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# Is selling gilts for a buy-in the best way to secure pension promises?

Simon Richards  
Ross Evans



# Agenda

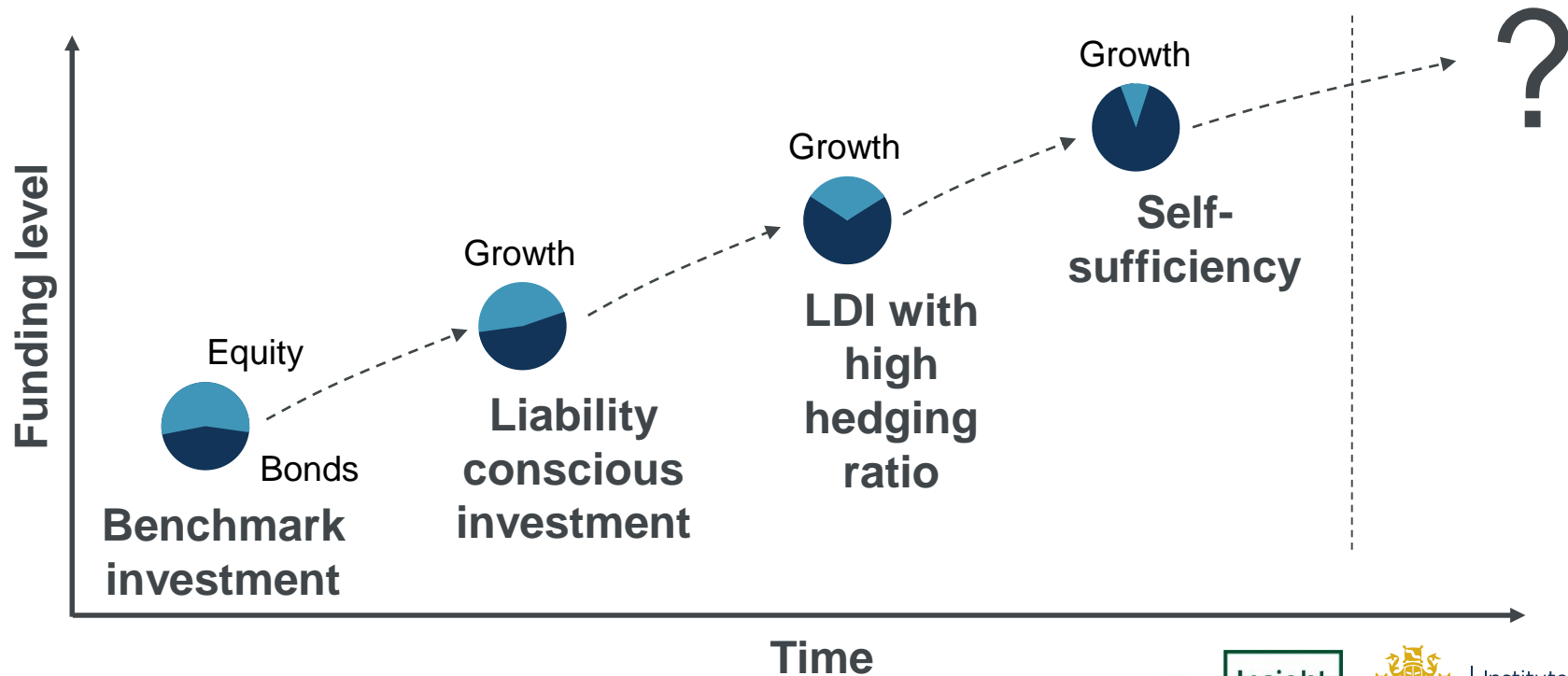
- The defined benefit pension de-risking journey
- Impact of insurance regulation
- What is the potential knock-on impact of all this?
- What might the synthetic model look like?



