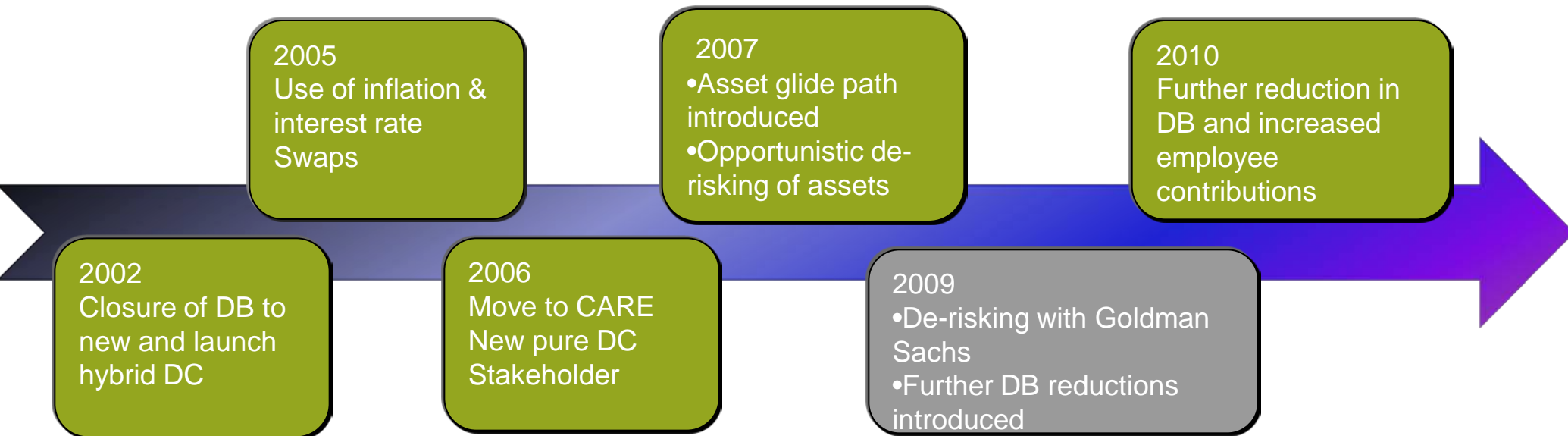
The aggregate UK pension fund asset value ranks RSA's pensions in

- 23rd position by Fund Value
- 11th position (in true private sector pension scheme terms)

Schemes de-risking activities

Scheme data 31 March 2010

Scheme	Fund Value	Members
	£m	
Sun Alliance (DB)	3,027	26,619
Royal Insurance (DB)	1,988	20,474
Bradford (DB)	141	1,390
UK2002 (Hybrid)	5	759
UK Stakeholder (DC)	57	4,100
	5,218	53,342





