MINUTES of the meeting of the **SURREY PENSION FUND BOARD** held at 9.30 am on 20 September 2013 at Committee Room C, County Hall, Kingston upon Thames, Surrey KT1 2DN.

These minutes are subject to confirmation by the Committee at its meeting on Friday, 15 November 2013.

Elected Members:

- * Ms Denise Le Gal (Chairman)
- * Mr Nick Skellett CBE (Vice-Chairman)
- * Mr W D Barker OBE
- * Mr Mike Goodman
- * Mr John Orrick
- * Mr Stuart Selleck

Co-opted Members:

- * Mr Tony Elias, District Representative
- * Judith Glover, Borough/District Councils
- * Ian Perkin, Office of the Surrey Police and Crime Commissioner
- Philip Walker, Employees

In attendance:

Paul Baker, Pensions Manager
Cheryl Hardman, Regulatory Committee Manager
John Harrison, Surrey Pension Fund Advisor
Sheila Little, Chief Finance Officer (Section 151 Officer) – for Minutes 20/13-30/13
Alex Moylan, Senior Accountant
Phil Triggs, Strategic Manager – Pension Fund & Treasury
Steve Turner, Partner, Mercer

20/13 APOLOGIES FOR ABSENCE AND SUBSTITUTIONS [Item 1]

Apologies were received from Philip Walker.

21/13 MINUTES OF THE PREVIOUS MEETING: 31 MAY 2013 [Item 2]

The minutes were agreed as an accurate record of the meeting.

22/13 DECLARATIONS OF INTEREST [Item 3]

There were none.

23/13 QUESTIONS AND PETITIONS [Item 4]

There were none.

24/13 AFFIRMATION OF DISCUSSIONS HELD AT THE INFORMAL BOARD MEETING OF 31 MAY 2013 [Item 5]

Declarations of Interest:
None.

Key Points Raised During the Discussion:

1. The Chairman introduced the report.

Actions/Further Information to be Provided:
None.

RESOLVED:

i. To **APPROVE** the notes of the Board's informal London meeting of 31 May 2013.
ii. To **AGREE** to amend CBRE's benchmark outperformance requirement to +0.5% per annum (gross of fees) over rolling three-year periods with the injection of a further £25m;
iii. To **AGREE** that a breach in the control range on the asset allocation categories as shown in the newly approved Statement of Investment Principles (SIP) would not stipulate that steps be taken immediately to restore parity, but that this breach would necessitate discussion amongst the Chairmen and officers and, where appropriate, the Pension Fund Board;
iv. To **AGREE** that the Fund should continue to ensure a diverse portfolio of assets to mitigate risk and volatility of returns;
v. To **AGREE** to balance the portfolio by removing £25m from LGIM's passive mandate and transferring to Baillie Gifford Diversified Growth Fund; and
vi. To **REVISIT** discussions concerning the transfer of £50m from LGIM's passive mandate and transferring to the Standard Life GARS Fund, subject to the outcome of discussions with Standard Life at Item 13 on the agenda.

Next Steps:
None.

25/13 MANAGER ISSUES AND INVESTMENT PERFORMANCE [Item 6]

Declarations of Interest:
None.

Key Points Raised During the Discussion:

2. The Strategic Manager, Pension Fund and Treasury introduced the report, explaining to Members an issue with a recent Board decision to subscribe to the BlackRock DivPep V Fund. While the Board had previously agreed to invest USD 20m, BlackRock's understanding was that the Board was going to invest £20m. The structured fee level was higher for investing with USD 20m, so officers held back from confirming subscribing to this fund. Following a discussion, the Board agreed not to go ahead with the BlackRock DivPep V Fund investment.
3. The Pensions Manager explained the auto enrolment statistics. Members queried the effect on cash flow but the Pensions Manager stated that this wouldn't be known until mid-November. The Chief

Finance Officer informed the Board that the People, Performance and Development Committee had built £1m into the Medium Term Financial Plan based on an opt-out rate of 10%. This would need to be reviewed as opt-out had been higher than 10%.

4. At the previous Surrey Pension Fund Board meeting, it had been agreed that a stock lending programme with Northern Trust should commence. The legal agreement was being scrutinised by Mercer. The Mercer representative highlighted a clause regarding indemnification which was very advantageous to Northern Trust. Negotiations are ongoing and the outcome will be reported to the next Board meeting.
5. There was a debate regarding the Standard Life Capital Secondary Opportunities Fund. The Surrey Pension Fund Adviser stated that the concept of focusing on secondary opportunities was good. The Mercer stated that it would be useful to have an indication from Standard Life regarding the level of discounts that it thought was available in the market. However, he was comfortable with Standard Life as a private equity manager and was supportive of the proposal to invest. The Board was informed that Standard Life had presented to a number of local authority pension funds on this opportunity but it was not known whether any had bought in. There was some concern that the total exposure to Standard Life would be high if this investment was made. The Strategic Manager, Pension Fund and Treasury informed the Board that the Secondary Opportunities were specifically for private equity products while GARS was concerned with the Diversified Growth fund, a separate entity. The Chairman questioned whether the Board would be taking a credit risk by investing in the Fund. The Mercer representative explained that there would be some credit risk as the opportunities are generally off-shore and so do not have as much protection. The Chief Finance Officer pointed out that the Pension Fund was underweight on the private equity asset class. It was agreed to defer a decision on this investment until after meeting with Standard Life at Item 13.
6. There was a discussion with regard to a proposed investment in the Capital Dynamics Global Clean Energy and Infrastructure Fund. The Board expressed concern that the fee was a little high as some other similar funds dealing with solar energy have a fee of 50-60bps. It was agreed that it would be worthwhile to test whether Capital Dynamics would be prepared to negotiate on fees.
7. The Strategic Manager, Pension Fund and Treasury introduced the Darwin Property Fund investment opportunity. He explained that it is a property type opportunity, but which had a number of characteristics in common with private equity. The Mercer representative explained that the people running the Darwin Group were experts in the field and that Mercer considered this to be an interesting return opportunity. The fund however, had a number of very specific risks, which needed to be clearly understood by the Board. The Chairman informed the Board that some other local authority pension funds had already invested in this Fund. There was some concern that the current management was not tied into the Fund and could leave while the Pension Fund is locked in for ten years. The Chairman pointed out that this was a private equity investment and investors were usually in these for the long term. The Strategic Manager, Pension Fund and Treasury stated that the documentation listed a penalty cost if the Pension Fund disinvested before the end of five years. The Board went on to debate

fee levels, the duration of any lock-in time and the amount to be invested.

8. The Strategic Manager, Pension Fund and Treasury informed the Board that an initial report from the actuary suggested that the Pension Fund is now at least 70% funded. Following the full results, the contribution rate would be reviewed. The actuary would attend the Board meeting on 15 November 2013 and the AGM on 22 November 2013. Before that, he would communicate with the Borough and District Councils and other scheme employers.
9. The Surrey Pension Fund Adviser reported back on his meetings with Fund Managers. He stated that Franklin Templeton had recorded good results overall. He was slightly uncomfortable with the level of fees. The Surrey Pension Fund Adviser also reported that the new Fund Managers for UBS had had a good year. The Chairman highlighted that the UBS contract had been under watch two years ago and had been kept on after UBS agreed to a reduction in fees, so the Pension Fund was receiving good value. The Surrey Pension Fund Adviser reported that Majedie had also seen good performance over the past year. Majedie was particularly good at sensing market changes and repostioning its fund. The Surrey Pension Fund Adviser reported that Marathon was also doing well. It had benefited from a strong process for cash flow and income generation. It is playing different parts of the economic cycle.
10. The Strategic Manager, Pension Fund and Treasury introduced the Financial and Performance Report and informed the Board that the current estimated market value of the Fund had since improved further from the reported value on page 47 of the report. A question was raised over what value Mirabaud was adding to the overall Pension Fund portfolio.
11. The Strategic Manager, Pension Fund and Treasury highlighted that the Pension Fund was slightly overweight on equities. The Chairman stated that she was not currently worried about this position.
12. Members queried the fee levels for Fund Managers as listed on page 52. The Mercer representative informed the Board that it would need to look at the added value of Fund Managers and that many of them had outperformed their benchmarks net of fees. The Chairman assured the Board that the Surrey Pension Fund was not soft on its investment managers.

Actions/Further Information to be Provided:
The Pensions Administration Strategy and the Pensions Administration Service Level Agreement to be presented to the Board on 15 November 2013.

RESOLVED:

vii. To **APPROVE** the report and the decisions as laid out;
viii. To not go ahead with the investment of USD 20m in BlackRock DivPep V Fund;
ix. To negotiate for a desired fee level of 125bps before bringing back a recommendation to the Board to make a USD 25m commitment to the Global Clean Energy and Infrastructure Fund;
x. To negotiate the fee level before bringing back a recommendation to the Board to make a £20m commitment to the Darwin Property Fund, with a lock-in period of nine years.

Next Steps:
None.

26/13 PENSION FUND RISK REGISTER [Item 7]

Declarations of Interest:
None.

Key Points Raised During the Discussion:

13. The Strategic Manager, Pension Fund and Treasury introduced the report, clarifying that there had been no changes to the Risk Register since the previous meeting.
14. There was a discussion about including the residual risk following mitigating actions. Officers agreed to do this for future reports.

Actions/Further Information to be Provided:
Officers to evaluate the residual risk following mitigating actions and include this as a column within the Risk Register.

RESOLVED:
To **NOTE** the Risk Register.

Next Steps:
None.

27/13 KEY PERFORMANCE INDICATORS [Item 8]

Declarations of Interest:
None.

Key Points Raised During the Discussion:

15. The Strategic Manager, Pension Fund and Treasury introduced the report. He pointed out that, with regard to the data quality indicator, the interim feedback from the actuarial evaluation suggested that the data provided by the pensions team had been of a very high quality. The team was talking to the actuary about what method can be used to evaluate data quality. This information will be used to inform a method for measuring performance on data quality within the Pension Fund. The Pensions Manager suggested that this will probably be an annual measurement.
16. The Strategic Manager, Pension Fund and Treasury informed the Board that a mechanism would be devised to allow the customer service indicators to be measured. The Chairman suggested that officers speak to the team who undertakes the employee survey. The Pensions Manager pointed out that the member satisfaction survey results may be influenced by attitudes towards different employers within the Fund. This would need to be addressed in the development and evaluation of a survey.

Actions/Further Information to be Provided:
None.

RESOLVED:
To **APPROVE** the KPI statement format.

Next Steps:
None.

28/13 REVISED STATEMENT OF INVESTMENT PRINCIPLES [Item 9]

Declarations of Interest:
None.

Key Points Raised During the Discussion:

17. The Strategic Manager, Pension Fund and Treasury introduced the report, outlining changes from the previous Statement of Investment Principles.
18. There was a query over why the Borough/District representatives, the external employer representative and the Fund Member representative were listed as Co-opted Members. It was explained that the Board is a County Council committee to which non-Councillors can be co-opted. There was a query about the composition of Local Committees which the Regulatory Committee Manager agreed to respond to.

Actions/Further Information to be Provided:
Regulatory Committee Manager to respond to a Member regarding the composition of Local Committees.

RESOLVED:

i. To **APPROVE** the revised Statement of Investment Principles;
ii. To **AGREE** that a breach in the asset allocation control range of greater than +/- 3.0% will not require steps to be taken immediately to restore parity, but require that the breach will necessitate discussion amongst the Chairman and officers and, where appropriate, the Pension Fund Board.

Next Steps:
None.

29/13 LGPS: CALL FOR EVIDENCE ON THE FUTURE STRUCTURE OF THE LOCAL GOVERNMENT PENSION SCHEME [Item 10]

Declarations of Interest:
None.

Key Points Raised During the Discussion:

19. The Strategic Manager, Pension Fund and Treasury introduced the report.
20. The Chairman informed the Board that the Government had established a LGPS Advisory Board on which she sat. The Government believes that if Pension Funds are pooled it will reduce

the cost of administering them. However, current data does not suggest that there is any correlation between the size of the Pension Fund, associated investment management fees and investment performance. The Mercer representative confirmed that many consultees were saying the same thing.

21. The Chairman suggested that the Government was taking a London-centric view of Pension Funds. In London there are many very small Funds which are not comparable with a Fund such as the Surrey Pension Fund.
22. Members suggested that forcing Pension Funds into a few super-Funds would be a mistake. The only positive would be a possible saving on fees but the data has already shown this to be unlikely.
23. Members also argued that pooling Pension Funds would be unfair on taxpayers in different areas as some Funds have not been managed as effectively as others. This would lead to some areas seeing taxes rise to support Funds which have not been effectively managed. The Surrey Pension Fund Adviser informed the Board that when mergers were first discussed it did mean that assets and liabilities would be merged. It now only refers to assets but the Board needs to be clear on this in its response.
24. The Chairman informed the Board of a requirement under the Pensions Act to establish a Pension Fund Scrutiny Board to oversee the operation and decision making of the Pension Fund Board. This would require the establishment of a further Board which would be difficult to find members for.

Actions/Further Information to be Provided:
None.

RESOLVED:
To **DELEGATE** the drafting of a formal response to the LGPS Call for Evidence on the Future Structure of the Local Government Pension Scheme to the Chief Finance Officer, in consultation with the Chairman of the Surrey Pension Fund Board, taking into account the views and observations of the Board.

Next Steps:
A further report to the Surrey Pension Fund Board following proposals due to be published before the end of 2013.

The Surrey Pension Fund Board adjourned its meeting at 11.30am for a short break and reconvened at 11.35am.

Item 11 was deferred to follow Item 14.

30/13 LIABILITY MANAGEMENT, INFRASTRUCTURE DEBT [Item 12]

Declarations of Interest:
None.

Also in attendance:
Toby Buscombe, Principal, Mercer
Marc Devereux, Principal, Mercer

Key Points Raised During the Discussion:

25. The Mercer representatives provided a presentation on liability risk management and infrastructure (slides attached as Annex 1).
26. It was suggested that Risk Ref. 2 within the Risk Register – bond yields fall leading to an increase in value of liabilities – was a crucial risk to watch and that mitigating actions should be developed further based on the information provided during Mercer's presentation.
27. There was general support for the concept of dynamically de-risking by setting trigger levels but not at this time.
28. The Chairman suggested that the Board needed a more detailed discussion on equity derivatives in the future.
29. The Board considered the investment in Funds managing infrastructure debt. It was informed that while the management of infrastructure debt was a relatively recent phenomenon with only a limited number of fund managers focusing on this area, each of those managers had very specific strategies. Due diligence would need to be exercised and risk controls developed if investing in these Funds. The Chairman pointed out that the credit analysis was key. The Mercer representatives added the need to ensure that the portfolio was well-diversified and that the Manager has the ability and track record to enforce when required.