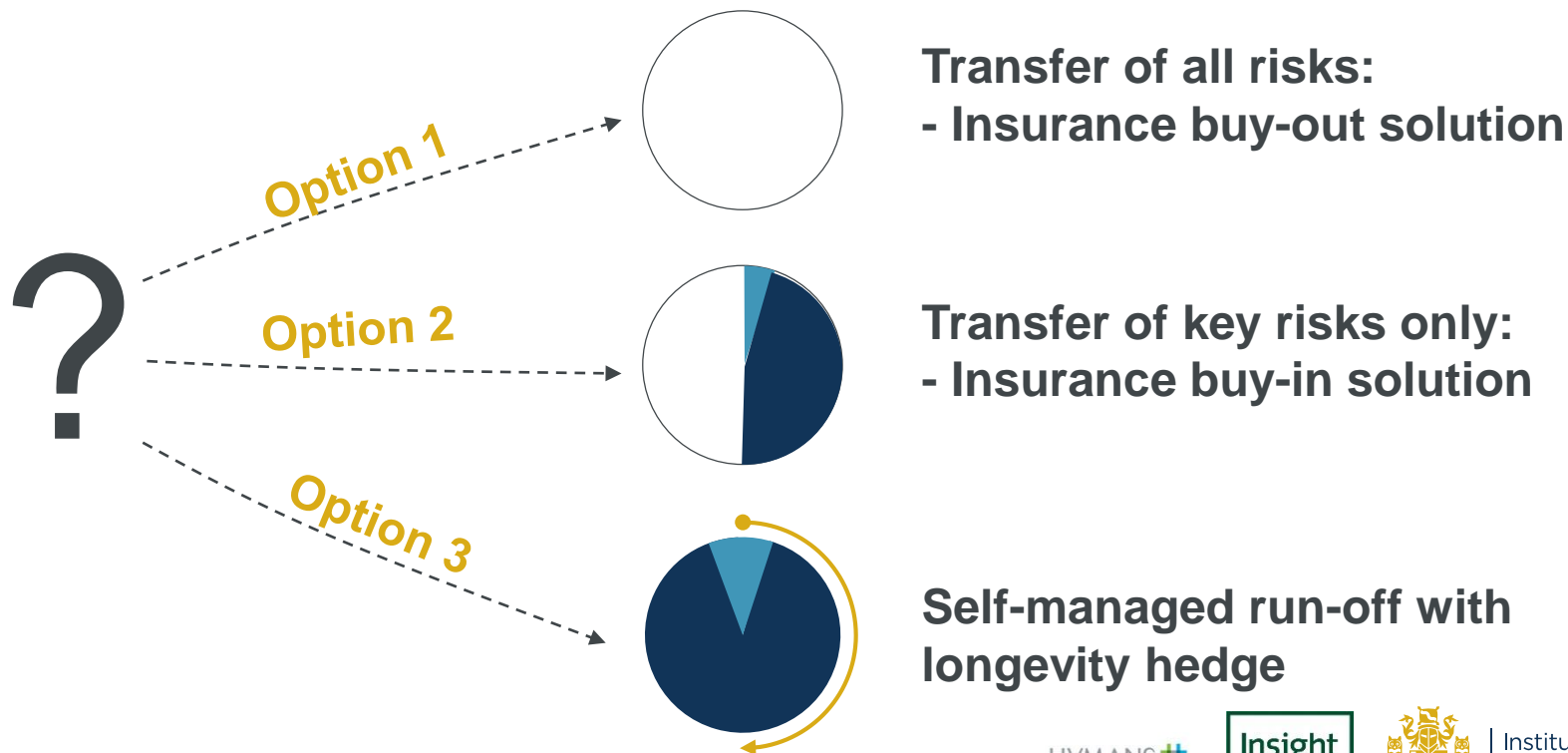
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# The defined benefit pension de-risking journey

# The de-risking journey



# Three options to meet pensions obligations



# Why consider a third way?

	Buy-out	Buy-in	DIY approach
Deals with deferred members?	Y	N	N
Deals with longevity risk for Pensioners?	Y	Y	Y
Ongoing requirements for Investment management?	N	Y	Utilises a specialist investment manager
Reduces governance requirements?	Y	Partly	N
Provides future flexibility?	N	Limited	Y
Insurance regulation impact?	Y	Y	N



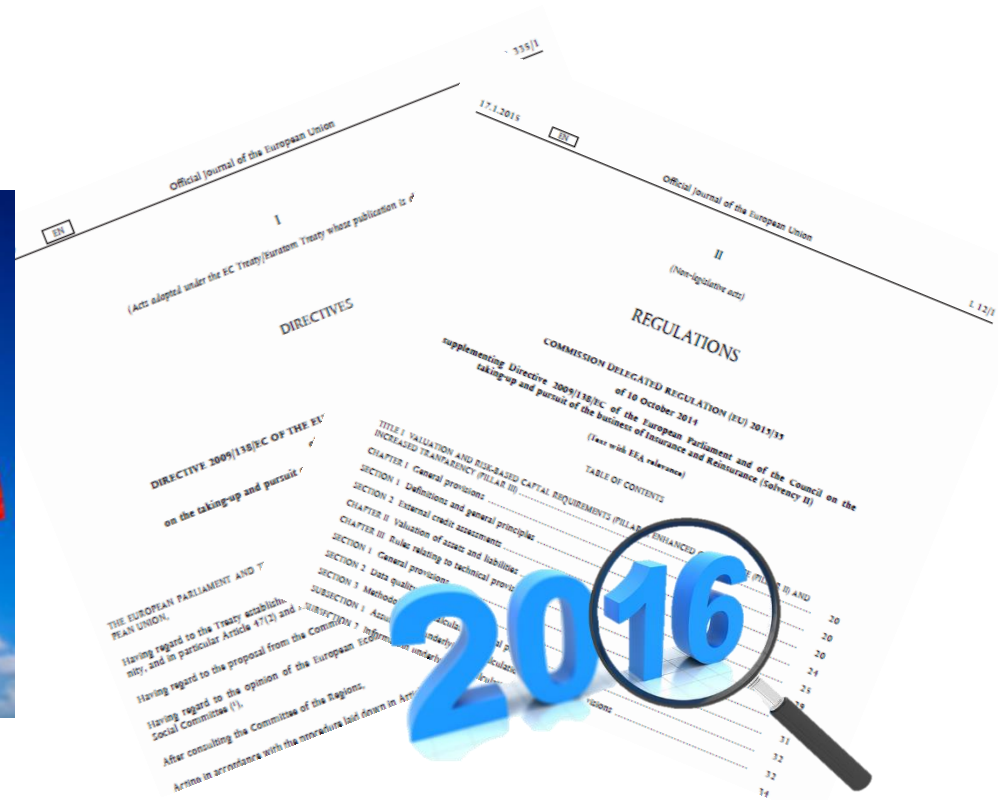
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# Impact of insurance regulation