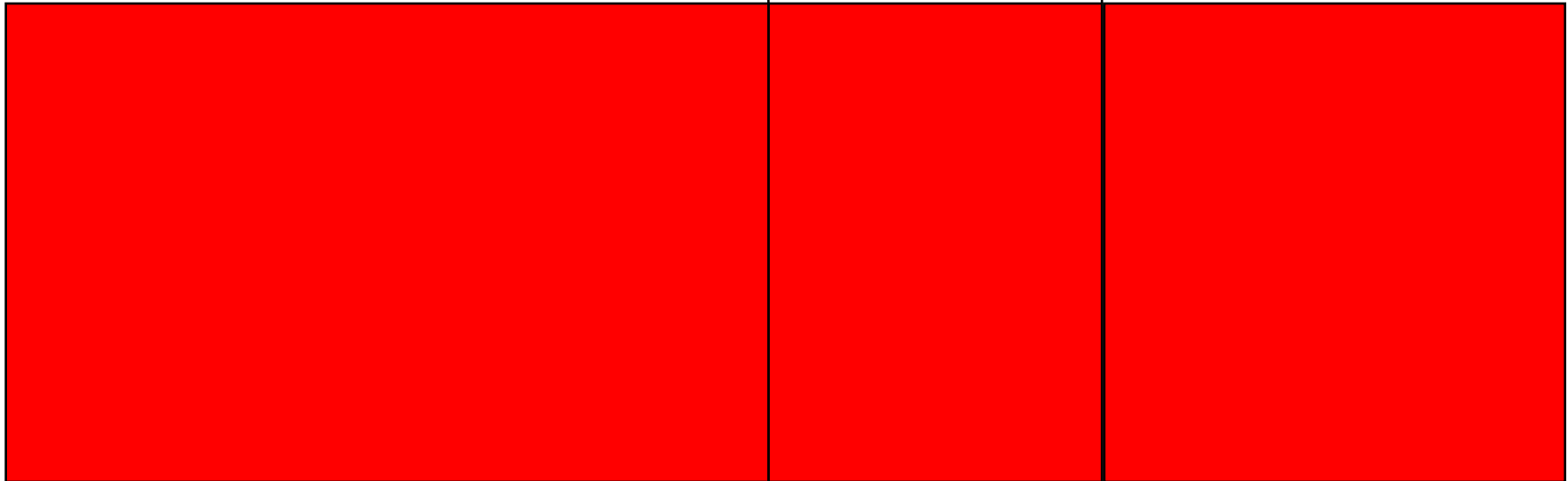
The BIG Picture from 2002 to 2010

The Risk Picture at the Start

PAST DB

Future DB

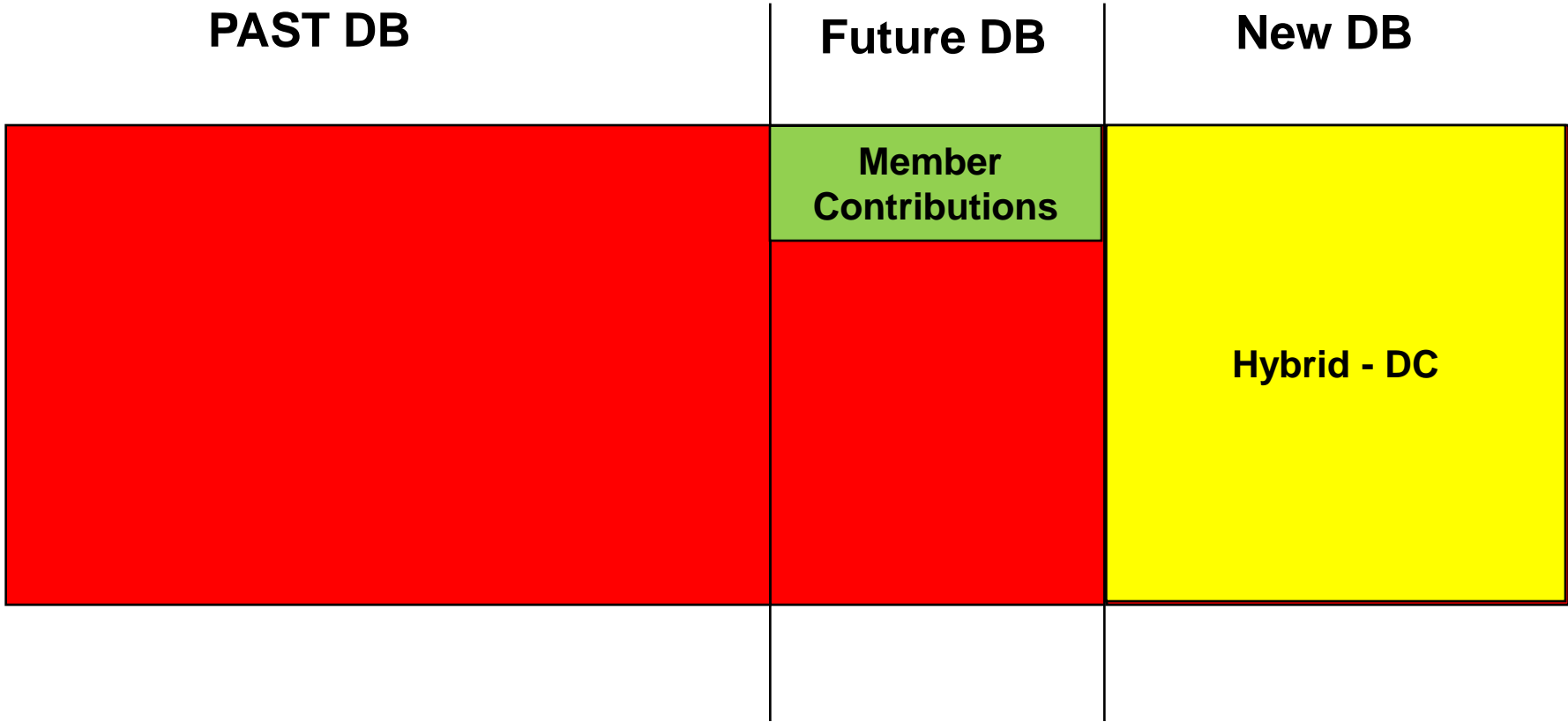
New DB





The BIG Picture from 2002 to 2010

After the 2002 changes





The BIG Picture from 2002 to 2010

The 2006 changes

PAST DB	Future DB	New DB
Removal of Final Salary Link	Member Contributions	New DC
	Care Benefits	
		Hybrid DC



The BIG Picture from 2002 to 2010

2007 to 2009 Asset changes

PAST DB	Future DB	New DB
Removal of Final Salary Link	Member Contributions	New DC
	Care Benefits	
Use of SWAPS/LDI & Asset de-risking		
		Hybrid DC



The BIG Picture from 2002 to 2010

The Deal with Goldman Sachs/Rothsday Life

PAST DB	Future DB	New DB
Removal of Final Salary Link	Member Contributions	New DC
	Care Benefits	
Effective Buy in		
Use of SWAPS/LDI & Asset de-risking		Hybrid DC



The BIG Picture from 2002 to 2010

The 2010 Changes

PAST DB	Future DB	New DB
Removal of Final Salary Link	Member Contributions	New DC
Effective Buy in	Care Benefits	
Use of SWAPS/LDI & Asset de-risking		Hybrid DC



2009 Aims and Issues – Thought Process

Background

- The proposed next step of ‘de-risking’ journey is to reduce longevity risk and associated asset mismatch risks
- RSA worked with the Trustees of the two main UK pension schemes and Towers Perrin on potential transactions to achieve this
 - Looked at a variety of providers, including traditional insurance - Prudential, Legal & General, Longevity deal with Swiss Re and options with Goldman Sachs

Objective

- To guarantee the future cashflows on a significant proportion of the scheme liabilities, effectively passing some or all of the risks to a third party
- For the Company, to reduce volatility of cash funding requirements, impact on balance sheet and any potential IAS19 surplus and effect on the P&L
- For the Trustees to diversify their ‘covenant risk’ to RSA as scheme sponsor, i.e. the reliance on RSA for additional future funding needs longer term or on “default”

Result

- Trustees continue to pay the DB pensions directly out of scheme assets, and pensioners remain members of the pension scheme
- Third party guarantees to cover a portion of the actual pensioner cashflows, whatever they may be, in return for the returns on a specific pool of assets



