Cash-flow generating real assets – the next big thing for pension schemes?

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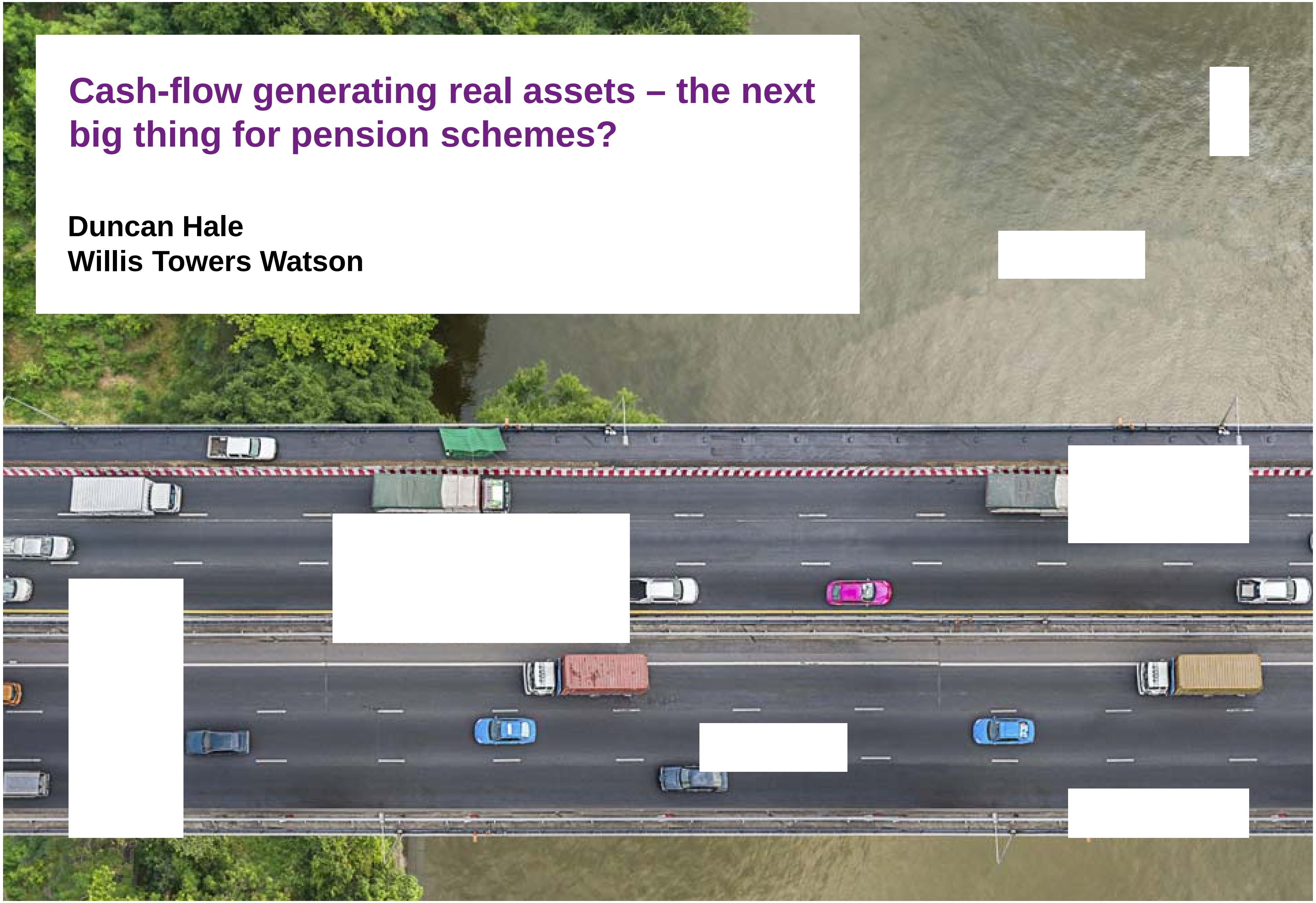
Willis Towers Watson



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What do DB Schemes need?
Rank the following characteristics in order of importance from highest to lowest

