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Macroprudential measures for GBP Liability Driven Investment funds

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Contents

Non-technical summary

The 2022 gilt (i.e. UK government bond) market crisis highlighted vulnerabilities amongst GBP denominated liability driven investment (LDI) strategies that pose a risk to financial stability. In light of LDI funds' levels of leverage, the scale, but especially the pace, of the increase in yields following the UK government's 'mini budget announcement' forced GBP denominated LDI funds to sell gilts at a moment of market illiquidity, driving yields higher. To stop this self-reinforcing dynamic, the Bank of England undertook a temporary and targeted intervention in the gilt market, which afforded LDI funds more time to reduce their leverage in an orderly manner.

Given the significance of Irish-authorised GBP LDI funds in the GBP LDI sector, in November 2022, the Central Bank of Ireland (hereafter 'the Central Bank') outlined supervisory expectations for GBP LDI funds to maintain an improved level of resilience, via an industry letter. This letter was introduced in coordination with the Commission de Surveillance du Secteur Financier (CSSF), Luxembourg's National Competent Authority (NCA), after interaction with the European Securities and Markets Authority (ESMA). The letter outlined that GBP denominated LDI funds were expected generally to maintain the enhanced level of resilience observed at the time, which was resilience to a 300-400 basis point increase in yields (referred to as a 'yield buffer').

This consultation paper outlines a proposal to codify and, in certain cases, augment the existing yield buffer measure, including via the use of Article 25 of the Alternative Investment Fund Managers Directive (AIFMD). Building on the November 2022 letter, this consultation paper outlines a policy proposal to strengthen the steady-state resilience of Irish authorised GBP denominated LDI funds, specifically:

- Such funds must maintain a minimum 300 bps yield buffer.
- The yield buffer applies equally to all Irish authorised GBP denominated LDI funds.
- Only assets on the funds balance sheet are considered as components of the yield buffer, and all of a fund's exposures are considered in the yield buffer's calculation.

- Irish authorised GBP denominated LDI funds would be required to calculate their monthly average yield buffer at the end of each month. This would be calculated as the monthly average of the yield buffer based on the yield buffer at the end of each business day of the month. The monthly average yield buffer would then need to be reported as a single observation to the Central Bank following each month-end and should be greater than or equal to 300 bps, subject to the usability feature outlined below.

- In order to provide limited flexibility to facilitate buffer usability, on a rolling basis over the last four reporting observations (i.e. monthly average yield buffer at the end of each month), one of the reporting observations can be below 300 bps in exceptional circumstances. The use of this flexibility will be monitored, with the expectation that it is not used on a regular basis.

- The yield buffer should also help build liquidity resilience, and will be accompanied by targeted high-level guidance on liquidity for Irish authorised GBP denominated LDI funds.

Following the review of the written feedback to this public consultation paper, it is expected that the Central Bank will publish a feedback statement and announcement of the final measures in the first quarter of 2024. It is proposed that there will be an implementation period of three months following the announcement of the measures. As this proposal is broadly a codification of existing measures the Central Bank does not anticipate that compliance will require substantial adjustment from Irish-authorised GBP denominated LDI funds.

The expected incremental cost for Irish-authorised GBP denominated LDI funds of codifying the yield buffer is expected to be limited. This policy proposal aims to codify the response outlined in the industry letter in November 2022, which has been in place for nearly 12 months. It would reduce the probability that Irish-authorised LDI funds contribute to future crises in the gilt market by strengthening their resilience.

Counterfactual analysis suggests that Irish authorised GBP denominated LDI funds would have been less vulnerable to the gilt

market shock of September 2022 if these measures were in place prior to the crisis. Based on analytical work outlined below, leverage would have been significantly lower in the run up to the crisis.

The Central Bank invites all stakeholders to provide comments on this Consultation Paper and on the draft Liquidity Guidance that forms part of this Consultation Document. Please provide feedback by filling in the response form, available at this address: http://centralbank.ie/IFD. The deadline for receiving feedback is 18 January 2024.

Macroprudential measures for the GBP denominated Liability Driven Investment funds

The Central Bank has examined the resilience of GBP denominated Liability Driven Investment (LDI) funds following the industry letter published in November 2022. The Central Bank proposes to codify the existing yield buffer measure for Irish authorised GBP denominated LDI funds from the November 2022 industry letter and, in certain cases augment it, to enhance the steady-state resilience of Irish authorised GBP denominated LDI funds. This codification and augmentation aims to strengthen the resilience of LDI funds and to reduce the probability that Irish-authorised LDI funds contribute to future crises in the UK government bond (gilt) market.