# What is Solvency II?



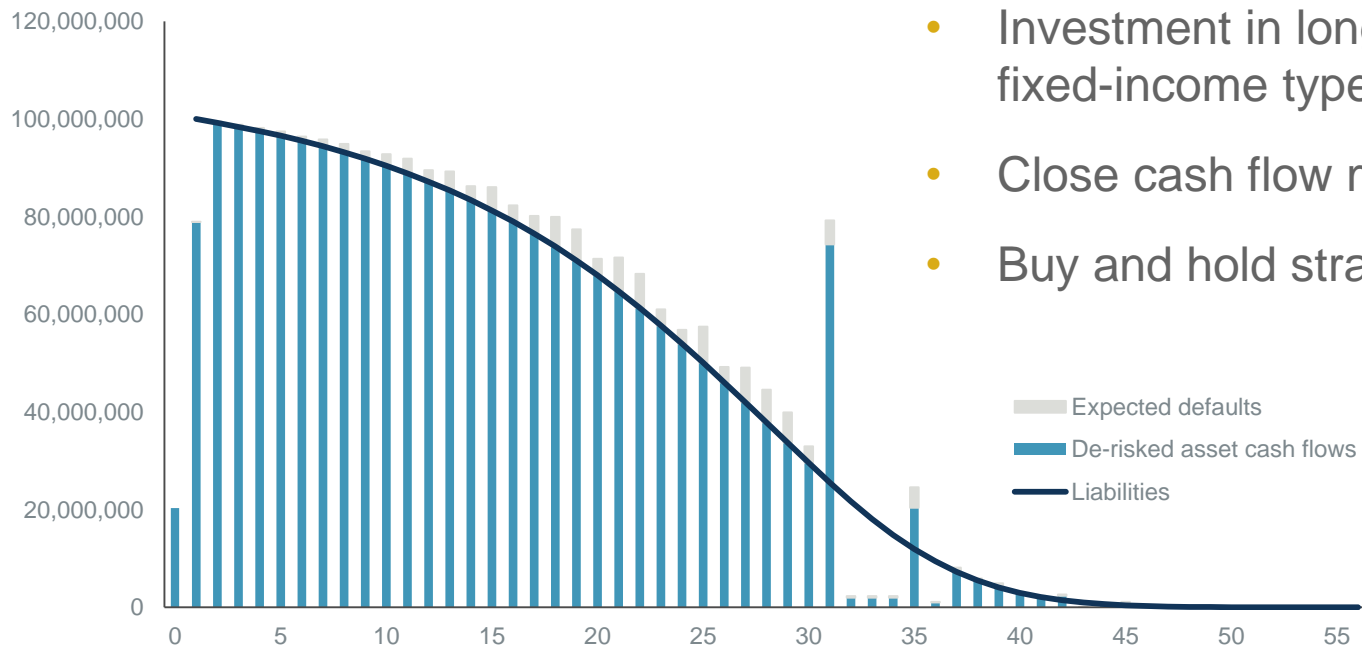


# Solvency II 101



- SCR to cover the risks faced by insurer at a 99.5% 1-year VaR level
- Risk Margin to take liabilities up to theoretical transfer value
- BEL based on projection of best estimate cash flows