Actions/Further Information to be Provided:
To schedule a discussion on equity derivatives.

RESOLVED:
To **NOTE** the presentation on Liability Risk Management and Infrastructure Debt.

Next Steps:
None.

The Surrey Pension Fund Board adjourned its meeting at 12.55pm for lunch and reconvened at 1.27pm.

John Orrick and Sheila Little sent apologies for absence from the afternoon session.

31/13 PRESENTATION: STANDARD LIFE [Item 13]

Declarations of Interest:
None.

Also in attendance:
Dale MacLennan, Investment Director, Standard Life
Neil Richardson, Investment Director, Standard Life

Key Points Raised During the Discussion:

30. The Standard Life representatives gave a presentation. They assured the Board that the departure of Euan Munro as the Director of Multi-Asset Investing and Fixed Income at Standard Life had not been a

surprise and that the team was capable of continuing without him. The name and brand was still attracting the best people to work within the team. The Board was informed that Euan Munro had in recent years taken on board other responsibilities and had not been as involved as he had been when the team was first put together. The Standard Life representatives agreed that Guy Stern's style was different from Euan Munro's but that he had been working on the product since 2008 and knew and understood its strengths. He was also keen to be as inclusive as possible. In response to concerns raised that Euan Munro may wish to take people with him to his new company, the Standard Life representatives considered that this was unlikely, although could not be ruled out. It was also pointed out that morale was high in the team and there was no feeling that anyone wished to leave. Members suggested that if the Board was investing in a Fund because of one person, that strategy should be reviewed. It was clarified that investment in Standard Life had not been on the basis of Euan Munro being in the lead post. It was recognised that Standard Life had a well-resourced team, with significant experience. In response to a query about Guy Stern's new responsibilities, it was clarified that he had not taken on all of Euan Munro's previous responsibilities and so would still be involved in the day to day running of the team.

RESOLVED: That under Section 100(A) of the Local Government Act 1972, the public be excluded from the meeting for the rest of Item 13 and for Item 14 on the grounds that they involve the likely disclosure of exempt information under paragraph 3 of Part 1 of Schedule 12A of the Act.

THE REST OF ITEM 13 AND ITEM 14 WAS CONSIDERED IN PRIVATE BY THE SELECT COMMITTEE. HOWEVER, THE INFORMATION SET OUT BELOW IS NOT CONFIDENTIAL.

31. Following further discussion based on a confidential presentation (slides attached as Annex 2), the Standard Life representatives left the meeting.

Tony Elias left the meeting.

32. The Board discussed the various investment opportunities with Standard Life. The Strategic Manager, Pension Fund & Treasury tabled a paper which outlined the Pension Fund's exposure to Standard Life (attached as Annex 3).

Actions/Further Information to be Provided:
None.

RESOLVED:
To **AGREE** that the Surrey Pension Fund make a USD 20m commitment to the Standard Life Secondary Opportunities Fund.

Next Steps:
None.

32/13 PRESENTATION: CBRE [Item 14]

Declarations of Interest:
None.

Also in attendance:
Alex Bignell, Head of UK, CBRE
DJ Dhananjai, Director, CBRE
Max Johnson, Director, CBRE

Key Points Raised During the Discussion:

33. The CBRE representatives gave a confidential presentation (slides attached as Annex 4).

Actions/Further Information to be Provided:
None.

RESOLVED:
To **NOTE** the CBRE presentation.

Next Steps:
None.

RESOLVED:

i. To go back into public session (Part One);
ii. That the items considered under Part Two of the agenda should remain confidential and not be made available to the press and public.

33/13 SURREY PENSION FUND ACCOUNTS 2012/13 [Item 11]

Declarations of Interest:
None.

Key Points Raised During the Discussion:

34. The Strategic Manager, Pension Fund and Treasury introduced the report. He explained that Jon Evans had been responsible for preparing the Financial Statements and had since departed his role. The recently appointed Senior Accountant, Alex Moylan, had taken responsibility for steering the Accounts through the external audit process. The External Auditors had made no recommendations, with only some minor adjustments made following discussions.
35. The Strategic Manager, Pension Fund and Treasury showed the Board a mock up of the cover of the Pension Fund's Annual Report.

Actions/Further Information to be Provided:
None.

RESOLVED:

i. To **NOTE** and **APPROVE** the financial statements;
ii. To **NOTE** the content of the Audit Findings for Surrey Pension Fund Report;
iii. To commend Jon Evans and Alex Moylan for their excellent work in the production and audit of the accounts; and

iv. To **NOTE** the Letter of Representation.

Next Steps:
None.

34/13 PRESENTATION: MANIFEST [Item 15]

This item was **WITHDRAWN**.

35/13 THE STEWARDSHIP CODE [Item 16]

Declarations of Interest:
None.

Key Points Raised During the Discussion:

36. The Strategic Manager, Pension Fund and Treasury introduced the report and informed the Board that, since its last meeting, an external governance adviser had been appointed.

Actions/Further Information to be Provided:
None.

RESOLVED:
To **ADOPT** The Stewardship Code and **APPROVE** the Fund's commitment to the Code.

Next Steps:
Compliance with the Code is kept under regular review and progress reported to the Board where appropriate.

36/13 DATE OF NEXT MEETING [Item 17]

The date of the next meeting was noted.

Meeting ended at: 3.25 pm

Chairman

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MERCER

TALENT • HEALTH • RETIREMENT • INVESTMENTS

SURREY COUNTY COUNCIL PENSION FUND
TRAINING ON:
LIABILITY RISK MANAGEMENT & INFRASTRUCTURE

20 September 2013

Steve Turner, Partner
Marc Devereux, Principal
Toby Buscombe, Principal

Minute Item 30/13

MARSH & McLENNAN COMPANIES

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Stages of defined benefit pension risk management

Strategy Implementation

"Current" state → Understand risk → Reduce covenant risk → Address Plan design → Reduce unrewarded risk → Reduce rewarded risk → Transfer governance and risk → "Future" low risk state

Understand risk	Reduce covenant risk	Address Plan design	Reduce unrewarded risk	Reduce rewarded risk	Transfer governance and risk
• Funded status monitoring • Covenant assessment • Investment advice • Governance overview and training	• Contingent assets (or SPVs) • Review of Plan rules	• Future accrual design options • Liability management	• LDI preparation • Investment beliefs re rewarded / unrewarded • Longevity hedging • Buy-in	• Dynamic de-risking program • Trigger setting • Derivatives / equity collars • Suitable target	• Ongoing risk management • Buyout

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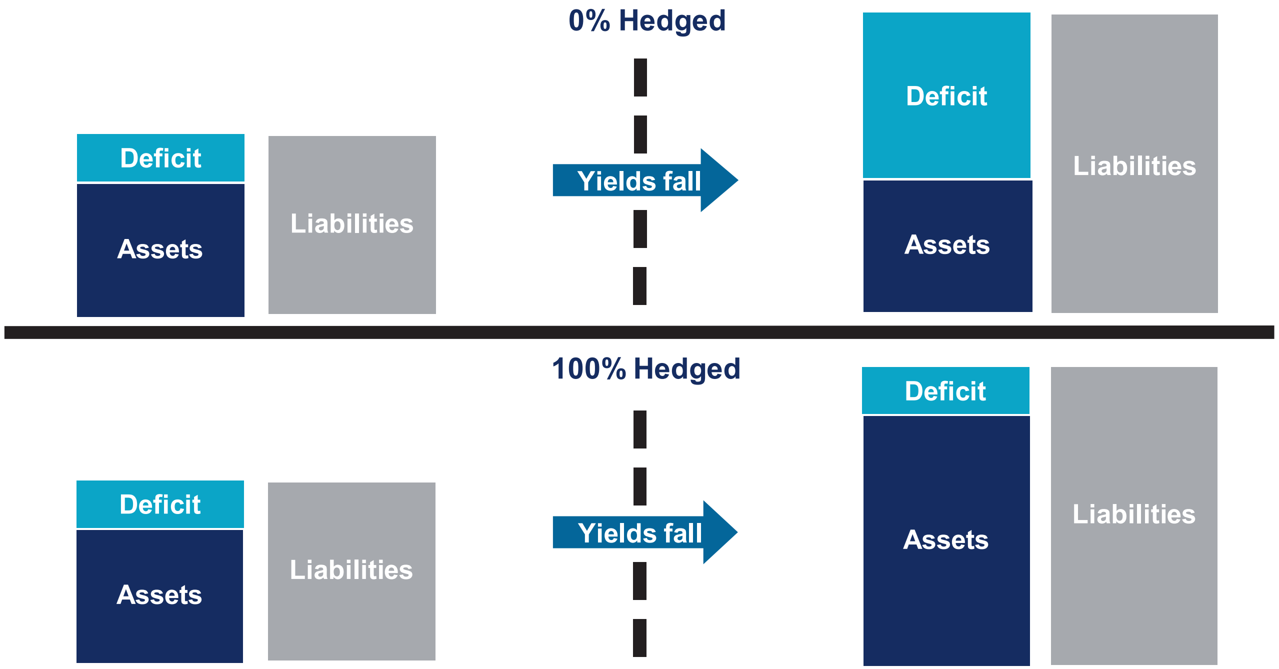
Understanding the liabilities
Main factors influencing the Fund's liabilities

Liability Driven Investments	Discount factor (interest rates)	Affects amount needed now to pay for future cashflows	Big impact
	Inflation	Affects amount of pension if linked to inflation / salaries	Big impact
	Pension increases	Usually linked to inflation or known in advance	Substantial proportion of impact through link to inflation
Longevity hedging	Life expectancy	Affects number of years for which pension is paid	Big impact

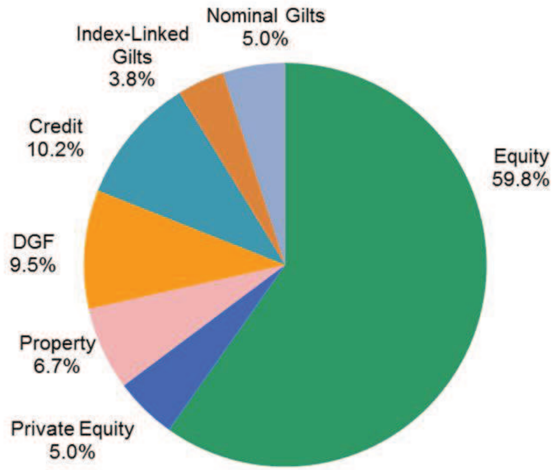
Liability Driven Investment (LDI)
What is it?

- ‘Liability hedging’ simply means that you offset the impact of movements in interest rates and inflation on the value of the liabilities by holding an asset that responds in the same way as the liabilities to movements in interest rates and inflation. A ‘hedge ratio’ of 50% means that the change in value of the asset is expected to be around 50% of the change in the value of the liabilities.
- Assuming the Fund has no interest rate hedging, then a fall in interest rates results in a rise in liabilities, whilst the assets remain unchanged, thus increasing the deficit. Had the Fund been 100% hedged on interest rates, then the assets would rise by the same amount as the liabilities, and the deficit would remain the same size.
- Similar analysis applies with changes in inflation and the amount of inflation exposure that is hedged.

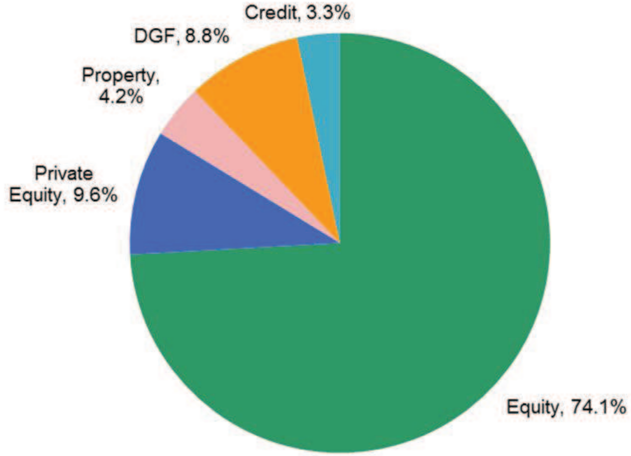


Surrey - current investment policy

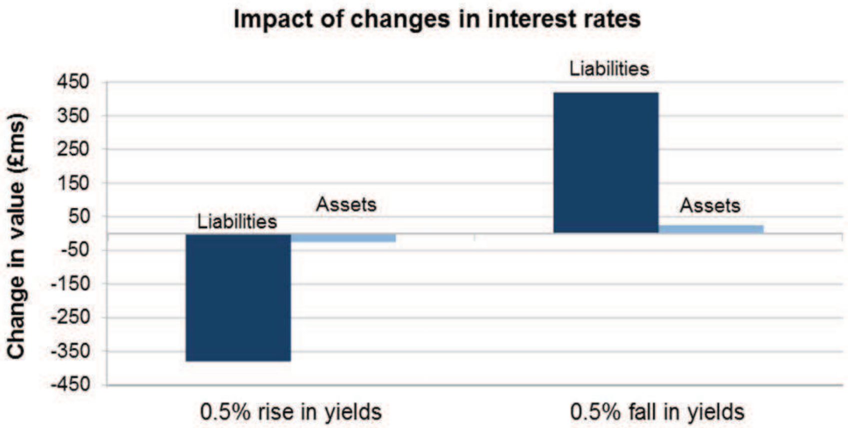
Benchmark asset allocation



Sources of expected return (gilts + 3.2% p.a.)