The 2022 gilt market crisis, triggered by the UK government's 'mini-budget', highlighted vulnerabilities amongst GBP LDI funds. A significant cohort of these funds are resident in Ireland.

1. Introduction

The 2022 gilt market crisis, triggered by the UK government's 'mini-budget', highlighted vulnerabilities amongst GBP denominated liability driven investment (LDI) strategies. The UK mini-budget led to expectations that the future path of interest rates would be higher, thus realising interest rate risk on LDI funds' portfolios. In light of their levels of leverage, this created pressure for GBP denominated LDI funds to deleverage to ensure their net asset values (NAVs) would not turn negative (forcing them to wind down). Where sufficient capital was not forthcoming from investors to deleverage, funds were forced to sell gilts. However, as pension funds and LDI funds are typically purchasers of long-dated gilts, these forced sales occurred while liquidity in the gilt market thinned, leading to further increases in yields. To halt this self-reinforcing dynamic, the Bank of England engaged in a temporary and targeted intervention to stabilise the gilt market.[1]

The stresses that GBP denominated LDI funds faced resulted from their use of leverage. LDI funds that entered into repurchase agreements (repo) and interest rate swap (IRS) positions needed to provide additional collateral to maintain these positions when gilt yields (or interest rates) increased during the gilt market shock. This created liquidity stress for funds, as they either may not have had sufficient cash or cash equivalents to meet swap margin calls, or may not have had sufficient assets not already pledged as collateral to meet repo collateral calls. In addition, due to their leverage, declines in the value of assets led to the risk of funds' net asset value (i.e. assets - liabilities) turning negative. At this point, a fund would no longer have been able to receive subscriptions, and would have had to wind down.[2]

The impact of leverage interacted with the sensitivity of LDI funds exposures to interest rates (i.e. duration). Two LDI funds with an identical share of repo relative to total assets, but with gilt portfolios with different duration will see differing levels of demand for additional collateral, as well as different impacts on NAV.

A significant cohort of GBP denominated LDI funds are authorised in Ireland. Irish-authorised LDI funds account for at least 20 per cent of the total GBP denominated LDI industry. For pooled funds (i.e. funds with more than one investor), which were particularly vulnerable to the shock, Irish-authorised funds represent approximately 60 per cent of the total pooled GBP denominated LDI fund assets. Irish-authorised LDI funds own a significant share of UK gilts – around 10 per cent of the outstanding stock at end-August 2022. The significance of this market share held by Irish-authorised LDI funds was evident during the gilt market crisis, where Irish-authorised funds accounted for 30 per cent of net gilt sales by LDI funds and their investors.

As financial stability is a global public good, the Central Bank is committed to playing its part in maintaining financial stability at an

[1] For more information on the gilt market crisis and Irish-authorised LDI funds, see: Dunne et al (2023), Irish-Resident LDI Funds and the 2022 Gilt Markets Crisis, Central Bank of Ireland, Financial Stability Note 7, 2023.

[2] The risk of a negative net asset value (NAV) and a fund running out of assets to meet additional demands for collateral occur simultaneously.

international level. Ireland is one of the largest domiciles for investment funds, regionally and globally, with a significant share of the GBP denominated LDI industry accounted for by Irish-authorised funds. Given this, and the collective impact GBP denominated LDI funds had on financial stability, the Central Bank considers it has a particular responsibility to assess policy and supervisory actions to enhance the resilience of the funds sector to help maintain financial stability internationally.

In addition, given the close connections between the Irish and UK economies, the Irish economy is particularly exposed should a financial crisis occur in the UK. In the absence of the Bank of England's intervention, it is likely that many LDI funds would have defaulted on collateral/margin calls for their repo and derivative positions. In turn, this could have led to a broader crisis in the UK financial sector. Due to strong financial sector and real economy links between Ireland and the UK, this would have had implications for the macro-financial environment in Ireland.

The Central Bank outlined, via an industry letter in November 2022, measures to improve the resilience of GBP denominated LDI funds.

Recognising the significance of Irish-authorised GBP denominated LDI funds, the Central Bank outlined, via an industry letter in November 2022, supervisory expectations that GBP denominated LDI funds maintain an improved level of resilience. This was introduced in coordination with the Commission de Surveillance du Secteur Financier (CSSF, Luxembourg's National Competent Authority (NCA)), after interaction with the European Securities and Markets Authority (ESMA).

This consultation paper outlines a proposal to codify and, in certain cases, augment the existing yield buffer measure, including via the use of Article 25 of the Alternative Investment Fund Managers Directive (AIFMD). Building on the November 2022 letter, this consultation paper outlines a policy proposal to strengthen the steady-state resilience of Irish authorised GBP denominated LDI funds, specifically:

- Such funds must maintain a minimum 300 bps yield buffer.
- The buffer applies equally to all Irish authorised GBP denominated LDI funds.