1. Additional returns above gilts

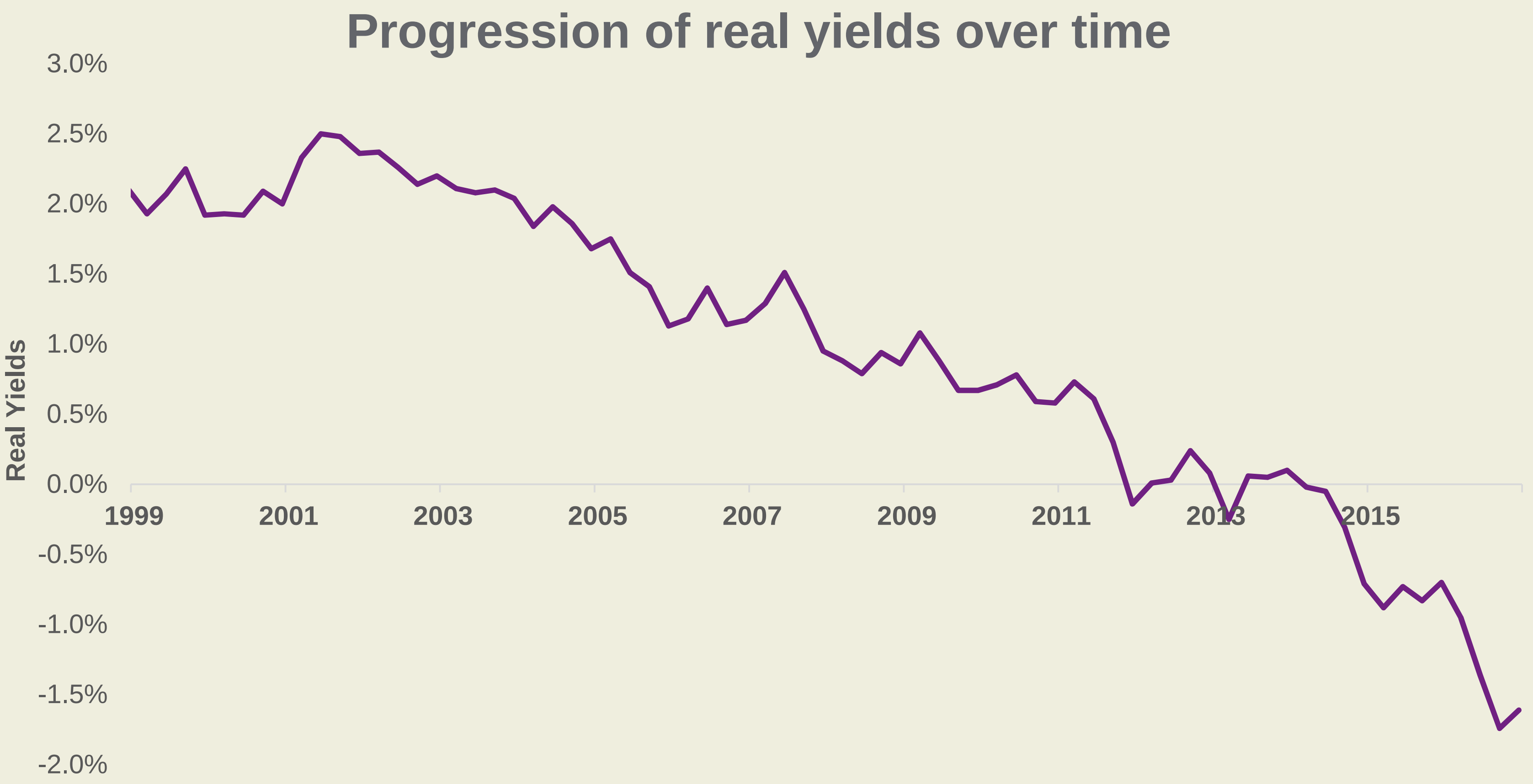
2. Cashflows with low probability of impairment

3. Assets that provide inflation linkages

4. Very long term cashflows (20 years+)

5. A portfolio that is highly liquid

Income provided by traditional assets is inadequate



Gross Redemption Yield (0% inflation) for FTSE Actuaries UK Index-Linked Gilts, Over 15 Year Index. Source: Bloomberg, 2016