Understand liability mis-match risk



Equity dominates the sources of expected returns

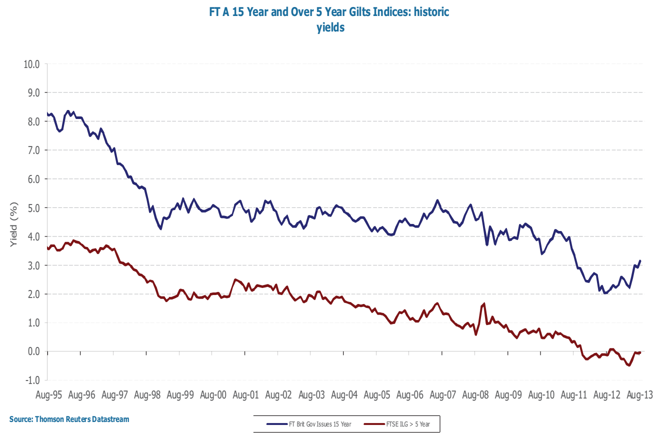
Liability risks are significant

Funding level will be highly volatile

Diversifying the assets and more focus on liability risks is required to effectively manage overall funding level risk

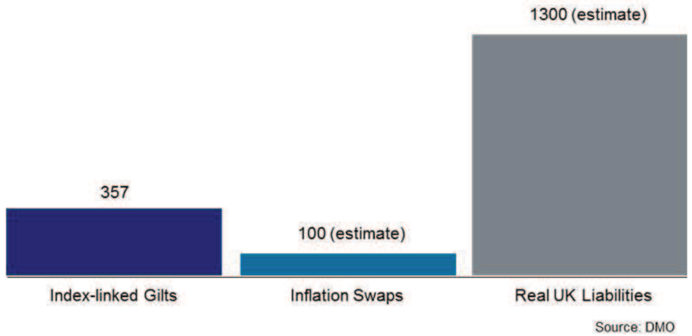
Index-Linked Gilts (ILG) are your best liability matching asset…
But there is a massive long-term structural demand & supply imbalance

1. Long-term decline in ILG yields

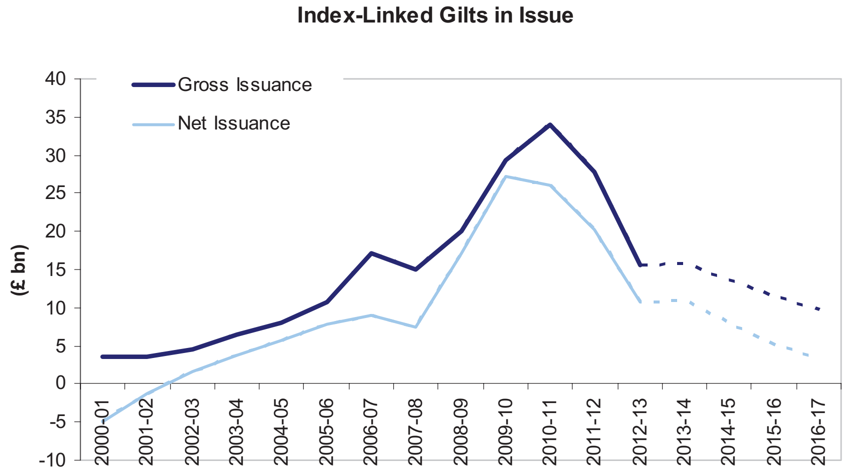


2. Demand for ILG exposure outstrips supply

Comparison of index-linked gilts in issue, plus inflation swaps transacted with UK pension scheme real liabilities (figures are very approximate estimates in £bn)



3. Net issuance of ILGs is expected to fall

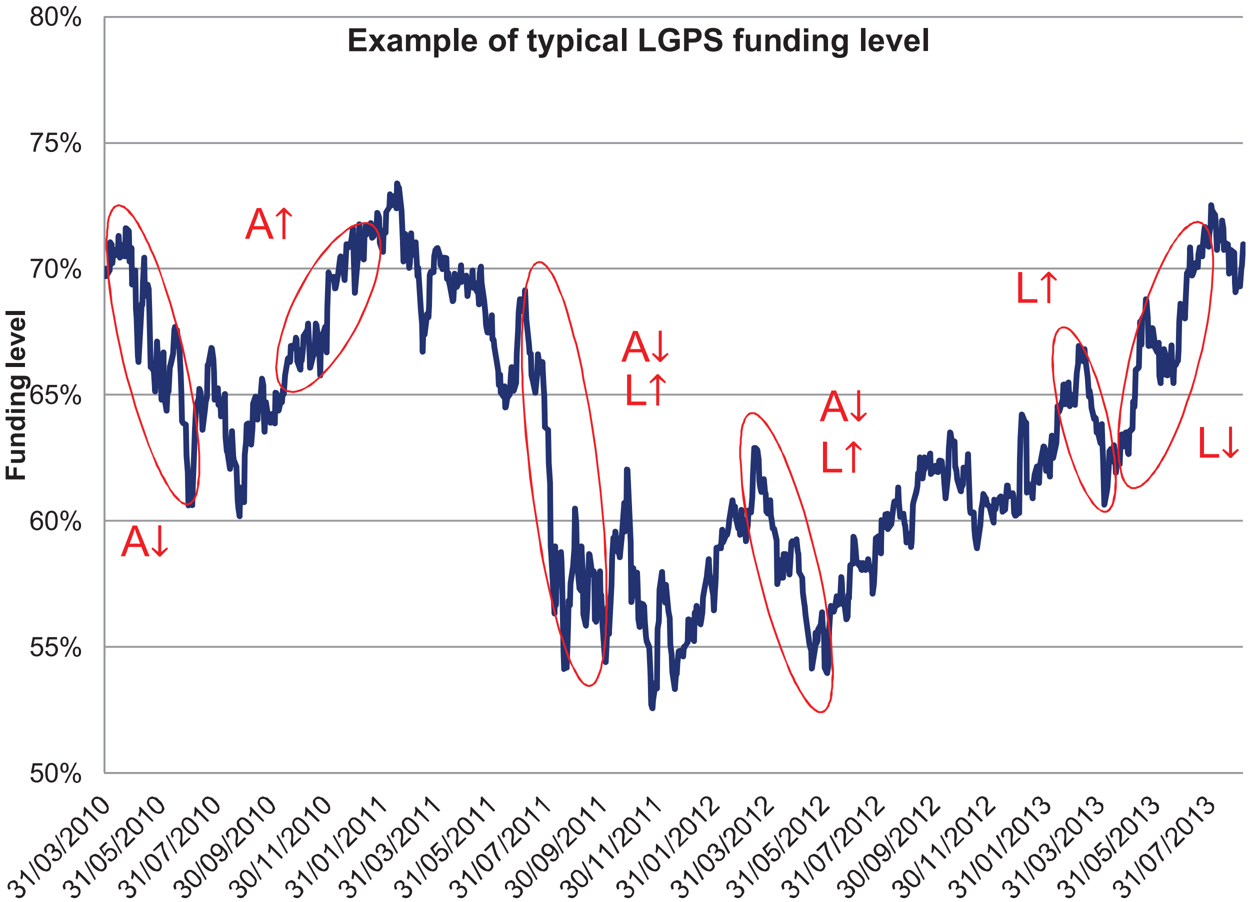


Sources: Mercer based on DMO and PPF "Purple Book" data and RBS data

Strong argument to put in place a plan to introduce liability hedging, e.g. based on funding level improvements

Real yields are likely to remain at depressed levels for an extended period of time due to supply and demand imbalance

Estimated funding level volatility
Typical LGPS Fund



- Based on an 80 / 20 Growth / Bond asset split and typical LGPS liabilities
- Funding levels remain broadly unchanged over the period shown, but £ deficits are expected to have increased materially due to higher liabilities.
- For the Fund, between the last two valuation dates the deficit has increased by c£500m to c£1.3bn. The monetary value of the liabilities will continue to grow with interest and future accrual of benefits
- Volatility in funding level clearly evident – may be unacceptable to some Employers

Key: A and L refer to the material movement of the either the Fund's assets and/or liabilities, which have contributed materially to the change in funding level over the highlighted periods. The arrow shows the direction of the change in value.

Surrey CC & LGPS
There's a lot on your plate…..

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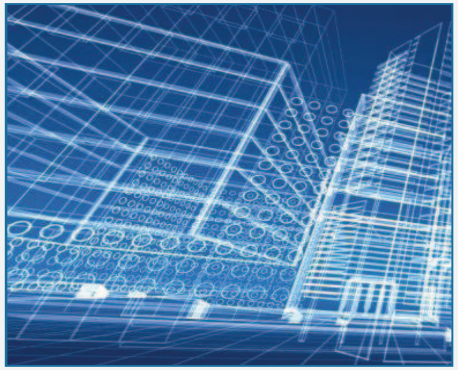
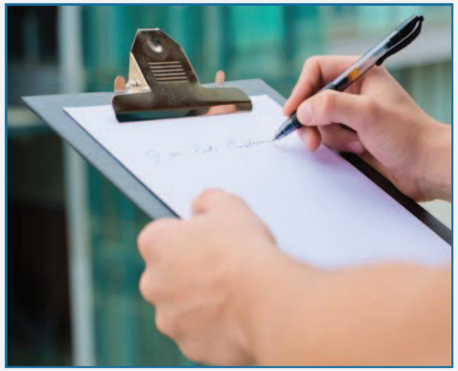
New LGPS 2014 scheme design



Austerity and affordability

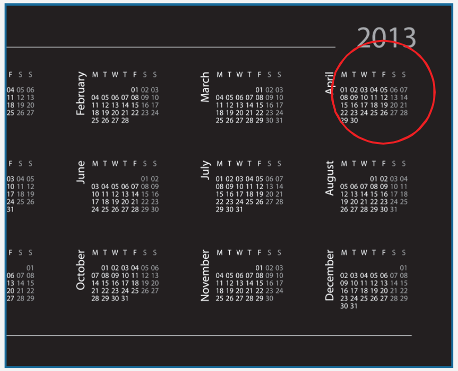
Potential Scheme Mergers

Call for Evidence



New governance structures

Actuarial Valuation year



Improved risk management is going to be a key way of helping to address many of the challenges ahead

HEDGING INSTRUMENTS

Hedging instruments
‘Toolkit’

Funded instruments

Index-Linked Gilts	Network Rail Bonds	Overnight Cash	Money Market
Fixed-Interest Gilts	Corporate Bonds	ABS	Covered Bonds

Unfunded instruments

Interest Rate Swaps	Inflation Swaps	Gilt Repos	Total Return Swaps
LPI Swaps	Asset Swaps	Equity Options	Swaptions
CDS	Futures	Forwards	Spread Locks

Most common

Hedging instruments
Common features among unfunded instruments

Receive fixed or inflation-linked cashflows	• The Fund would receive fixed or inflation-linked cashflows from the counterparty. • These would be used to match the Fund's fixed or inflation-linked liability cashflows.
Pay floating cashflows	• The Fund would pay a floating rate of interest in exchange for the fixed or inflation-linked cashflows. • For example, in the case of swaps this interest rate would most likely be LIBOR.
Change in value of the instrument hedges change in liability value	• As interest rates change over time, the value of the instruments change. • These changes in value hedge the changes in the liability value.
Limited initial capital required	• In theory, apart from transaction costs and initial collateral, no initial capital is required to enter into these transactions. It is for this reason that gearing is possible.
Subject to counterparty credit risk	• Instruments are traded directly with investment banks. However, some derivatives will be moved to central clearing houses. • If the counterparty defaults, the Fund may make a loss. • This is partially mitigated by collateralisation, but some risks still remain, for example: – The Fund may be out of the market for some time after default. – The collateral received may fall in value or the Fund may have posted collateral worth more than its loss on derivative positions.
Ongoing collateral requirements	• The Fund must have collateral to post to cover any losses on the derivative positions. • Similarly, the Fund will receive collateral on any gains on its derivative positions.

Most unfunded instruments involve the payment of a floating interest rate in exchange for fixed or inflation-linked cashflows.

Hedging instruments
Interest rate swaps and Inflation swaps

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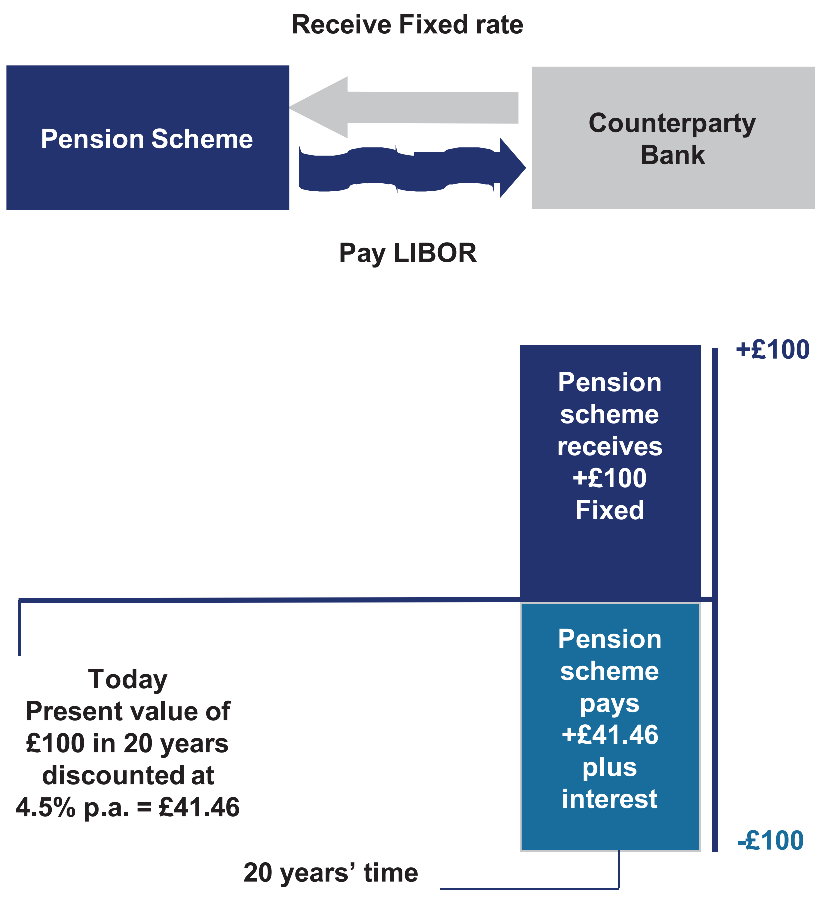
How it works



Interest Rate and Inflation Swaps

Purpose

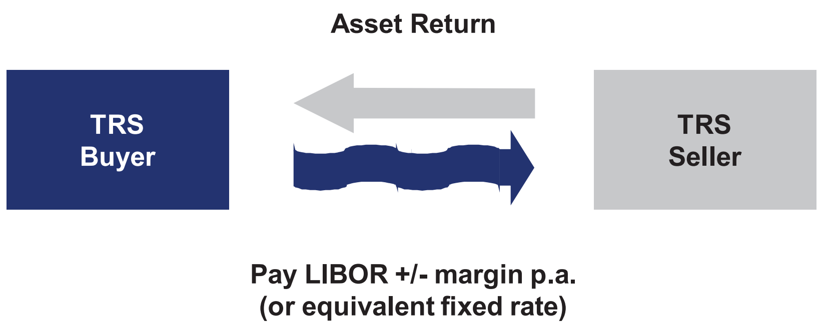
- Pension schemes use interest rate swaps to hedge interest rate risk
  - Pay a floating "cash" rate (usually LIBOR)
  - Receive fixed "swap" rate.

