KEY POINTS

- The authors argue that repos are borrowings for the purpose of the IORP II Directive and that a pension fund with at least 100 members has no power to borrow, other than for temporary liquidity purposes.
- The effect of a rigorous IORP I Directive interpretation (reading the word "investment" back into the Occupational Schemes (Investment) Regulations 2005 and to strike out the lines added), would prohibit the use of derivatives to manage liability sensitivities.
- If the discount rate sensitivities being managed under LDI is for the benefit of the sponsor, then the question of trustee duties must arise.
- The authors would greatly appreciate the views of legal scholars on these issues.

Authors Professor Iain Clacher, Dr Con Keating and Professor Philip Bennett

Are leveraged LDI strategies lawful? A rejoinder and a request

Professor Iain Clacher, Dr Con Keating and Professor Philip Bennett welcome Richard Salter KC's article:[1] 'Are Leveraged LDI Strategies Lawful?' (2023) 2 JIBFL 71, and the invitation to respond. In this article they set out two distinct concerns with leveraged LDI strategies, namely the use of repo and derivatives – and would greatly appreciate the views of legal scholars on these issues.

CLARIFICATION OF SOME TERMINOLOGY

LDI strategy

As the expression "LDI strategy" (LDI) is a portmanteau term for a wide range of asset allocations, we thought that this article should begin with a clarification of the operations involved in these strategies.

- **Liabilities vs discounted present value estimates of liabilities:** To do so, we must also clarify another form of shorthand that we believe often leads to ambiguity and confusion. Within the pensions industry, as well as in regulation and the news and industry press, it has become commonplace to refer to the discounted present values of actual pension liabilities as the "liabilities" of the scheme. This is incorrect as what are commonly called liabilities here are merely the present value estimates of the ultimate liabilities of the scheme (referred to as technical provisions in Pt 3 of the Pensions Act 2004).
- **What is the correct discount rate?** A fundamental issue, but not one for this article, is the question of what is the "correct" discount rate in such a setting? However, the current regulatory regime as enforced by the Pensions Regulator, while "offering" flexibility as to the choice of discount rate, in reality is a regime where the discount rate is based on a gilts+ methodology. As such, it intrinsically links the present value of pension liabilities to prevailing gilt yields.
- **Impact of using gilt yields to determine the discount rate:** Gilt yields do indeed tend to be lower than those of equities and other riskier investments, but the use of gilt rates to discount future pension liabilities results in higher present values for liabilities and greater potential funding expense to the scheme sponsor (because the scheme is projected to have a lower investment return on "safe" investments such as gilts and so less likely to meet the liabilities in the future). The sustained declines in gilt yields over the past twenty years resulted in the asset coverage of the projected ultimate liabilities rising from around 40% to slightly over 80% at the end of 2021, making schemes appear much more expensive to finance.
- **The ultimate long-term investor becomes a very short-term investor:** As well as this, the use of gilt yields introduces short-term volatility between the market value of pension scheme assets and the present value of pension liabilities, and so scheme solvency becomes highly variable, with real economic costs for scheme sponsors, who are required to make good any deficits. LDI (Liability Driven Investment) and latterly LLDI (Leveraged Liability Driven Investment) was conceived as a response to this problem.

LIABILITY DRIVEN INVESTMENT: SOME INITIAL MARKET STATISTICS

The pension liabilities are unchanged

We would note first that LDI operates as an asset allocation and does not in any way alter the actual liabilities of a scheme and the overwhelming majority of LDI strategies are *not* concerned with matching the projected cash flows of pension liabilities. The vast majority of schemes employing LDI are attempting to match the sensitivity of the market value of their assets and the present value of liabilities to changes in interest rates. Moreover, the gilt market is neither large enough nor long enough in terms of outstanding maturities to match projected cash flows on the scale and term of projected scheme liabilities.

Modified duration

The most common measure of the sensitivity of an asset or liability to changes in interest rates is known as modified duration. If discount rates are zero, the modified duration of a cash flow sequence is simply its average life. Mathematically, modified duration is the tangent to, or slope of, or rate of change of the price yield curve at a particular yield; it is a local value, and is accurate only for very small changes in that yield.