Alternative sources of inflation-linked income are needed

Assets that help you achieve your mission

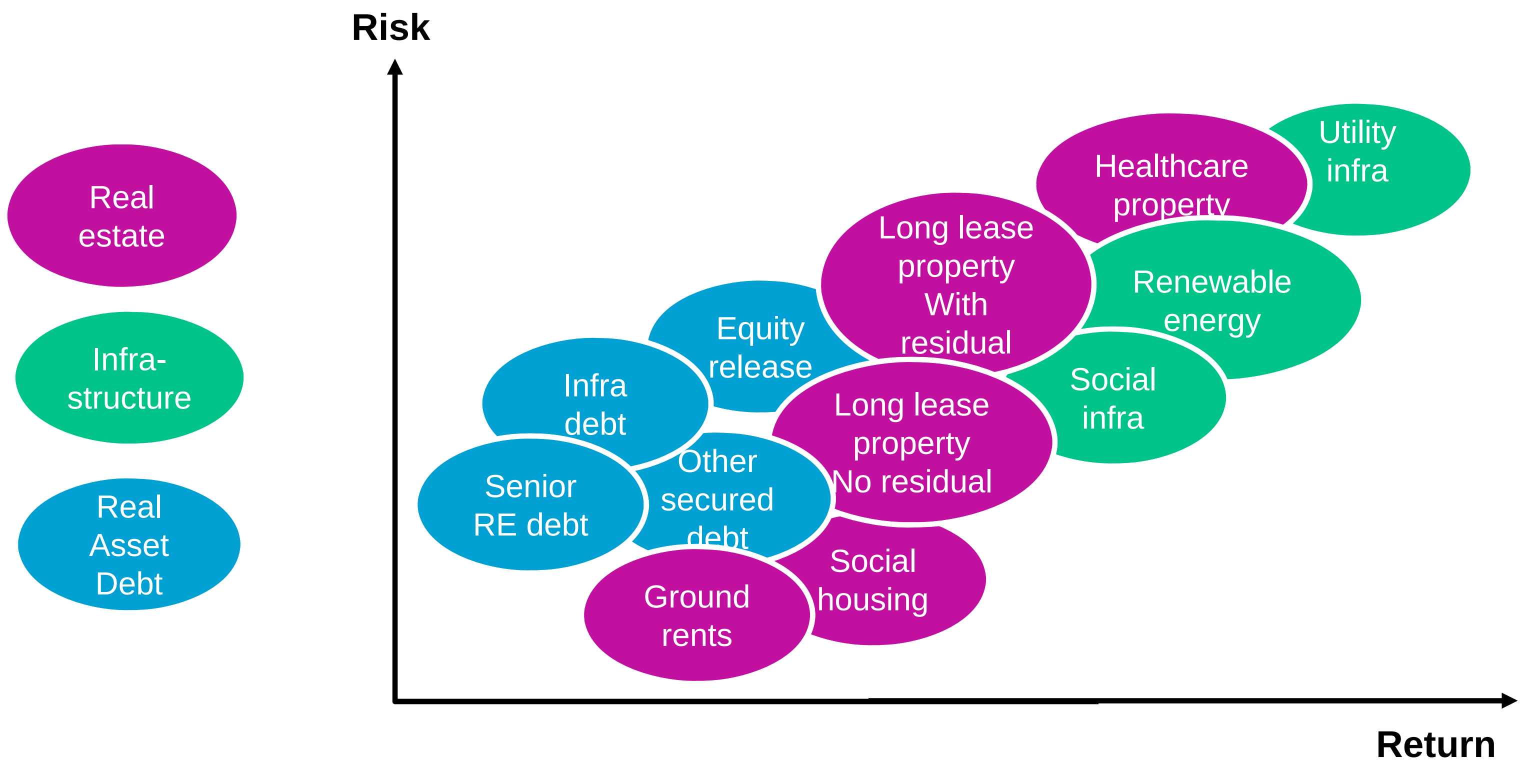
Secure Income Assets (SIAs) are:

Real Estate	Infrastructure	Real Asset Debt

- Contractual, inflation-linked, long-term cash flows
- Robust counterparties or tangible collateral backing
- Most economic value from cashflows
- Limited economic exposure

Assets that help DB funds meet their mission: providing an income to members

What is the universe of SIA investments?



While the broad opportunity set is vast, the amount of capacity in individual assets can be quite small; idea generation and execution are key

Ground rents - commercial

Description and return drivers

- Purchase of land (the ‘freehold’) and lease to a head leaseholder for a number of years (often 125, 250 or even 999 years)
- The head leaseholder pays ground rents
- Payments may be inflation linked or have fixed increase.