2009 Aims and Issues – Actions and Options

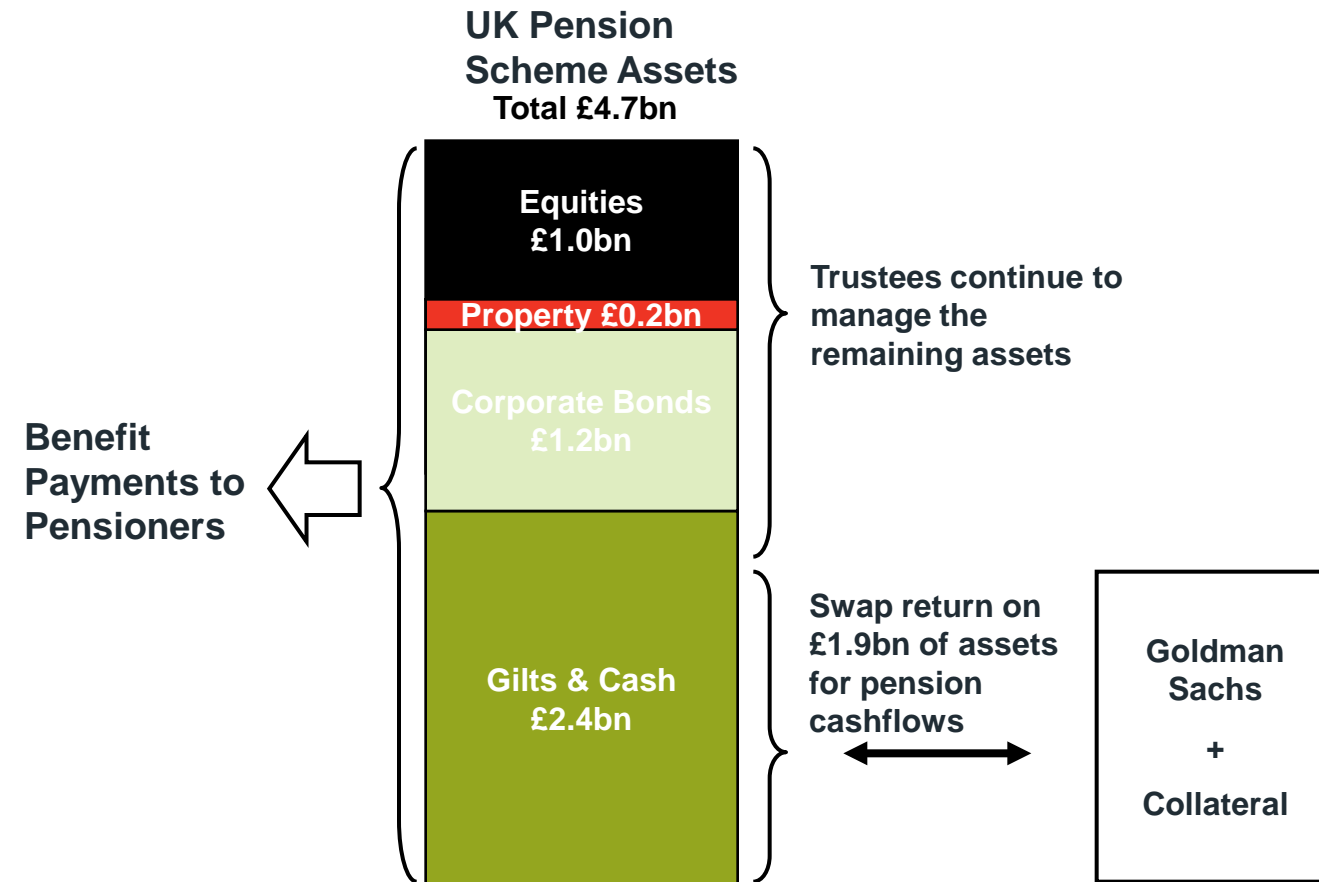
Structure

- The Trustees made an investment decision to exchange the returns on some of the scheme assets (Swaps, Gilts and cash) for a guarantee by the provider to pay a proportion of the future pension payments whatever they may be
- The effect is similar to the schemes buying a bulk annuity, the traditional method of insuring pensioner liabilities e.g. with Pru or L&G, but with better security
- Achieved by Schemes entering into a pair of interlocking asset and longevity swaps with Goldman Sachs/Rothsay Life which guarantees to convert the returns on the agreed asset pool into the actual pension payments

Security

- Security of this arrangement is stronger than a conventional bulk purchase annuity
 - Schemes retain legal title to assets – not handed over as ‘premium’
 - Full investment-grade collateral provided for any exposure to Goldman Sachs, topped up daily as needed, with additional collateral buffer provided
 - Full Goldman Sachs group guarantee for market risks, backed up by the FSCS for the longevity risk
 - Third-party fund manager to police the arrangement daily
 - Based on tried-and-tested ISDA swap contract wording

2009 Aims and Issues – Solution



On the balance of the fund, Trustees remain exposed to:

- Mortality risk
- Asset risks (on equities, property and corporate bonds)
- Inflation and interest rate mismatch risk

On the “deal” portion, risks are:

- Counterparty exposure to Goldman Sachs, mitigated by collateral held
- No mortality risk
- No asset risks
- No inflation and interest rate mismatch risk