At year end 2022, the UK Debt Management Office (DMO) reported the duration of the outstanding stock of conventional gilts, with a market value of £1,295bn as 9.52 years, while at the same time, the duration of pension scheme liabilities in total appears to be around 17 years.[2] According to the DMO, the index linked gilt market is longer in duration,

at 17.7 years but small in market value, at £619bn. It is also worth noting that the free float of conventional gilts (that is conventional gilts that can be readily bought and sold in the market) has been greatly reduced by the £800bn of conventional gilts held by the Bank of England that it acquired under the various quantitative easing programmes the Bank has undertaken since 2009.

Defined benefit schemes' gilt holdings in June 2022

The holdings of conventional (cash) gilts by defined benefit pension schemes in June 2022 was reported by the ONS as shown in Table 1 below.

These holdings of cash gilts, for self-managed and segregated accounts, were just 27% of the gross pension scheme assets of £1,692bn. At this time, repos outstanding were reported as £208bn, which was 14.5% of net scheme assets. In addition, schemes also held shares in pooled LDI funds, which were themselves holding gilts and derivatives and using repo. At the beginning of 2022, these funds were estimated to have a value of £200bn and to be leveraged four times.

The growth of the use of interest rate swaps to accelerate the move from ultimate long-term investor to a very short-term investor

The relative shortage of gilts in the market gave rise to the use of interest rate swaps by schemes employing LDI and LLDI strategies. The form of the swaps used by pension funds have the schemes receiving a fixed rate periodically, usually every six months, on a notional amount of gilts held, while paying at the same periodicity the short rate, usually six-month LIBOR/SONIA. In such a situation, schemes are receiving the long rate and paying the short rate. As a result of paying the short rate, this introduces a short-term aspect into scheme management, which absent the introduction of the swap would not have been a consideration.

TABLE 1:

GILTS	MILLIONS (£)
Conventional Gilts	
0 up to 6.99 years maturity	-8,113
7 up to 14.99 years maturity	12,117
14.99 up to 24.99 years maturity	60,643
25 years and over maturity	81,397
Index Linked Gilts	311,273
Total Conventional Gilts	146,044
Total Gilts	457,317

Leverage alone is an incomplete measure of the riskiness of a fund or portfolio; a portfolio of one-year duration assets levered, say, seven times is far less than that of a portfolio levered once consisting of ten-year duration assets. The riskiness of a fund is the product of its leverage *and* its modified duration.

OUR CONCERNS WITH LAWFULNESS

Repos are NOT derivatives

First, we should state that we have never considered repurchase agreements to be derivative securities. Indeed, the only person we have heard make such an assertion is Neil Bull of the Pensions Regulator, in evidence to the Lords' Industry and Regulators Committee (who appeared to be quoting from a part of the Pension Regulator's own guidance[3] (albeit that the definition of derivative in the same guidance does not include repos[4]). That assertion was immediately challenged and dismissed.[5] In this we are in complete agreement with Richard Salter KC.

Pooled LDI funds

Second, we have not suggested that borrowing or leverage, nor the instruments used to achieve this, within pooled LDI funds is unlawful. The reference to the actions of the Central Bank of Ireland and Commission de Surveillance du Secteur Financier, Luxembourg is potentially misleading as they are in fact concerned with the extent of leverage (their riskiness) within pooled LDI funds established in their jurisdiction, in which pension schemes own shares or units, as opposed to the presence of leverage per se. We would, however, question the wisdom of trustees buying such volatile risky assets. We would also question the propriety of the use of these funds by some schemes to circumvent prohibitions on the use of derivatives contained within their trust deeds and rules. But a discussion of these two questions is outside the scope of this article.

We have two distinct concerns with leveraged LDI strategies. The first concern is with repo and the second and distinct concern is with the use of derivatives.

REPURCHASE AGREEMENTS

Preliminary

We note the judgment[6] cited by Richard Salter KC. But the fact that repos are not borrowings (or secured borrowings) for the purpose of UK legislation (the Financial Collateral Arrangements (No 2) Regulations which transpose an EU Directive 2002/47/EC, the Financial Collateral Directive) does not lead to the conclusion that repos are not borrowings for the purposes of Directive (EU) 2016/2341 (the Directive on the activities and supervision of Institutions for Occupational Retirement Provision (IORPs) – the IORP II Directive).