Mechanics

- A zero coupon swap is quoted in terms of the fixed rate and the notional exposure, which equates to the present value of the cashflows. For example:
  - 20-year zero coupon swap rate of 4.5% p.a.
  - Cashflow of £100 in 20 years
  - Notional of £41.46.
- Interest rate swaps provide fixed payments.
- Inflation swaps can be used in addition to provide inflation-linked payments:
  - Pay a fixed rate (breakeven "swap" inflation)
  - Receive actual RPI.
- Cashflows have equal value at outset – in theory no payment is required (apart from transaction costs).
- Both interest rate and inflation swaps could be traded with terms of up to 50 years.

Hedging instruments
Total Return Swaps

How it works



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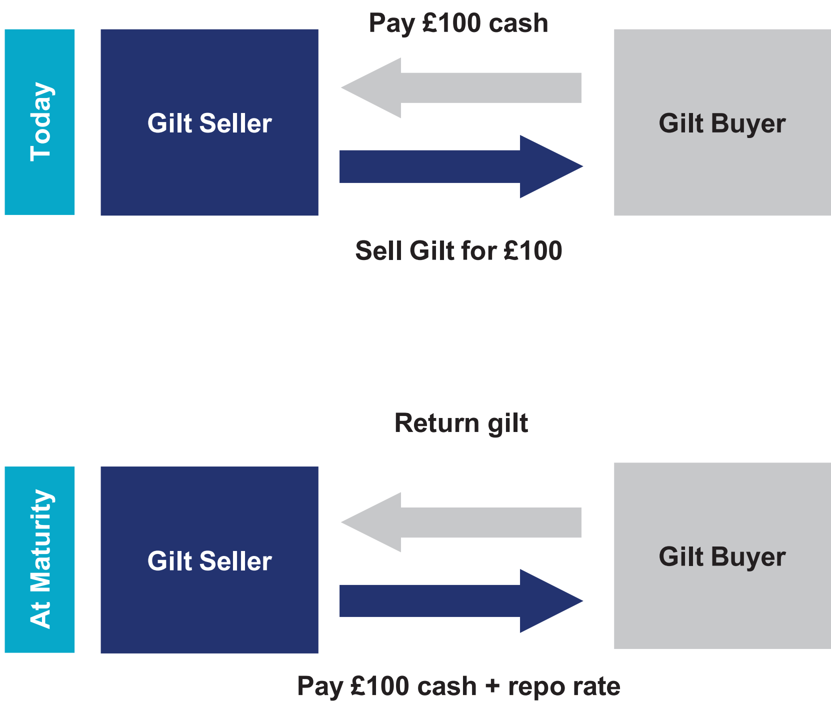
Total Return Swaps

- Under a gilt TRS, a pension plan agrees to:
  - pay a floating rate (LIBOR +/- a margin) on a specified notional amount
  - receive the total return on a specified gilt applied to the same notional amount
  - for a specified term
- No assets are exchanged up-front, so the Fund would therefore obtain unfunded economic exposure to the specified gilt.
- Unlike swaps, the term of gilt TRS is limited to 2-3 years. This means that the position must be rolled from time to time. This creates **roll risk**:
  - The margin relative to LIBOR may be unattractive
  - It may in extreme cases be impossible to roll the position. If this happens other instruments could be considered (e.g. swaps or gilt repo).
- Each time a gilt TRS position is rolled, it must be cash settled, creating **liquidity risk** if insufficient cash set aside (and the Fund has made a loss)
  - In practice, pooled funds and manager processes (and ongoing collateral management) are designed to ensure that this situation does not happen.

Hedging instruments
Gilt Repo

How it works



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Gilt repo

Today

- Transact a gilt repo with a counterparty bank, i.e. sell a gilt and agree to buy it back at a future date at a pre-determined price.
- Pension fund retains economic exposure to gilt. Cash may be subject to a “haircut” retained by bank counterparty.

At Maturity

- Pension fund re-purchases gilt at the pre-determined price.
- At the end of each repo contract, the Fund would roll the repo (i.e. enter into another repo to continue borrowing).

Comments

- The Fund could use its existing gilt holdings to held establish an LDI portfolio. Cash raised from repos could be used to purchase further gilts. At the end of each repo contract, the Fund would roll the repo (i.e. enter into another repo to continue borrowing).
- Economically, the transaction is broadly equivalent to the use of gilt TRS, the key difference being the funding cost (i.e. the difference between the gilt repo rate and the gilt TRS rate).
- Gilt repo typically have terms of up to 1 year and must be rolled from time to time, so like gilt TRS they are subject to **roll risk**.

Hedging instruments
Key risks in the use of Over The Counter (OTC) derivatives and repos

Counterparty risk

- The Fund should understand the approach taken by any investment manager to selection and monitoring of counterparties and measures of controlling this risk

Regulatory / legal risk

- Documentation will need to be reviewed from both legal and investment perspectives. The scope of the reviews depend on delivery mechanism, structure, instruments and techniques used. Any structure would need to be "future-proof" to accommodate regulatory changes, such as central clearing of derivatives.

Operational Risks

- Liquidity and costs of ongoing management of synthetic/repo positions needs to be understood. For gilt repo, 'the roll risk' in particular.

Gearing

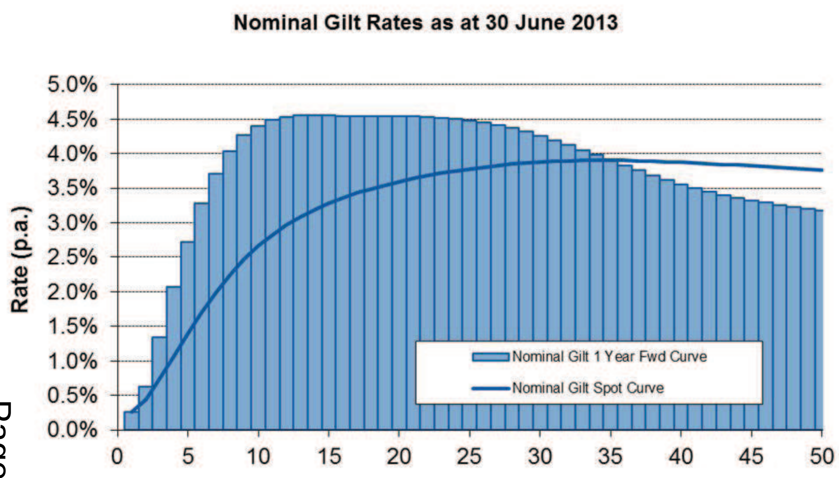
- If positions are geared the level of gearing will vary with the changes in yields. The process will need to be understood and agreed on how to manage the gearing within the portfolio.

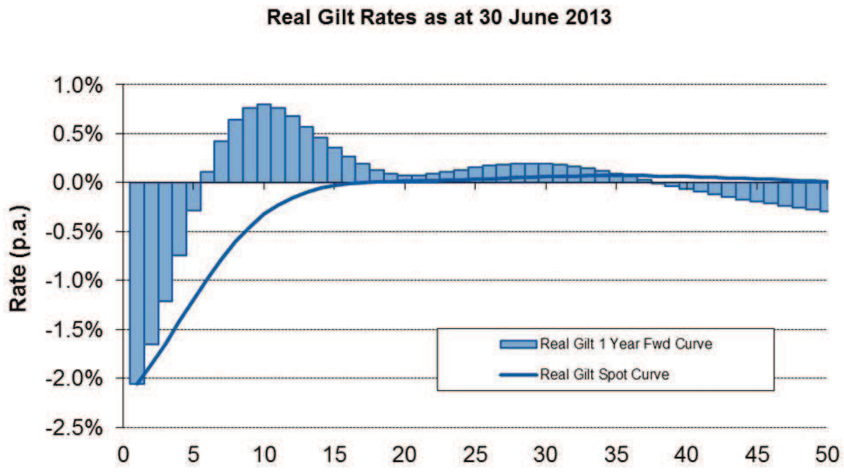
LIBOR/Repo rate generation

- Risks associated with LIBOR and/or Repo rate needs to be understood.

GILT MARKET UPDATE

Gilts market update
Spot and forward yields (as at 30 June 2013)





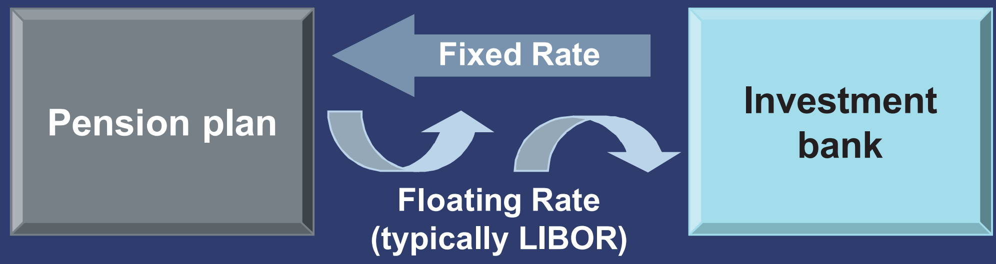
- The charts show gilt yields (**dark blue curve**) as at 30 June 2013 and the year-by-year forward rates implied by these yields (**light blue bars**). Forward rates show the path of cash returns that would result in the same return as the gilt yield over the relevant period.
- A forward rate is the expected rate at a point in the future. For example,
  - Based on 30 June 2013 pricing, the markets expect that the nominal (left-hand chart) cash return in 2033 (i.e. in 20 years time) will be just over 4.5%. This is significantly higher than the current nominal cash return of c.0.5%.
- A spot rate is the expected average rate between today and a point in the future, e.g.
  - A 20 year spot nominal rate is the average expected rate from years 1 to 20 (i.e. it is the average of forward rates over the next 20 years). Using the same example, the gilt yield (spot rate) is c.3.6% p.a.

Gilt yields are being dragged down by current low short-term interest rates. This is consistent with Bank of England's current base rate of 0.5% p.a.

What is fair value?

Long-term interest rates (or yields) are said to be fair value if there is a broadly even chance of cash returns being higher or lower over the same period…

… or in other words if the fixed (interest) rate is broadly in line with the expected floating (cash) rate over the term of a swap. (Note: the economics of an interest rate swap are akin to borrowing to invest in a bond.)



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Fair value is…

- A consideration for when hedging should be undertaken.
- A highly subjective judgement.

Fair value is not…

- A target for all hedging.
- More important than broader strategic considerations (e.g. risk tolerance).
- A short-medium term prediction for reversion of long-term interest rates. Long-term interest rates may be below fair value for a long time.

Gilts market update

Mercer 'fair value' for long term nominal and real gilt interest rates – defined as 5yr+ forward rates

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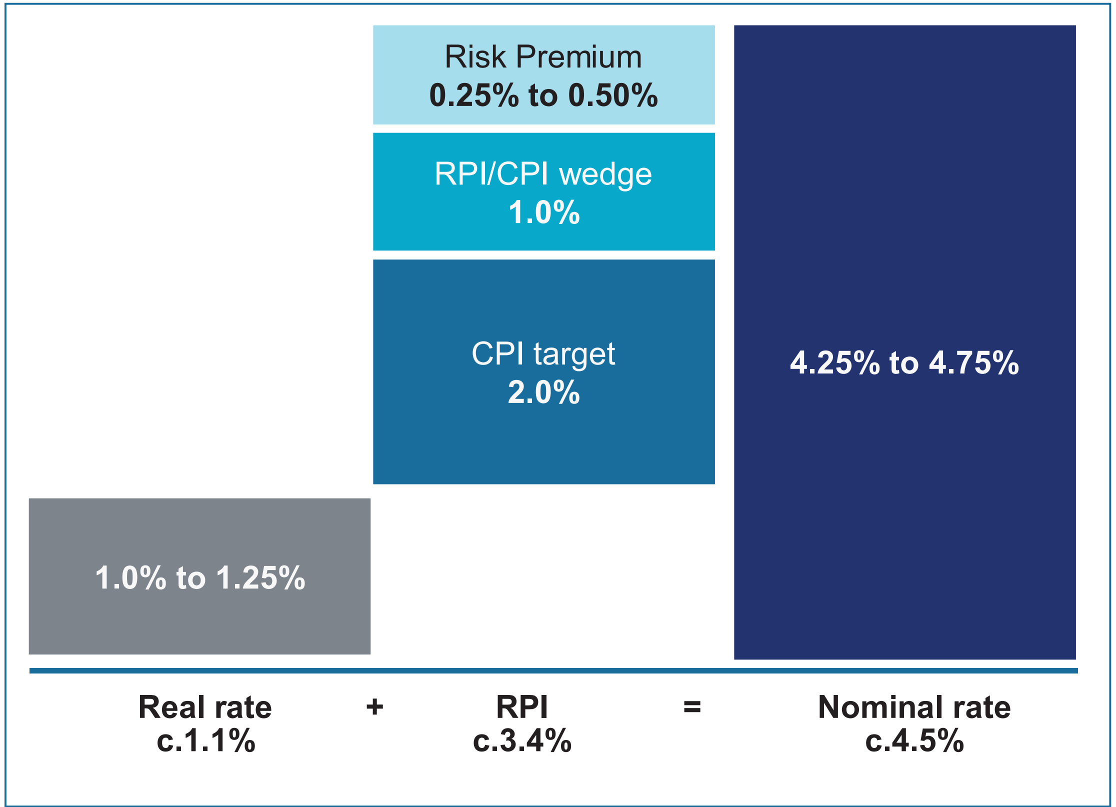
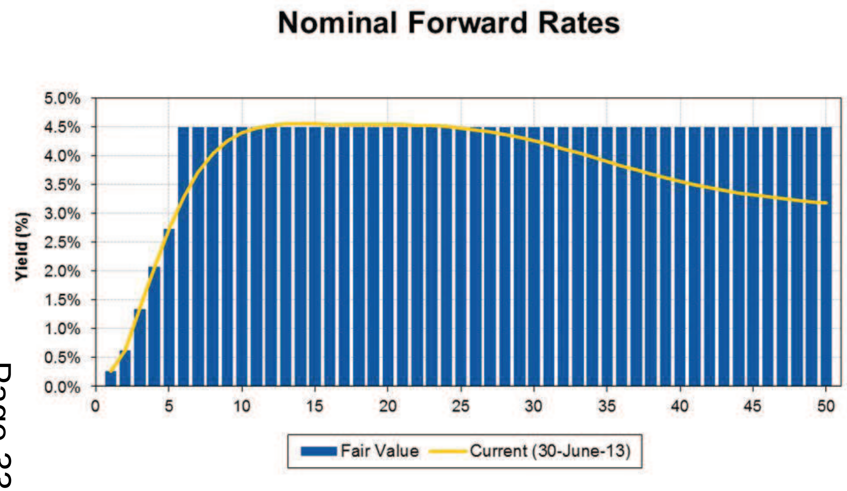
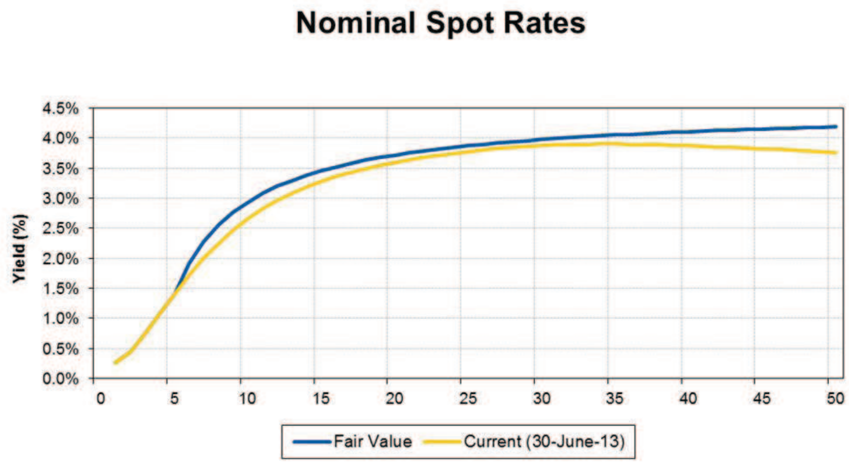


- The Mercer Rates Committee (MRC) sets 'fair value' views for gilt yields and inflation (RPI).
- Specifically, taking a view on forward rates *beyond* five year maturities. The first five years are assumed to be fair value.
- Mercer fair value views are informed by historic averages for real rates, projections for inflation, and the expectation that the Bank of England will be successful in meeting its inflation target. The nominal rate is the by-product of the two.
- The real rate and inflation views are reviewed on a quarterly basis or more frequently should a significant event occur such as the CPAC review of the method of calculating RPI inflation.