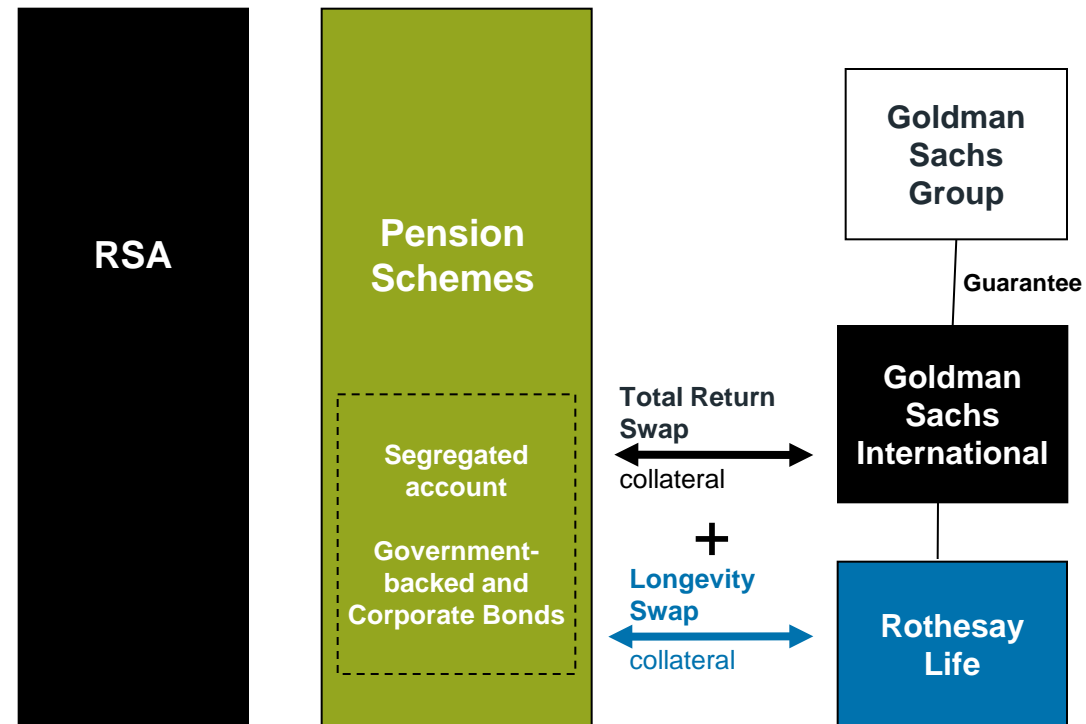
2009 Aims and Issues – Outcome

- **Structured as a pair of interlocking swaps**

- Pair of swaps transforms asset returns into actual pension cashflows
- Total Return Swap transforms actual asset cashflows into expected pension cashflows
- Longevity Swap transforms expected pension cashflows into actual pension cashflows

- **Scheme's fund manager continues to**

- Manage the assets, at Goldman Sachs' discretion within certain preset constraints, and
- Check values, eligibility and posting of collateral daily





2009 Aims and Issues – Outcome

For Company

- Long-term risk reduction:
 - Reduction in long-term mortality exposure
 - Perfect match for portion of pension cashflows, including associated inflation and interest rate risks
- Lower volatility of accounting pension surplus/deficit, providing greater protection for balance sheet and capital positions
- No expected increase in future cash funding requirements on proportion of schemes liabilities

For Trustees

- Long-term risk reduction:
 - Reduction in long-term mortality exposure
 - Perfect match for portion of pension cashflows, including associated inflation and interest rate risks
- Diversification of sponsor covenant risk – not solely reliant on RSA if liabilities grow due to increasing longevity
- No change expected in funding surplus or deficit

For Goldman Sachs

- ‘Trophy deal’ gives positive message to market about counterparty confidence in Goldman Sachs
- Establishes Rothesay Life as a major player in pension buy-in / buy-out market
- Generate ‘carry’ of 80-100bp on £1.9bn of assets, for cost of longevity protection of c.50bp and cost of collateral and market risk guarantee
- Improves Goldman Sachs franchise and relationship with UK Government by sourcing funding for infrastructure – Network Rail Bonds used in deal