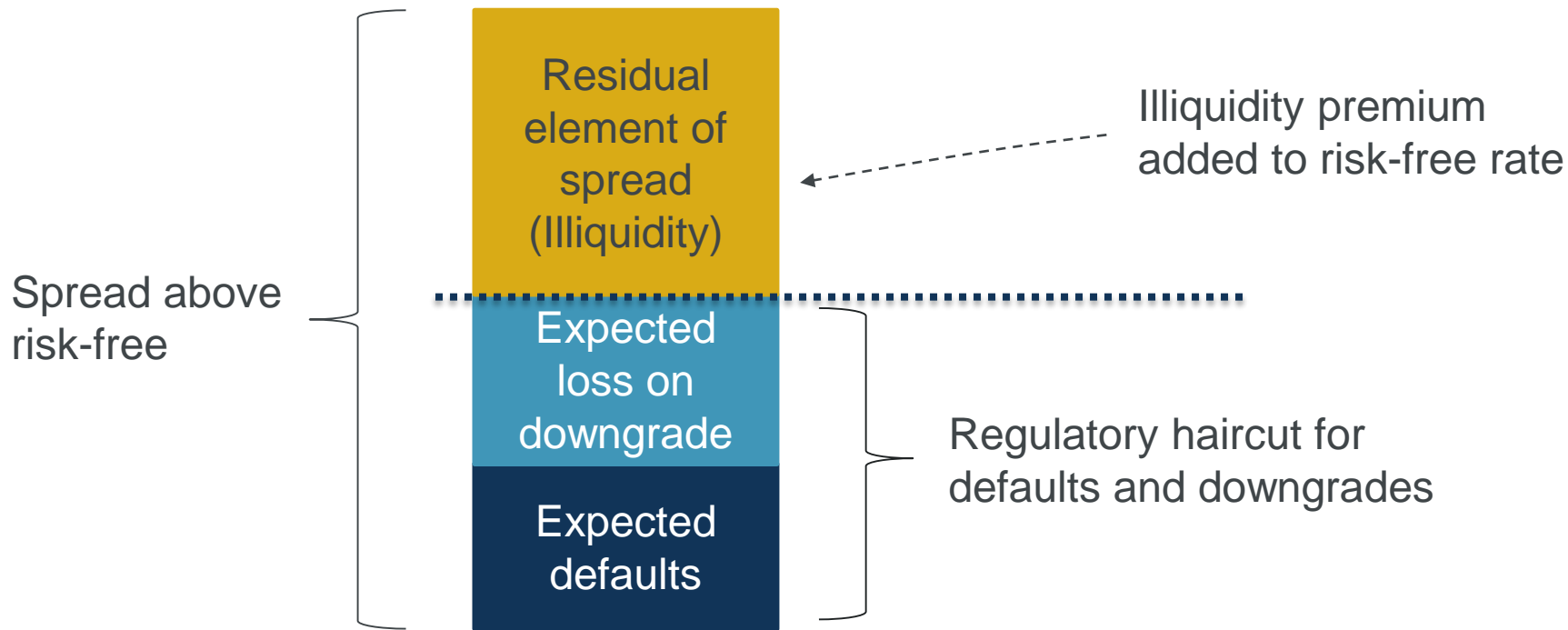
# Annuities in an insurance world



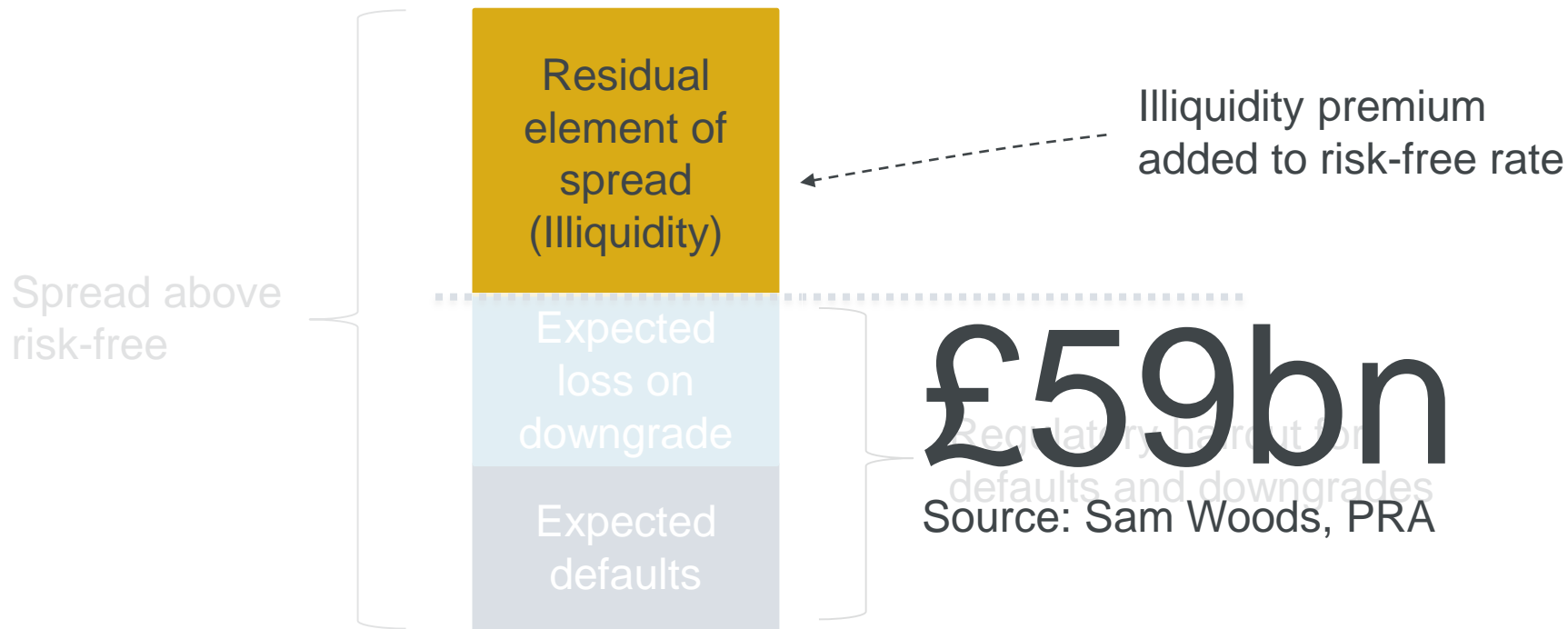
- Investment in long-dated, fixed-income type assets
- Close cash flow matching
- Buy and hold strategy