- Only assets on the funds balance sheet are included in the calculation of the yield buffer, and all of a fund's exposures are considered in the yield buffer's calculation.

- Irish authorised GBP denominated LDI funds would be required to calculate their monthly average yield buffer at the end of each month. This would be calculated as the monthly average of the yield buffer based on the yield buffer at the end of each business day of the month. The monthly average yield buffer would then need to be reported as a single observation to the Central Bank following each month-end and should be greater than or equal to 300 bps, subject to the usability feature outlined below.

- In order to provide limited flexibility to facilitate buffer usability, on a rolling basis over the last four reporting observations (i.e. monthly average yield buffer at the end of each month), one of the reporting observations can be below 300 bps in exceptional circumstances. The use of this flexibility will be monitored, with the expectation that it is not used on a regular basis.

- The yield buffer should also help build liquidity resilience, and will be accompanied by targeted high-level guidance on liquidity for Irish authorised GBP denominated LDI funds.

As was the case with the supervisory measures taken in November 2022, it is proposed that the codification of the yield buffer is undertaken in conjunction with the CSSF. This should ensure continued international coordination and consistency such that the yield buffer requirements remain aligned across the two main fund domiciles for GBP denominated LDI funds and builds on the letter issued to industry by both NCAs in November 2022. Engagement on the proposed measures has also occurred with other international and European partners working on LDI fund issues.

This international coordination between national competent authorities is important to ensure the effectiveness of the measures. GBP denominated LDI funds are domiciled in different jurisdictions in the EU, and there are a cohort of GBP denominated LDI funds managed on a cross-border basis. International coordination, including information sharing, should ensure that the introduction of these measures does not lead to risks being shifted between jurisdictions. This is in keeping with the Central Bank's views outlined in the Discussion Paper "*An approach to macroprudential policy for investment funds*", which recognises the importance of international coordination in operationalising a macroprudential framework for investment funds more generally.

The rest of this paper proceeds as follows. Section 2 outlines the policy response in response to the 2022 Gilt Market Crisis. Section 3 outlines the proposed calibration of a codified yield buffer for Irish authorities GBP denominated LDI funds. Section 4 outlines liquidity guidance for LDI funds. Section 5 discusses the proposed implementation of the codified yield buffer. Section 6 discusses the potential impact of the yield buffer's codification. Section 7 concludes by requesting feedback from stakeholders.

2. The Regulatory Response to the Gilt Market Crisis

The proposed macroprudential policy aims to increase the resilience of Irish GBP denominated LDI funds by reducing the probability that these funds amplify a shock in the gilt market.

The industry letter issued in November 2022 by the Central Bank, in coordination with the CSSF, outlined a supervisory expectation that GBP denominated LDI funds maintain resilience to a 300-400 basis points (bps) increase in yields. The letter noted the improved resilience to further increases in yields observed at the time, and stated that industry participants are expected to maintain that level of resilience. This expectation requires that the capital of an LDI fund is not exhausted if yields increase by 300-400 basis points (i.e. its NAV will not turn negative). Any reduction in this resilience needs to be communicated to the relevant NCA, and accompanied by a series of risk assessment and risk management plans. The yield buffer was introduced as a minimum safeguard to maintain the operational and financial resilience of GBP denominated Irish-authorised LDI funds, and to reduce the probability that GBP LDI funds would amplify any future shock in the gilt market.

Subsequently, UK regulatory authorities have outlined their own recommendations and guidance on enhancing the resilience of various entities in the LDI sector. On 29 March 2023, the Financial Policy Committee (FPC) of the Bank of England published recommendations for The (UK) Pension Regulator to improve the resilience of LDI funds, including a yield buffer recommendation. The Central Bank noted the FPC announcement and reaffirmed its expectations that the minimum safeguards highlighted in the November 2022 letter should continue to be observed for GBP denominated LDI funds. The Pension Regulator (TPR) largely adopted the recommendations of the FPC into their guidance for pension fund trustees, including a minimum yield buffer of 250 bps plus an additional (undefined) operational buffer.

The yield buffer can address LDI funds' vulnerabilities, i.e. leverage and duration.

The yield buffer can address LDI funds' vulnerabilities as it is directly determined by funds' portfolio duration and leverage. The yield buffer is defined as the level of increase in yields that a fund can withstand before its NAV turns negative. This can be estimated by calculating the duration of a fund's portfolio. Using this approach, the increase in yields that would cause the exposures of the fund to decline by a value equal to a fund's NAV can be estimated. As this decline is determined by the ratio of NAV to total exposures (i.e. the inverse of leverage), the lower a fund's leverage, the higher the yield buffer of that fund.

