Liability Driven Investment: Creating Liabilities

Dr Con Keating, Chairman, The Bond Commission of the European Federation of Financial Analysts Societies

Thursday, 21 July 2022

A Word From Today's Chairman

Professor Michael Mainelli

Executive Chairman

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Today’s Agenda

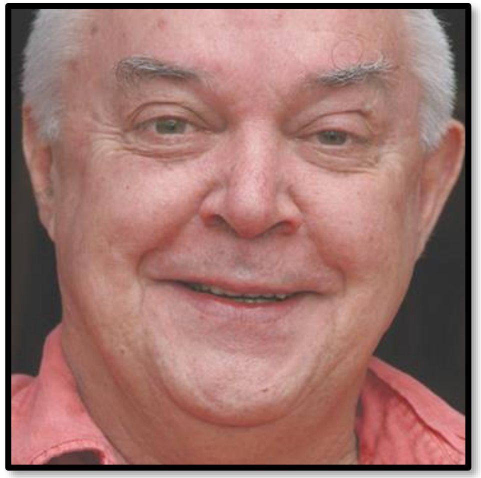
- 10:00 – 10:05 Chairman’s Introduction
- 10:05 – 10:25 Keynote Presentation – Dr Con Keating
- 10:25 – 10:45 Question & Answer

Today’s Speaker

Dr Con Keating

Chairman

The Bond Commission of the European Federation of Financial Analysts Societies



LDI
Some Concerns

Never in the field of accounting standards, actuarial theory and Pensions Regulator practice has an unelected and unaccountable few destroyed so much value for so many pension scheme members

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The Law - Borrowing

- **Borrowing – IORP II, Art 19**
- The home Member State **shall prohibit IORPs from borrowing** or acting as a guarantor on behalf of third parties. However, Member States **may** authorise IORPs to **carry out some** borrowing **only for liquidity purposes and on a temporary basis.**
- **The Occupational Pension Schemes (Investment) Regulations 2005 (OPS, 2005)**
- Borrowing and guarantees by trustees
- **5.**—(1) Except as provided in paragraph (2), **the trustees** of a trust scheme, and a fund manager to whom any discretion has been delegated under section 34 of the 1995 Act**, must not borrow money** or act as a guarantor in respect of the obligations of another person where the **borrowing is liable to be repaid**, or liability under a guarantee is liable to be satisfied, **out of the assets of the scheme.**
- (2) Paragraph (1) does not preclude borrowing made only for the purpose of providing liquidity for the scheme and on a temporary basis.

The Law - Derivatives

- **IORP II Art 19**
- (e) investment in derivative instruments shall be possible insofar as such instruments contribute to a reduction in **investment** risks or facilitate efficient portfolio management.

- **Occupational Pension Schemes (Investment) Regulations (2005)**
- (8) Investment in derivative instruments may be made only in so far as they—
- (a) contribute to a reduction of risks; or
- (b) facilitate efficient portfolio management (including the reduction of cost or the generation of additional capital or income with an acceptable level of risk),
- and any such investment must be made and managed so as to avoid excessive risk exposure to a single counterparty and to other derivative operations.

Borrowing

- **Borrowing from the bank or some third party**
- This appears to be limited to a small number of overdraft facilities (Permitted)
- **The issuance of notes or bonds**
- This has not happened, though some sponsors have issued bonds to fund deficits
- **Repo**
- Economically this is secured borrowing. It effectively subordinates the interests of scheme members
- It has been widely utilised in the financing of long positions in conventional and index linked gilts-edged securities.
- The repurchase leg clearly satisfies the statute implied test of borrowing - of repayment from the scheme’s assets.
- Schemes have been borrowing for long terms and in amounts far in excess of their liquidity needs – USS – 4-5 times annual pension payments – and proposing to raise this to around 10-12 times.
- ICMA - the principal use of repo is in fact the secured borrowing and lending of cash.
- Repo financing has been used by Federal Reserve banks to provide credit to member banks since 1917