Source: Hymans Robertson and Insight, for illustration purposes

# Capturing the Illiquidity Premium



# Capturing the Illiquidity Premium



# Pre-approval required from the regulator



- Eligible assets
- Eligible liabilities
- Asset liability matching
- Portfolio governance

# Asset eligibility

*“... bonds and other assets with similar cash-flow characteristics...”*

*... the cash flows of the assigned portfolio of assets are fixed and cannot be changed by the issuers of the assets or any third parties;”*

# Asset eligibility

- Problem children:

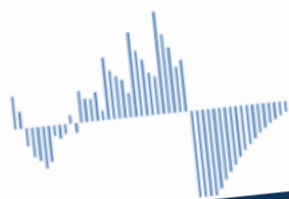
- Callable bonds
- Bonds/loans with “make whole” or “spens” clauses
- Non £-denominated bonds
- Prepayment options

- Possible solutions:

- Outright sales
- Hedging
- Modifying cash flows
- Repackaging

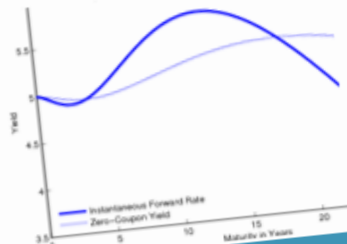


# Asset liability matching



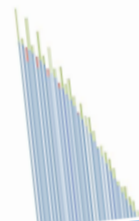
## Test 1

- Discounted accumulated cash-flow shortfall < 3% of PV liabilities
- Test whether forced seller of assets



## Test 2

- 99.5<sup>th</sup> percentile VaR < 1% of BEL
- Test level of interest rate, currency, inflation mismatching risk



## Test 3

- 99% < notional swap ratio < 100%
- Test whether materially under-matched

Source: IFoA Matching Adjustment working party – for illustration

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# Portfolio governance

## Approved asset list

- Full review of bond documentation required, requires expert judgement

## Management actions

- Client approval may be required by the asset manager before trading can take place

## New issues

- Potential inability to access new issues due to delay in obtaining full documentation

## Ongoing analysis

- Requirement for regular review of matching tests



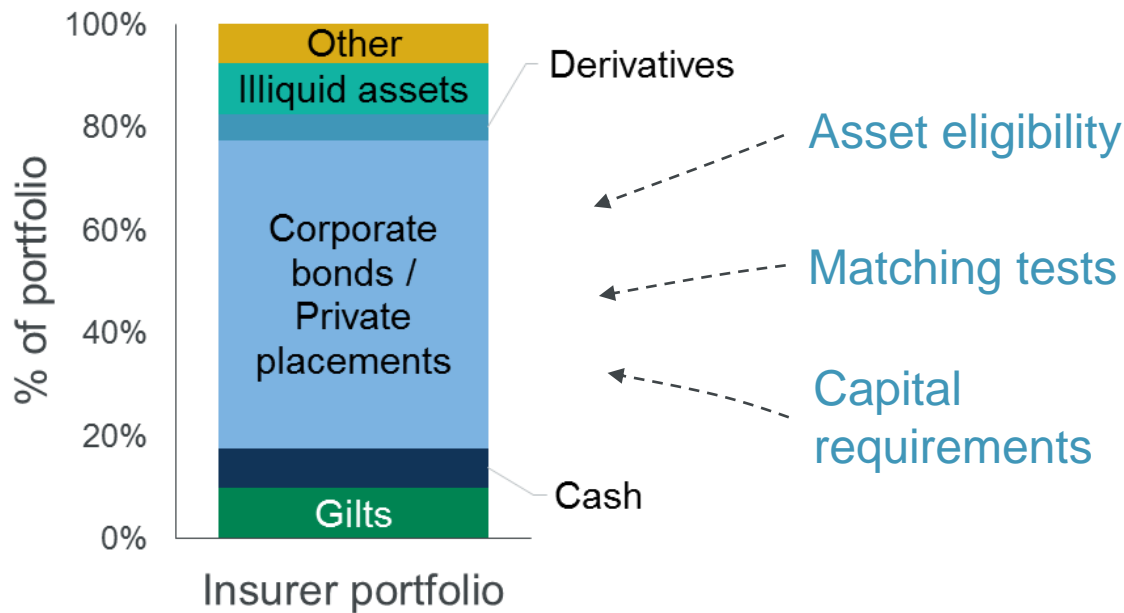
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**What is the potential knock-on impact  
of all this?**



# Consider an insurance company...

- Asset portfolio backing block of immediate annuities
- Spread, net of haircut for expected defaults and downgrades, of 110 bps



## Assumptions

- The buy-in insurer does not make any profit. All its investment return is used to pay claims, expenses and cost of capital
- The buy-in insurer operates at SCR level: no surplus above this level
- The insurer general expenses are equivalent to the operating expenses of the scheme (as percentage of liabilities)
- The buy-in insurer reinsures 100% of the longevity risk and has no competitive advantage on pricing for the protection
- The scheme puts in place a cash-flow matching investment strategy once the longevity hedge is in place
- Calculations are on a Standard Formula basis