ILGs+3%

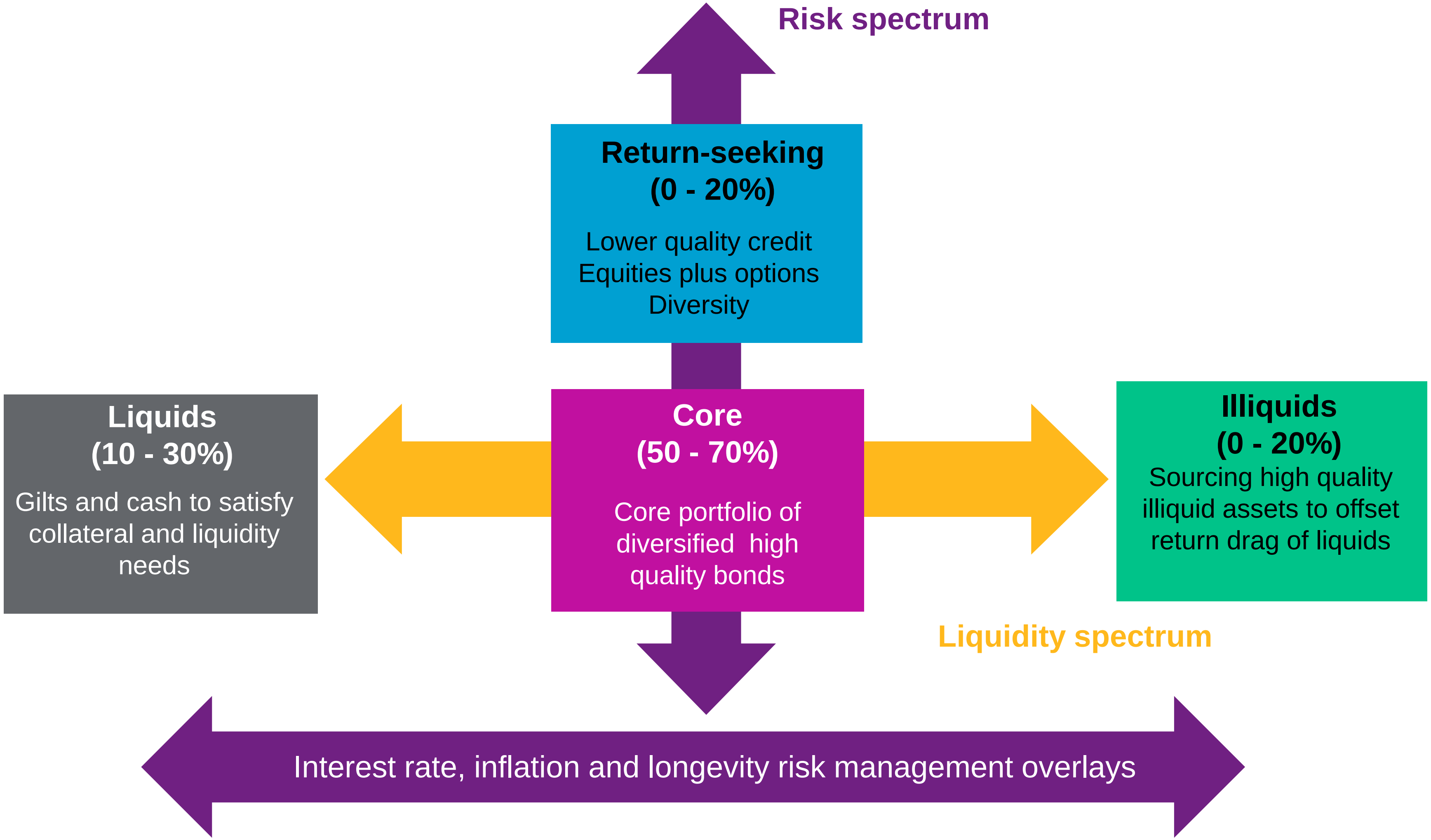
Key Benefits	Risk Considerations
✓ On default by the head leaseholder, the freeholder takes ownership of the property on the land ✓ Diversification of tenants mitigates counterparty default risk ✓ The head leaseholder has no legal right to renew	➢ Poor liquidity ➢ Reasonably high transaction costs

SIAs – a way to provide resilience and long-term cash flows

What DB schemes want	What SIAs deliver	
Higher Income	Higher expected returns than credit and ILGs	✓
Lower risk	Better asset backing than credit	✓
Inflation linkage	Contractual inflation linkages	✓
Long-term cashflows	Assets are 20 year +	✓
Liquidity	Secondary market offers steady but not instant liquidity	✗

How are SIAs used?