Derivatives

- Reverse repo is borrowing of the security
- Short-selling is also borrowing of the security
- Derivatives such as interest rate swaps involve no exchange of cash at inception, if fairly priced.
- They will however be subject to collateral maintenance margins reflecting the profit or loss since inception.
- The cash margin received is an advance on an expected future profit
- If it (or some part of it) is spent on the purchase of, say, other securities, this is borrowing.
- If it is used to meet margin collateral calls on other derivatives contracts (eg ‘netting’), it is borrowing.
- This is why derivatives contracts usually contain rehypothecation rights

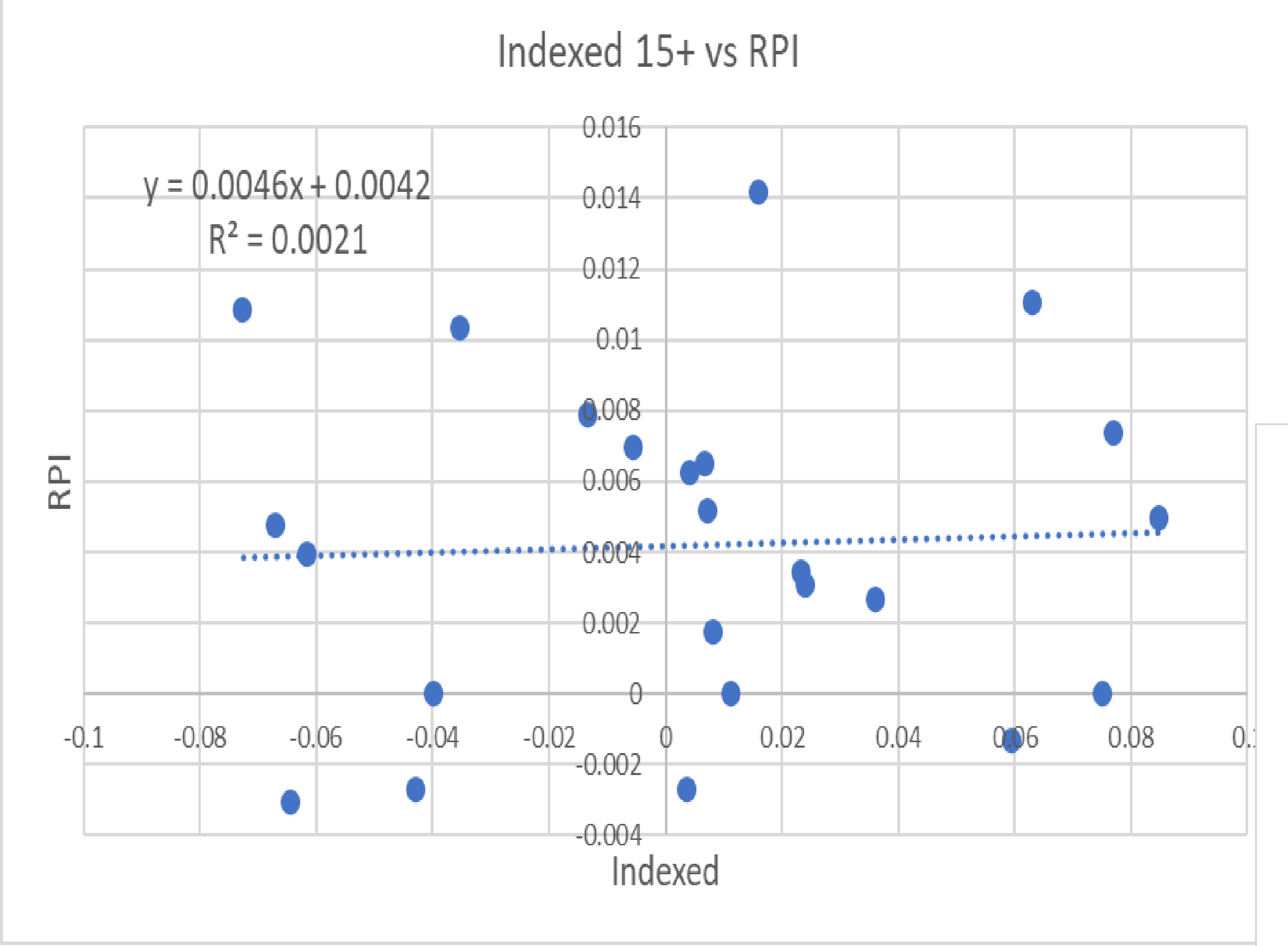
Are Repos Derivatives ?