The yield buffer is not codified as a single leverage limit, such as that introduced for property funds authorised in Ireland, as such a leverage limit does not account for duration. Based on an assessment by the Central Bank, a single leverage limit is not deemed the appropriate policy tool for Irish-authorised GBP denominated LDI funds given the business models and activities of these funds. For instance, imposing a single leverage limit could lead to funds whose portfolios were highly sensitive to interest rates able to take on a level of leverage that would see their NAV turn negative in the event of a less than 300 bps increase in yields.

3. Key Elements of the Yield Buffer Proposal

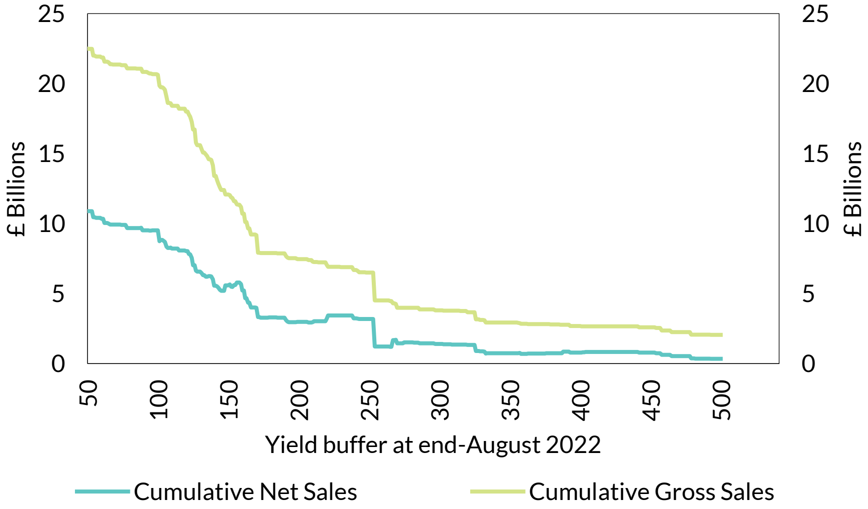
The yield buffer is proposed to be set at a 300 basis point minimum.

3.1 The level of the buffer and its calculation

It is proposed that the yield buffer is set at a 300 bps minimum. This calibration is guided through a combination of analytical evidence and judgement and is consistent with the range of 300-400 bps as set out in the November 2022 letter by the Central Bank.

Analysis and empirical evidence support the continued imposition of a minimum 300 bps yield buffer. Funds with a yield buffer below 300 bps at end August 2022 net sold £10.1bn in gilts over the crisis period, while those with a yield buffer above 300 bps net sold just £1.0bn. Likewise, when the end-August yield buffer is mapped against net gilt sales over the period, it is shown that net sales of gilts begins to accelerate between 300 bps and 250 bps (see Chart 1). Funds with a yield buffer below 300 bps also saw greater collateral calls from repo, relative to their NAV. Finally, a 300 bps minimum yield buffer is larger than historical monthly increases in gilt yields.

Chart 1: LDI Funds entering the crisis with yield buffers below 300 bps accounted for the majority of gilt sales
Cumulative net and gross sales of gilts over crisis period by GBP LDI funds if a yield buffer requirement was introduced in December 2021.



Source: Industry Survey, Central Bank of Ireland calculations.
Notes: Crisis period covers 23/9/22 – 14/10/2022.

There are other factors that the Central Bank judges to support a minimum yield buffer of 300 bps, including a degree of international consistency. For instance, the buffer level recommended to the TPR by the Bank of England's FPC in March 2023 was broadly consistent with the level outlined in the Central Bank's November 2022 letter. Therefore, codifying the buffer at 300 bps should, at a broad level, ensure international consistency for funds.[3]

[3] The Bank of England recommended a 250 bps buffer and an additional undefined buffer. See Bank of England staff paper: LDI minimum resilience – recommendation and explainer.

The yield buffer, and its estimation, should consider all exposures that a fund's portfolio contains. This will require funds to develop a weighted average of the interest rate sensitivity of all their exposures to calculate their portfolio duration (and convexity).[4] The yield buffer is approximately equivalent to the assets of a fund not committed to maintain their leverage (i.e. collateral/margin for repo/gilts). The current proposal does not seek to be prescriptive on what these assets should be, but instead supports providing high-level guidance on asset liquidity. Such a high-level approach is consistent with the supervisory expectations set out in the November 2022 letter by the Central Bank.

The yield buffer should consider all exposures that a fund's portfolio contains.