Fair value views are subjective and should not be solely relied on when setting hedging policies.

Gilts market update
Forward rates vs. Spot rates (current vs. Mercer 'Fair Value' views as at 30 June 2013) – assumed 1.25% real and 4.5% nominal





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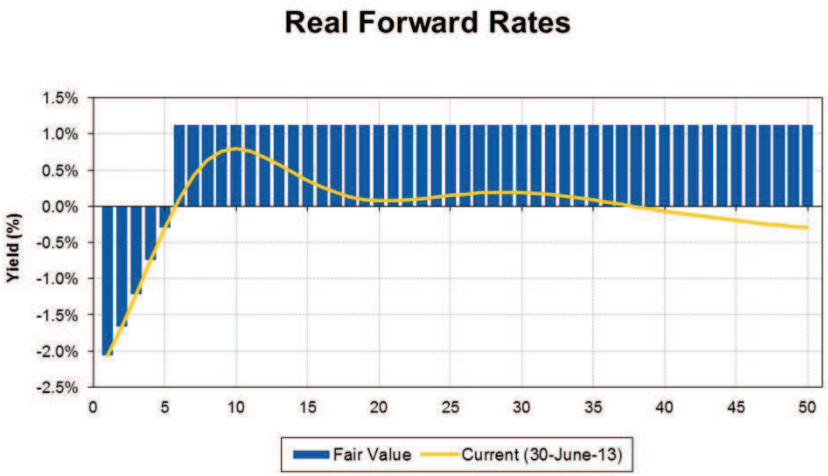
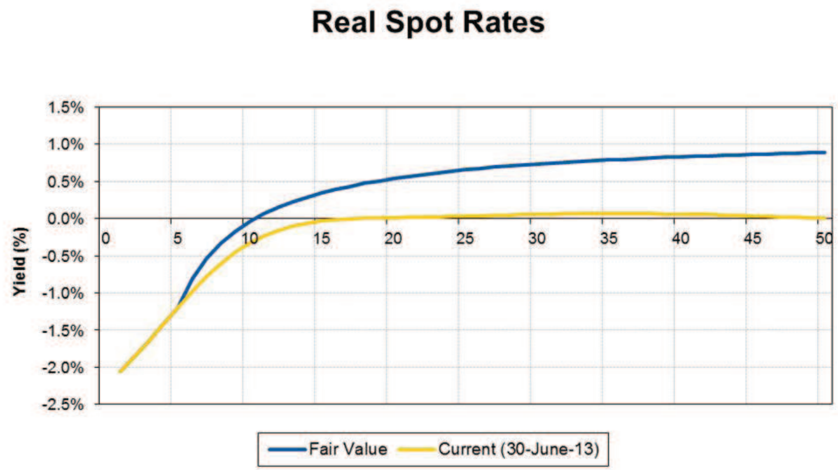
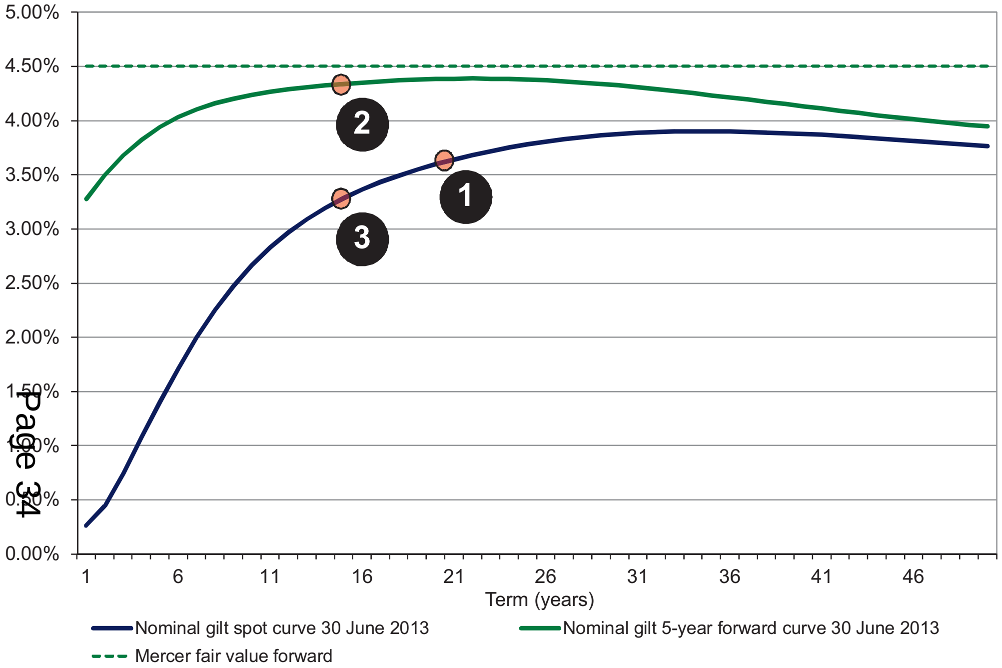




Are yields too low to hedge?
Yields are not as unattractive as they appear

Nominal spot and forward curves



- Significant increases in nominal yields are already priced in
- Under a traditional approach to valuing liabilities, the steepness in yield curve implies fixed liabilities would increase in value over 5 years by around 6%
- If yields remain unchanged, the value of a 20-year fixed liability would increase by around 25% over 5 years
- Any fall in yields would lead to even greater losses
- Similarly for real yields

25% increase

1 Value of £180m cashflow in 20 years at 3.6% discounting = £89m

2 Value of £180m cashflow in 15 years at 4.4% discounting = £94m

3 Value of £180m cashflow in 15 years at 3.3% discounting = £111m

6% increase

Scope for significant losses in a "muddle-through" scenario

IMPLEMENTATION

Implementation considerations
Overview of main approaches

SIMPLICTY

COMPLEXITY

IMMEDIATE EXECUTION

Immediate switch from the current to the target strategy, irrespective of the price (e.g. yield levels)

PHASED OVER TIME

Phase the switching over time by splitting the trade into tranches (e.g. 10 switches of equal sizes). The switches are done irrespective of price.

TRIGGER BASED

Set minimum pricing criteria (e.g. trigger level or levels) which, once satisfied, will action switches towards the target strategy

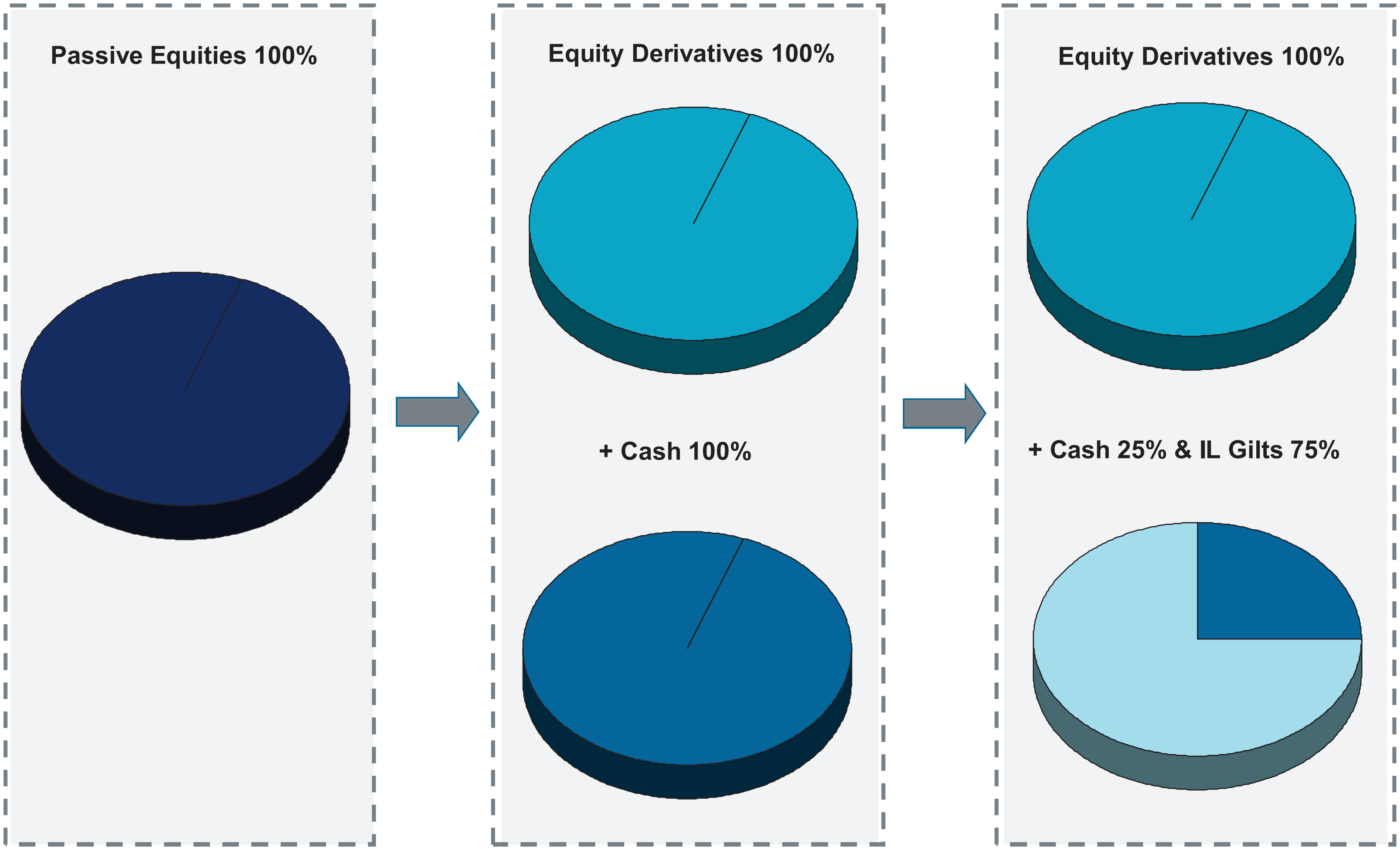
No single right answer – driven by beliefs and risk tolerance

In the following slides we show how the Fund could finance an LDI mandate without reducing the expected return on the assets

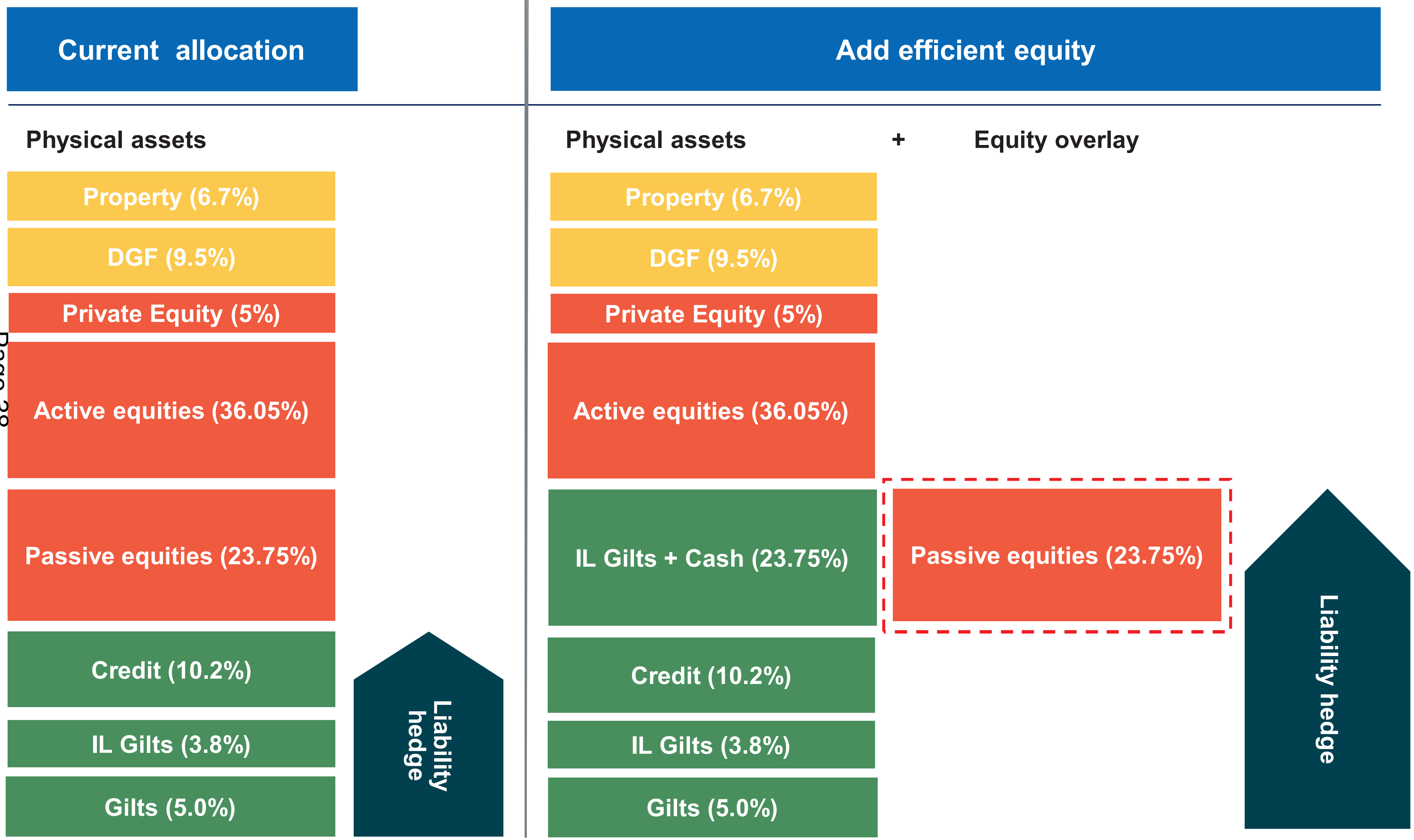
Make the Fund’s passive equities work harder