- No mainstream finance texts make this claim
- We found just one paper supporting this concept
- (Is the repo a derivative? A.P.Faure, Rhodes University, June 2011)
- EMIR: "A derivative is a financial contract linked to the fluctuation in the price of an underlying asset or a basket of assets."
- However, we would note that **repos are not derivatives *of* the underlying securities**
- **But rather operations *on* those securities**, (their sale and purchase)
- **For the purpose of borrowing money**.
- But, in the Investment Risk Appendix to the (PPF) Board's Determination under Section 175(5) of the Act:
- 30. Gilt derivatives include gilt repos, …

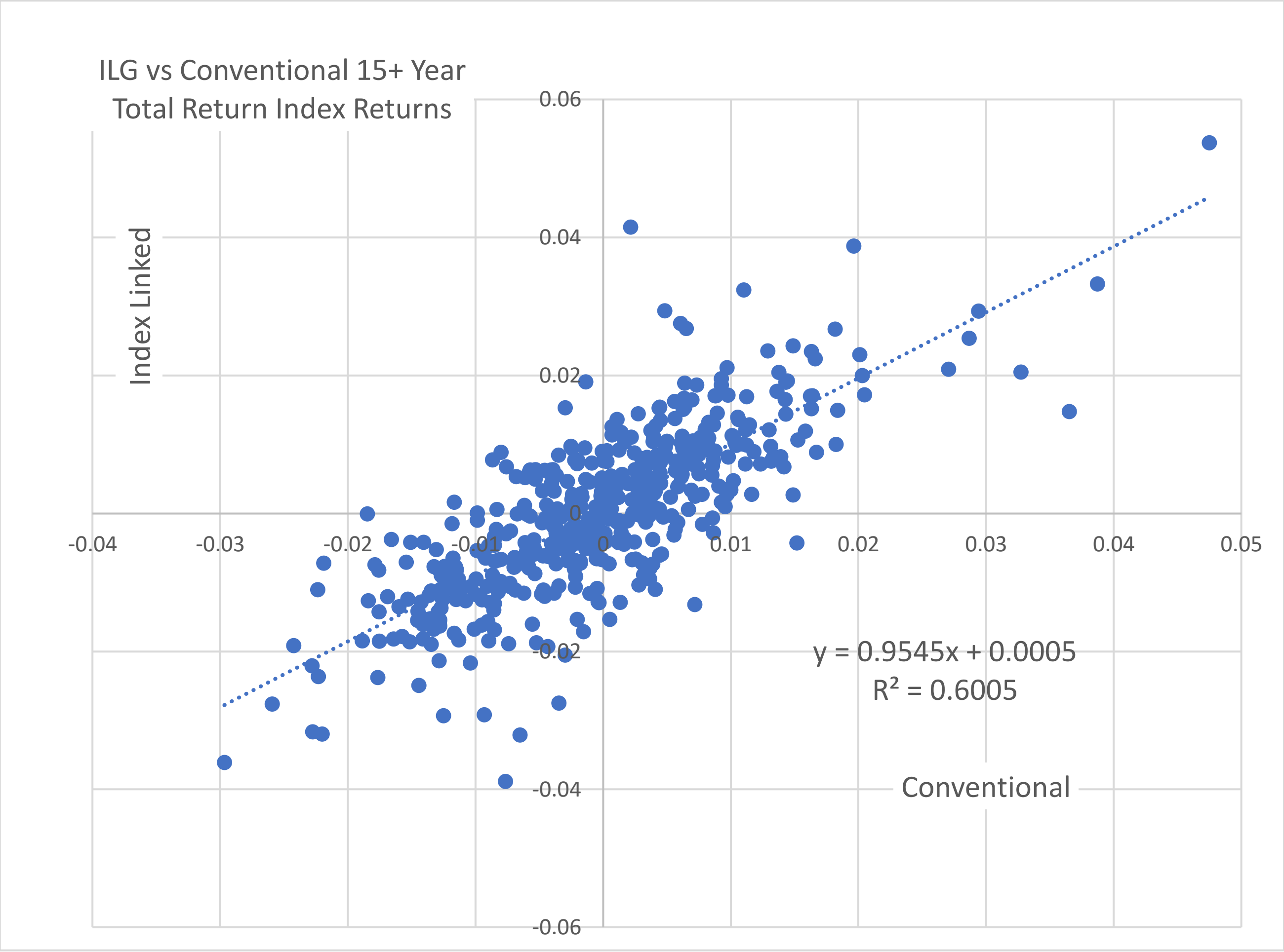
Hedging the discount rate

- Interest rates (Discount rates) do not figure in the determination of the pensions ultimately payable by a scheme.
- These rates merely determine a present value for those projected benefits
- The natural rate of scheme funding or amortisation is the rate of growth required of the contribution to meet those projected values (CAR). This rate may be modified by the experience of the various factors which determine the amounts of those benefit projections where that varies from the original assumptions.
- There is little or no relation between gilt yields and equity market performance.
- Hedging using conventional gilts actually introduces a dependency on the performance of gilts into the scheme.
- Schemes will gain when rates decline and lose when they rise.
- Hedging the discount rate by buying gilts does nothing to improve the likelihood of paying pensions fully when due.
- And borrowing to finance the purchase of gilts compounds the sin.

