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

Duncan Hale
Willis Towers Watson
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

Progression of real yields over time

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:

- 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.

Key Benefits

- 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

Risk Considerations

- Poor liquidity
- Reasonably high transaction costs

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

<table>
<thead>
<tr>
<th>What DB schemes want</th>
<th>What SIAs deliver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher Income</td>
<td>Higher expected returns than credit and ILGs</td>
</tr>
<tr>
<td>Lower risk</td>
<td>Better asset backing than credit</td>
</tr>
<tr>
<td>Inflation linkage</td>
<td>Contractual inflation linkages</td>
</tr>
<tr>
<td>Long-term cashflows</td>
<td>Assets are 20 year +</td>
</tr>
<tr>
<td>Liquidity</td>
<td>Secondary market offers steady but not instant liquidity</td>
</tr>
</tbody>
</table>
How are SIAs used?

Building a Cashflow Matching Portfolio

Risk spectrum

Return-seeking
(0 - 20%)
Lower quality credit
Equities plus options
Diversity

Core
(50 - 70%)
Core portfolio of
diversified high
quality bonds

Illiquids
(0 - 20%)
Sourcing high quality
illiquid assets to offset
return drag of liquids

Liquidity spectrum

Interest rate, inflation and longevity risk management overlays

Liquids
(10 - 30%)
Gilts and cash to satisfy
collateral and liquidity
needs

Diversity
Return-seeking
(0 - 20%)
Lower quality credit
Equities plus options
Diversity

Core
(50 - 70%)
Core portfolio of
diversified high
quality bonds

Illiquids
(0 - 20%)
Sourcing high quality
illiquid assets to offset
return drag of liquids

Liquidity spectrum

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

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

<table>
<thead>
<tr>
<th>Asset class</th>
<th>Weight</th>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gilts</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Credit</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>SIAs</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Contributions</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Projected cashflows after default haircuts (£m)

This portfolio would require assets of c£2bn

<table>
<thead>
<tr>
<th>Assets and cashflows</th>
<th>£m</th>
<th>Return of cashflows after haircuts</th>
<th>Default risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total required assets</td>
<td>1,968</td>
<td>Internal rate of return</td>
<td>0.2%</td>
</tr>
<tr>
<td>Total asset cashflows</td>
<td>2,683</td>
<td>Yield over gilts</td>
<td>-0.05%</td>
</tr>
<tr>
<td>Total liability cashflows</td>
<td>2,682</td>
<td>Average haircut</td>
<td>1.1%</td>
</tr>
</tbody>
</table>

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)

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<td>35%</td>
<td></td>
</tr>
<tr>
<td>Credit</td>
<td>45%</td>
<td></td>
</tr>
<tr>
<td>SIAs</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Contributions</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Initial portfolio

This portfolio would require assets of c£1.6bn

Projected cashflows after default haircuts (£m)

A noticeable improvement in long dated cashflows

This portfolio would require assets of c£1.6bn

<table>
<thead>
<tr>
<th>Assets and cashflows</th>
<th>£m</th>
<th>Return of cashflows after haircuts</th>
<th>Default risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total required assets</td>
<td>1,611</td>
<td>Internal rate of return</td>
<td>0.8% Average haircut</td>
</tr>
<tr>
<td>Total asset cashflows</td>
<td>2,683</td>
<td>Yield over gilts</td>
<td>0.96%</td>
</tr>
<tr>
<td>Total liability cashflows</td>
<td>2,682</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

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

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

Source: Greencoat
Building a SIA portfolio

- Fees
- Quality of partners
- Relative value
- Security of assets
- Left-tail risks
- Expected returns
- Quality of opportunity set
- Correlations between strategies
- Cashflow analysis
- Counterparty risk
- Contractual framework
- Inflation linkages

Quantitative modeling ➔ Judgmental overlay ➔ SIA Portfolio

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What might a SIA portfolio look like?

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

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How we build portfolios

<table>
<thead>
<tr>
<th>How we are different</th>
<th>How does this add value?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open architecture</td>
<td>We work with the best investors, because they want to work with us</td>
</tr>
<tr>
<td>Innovation</td>
<td>Our universe captures anything that improves our portfolio, not just the convenient</td>
</tr>
<tr>
<td>Preferred partner</td>
<td>We hunt down opportunities and get money in the ground; we don’t just sit in queues</td>
</tr>
</tbody>
</table>
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
13.6% pa

Yield
6.4% pa

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

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## 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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M +44 7736 478542

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.


- 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