Physical equity can be replicated by cash/bonds and equity derivatives

Using derivatives can retain equity returns but reduce interest rate and inflation risk



Using capital efficiently to increase liability hedge whilst maintaining expected return through exposure to return seeking assets



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LONGEVITY HEDGING

Longevity swap and buy-in compared

	Pensioner Longevity swap	Pensioner buy-in
Pros	• Removes pensioner longevity risk at below recent trends • "Buy now while stocks last" • Avoid locking into current low yields • Retain asset flexibility • Possible stepping stone to later full risk transfer or self-sufficient run off	• Close matching on portion of liabilities • Investment market dislocations can present pricing opportunities • Consistent with a long term complete exit
Cons	• Possible adverse funding/accounting implications (although can potentially be funded by adjusting investment strategy) • Extra admin requirements	• Illiquid so constraint on investment strategy • If paid for by sale of gilts, potentially limited risk reduction or even increase in risk • If paid for by sale of growth assets, lock in underfunding

A longevity swap is economically similar to an unfunded buy-in, retaining asset flexibility (so risk and reward) and spreading payment of longevity risk premium to the third party over the contract's life

At a high level, the mechanism of a longevity swap is relatively simple…although multiple parties are involved

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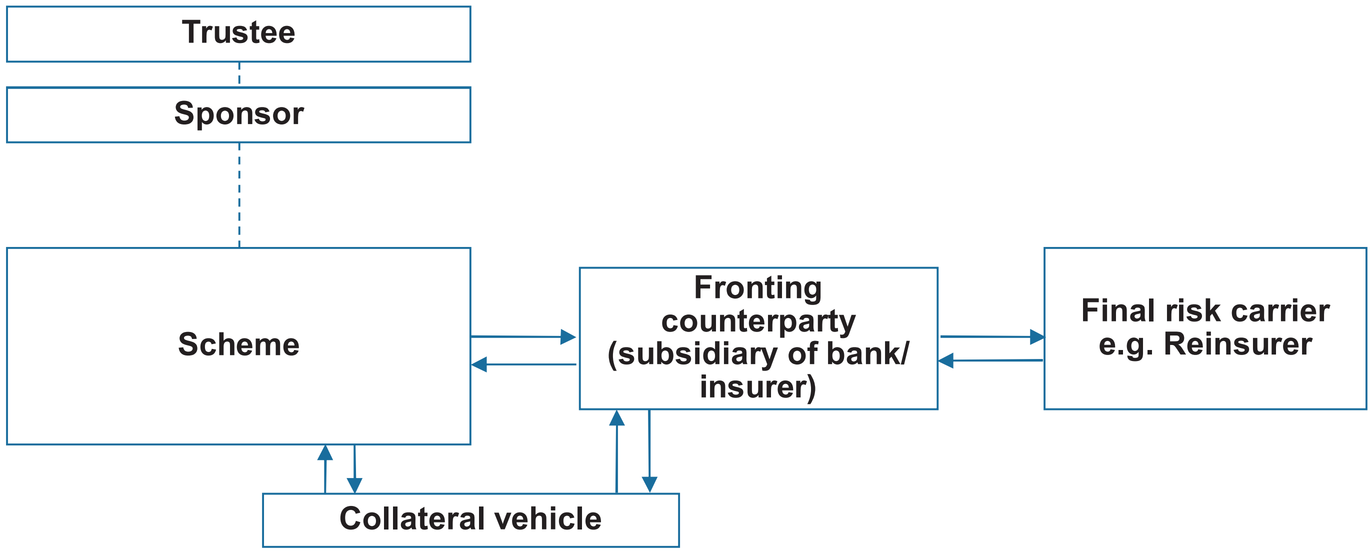

Need to consider:

- Members covered
- Named life vs. index
- Insurance vs. derivative
- Collateral structure etc

- Pension scheme administrator typically provides a monthly file of pensioner status movements (deaths, contingent spouse pensions becomes due, suspensions, reinstatements)

A number of longevity swaps have already transacted and the market continues to develop

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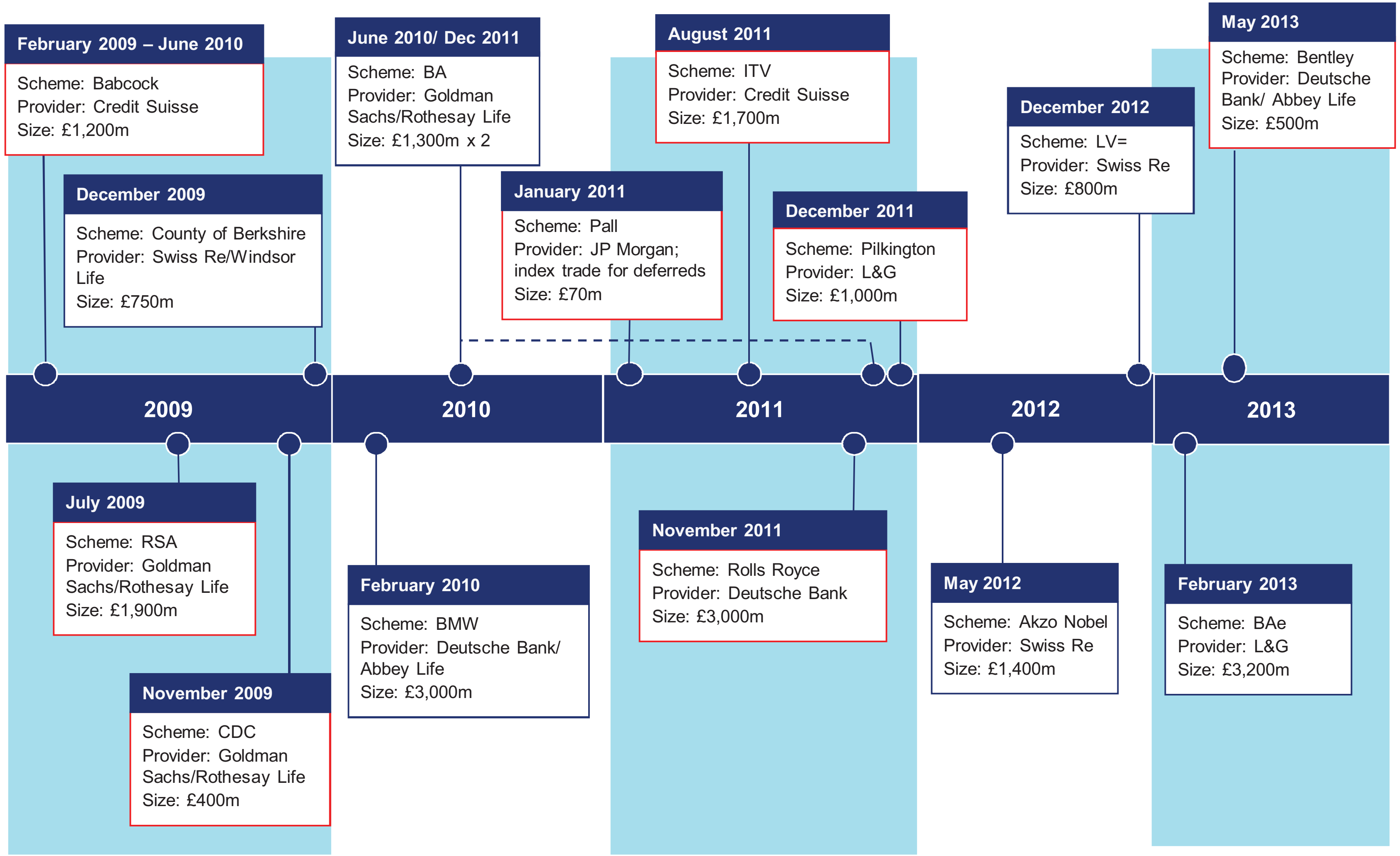

- Red boxes denote involvement of Mercer consultant

INFRASTRUCTURE

Asset class overview
Defining economic characteristics

High barriers to entry

Economies of scale

Inelastic demand

Long life duration

Inflation linkage

Asset class overview
Comparison to other asset classes

Property:
Tangible underlying assets / concession
Importance of capital structure
Long duration
Interest rate sensitive

Fixed Income:
Current cash yield
Inflation linkage (for ILGs)
Visibility and predictability

“INFRASTRUCTURE”

Private Equity:
Illiquid equity
Due diligence requirement
Active management

Infrastructure:
Political and regulatory risk
Large-scale investments
Unique market positioning
Equity & Debt investment channels

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Current investment case
Market backdrop

Demand side

- Ongoing inflation uncertainty & concerns
- Overbid traditional markets for inflation
- High uncertainty around traditional asset pricing

Need to consider alternative investment options

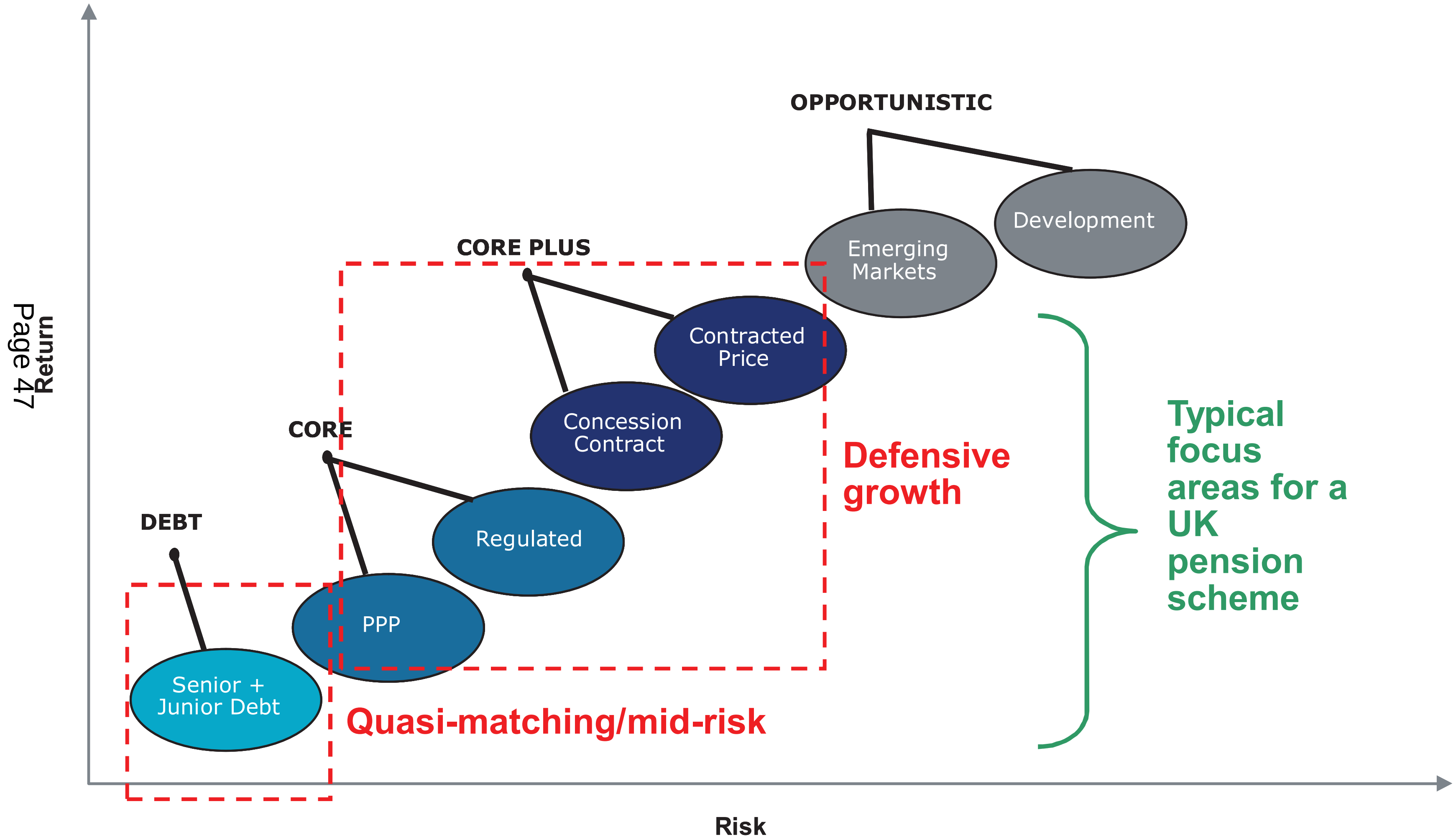
Supply side

- Systemic factors driving supply of new opportunities
- Asset gearing levels coming down
- Strong focus on availability style low risk assets