ILGs

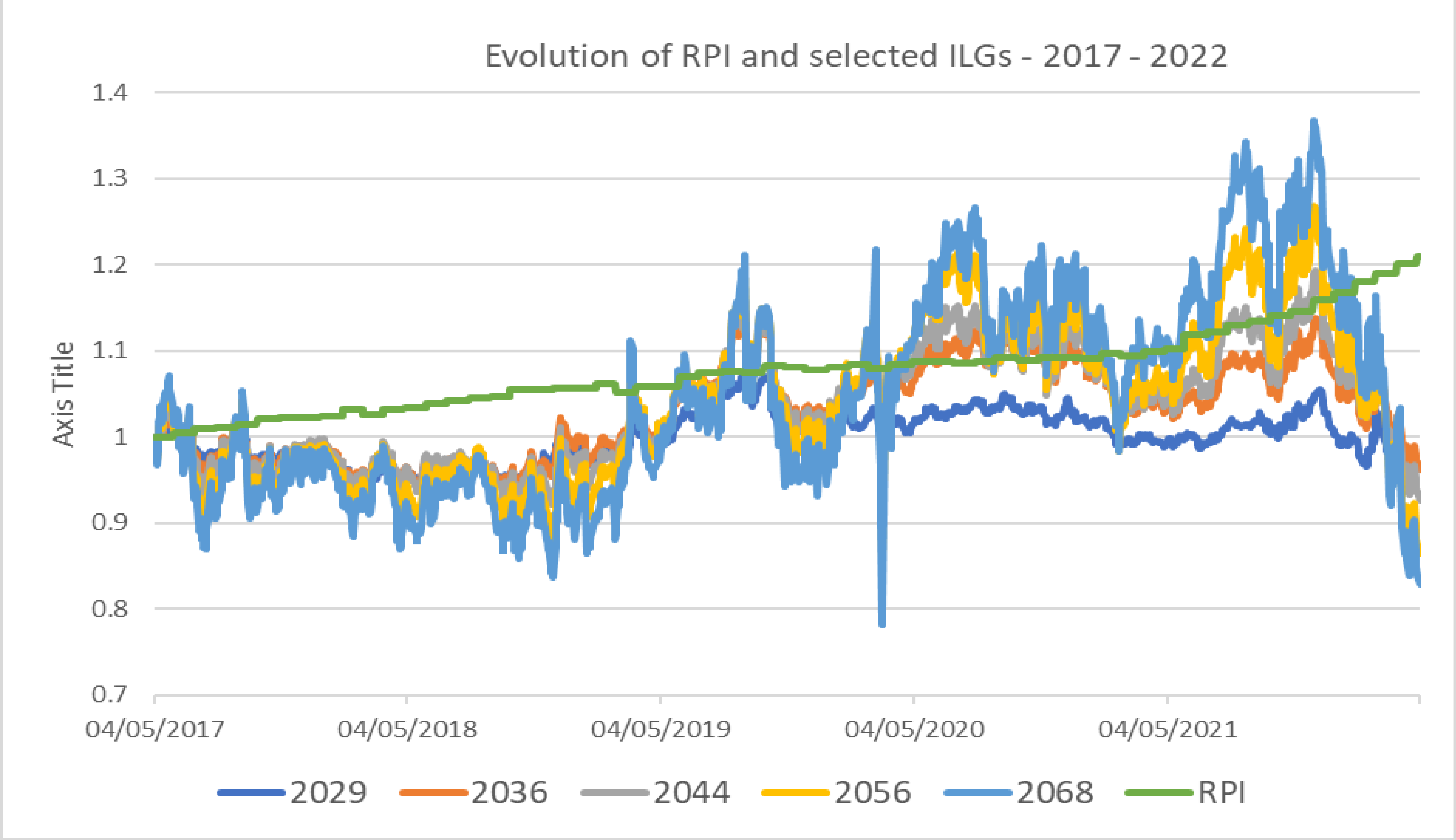


Indexed 15+ vs RPI
y = 0.0046x + 0.0042
R² = 0.0021
RPI
Indexed
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
-0.002
-0.004
-0.1
-0.08
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