3.2 Scope of Measures

It is proposed that the scope of the yield buffer does not change from the expectation set out in the Central Bank letter to industry in November 2022. It is proposed that the yield buffer will apply to all Irish-AIFM managed, GBP denominated LDI funds authorised in Ireland. At this point, the Central Bank judges that these funds can pose a systemic risk given their leverage and concentrated ownership position in the gilt market. Irish-authorised euro-denominated LDI funds do not pose the same risk to the European sovereign debt market as they hold a much smaller share of the overall market.[5] Monitoring of euro-denominated LDI funds will form part of the Central Bank's annual Article 25 risk assessment submitted to ESMA, and if their systemic importance were to change, the Central Bank would review the application of the rules accordingly. The Central Bank reserves the possibility of applying the measures to Irish-authorised GBP denominated LDI funds with non-Irish AIFMs under the relevant domestic funds legislation.

In line with the November industry letter, the yield buffer will apply to all Irish-authorised GBP denominated LDI funds.

The population of GBP denominated LDI funds that the codification would apply to will be identified from their investment strategy. A definition of LDI funds based on portfolio composition would likely be imprecise - other fund cohorts also combine sovereign bond holdings, repo and interest rate swaps, while not posing the same risk to financial markets.[6] What differentiates LDI funds is how these

[4] Where exposures are equal to assets (excl. mark-to-market derivative positions) plus net notional.
[5] Irish-authorised EUR LDI funds hold less than 0.1 per cent of total euro area sovereign debt.
[6] Typically, this is because they are not as leveraged and/or they do not have the same kind of concentration within a certain market segment.

instruments serve the funds' investment strategy – they are used to hedge their investors' liabilities. Therefore, the proposed definition includes:

> "*Any fund whose investment strategy seeks to match the interest rate or inflation sensitivity of their assets to that of their investors' liabilities.*"

It will be the responsibility of fund managers to determine whether GBP denominated LDI funds they manage are in scope of the measures. In terms of the scope of the measures, it is proposed that the yield buffer should apply to all Irish authorised GBP denominated LDI funds equally.

New funds seeking authorisation as GBP denominated LDI funds managed by an Irish AIFM, in line with the definition above, will be required to notify the Central Bank that they are in scope of the measures. It is the expectation that AIFM's of LDI funds will notify the Central Bank that they are in scope of the measures when they are seeking authorisation. The Central Bank may conduct thematic analysis on the in-scope population of funds, so managers will need to ensure that this is up-to-date for the GBP denominated Irish authorised LDI funds they manage.

3.3 Third Party Assets

Assets owned by LDI funds' investors that the LDI fund is authorised to use will not form part of the yield buffer. The inclusion of assets external to the fund's balance sheet could form a potential contagion channel in times of stress. For example, if assets external to the fund are considered as part of the yield buffer, shocks to LDI fund portfolios will be rapidly transmitted to the assets that the LDI manager is authorised to use. The Central Bank considered whether external assets could be used subject to a haircut. However, the feasibility of applying a haircut to such external assets is uncertain. Future shocks may not share the same pattern as those that have occurred to date, such that the impact of a given crisis on external assets could be much greater than anticipated by a haircut.

Assets owned by LDI funds' investors will not form part of the yield buffer.

3.4 Buffer Usability

A key objective in the design of the yield buffer is that it should be usable and should not lead to procyclical dynamics. It would be counterproductive if LDI funds sell gilts in times of stress in order to meet the yield buffer. If such procyclicality occurred, the replenishment of the yield buffer could replicate the forced sale dynamics observed in the gilt market crisis during a future stress, amplifying any initial shock.

To promote usability of the buffer, the Central Bank proposes to adjust how the yield buffer is applied. It is proposed that Irish authorised GBP denominated LDI funds would be required to calculate their yield buffer at the end of each month. This would be calculated as the monthly average of the yield buffer based on the yield buffer at the end of each business day of the month. The monthly average yield buffer would then need to be reported as a single observation to the Central Bank following each month-end and should be greater than or equal to 300 bps, subject to the usability feature outlined below. In order to provide limited flexibility to facilitate buffer usability, on a rolling basis over the last four reporting observations, one of the reporting observations may be below 300 bps in exceptional circumstances. The use of this flexibility will be monitored, with the expectation that it is not used on a regular basis.

Additionally, and consistent with the Central Bank's approach to macroprudential policy for investment funds, the Central Bank may temporarily dis-apply the yield buffer requirement should there be a significant, market-wide shock to financial stability. Disapplication of the yield buffer would be considered in the case of a severe market wide shock or event, where it is anticipated that it may take a substantial period for funds to return to the required levels of resilience, and that forcing them to expedite this process would be further amplify the shock. This would ultimately be a judgement, based on the review of a range of data and external indicators, coupled with ongoing market intelligence and firm engagement.