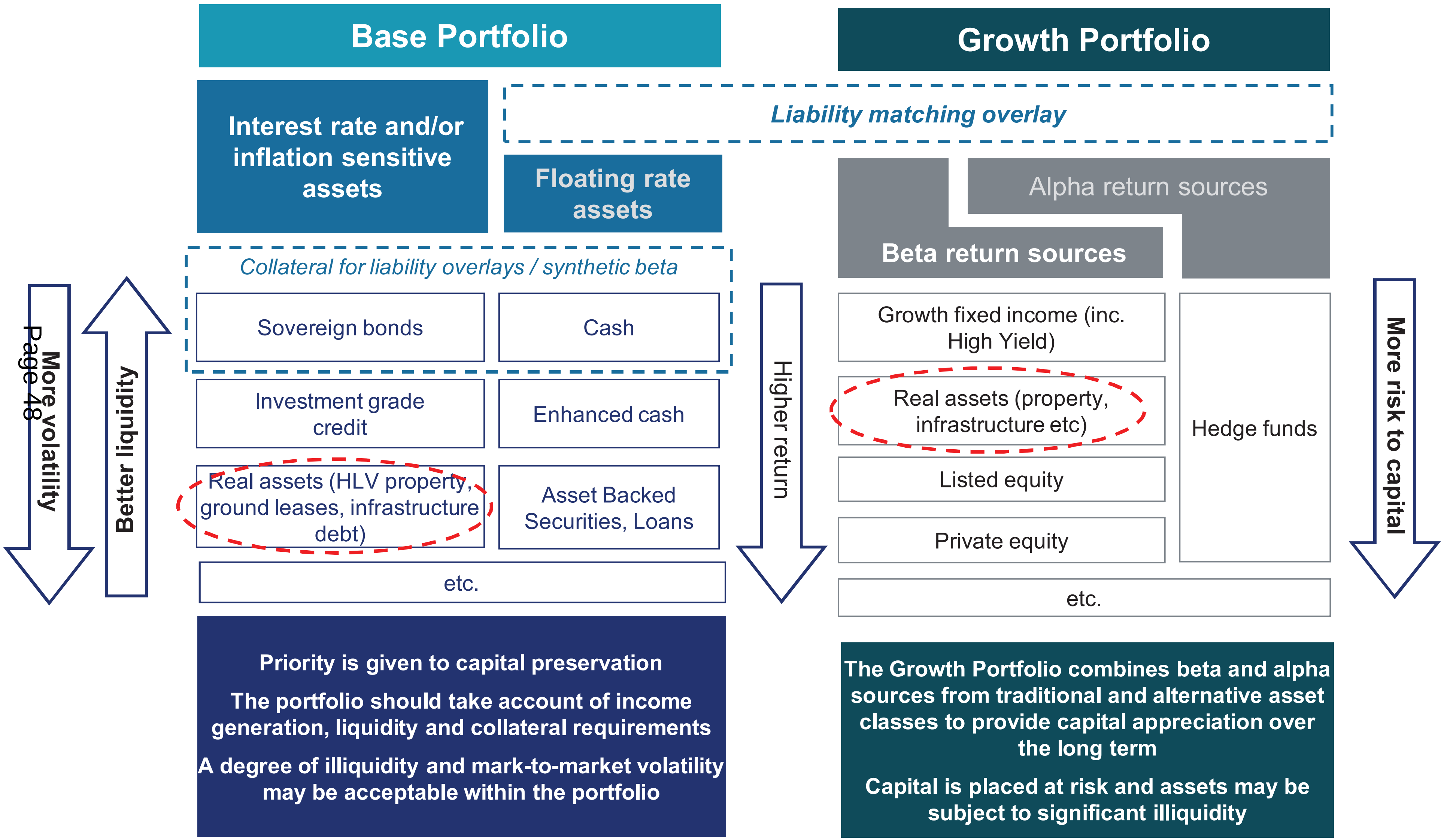
Solid supply of assets

Attractive investment environment on a risk-adjusted basis

Positioning the asset class
A range of risk profiles



Positioning of the asset class
… and differing portfolio roles



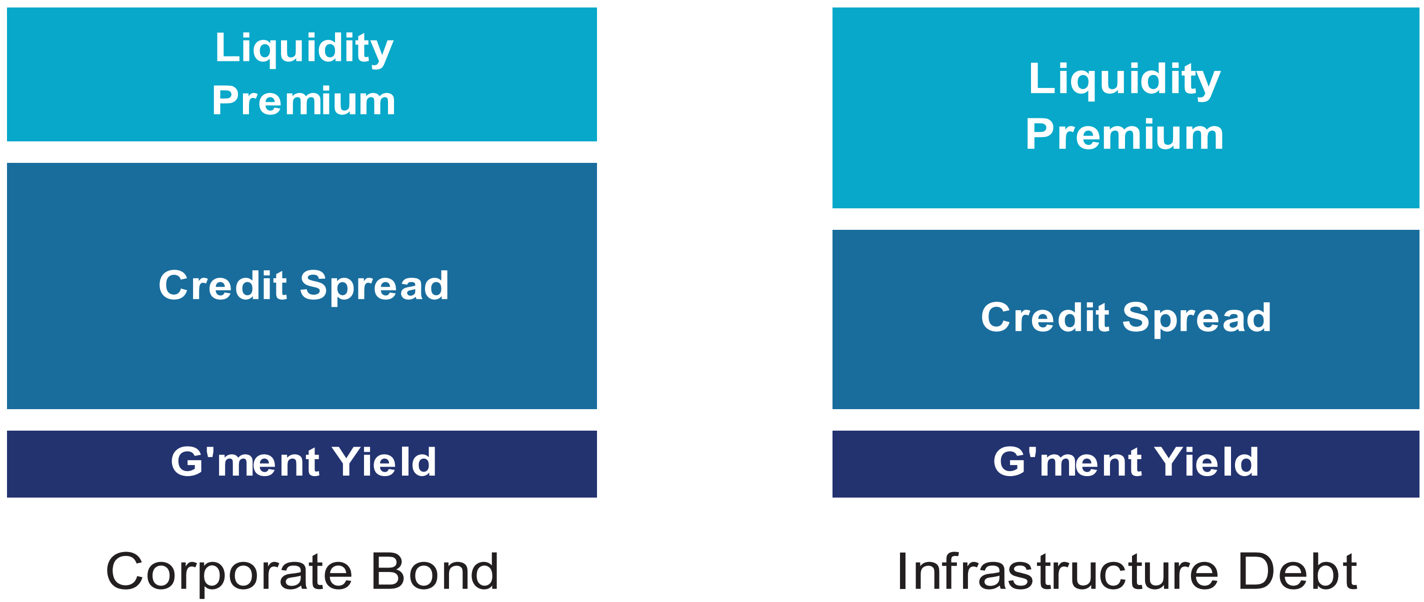
Infrastructure debt
What is it?

- Can take two main forms, **public** (e.g. Network Rail bonds) but more commonly, **private**
- Privately placed loans (often unlisted and unrated) are issued by infrastructure businesses to finance capital expenditure, acquisitions, and ongoing asset ownership
- Pricing and wider terms are tailored to each transaction through a flexible deal structure
- Stable cash flows and high operating margins from infrastructure support relatively high debt levels
  - But also mean risk levels are lower than other sectors of private debt
  - With a commensurate reduction in expected returns (compared to other private debt)

Infrastructure debt
Characteristics

- Compared to debt from other sectors, infrastructure debt trades off **credit risk** for **liquidity risk**
- **Spreads at attractive levels** compared to historical norms

indicative return breakdown



Comparing infrastructure debt to equity
Key features

- Characteristics of infrastructure lead to predictable business plans; senior lender protections further reduce the investment risk profile
  – terms typically allow for significant recovery upon default
- Subordinated debt sits between equity and senior debt on the risk spectrum
  – payments ahead of equity distributions
  – unsecured or 2nd ranking claim on asset

	Senior debt	Subordinated debt	Equity
% of capital structure	■ between 40% and 90%	■ up to 25%	■ between 10% and 60%
Ranking	■ senior to all other stakeholders	■ subordinated to senior debt ■ senior to equity	■ subordinated to all creditors
Term	■ amortisation profile generally matches expected life of asset (with some buffer) ■ may have intermediate maturity	■ maturity after Senior Debt ■ average life longer than Senior Debt	■ perpetual
Security	■ 1st ranking charge over available assets ■ Typically does not include "hard" assets, but provides lenders control/step-in rights	■ unsecured of 2nd ranking charge	n/a

Infrastructure debt
Market pricing and expected returns

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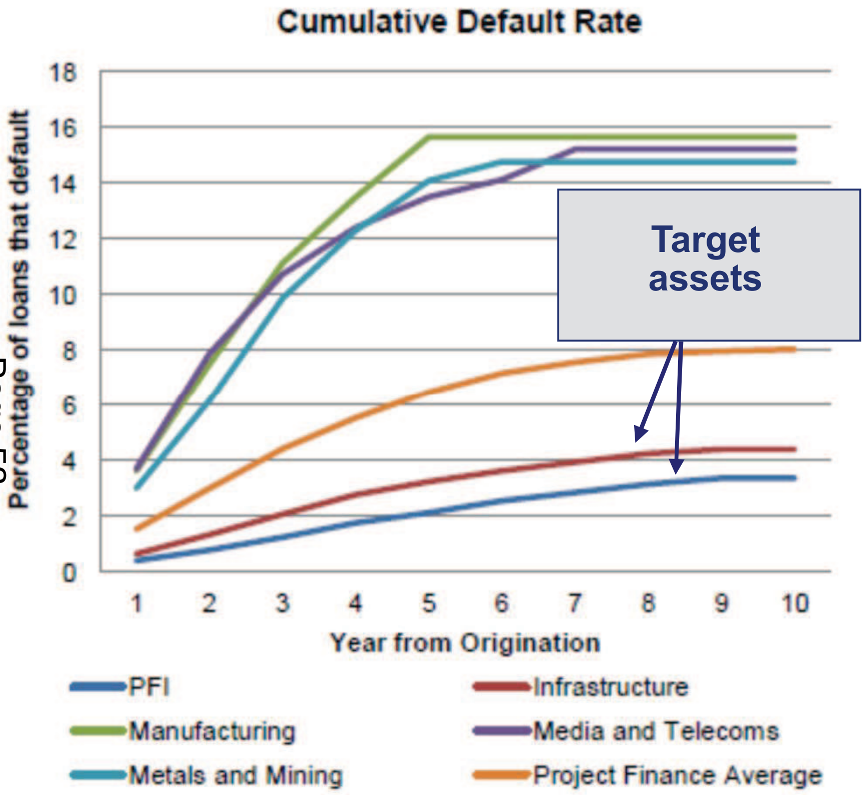
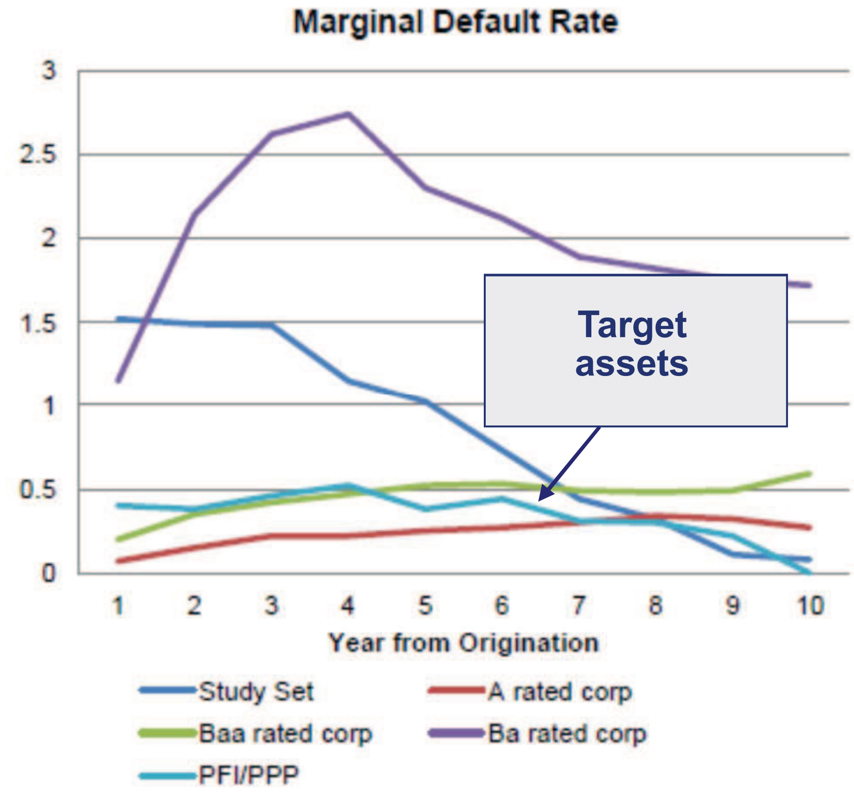
	Senior Debt	Subordinated Debt	Equity
Funding base	■ floating or fixed rate	■ floating or fixed rate	
Form of return	■ regular cash interest	■ primarily regular cash interest ■ potential for accrued interest and capital gains	■ primarily capital gains ■ equity dividends
Return expectations	■ LIBOR + 2.25% - 3.25% for Core	■ typical premium of >= 3% over Senior Debt in same transaction	■ 10-14% IRR for Core/Core Plus ■ Up to 20% IRR for Opportunistic

* Indicative returns for individual investments

These vary according to position in capital structure, sector and risk profile

Infrastructure debt
Default rates compared to other asset classes





Source: Sequoia, Moodys

…and high historical recovery rates

Implementation considerations
General comments

- For all but the largest investors, implementation will need to be via third party managed funds or separate accounts

- Existing universe of infrastructure senior debt managers, with an increasing array of senior managers entering the market in response to the emerging opportunity

- Preference for separate account for those investors that have the scale to access this format (typically $100m allocations and upwards)
  - greater tailoring potential
  - greater control over mandate management and hold period

- Increasing array of pooled closed end funds emerging for smaller investors (further details below)

- Portfolio planning and objective setting as a necessary first step

Implementation considerations
Implementation routes compared

	Potential Advantages	Potential Disadvantages	Indicative Size Threshold
Direct investment	• Direct influence on investment selection and portfolio composition • Portfolio tailoring • Fee saving	• Need for in-house or outsourced credit expertise • Requires large sums of capital • Portfolio concentration especially in the early years	£150m+
Mandate investment	• Delegated control of investments • Investment selection and management undertaken by a dedicated manager • Access to manager proprietary deal flow • Control of portfolio design and composition leading to portfolio tailoring potential	• Potential for agency risks in the absence of dedicated portfolio manager support/resourcing • Potential for agency risks • Higher fees than direct investing • Portfolio concentration especially in the early years	£75m+
Unlisted funds	• Investment selection and management undertaken by a dedicated manager • Access to proprietary manager deal flow • Can accommodate smaller investments • Portfolio monitoring and reporting access	• Higher fees • Acquisition risk • Potential for strategy drift • Potential lack of long term track record • Manager reliance gives rise to agency risk	£75m