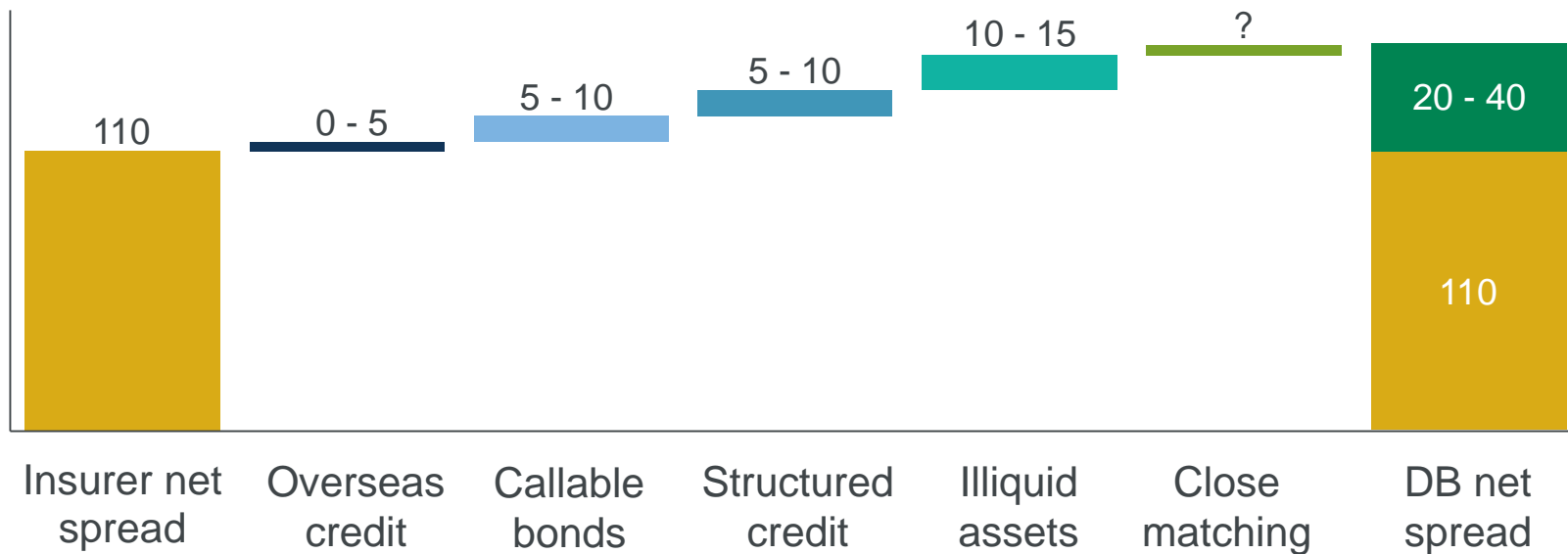
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# Impact of greater investment freedom



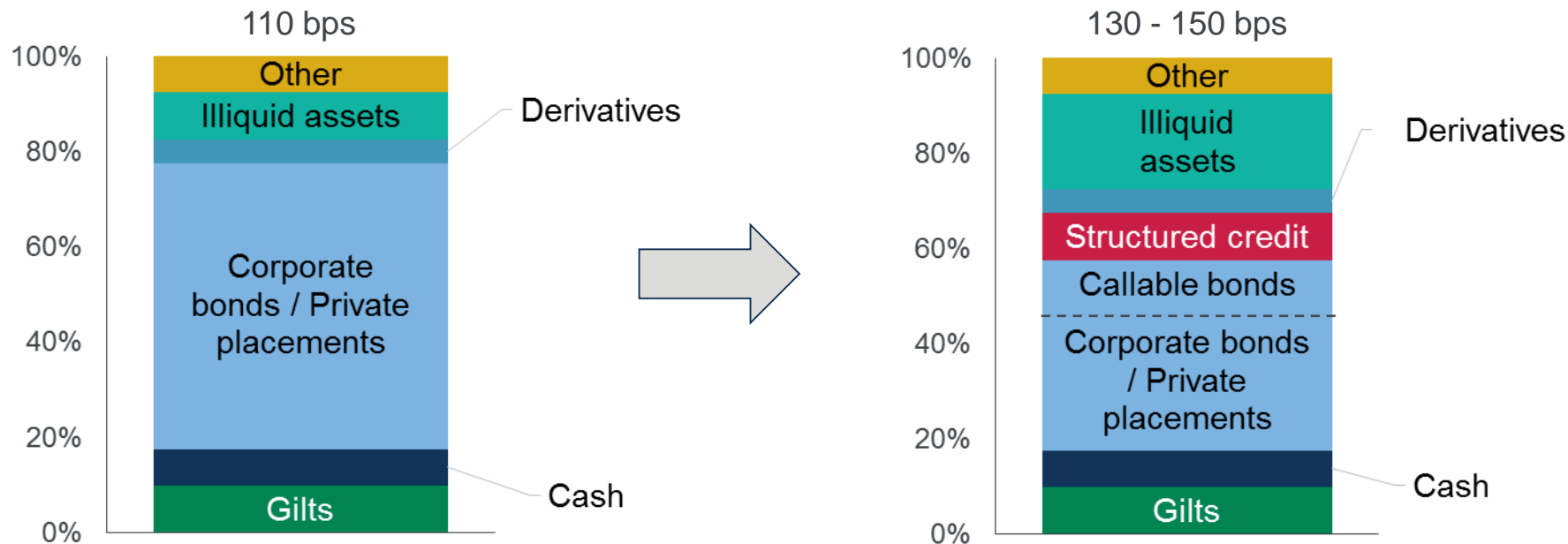
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# The reshaped investment portfolio