The following example describes how the Central Bank envisions these elements combining. Consider a 5-month period. An Irish authorised GBP denominated LDI fund has been maintaining a monthly average yield buffer of 300 bps in each of months 1-3. In month 4 a shock occurs such that the fund expects that there will be a prolonged and or substantial deviation of the buffer below 300 bps. At this point, the fund should notify the Central Bank that such a deviation in the yield buffer has occurred. The fund may be able to recapitalise by month end such that the monthly average equates to

300 bps. However, if this is not feasible then the proposed measures provide some limited flexibility that does not require the fund to deleverage procyclically to return to a 300 bps monthly average. In month 4, their monthly average buffer can remain below 300 bps. In month 5, it is expected that by the end of this month the monthly average yield buffer should have returned above 300 bps. If the buffer was to not return above 300 bps in month 5, or if it had dipped below 300 bps in at least one of months 1-3 and month 4, then this would constitute a breach of the measures.

The 300 bps yield buffer level should be viewed as a minimum, rather than a target. The Central Bank anticipates that to avoid the yield buffer deviating below the minimum, Irish authorised GBP denominated LDI funds should consider maintaining their yield buffer above the 300 bps in order to manage idiosyncratic variations in the value of their portfolio. The Central Bank considers that maintaining a yield buffer above the minimum requirement would be prudent, particularly where operational challenges may prevent investors being able to meet capital calls quickly (e.g. if a fund needs to co-ordinate amongst a large number of investors and believes it may be operationally challenging for some investors to meet capital calls in a stress situation). Furthermore, funds should ensure that their investors are prepared and able to meet capital calls that can be expected in both normal and stressed market conditions.

The 300 bps level should be viewed as a minimum, rather than a target.

It is proposed that fund managers will only notify the Central Bank that their yield buffer has fallen below 300 bps in real time if they expect the deviation to be prolonged and/or substantial. Minor deviations of the yield buffer below the minimum 300 bps do not need to be reported in real time, thus providing LDI funds with the incentive to re-build their buffers appropriately and without resorting to fire sales of gilts to immediately replenish their yield buffers.

3.5 Reporting

The buffer usability proposal will require changes to the existing LDI data template utilised by peer NCAs, including the Central Bank. Following the gilt market crisis, a data template was jointly introduced by the CSSF, the Central Bank and the Financial Conduct Authority (FCA) to monitor GBP LDI funds on a weekly basis. In addition to the fields in the existing template, LDI funds will also have to report the monthly average of the yield buffer as described above. This will form part of the ongoing monitoring process by the Central Bank and will be used for ongoing supervisory engagement with relevant funds.

4. Liquidity Guidance

The yield buffer should also help build liquidity resilience. By reducing the size and/or sensitivity of interest rate exposures relative to a fund's NAV, the yield buffer also reduces the relative size of collateral and margin calls from repo and swaps that funds face compared to the assets they have available to meet those liquidity demands.

However, it is proposed that targeted guidance on liquidity also accompanies the yield buffer codification proposal, recognising the particular circumstances of LDI funds. The proposed high-level guidance is as follows:

> *"Funds should ensure that they maintain sufficient holdings of assets which are eligible to meet margin or collateral calls that result from adverse market circumstances, or assets which can be transformed into such eligible assets with requisite speed."*

5. Implementing the Yield Buffer

It is proposed that the yield buffer will be codified under Article 25 of the AIFMD. Article 25 gives powers to impose restrictions on the leverage that AIFMs are entitled to employ with respect to the AIFs they manage, where leverage is judged to contribute to systemic risk or disorderly markets. Codifying the yield buffer with Article 25 is consistent with previous macroprudential decisions of the Central Bank with respect to alternative investment funds (property funds).[7]

The yield buffer should also help build liquidity resilience.

It is proposed that the yield buffer would be codified as an 'other restriction' under Article 25 of the AIFMD, rather than as a single leverage limit. As previously highlighted, the yield buffer will limit

[7] As a consequence, and in line with their regulatory requirements, there will also be a role for fund depositaries in monitoring related investment restrictions introduced by these measures and, where relevant, reporting breaches identified to the Central Bank.

each fund's leverage based on the duration of their portfolio. This necessitates the use of an alternative power under Article 25 of AIFMD, and unlike the macroprudential measures announced for property funds, the Central Bank does not intend to codify the yield buffer as a single leverage limit.