Implementation considerations
Indicative fund terms

	Manager A	Manager B
Type of strategy	Infrastructure Senior Debt, UK Only Pooled fund	Infrastructure Senior Debt, UK Only Pooled fund
Return targets	LIBOR + 2.85% (gross)	LIBOR + 2.50-2.75% (net)
Management fees	No fees on committed but undrawn capital 0.25% p.a. on drawn capital	0.45% p.a. on committed capital during Investment Period 0.25% p.a. on Invested Capital thereafter
Drawdown period	12 month maximum	5 year maximum
Market capacity	$15 billion+	$30 billion+
Typical lock up period	10 years	10 years with rolling 5 year extension options thereafter

APPENDICES

Affordable de-risking
Banking improvements in the funding to help de-risk

1. Trigger breached 09/10/12
- Increasing real yields and growth markets;
- Strategic Growth Allocation reduced to 68% from 70%

2. Trigger breached 17/10/12
- Primarily result of increase in real yields;
- Strategic Growth Allocation reduced from 68% to 65%

3. Funding level spike 03/01/13
- Primarily result of one day increase in real yields;
- Trigger not quite breached, growth allocation unchanged

4. Trigger breached 13/02/13
- Primarily driven by increase in real yields. Growth markets also performed strongly;
- Strategic Growth Allocation reduced from 65% to 62%

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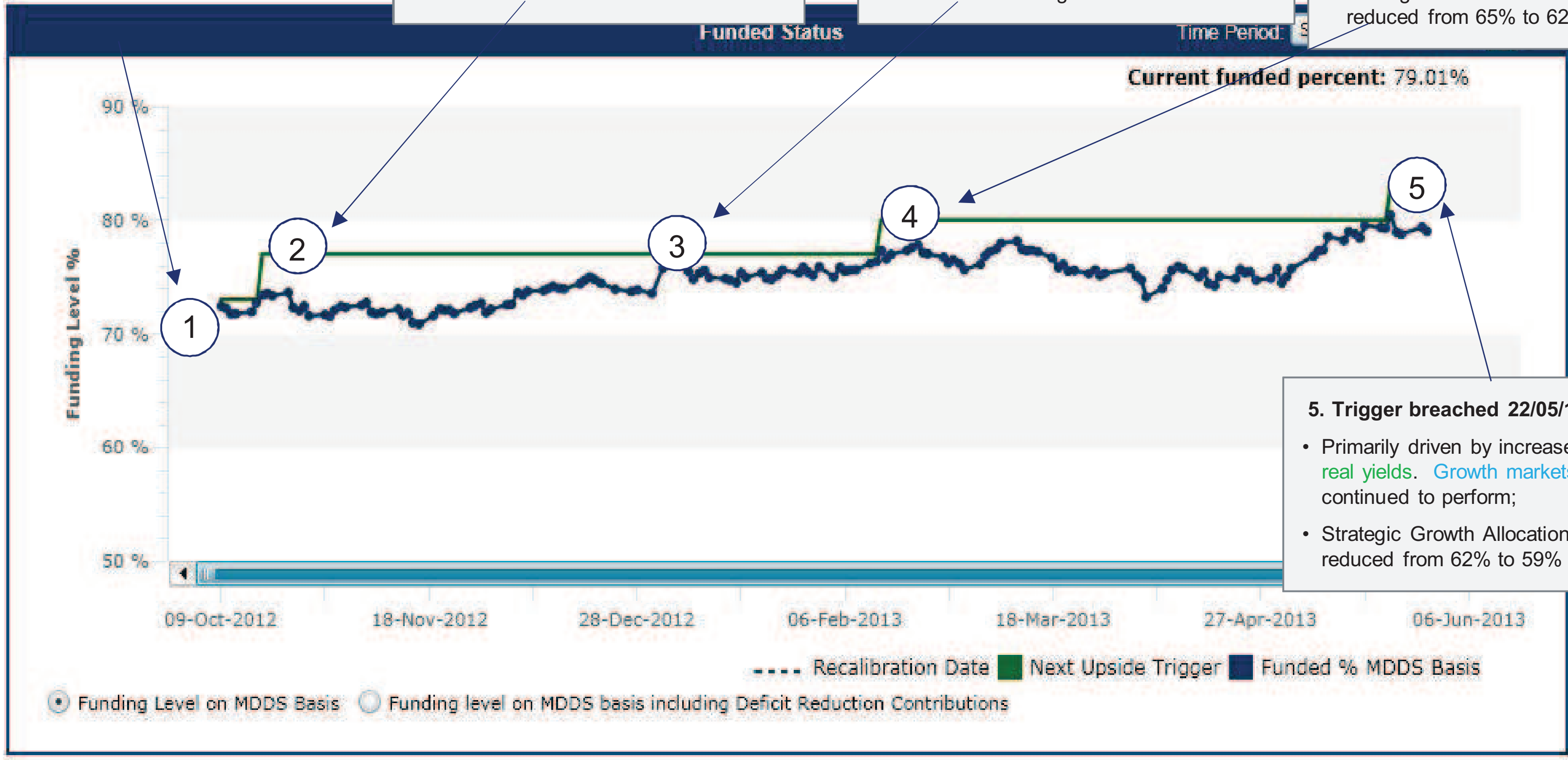
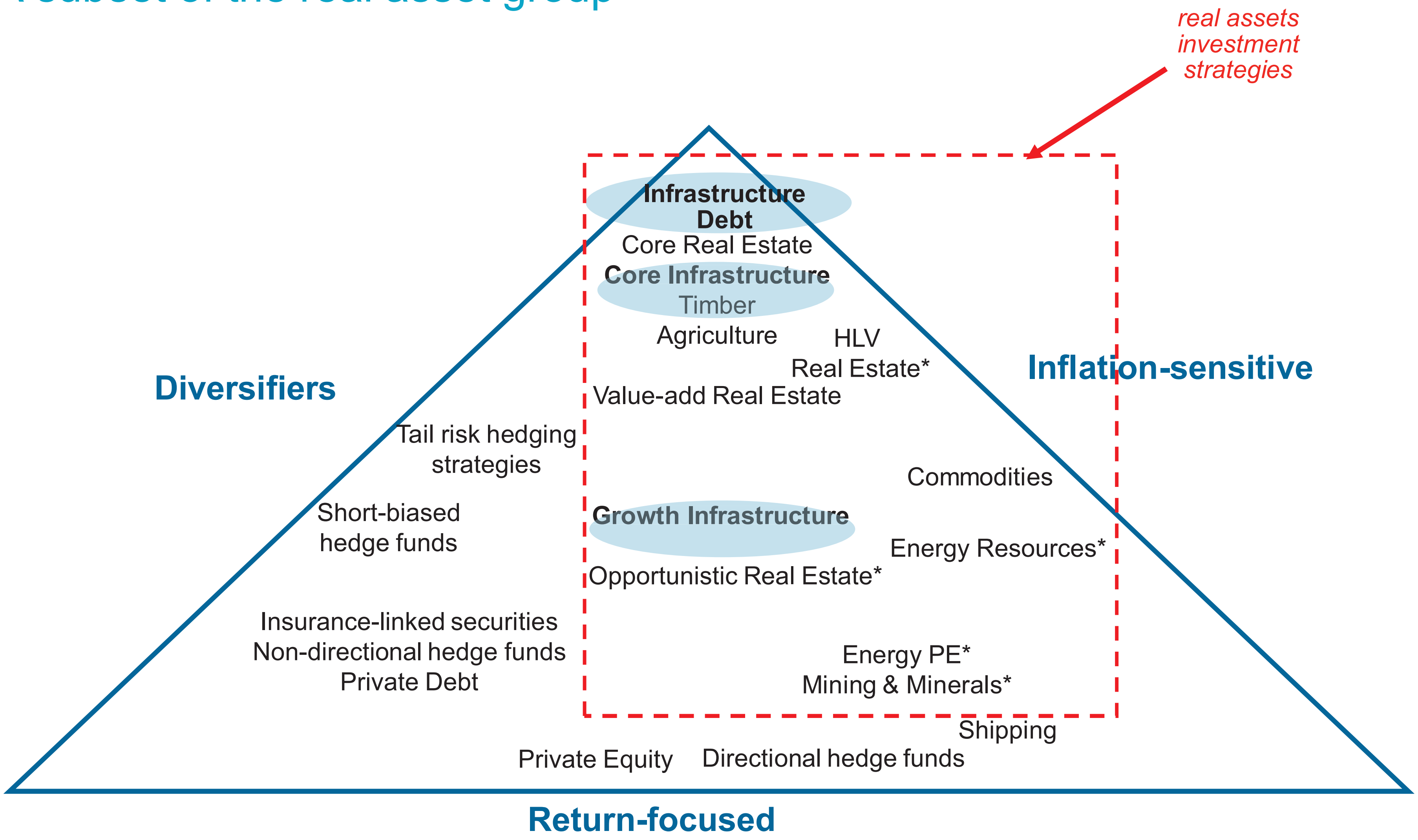


5. Trigger breached 22/05/13
- Primarily driven by increase in real yields. Growth markets continued to perform;
- Strategic Growth Allocation reduced from 62% to 59%

- For this client, the funding level has increased from 72% at inception to 79% at end of period;
- De-risked through numerous triggers, Growth portfolio allocation reduced from 70% to 59%;

The Fund could look to dynamically de-risk to move to the lowest risk investment strategy that would still support the funding assumptions

Positioning the asset class
A subset of the real asset group



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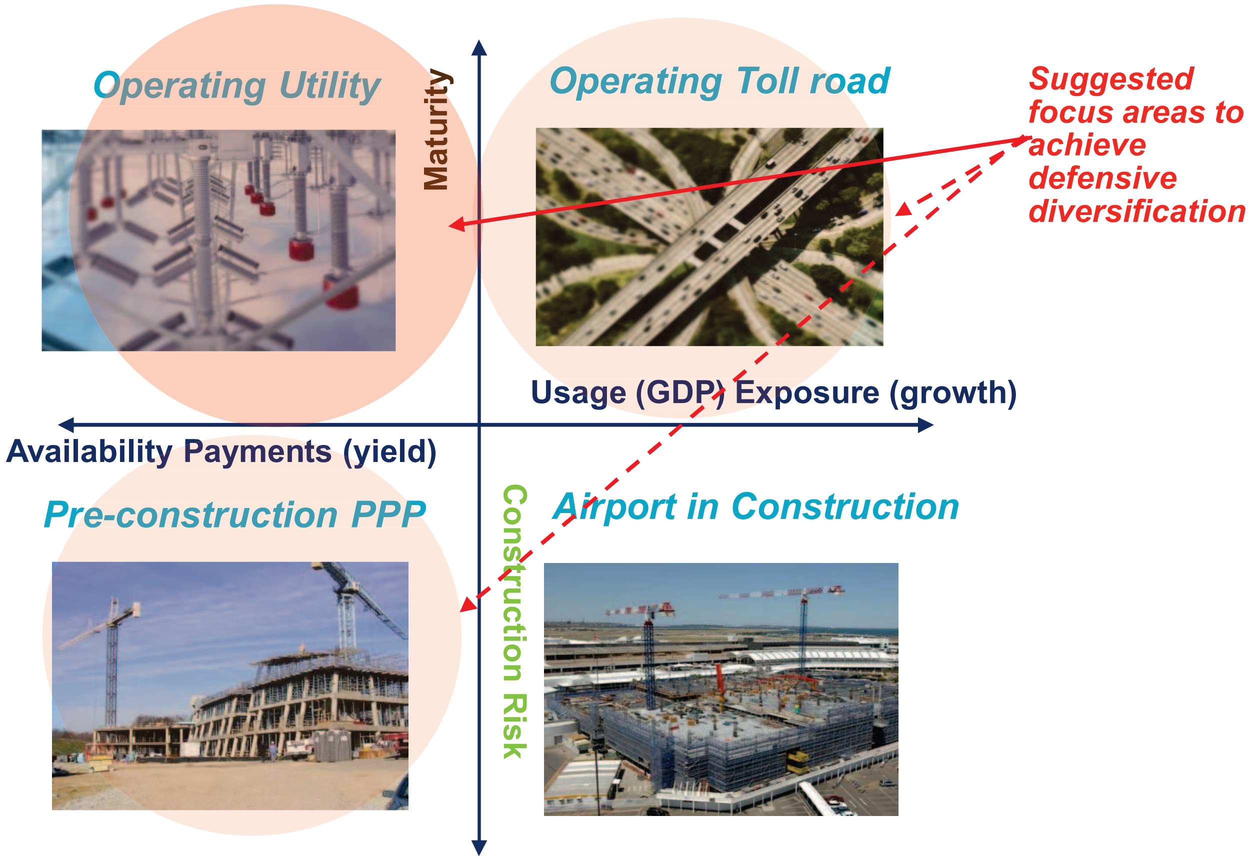
Current market opportunity
The infrastructure debt funding gap

- Demand for infrastructure is significant
  - $500-$600 billion estimated annual need among OECD members
  - $40 trillion or 2.4% of world GDP to be invested in infrastructure to 2030
- Historically banks have been main provider of infrastructure debt (providing up to 90% of debt); post financial crisis, numerous factors are limiting bank participation
  - Basel III and balance sheet repair
  - lower risk appetite
  - “take-and-hold” model
  - refinancing wall
- Other sources of liquidity that were popular prior to the financial crisis (bonds wrapped by mono-lines, CLOs, hedge funds) are no longer in the market
- …leaving a key role for other institutional investors

Asset class overview
A range of risk profiles



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Minute Item 31/13

By virtue of paragraph(s) 3 of Part 1 of Schedule 12A
of the Local Government Act 1972.

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Variance vs Allocation £m (31/08/2013)				
Asset Type		**Total**	**Passive (L&G)**	**Active**
Equity		84.3	24.8	59.5
	UK	-24.8	-44.6	19.8
	O'Seas	109.0	69.4	39.6
Property		-39.6		
Alternatives		12.4		
Bonds		-57.0	-49.6	-7.4
	Gilts	-9.9	-22.3	12.4
	Index Linked	-5.0	-9.9	5.0
	Corporate	-39.6	-17.3	-22.3
	Unconstrained	-2.5		-2.5

Standard Life Exposure (31/08/2013)			
Asset Type		**Value £m**	**Committment £m**
Investment Funds		**142.4**	**50.0**
	GARS -Diversified Growth Fund	142.4	
	(Potential) GARS -Diversified Growth Fund		50.0
Private Equity Funds		**19.2**	**37.6**
	Standard Life ESP II	4.5	0.7
	Standard Life ESP 2006	9.8	2.1
	Standard Life ESP 2008	4.5	8.2
	Standard Life ESF	0.5	14.2
	(Potential) Standard Life Secondary Opportunities		12.4
		161.6	**87.6**
Grand Total			**249.2**
% of Overall Fund			**9.7%**

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