Building a Cashflow Matching Portfolio



Our clients have embraced SIAs

Idea	Date	Our client investment (% of fund)
Social Infrastructure secondary	2008	£90m (~40%)
Social infrastructure fund	2009	£30m (~30%)
Segregated ground rent portfolio	2011	£23m (100%)
Social Infrastructure fund	2011	£220m (~70%)
Social Infrastructure secondary	2012	£275m (~60%)
Long lease healthcare	2013	£94m (~50%)
Social Infrastructure fund	2013	£250m (~50%)
Renewable energy fund	2014	£385m (~80%)
Infrastructure debt fund	2014	£400m (~60%)
Residential ground rents co-investment	2014	£99m (~60%)
Hydro platform co-investment	2015	£30m (~50%)
Social Infrastructure fund	2015	£350m (~50%)
Utility asset	2015	£195m (~30%)
Ground rent fund	2015	£300m (~80%)
Small lot size long lease fund	2016	£300m (~100%)
Residential ground rents	2016	£80m (~40%)
Solar energy mandate	2016	£300m (100%)
Availability transport asset	2017	£45m (~50%)
Small lot size long lease fund	2017	£200m (100%)
Ground rent fund	2017	£550m (~90%)

Source: Willis Towers Watson, 2017

Different investment metrics matter in a Cashflow Matching Portfolio

Traditional risk and return metrics

- 1 year VaR
- Expected return of a fixed allocation portfolio
- Hedge ratio and return seeking vs matching

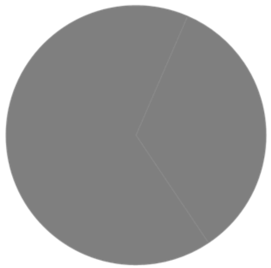
New cashflow metrics / temporal measures

- Profile mismatch
- Default risk/cashflow impairment
- ‘Money weighted’ return measures (as portfolio not static)

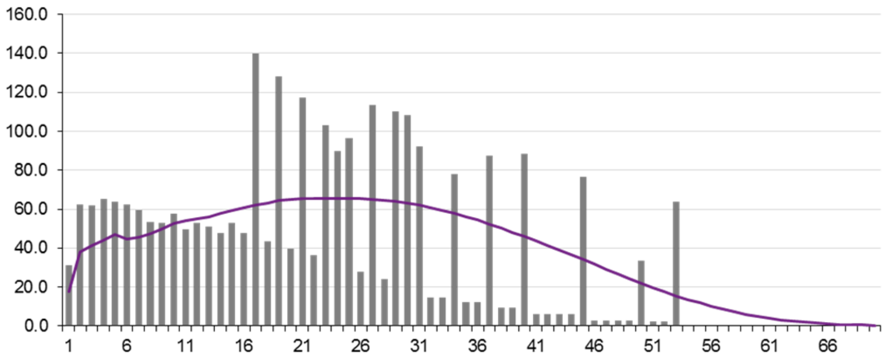
100% gilts

Initial portfolio

Asset class	Weight	Key
Gilts	100%	
Credit	-	
SIAs	-	
Contributions	-	



Projected cashflows after default haircuts (£m)



This portfolio would require assets of c£2bn

Assets and cashflows	£m	Return of cashflows after haircuts		Default risk	
Total required assets	1,968	Internal rate of return	0.2%	Average haircut	1.1%
Total asset cashflows	2,683	Yield over gilts	-0.05%		
Total liability cashflows	2,682				

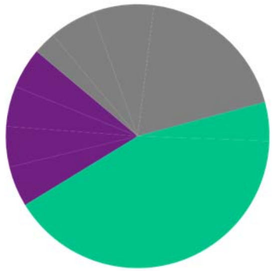
Shown only as a base line; not economically sensible