The proposed yield buffer would be imposed through Article 25 of the AIFMD, as transposed to Irish law by way of Regulation 26 of the Irish AIFM Regulations. Article 25 of the AIFMD notes: **"…***The competent authorities shall assess the risks that the use of leverage by an AIFM with respect to the AIFs it manages could entail, and, where deemed necessary in order to ensure the stability and integrity of the financial system, the competent authorities of the home Member State of the AIFM, after having notified ESMA, the ESRB and the competent authorities of the relevant AIF, shall impose limits to the level of leverage that an AIFM are entitled to employ or other restrictions on the management of the AIF with respect to the AIFs under its management to limit the extent to which the use of leverage contributes to the build-up of systemic risk in the financial system or risks of disorderly markets. The competent authorities of the home Member State of the AIFM shall duly inform ESMA, the ESRB and the competent authorities of the AIF, of actions taken in this respect, through the procedures set out in Article 50."* The proposed measures would also be imposed by way of condition of authorisation under Regulation 9 of the Irish AIFM Regulations. Where a non-Irish AIFM is managing an Irish authorised GBP denominated LDI fund, the condition will be imposed under the relevant domestic funds legislation if the non-Irish AIFM is not already subject to the yield buffer requirement under Article 25 in their home Member State.

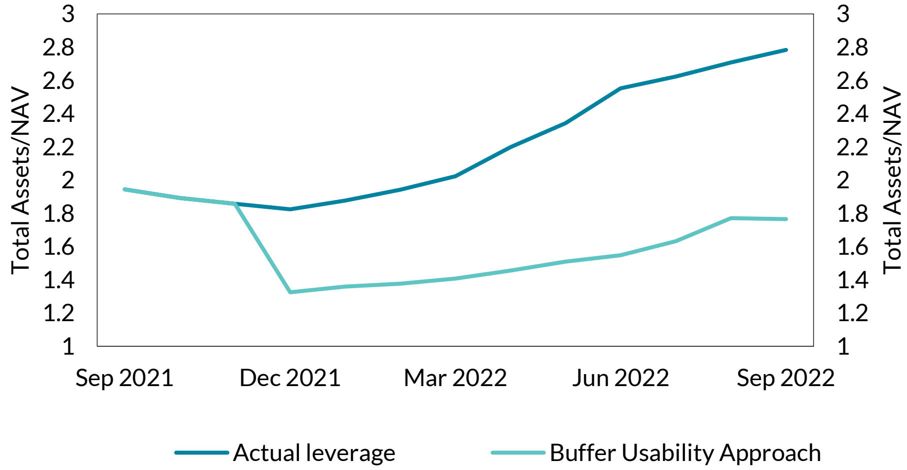
The yield buffer will be codified as an "other restriction" under Article 25 AIFMD.

It is proposed that there will be an implementation period of 3 months following the finalisation of the codification process. As this is largely a codification of existing measures the Central Bank does not anticipate that that compliance will require substantial adjustment for those LDI funds in scope of the measures.

6. Expected Impact of Yield Buffer

Counterfactual analysis by the Central Bank suggests that had the yield buffer been in place from December 2021, then leverage would have been substantially lower than it was in September 2022. Leverage began rising following the start of the Bank of England interest rate hiking cycle in December 2021, as LDI funds did not seek sufficient recapitalisations or sell gilts to keep leverage constant. To assess if the introduction of the yield buffer would have made a difference to LDI fund leverage, it is assumed in this example that the yield buffer was introduced in December 2021. The adjustment to leverage funds would have to make to come into compliance is then calculated, as well as adjustments required to remain compliant with the rule. As can be seen in Chart 2, a yield buffer would lead leverage to be almost a third lower than it actually was.

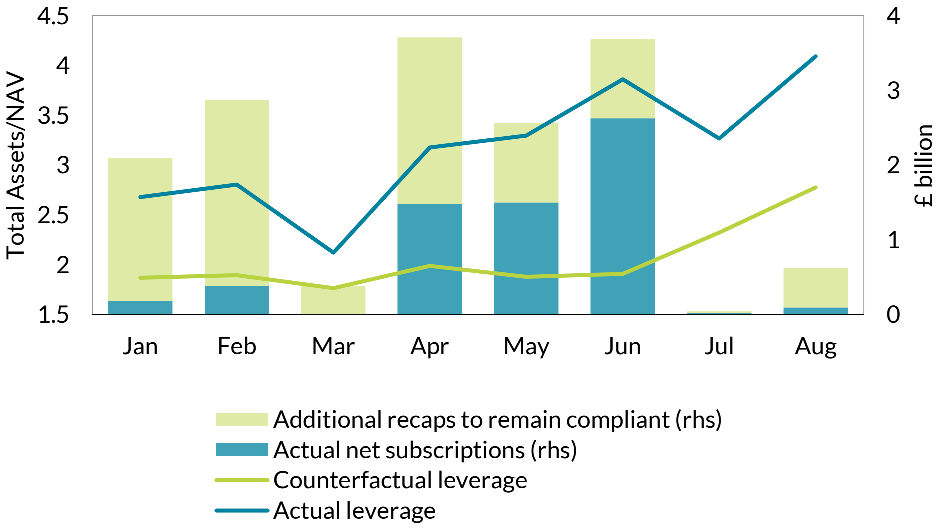
Chart 2: LDI fund leverage would have been significantly lower in the run up to the crisis if a buffer was in place from December 2021
Counterfactual median leverage for GBP LDI funds if a yield buffer was introduced in December 2021