0.08



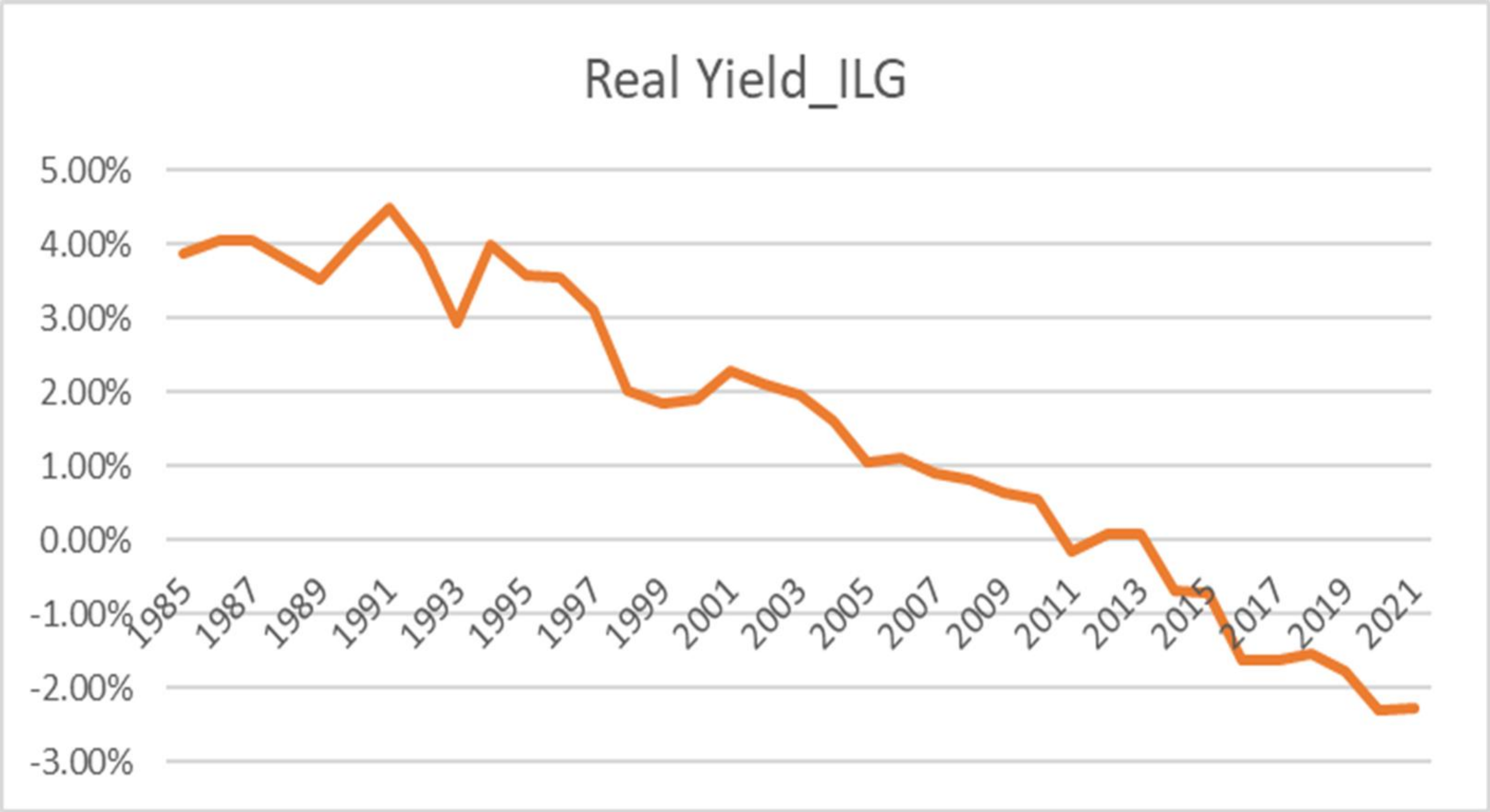
ILG vs Conventional 15+ Year
Total Return Index Returns
Index Linked
Conventional
y = 0.9545x + 0.0005
R² = 0.6005
0.06
0.04
0.02
0
-0.02
-0.04
-0.06
-0.04
-0.03
-0.02
-0.01
0
0.01
0.02
0.03
0.04
0.05