Cashflow matching portfolio

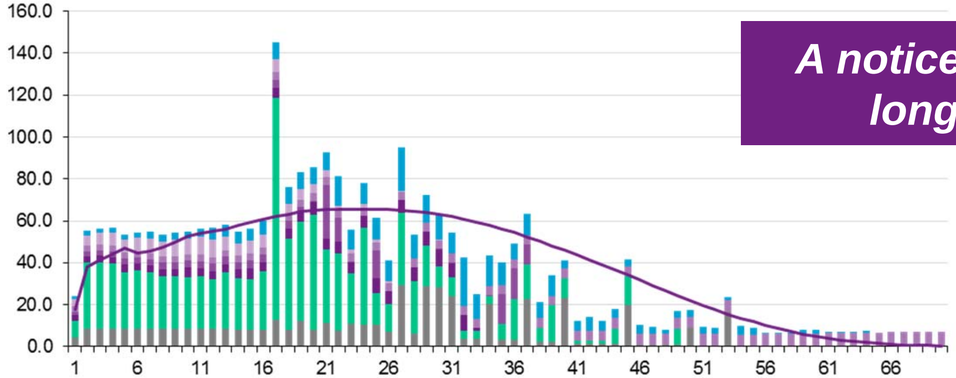
45% AAA/AA credit, 20% illiquids and 35% gilts
(of which 15% switched into credit in 5/10/15 years)

Initial portfolio

Asset class	Weight	Key
Gilts	35%	
Credit	45%	
SIAs	20%	
Contributions	-	



Projected cashflows after default haircuts (£m)



A noticeable improvement in long dated cashflows

This portfolio would require assets of c£1.6bn

Assets and cashflows	£m	Return of cashflows after haircuts		Default risk	
Total required assets	1,611	Internal rate of return	0.8%	Average haircut	1.7%
Total asset cashflows	2,683	Yield over gilts	0.96%		
Total liability cashflows	2,682				

Additional yield over gilts of 1.0%

Diversification in SIAs is critical

- Diversification is crucial to success because:
  - It minimises left tail-risks
  - Spreads operational risk
  - It reduces the potential for opportunity cost
  - It minimises timing risk
  - Manage liquidity risk