Source: Hymans Robertson and Insight, for illustration purposes

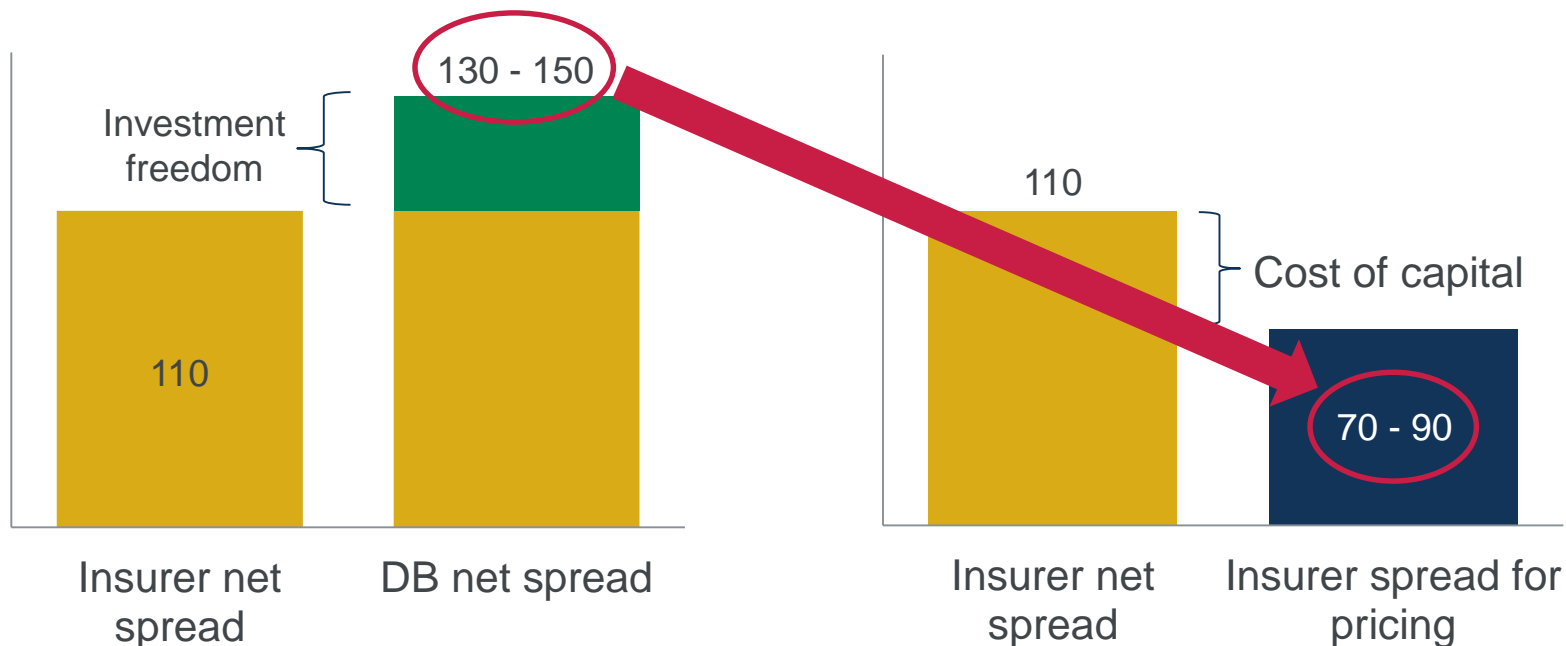
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# Impact of removing the cost of capital



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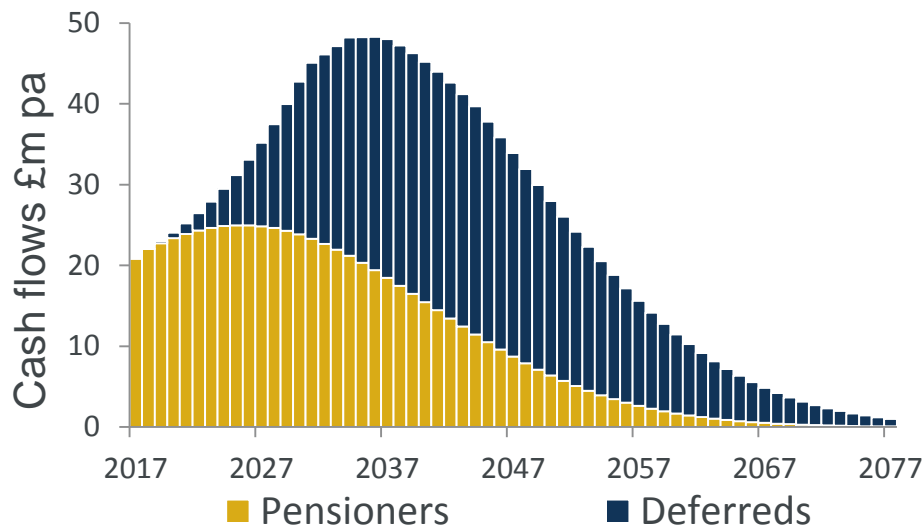


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# What might the synthetic model look like?