The Financial Collateral Directive 2002/47/EC was, at the risk of some oversimplification, aimed at creating certainty so as to prevent the repercussions of non-registration of security interests applying to repos. In contrast the IORP II Directive (replacing, consolidating and expanding the IORP I Directive – Directive 2003/41/EC) is setting out restrictions on what an IORP can or cannot do.

The IORP II Directive: its purpose in including the restriction on borrowing by IORPs

Our argument that repos are borrowings for the purpose of the IORP II Directive, Art 19(3) starts with the Recitals to that Directive which draw out two aspects of the purpose of the Directive. The first is the need to ensure a high level of protection and security to members' retirement benefits.

The second is that IORPs are seen as very long-term investors with low liquidity risks.

But, if the IORP has the power to borrow in economic terms up to one year money in the repo market to buy long dated gilts investments and arbitrage the interest rate difference, that is:

- a straight speculation on the yield gap between long term and short-term interest rates;
- it converts low liquidity risk of the very long term investor into high liquidity risk; and
- it does not provide a high level of protection to members' retirement benefits.

We have set out below some of the Recitals to the IORP II Directive to make our argument (our emphasis added).

Recital (2) says:

> "(2) In the internal market, institutions for occupational retirement provision (IORPs) should have the possibility to operate in other Member States *while ensuring a high level of protection and security* for members and beneficiaries of occupational pension schemes."

Recital (4) says:

> "(4) In order to facilitate further the mobility of workers between Member States, this Directive aims to ensure good governance, the provision of information to scheme members and the transparency *and safety of occupational retirement provision*."

Recital (6) says:

> "(6) Directive 2003/41/EC represented a first legislative step on the way to an internal market for occupational retirement provision organised on a Union scale. A genuine internal market for occupational retirement provision remains crucial for economic growth and job creation in the Union and for tackling the challenge of an ageing society. That Directive, dating from 2003, has not been substantially amended to introduce a modern risk-based governance system for IORPs. Appropriate regulation and supervision at Union and national level *remain important for the development of safe and secure occupational retirement provision* across all Member States."

Recital (17) says:

> "*The prudential rules laid down in this Directive are intended both to guarantee a high degree of security* for all future pensioners through the imposition of stringent supervisory standards, and to clear the way for the sound, prudent and efficient management of occupational pension schemes."

Recital (29) says:

> "*In order to protect members and beneficiaries*, IORPs should limit their activities to those referred to in this Directive and to those arising therefrom."

Recital (45) says:

> "*IORPs are very long-term investors*. Redemption of the assets held by IORPs cannot, in general, be made for any purpose other than providing retirement benefits. *Furthermore, in order to protect adequately the rights of members and beneficiaries, IORPs should be able to opt for an asset allocation that suits the precise nature and duration of their liabilities*. Therefore, efficient supervision is required as well as an approach to investment rules that allows IORPs sufficient flexibility to decide on the most secure and efficient investment policy *and obliges them to act prudently. Compliance with the prudent person rule* therefore requires an investment policy geared to the membership structure of the individual IORP."

Recital (48) says:

> "This Directive should ensure an appropriate level of investment freedom for IORPs. *As very long-term investors with low liquidity risks*, IORPs are in a position to invest in non-liquid assets such as shares and in other instruments that have a long-term economic profile and are not traded on regulated markets, multilateral trading facilities (MTFs) or organised trading facilities (OTFs) within prudent limits. They can also benefit from the advantages of international diversification. Investments in shares in currencies other than those of the liabilities and in other instruments that have a long-term economic profile and are not traded on regulated markets, MTFs or OTFs should therefore not be restricted, in line with the prudent person rule so as to protect the interest of members and beneficiaries, except on prudential grounds."

ARTICLE 19(3) AND REG 5

We turn now to Art 19(3):

> "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."

Article 19(3) is transposed by the Occupational Pension Schemes (Investment) Regulations 2005, reg 5 (our emphasis added to draw out the addition of the word "money"):

> "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 s 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."

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Note: This does not apply to schemes with fewer than 100 members (Investment reg 7 as permitted by IORP II Art 5).