Left-tail risk analysis:
Subsidy reduction in renewable energy assets

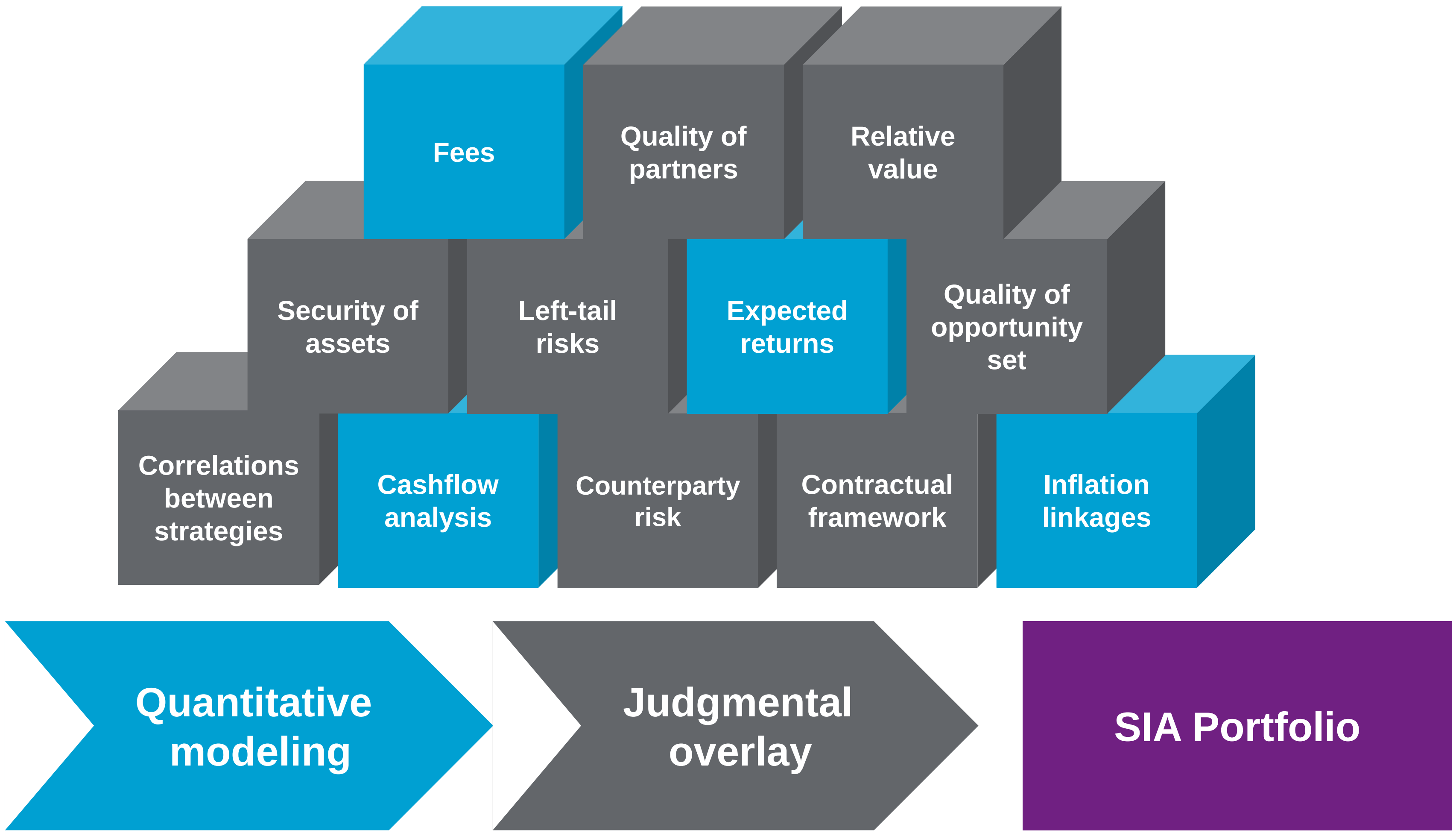
Gross Project IRR

% of Subsidy Reduction	Year Reduction happens: 1	3	5	7	10	13	15	17
0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
20%	5.6%	5.8%	6.0%	6.2%	6.4%	6.6%	6.7%	6.8%
40%	4.2%	4.5%	4.9%	5.2%	5.7%	6.2%	6.4%	6.7%
60%	2.6%	3.1%	3.6%	4.2%	4.9%	5.7%	6.1%	6.5%
80%	1.0%	1.6%	2.2%	3.0%	4.1%	5.1%	5.7%	6.3%
100%	0.8%	0.1%	0.7%	1.6%	3.1%	4.5%	5.4%	6.1%

Source: Greencoat

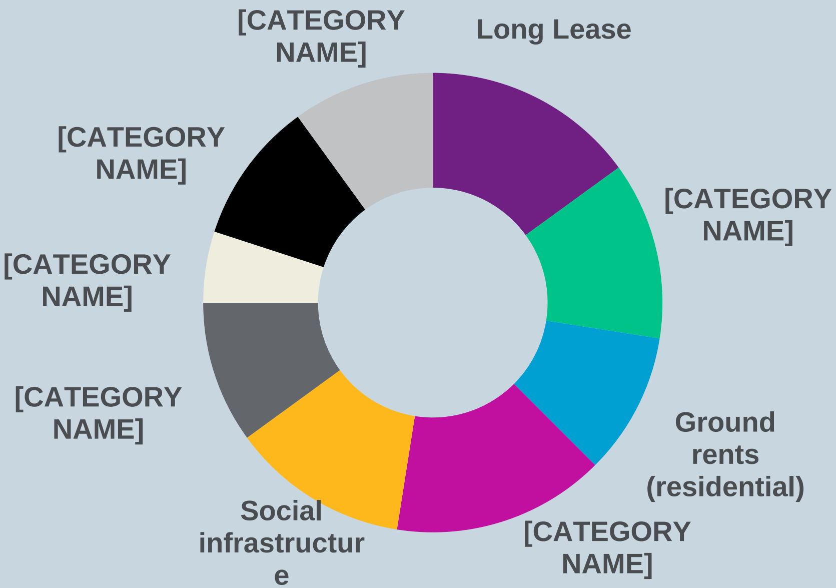
Manage your SIA portfolio as you would expect a quality credit investor to build a portfolio – as much diversity as practical

Building a SIA portfolio

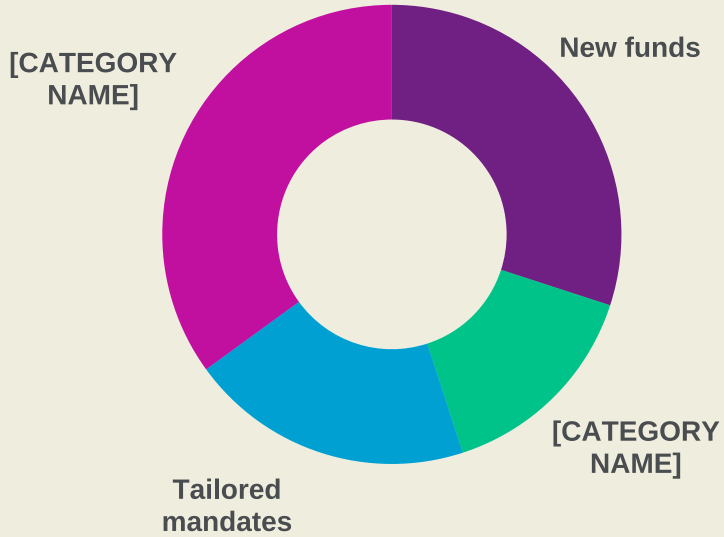


What might a SIA portfolio look like?