# Example pension scheme



## Assumptions

- For simplicity we assume that the buy-in premium is equal to the gilts-flat valuation of the corresponding liabilities
- We examine the impact of an immediate pensioner buy-in versus the alternative of a DIY approach
- We assume a discount rate of gilts + 75bps for the DIY buy-in and a longevity hedging fee of 3% pa
- The DIY liability value is £880m

Gilts-flat basis	Value (£m)	Duration (yrs)	PV01 (£m)
Non-pensioners	500	25.0	1.25
Pensioners	500	14.0	0.70
<b>Total liabilities</b>	<b>1,000</b>	<b>19.5</b>	<b>1.95</b>
Assets	800		
<b>Funding ratio</b>	<b>80%</b>		

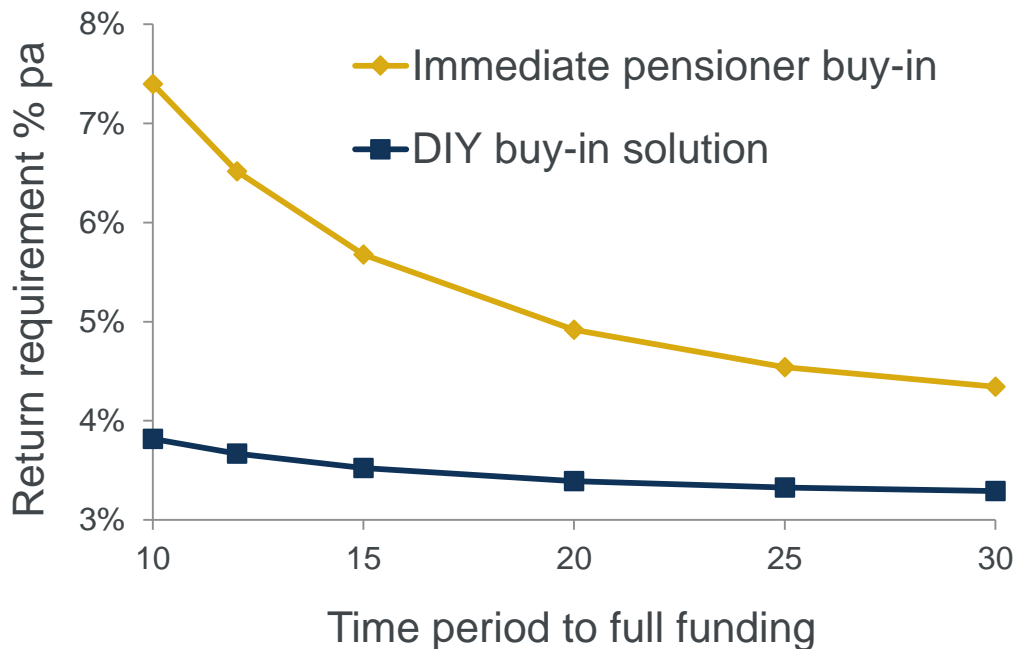
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# Return requirements for full funding



- In each case we consider only the assets that the trustees can invest
- At all tenors the trustee return target is far higher under the pensioner buy-in approach
- Taking account of the returns on the pensioner buy-in gives an overall 10 year return target of 4.6% pa (rather than 7.4% pa)
- The longevity swap adds c.10bps to the DIY buy-in return requirement

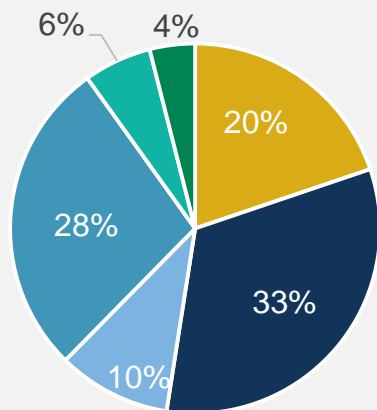
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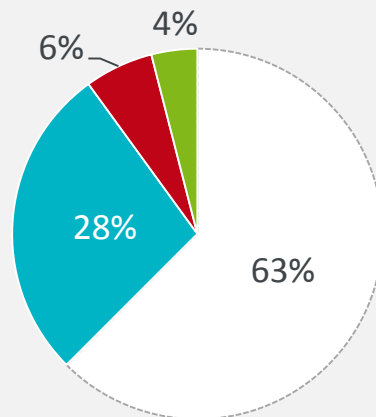
# Impact on investment objectives



## DIY buy-in

- LDI assets
- Corporate bonds
- Alternative bonds
- Global equity
- Property
- Private equity

- **Trustees have investment control over all assets**
- They invest in a diversified range of asset classes in order to meet their investment objectives



## Immediate pensioner buy-in

- Buy-in
- Global equity
- Property
- Private equity

- £500m is invested in a pensioner buy-in
- **Trustees have control over just 38% of the assets**
- They must invest primarily for growth

# Questions

# Comments

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