ILGs



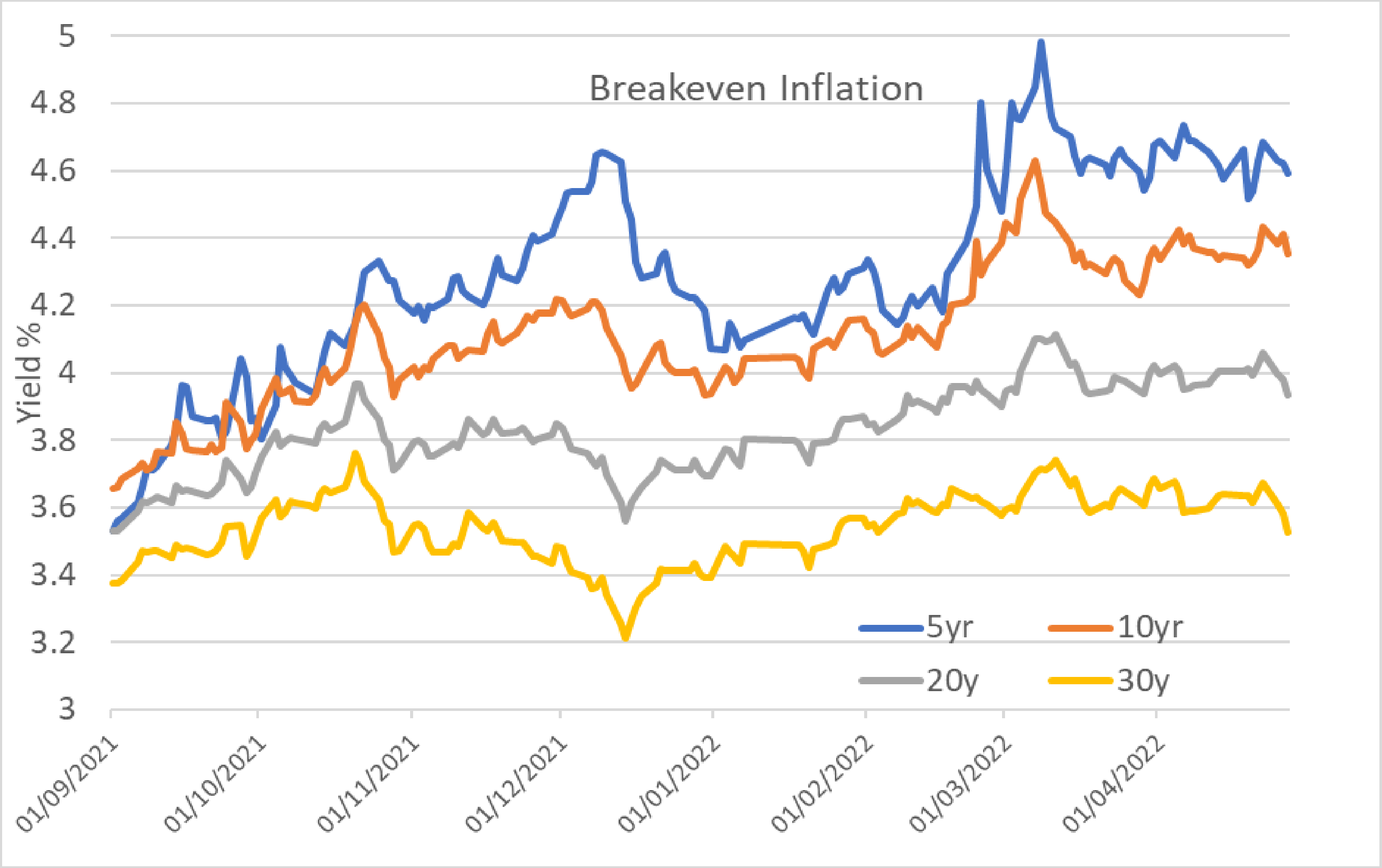
Evolution of RPI and selected ILGs - 2017 - 2022
Axis Title
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
04/05/2017
04/05/2018
04/05/2019
04/05/2020
04/05/2021
2029
2036
2044
2056
2068
RPI

ILGs



Real Yield_ILG
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
-1.00%
-2.00%
-3.00%
1985
1987
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021

Breakeven Yields



- A breakeven yield is the difference between the yield on an ILG and its equivalent duration conventional gilt.
- It is the rate of inflation required to deliver the equivalent return to that available on the conventional
- The yield on the conventional may be higher or lower than the rate of inflation applicable to scheme liabilities

The legal risks of LDI

- Schemes are borrowing
- Schemes are allocating assets to hedge elements which do not affect pension scheme members
- Schemes are buying assets which increase volatility with no commensurate expectation of gain (ILG)
- Schemes are buying assets which increase the cost of pension provision.
- **Trustees should be aware of the risks**
- **And so too should be LDI managers**
- **And TPR must explain why it is not enforcing the law.**

What is wrong with management to the triennial valuation?

- Consider a scheme which has total projected liabilities of, say, £120 million.
- The present value of these liabilities is £75 million (technical provisions)
- The scheme has assets of £75 million – the scheme is in balance
- Now suppose that the discount rate rises, such that the present value of liabilities is now £60 million and assets fall (by design) to £60 million. All else unchanged.
- The scheme is again in balance
- But the level of funding relative to the true liabilities has fallen from 62.5% to 50%.
- The scheme is much less likely to be able to meet the ultimate required pension payments.
- And that raises the spectre of action being taken for breach of fiduciary duty

Comments, Questions & Answers

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Thank You For Listening

Forthcoming Events

- Mon, 25 Jul (17:00-18:30) A City Of London Event On Entrepreneurship & Green Finance
- Wed, 27 Jul (11:00-11:45) Porridge Or Freedom Fries – An Essential Guide To Sanctions Compliance
- Thu, 28 Jul (08:30-10:30) Financial Centre Futures Webclave: Future Of Financial Centres & Public/Private Partnership
- Mon, 01 Aug (15:00-15:45) Delivering For Your Customers In Times Of Crisis

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