The key question then becomes what was the purpose of the borrowing restriction in the IORP II Directive? If the correct answer is to protect the pension fund assets backing the pension rights of the members of the pension fund from speculation using repos to finance that speculation, then a transaction, generally recognised as economic borrowing, that amounts to economic borrowing in the pension fund (as distinct from owning shares or units in an Irish or Luxembourg leveraged LDI fund), is borrowing for the purpose of the IORP I Directive, now consolidated and replaced by Art 19(3) of the IORP II Directive.

If that is correct, then a pension fund with at least 100 members[7] has no power to borrow, other than for temporary liquidity purposes, and this also extends to its investment manager if there were to be a segregated leveraged LDI fund strategy in operation, but a scheme could still invest in a pooled leveraged LDI fund.

And, that is how, it appears to us, that an English court would be required to interpret "borrow" and "borrowings" in reg 5. The approach required to be adopted by an English court is expanded on below.

APPROACH TO INTERPRETING UK DOMESTIC LEGISLATION TRANSPOSING (RETAINED) EU LAW

Pfeiffer

This is what the ECJ said in *Pfeiffer*[8] (our emphasis):

> "113.Thus, *when it applies domestic law, and in particular legislative provisions specifically adopted for the purpose of implementing the requirements of a directive, the national court is bound to interpret national law, so far as possible, in the light of the wording and the purpose of the directive concerned in order to achieve the result sought by the directive* and consequently comply with the third paragraph of Article 249 EC (see to that effect, inter alia, the judgments cited above in Von Colson and Kamann, paragraph 26; Marleasing, paragraph 8, and Faccini Dori, paragraph 26; see also Case C-63/97 BMW [1999] ECR I-905, paragraph 22; Joined Cases C-240/98 to C-244/98 *Ocèano Grupo Editorial and Salvat Editores*."

LEHMAN BROTHERS INTERNATIONAL (EUROPE) (IN ADMINISTRATION)[9]

This is what Briggs J said in this *Lehman* case:

> "56. It is, equally, common ground that domestic legislation such as CASS7 which is made for the purpose of fulfilling the requirements of EU law contained in a Directive must be interpreted in the light of the meaning and purpose of the Directive. For that purpose the court may need to adopt a two stage approach, the first of which consists of interpreting the Directive, and the second of which consists of interpreting the domestic legislation in the light of the meaning of the Directive, thus interpreted: see generally *HMRC v. IDT Card Services* [2006] EWCA Civ 29. The first stage may require reference to different language texts of the Directive, to relevant *travaux préparatoires* and to any relevant decisions of the ECJ. In the present case, no ECJ decisions have been relied upon, and subject to one point to which I shall return, the *travaux préparatoires* added little to that which can be gained from the relevant parts of the text of the two Directives, read in their context. Mercifully, no-one suggested that enlightenment would flow from considering non-English texts.
>
> 57. At the second stage, the relevant domestic legislation must be interpreted in accordance with the following principles:
>
> i) it is not constrained by conventional rules of construction;
> ii) it does not require ambiguity in the legislative language;
> iii) it is not an exercise in semantics or linguistics;
> iv) it permits departure from the strict and literal application of the words which the legislature has elected to use;
> v) it permits the implication of words necessary to comply with the Community law obligations; and
> vi) the precise form of the words to be implied does not matter.
>
> See *Vodafone 2 v. HMRC* [2009] EWCA Civ 446 at paragraph 37.
>
> 58. Nonetheless, the breadth of the obligation to construe in accordance with Community law obligations is constrained by the following requirements:
>
> (a) The ascertained meaning should 'go with the grain of the legislation' and be 'compatible with the underlying thrust of the legislation being construed'. It should not be inconsistent with a fundamental or cardinal feature of the legislation since this would cross the boundary between interpretation and amendment.
> (b) The exercise of the interpretative obligation cannot require the court to make decisions for which it is not equipped, or give rise to important practical repercussions which the court is not equipped to evaluate.
>
> See *Vodafone 2* (supra) at paragraph 38."

We would draw out the point that there is broad harmony between the ECJ interpreted EU law requirement (see *Pfeiffer* para 113) and the rules set out by Briggs J in *Lehman* (15 December, 2009) at paras 56-58 both of which are set out above for ease of following our arguments.