Sector split*



Implementation method split*



Key focus is on delivering a diversified portfolio

* These are shown as example splits of a secure income portfolio
It is expected to take 3-7 years for a secure income portfolio to reach full maturity; during the build up phase the portfolio may exhibit less diversification

How we build portfolios

How we are different	*How does this add value?*
Open architecture	**We work with the best investors, because they want to work with us**
Innovation	**Our universe captures anything that improves our portfolio, not just the convenient**
Preferred partner	**We hunt down opportunities and get money in the ground; we don't just sit in queues**

Our Secure Income Assets credentials

Significant deployment*

£4.2 bn+

across Secure Income strategies

Experienced team

27

professionals across SIAs

Attractive fee discounts*

17%

average fee saving

Strong performance*

IRR	Yield
13.6% pa	6.4% pa

* For explanation of calculation methodology, see explanatory notes in the Appendix
Past performance is no guarantee of future performance

Towers Watson Secure Income Fund

Secure Income Fund key characteristics	
Summary	A multi-manager, multi-strategy, fund investing across the Secure Income Asset spectrum Designed to provide access to our best ideas in a simple and diversified way
Objective	Provide investors with an easy and tax-efficient means of investing into a diversified portfolio of best-in-class Secure Income Assets
Target return and yield*	Target returns of **ILGs plus 2-3%** (over 5 year periods) Target **yield of 4% p.a.** (over 5 year periods)
Size of fund	Investor commitments of circa £210m Invested capital of circa £40m
Allowed investments	A combination of real estate, infrastructure and real asset debt Utilising primary fund investments, segregated mandates, secondary acquisitions of units in funds and direct assets, and co-investments
Fees*	Sliding fee scale on invested of 0.2-0.3%pa Expected overall TER of <1.0%pa
Investor friendly features	Open-ended fund with annual liquidity Explicit inflation-linkage targets Enhanced reporting to dovetail with cashflow management

* Target returns and fees for the TW Secure Income Fund. Targets are shown net of fees. This is not a guarantee of future performance.

Secure Income Assets, an important part of UK DB Fund portfolios

Traditional matching assets are delivering inadequate yields: SIAs offer an alternative

2-3%

Extra return over Index-Linked Gilts for a portfolio of SIAs

4%

Yield a portfolio of SIAs can deliver over the medium term

These are simple assets, but they are not simple to source

* Proposed targets a SIA portfolio. This is not a guarantee of future performance.

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Portfolio Manager of the Secure Income Fund

Duncan is the Portfolio Manager for the Secure Income Fund, a fund that invests across low risk, cash generative strategies in the UK across the infrastructure, real estate and real asset debt asset classes. He is also a member of the infrastructure research team, where he not only is involved in researching infrastructure ideas, but he also advises clients on all aspects of their infrastructure program. Duncan is also a regular contributor to the press with regards to issues involving Secure Income and the infrastructure asset class.

Duncan joined Watson Wyatt in 2001 in our Sydney office, before moving to the United Kingdom business is 2005. Duncan has a Bachelor of Commerce (Hons) from the University of Sydney, and has completed the Postgraduate Certificate in Project Finance from Middlesex University. He also holds the Chartered Financial Analyst designation.

Explanatory notes

Slide 16: Our Secure Income Assets credentials

- Significant deployment; Reflects our total client commitments and investments in SIAs where we have led or supported the commitment or investment.
- Strong performance; Performance from 2008 till 31 December 2015. Reflects the performance track record of assets recommended and selected for our Delegated clients base. Net of underlying manager fees, gross of our fees. Past performance is no guarantee of future performance. Source Willis Towers Watson, 2016
- Attractive fee discounts; Simple average of fee discounts of Primary SIA funds recommended and selected for our Delegated clients base. Fee discount is calculated by looking at level of fee paid by our clients versus standard manager rate, over the first ten years of the investment vehicle. This is shown as percentage of total fees based on managers stated rates.

Source Willis Towers Watson, June 2017

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