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The work streams

Overall commercial proposition

Assets and collateral

Benefits structure

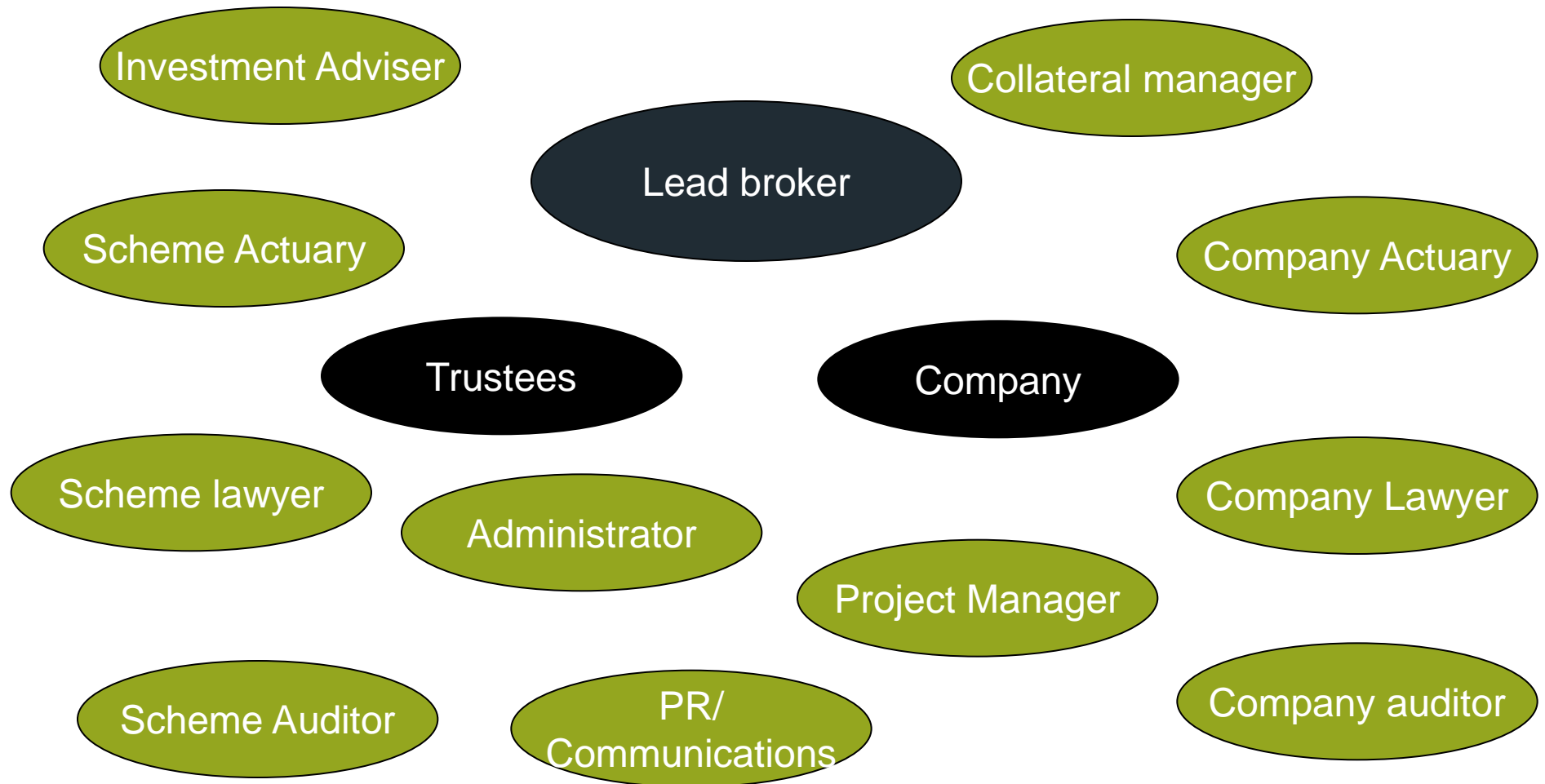
Data

Legals

Communication



The cast



The difficult bits

- How do you measure the longevity risk you are removing?
- Collateral
- Truing up data
- Legals

Longevity risk vs economic risk

Mortality and most other economic risks are fundamentally different:

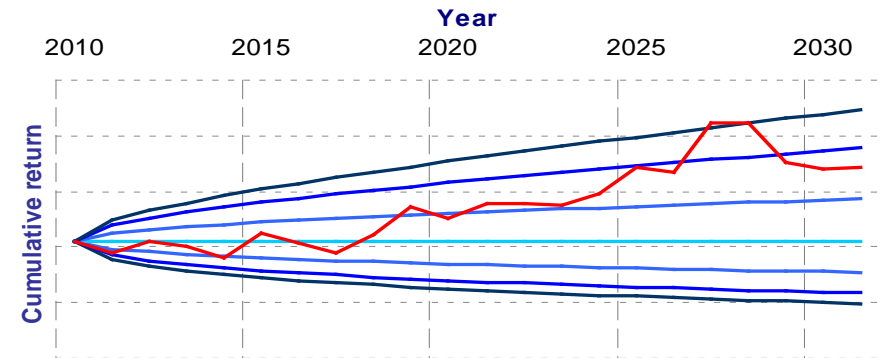
Economic risks

- The longer I run the risk, the more predictable (in relative terms) the outcome
- “Funnel of doubt” expands at a lower rate further into the future.
 - “*in the long term, risky assets outperform*”

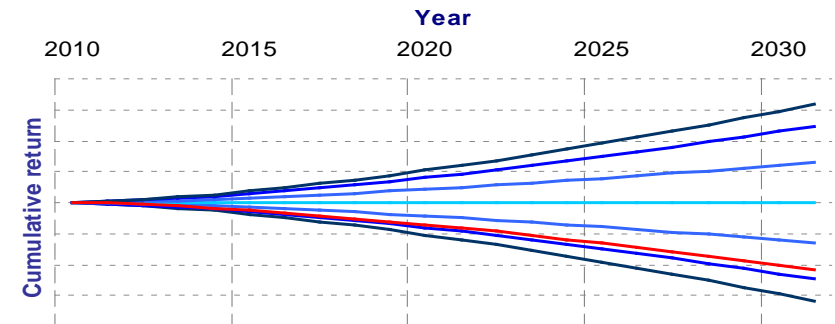
Longevity risk

- The longer I run the risk, the more extreme the outcome could be
- “Funnel of doubt” diverges
 - “*once longevity starts to move against me, it will probably get even worse*”

Economic risk over time



Longevity risk over time





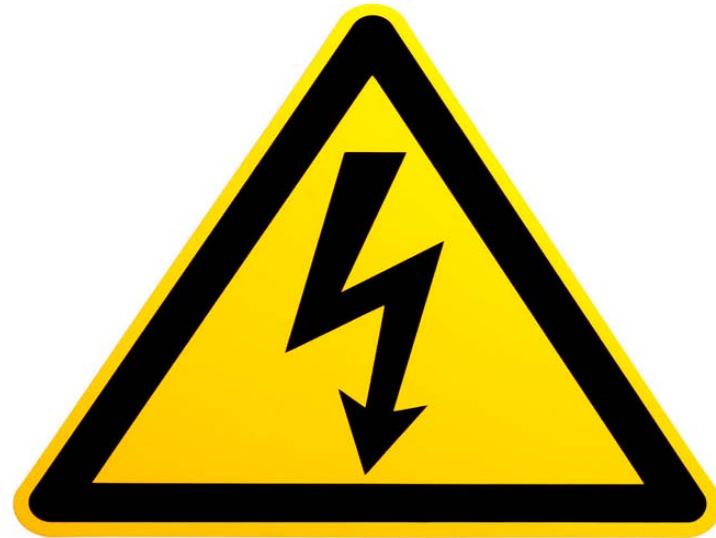
Collateral

- Day 1
 - The scheme is likely to have to post
- Assets
 - What have you got
 - What you want to be left with if the worst happens
- Measurement
 - Similar to LDI but still some challenges
- Longevity basis
 - Base table is straight forward
 - Future improvements is a challenge
- Manager costs



Benefits and data

- Know your data
- Custom & practice as well as the rules
- Truing up



Legal issues

- Termination
- Surrender
- Annuitisation
- Restructuring
- Novation
- PPF
- Risks transferred e.g. admin risks
- Indemnities and warranties
- Dispute Resolution
- Execution
- Data Protection



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