IORP II Directive is retained EU law

For completeness we note that the IORP II Directive (and the UK domestic legislation, including the Investment Regulations transposing it) is retained EU law and that

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the approach to interpreting it is retained EU law.[10]

DERIVATIVES

Our second and more substantial concern is with the use of derivatives to hedge liabilities. This revolves around the (mis) transposition of the IORP I Directive. Article 19 (1)(e) states:

> "(e) investment in derivative instruments shall be possible insofar as such instruments contribute to a reduction in *investment* risks or facilitate efficient portfolio management."
> (Emphasis added)

This was transposed in The Occupational Schemes (Investment) Regulations 2005 as:

> "4 (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*)"
> (Emphasis added)

Note the omission of the word investment under point (a) in the UK regulations, and the additional lines added. According to the consultation response on these regulations, it appears that this wording was introduced as several respondents (a mixture of pension funds, investment consultants, and insurance companies) had indicated that a direct transposition of the IORP I Directive would constrain the existing strategies, although LDI and LLDI was not mentioned explicitly.

It is interesting that, at that time, the use of derivatives by pension schemes was extremely small, just 4.3% of assets and 1.8% of liabilities,[11] and much of this would have been for investment purposes, such as the hedging of the foreign exchange exposures of overseas equity held, which is explicitly allowed for in the European Directive, as this is the use of derivatives for investment management purposes.

WHERE DOES THIS LEAVE US ON THE LEGALITY OF LEVERAGED LDI?

In arriving at any judgment, we would expect the court to read the word investment back into the Occupational Schemes (Investment) Regulations 2005, and to strike out the lines added, as they are far more permissive than the Directive (applying the same rules as outlined above for repos).

The effect of the rigorous IORP I Directive interpretation would be to prohibit the use of derivatives to manage liability sensitivities. It would not however restrict the use of other assets for this purpose.
It is worth considering the risk factors which do affect the ultimate benefits of members, which include wage growth, inflation, and longevity. What must be made explicitly clear is that interest rates and equivalently discount rates, do not affect the values or timing of member benefits; they are not a risk factor when it comes to paying member benefits in full, on time, as they fall due.

The question should therefore be asked: for whose benefit are discount rate sensitivities being managed under LDI? If the answer to that, as appears likely, is the sponsor, then the question of trustee duties must arise as well as the regulatory architecture and advice given in such circumstances. It is also worth noting that a sponsor could hedge this interest rate sensitivity within the firm's balance sheet, but we have found none that chose to do so.

We would greatly appreciate the views of legal scholars on these issues. That said, given the amounts at stake, it seems likely that at some point these questions will be litigated before the UK Court of Appeal or UK Supreme Court. ■

1 'Are leveraged LDI strategies lawful?', (2023) 2 JIBFL 71.
2 Authors' calculations. The proposed new Funding Regulations and DB Funding Code propose to use duration as a measure of scheme maturity, requiring funding to be based on a low dependency asset allocation beyond that point.
3 https://www.thepensionsregulator.gov.uk/en/document-library/scheme-management-detailed-guidance/funding-and-investment-detailed-guidance/db-investment/matching-db-assets
4 https://www.thepensionsregulator.gov.uk/en/document-library/scheme-management-detailed-guidance/funding-and-investment-detailed-guidance/db-investment/#dd1694105aa041c0a8320870e5dbbc81
5 See, p 31: https://committees.parliament.uk/oralevidence/11544/pdf/
6 [2012] EWHC 2997 (Ch).
7 See the exception in Investment Regulation 7 for a pension fund with fewer than 100 members.
8 ECJ 5 October 2004 C-397/01.
9 [2009] EWHC 3228 (Ch) 15 December 2009.
10 European Union (Withdrawal) Act 2018 (as amended by the European Union (Withdrawal Agreement) Act 2020) – ss 1B, 2, 4, 6 and 7 (and also the Explanatory Note at the end of the Occupational Pension Schemes (Investment) Regulations 2005).
11 ONS MQ5.

Further Reading:
- Are leveraged LDI strategies lawful? (2023) 2 JIBFL 71.
- Pension scheme's liability driven investment strategies: what went wrong? A lawyer's guide (2022) 11 JIBFL 721.
- LexisPSL: Pensions: Overviews: The LDI crisis – overview.