Source: Central Bank of Ireland calculations.
Notes: Buffer usability approach refers to a yield buffer requirement that allows for a deviation below 300 bps if the preceding 3 months have had values above 300 bps.

This lower level of leverage is achieved in part by encouraging funds to recapitalise by more than they otherwise would have. Under the assumption that all funds are compliant with the 300 bps buffer at end 2021 and see the same movement in their buffer over January – August, a cohort of funds needing to recapitalise to remain compliant with the buffer usability approach can be identified, and the volume of recapitalisations required can be quantified. In doing so, it is shown that if the buffer was in place this cohort would have raised an additional £10bn in equity from investors. In turn, this would have kept their counterfactual leverage more contained, relative to their actual leverage (see Chart 3).

Chart 3: Maintaining the buffer from January-August would require funds to raise an additional £10bn in equity – with leverage lower and more stable as a consequence
Actual and counterfactual median leverage and net subscriptions for GBP LDI funds needing to recapitalise to remain compliant with buffer in counterfactual, Jan-Oct 2022



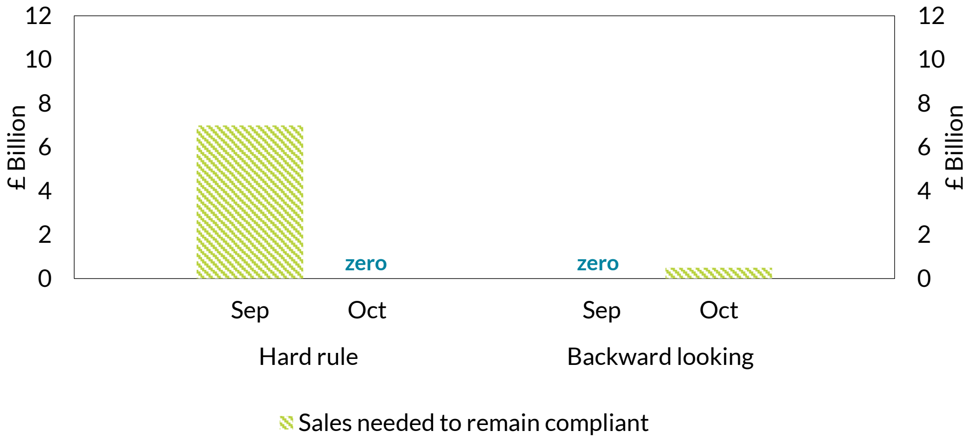
Source: Central Bank of Ireland calculations.
Notes: Funds included in chart limited to cohort who would need to recapitalise over Jan-August 2022 to remain compliant with buffer. Therefore, the sample is different to that in Chart 2, and as a consequence leverage also differs.

The application of the yield buffer with the buffer usability approach would not have resulted in significant procyclical gilt sales by funds. Consider a counterfactual where all funds maintained a 300 bps minimum yield buffer from June to August.[8] To determine whether the buffer usability approach would require procyclical gilt sales over October, the change in their actual yield buffer over August-October is added to the counterfactual buffer at end-August.[9] Assuming that funds can only sell gilts to return to 300 bps where this figure is below 300 bps, it is estimated that LDI funds would have sold approximately

[8] This would require funds with a buffer below 300 bps to see their NAV increase such that they had a buffer of 300 bps. Funds with a buffer above 300 bps would see no change in their buffer.
[9] Gilt sales would not be required in September under the buffer usability approach as it allows for a deviation below 300 bps.

£0.5bn in additional gilt sales to comply with the buffer usability approach. In contrast, if a similar exercise is performed with a requirement that funds must always meet a 300 bps buffer (a 'hard rule'), procyclical sales would have been necessary - funds would have sold an additional £7bn in September (see Chart 4).[10]

Chart 4: Applying the yield buffer with the buffer usability approach would not lead to substantial pro-cyclical gilt sales, but applying it as hard rule would
Actual net sales of gilts by GBP LDI funds and the additional sales required to comply with different forms of the yield buffer, Sep-Oct 2022



Source: Central Bank of Ireland calculations.
Notes: Hard rule refers to a yield buffer requirement that funds always maintain a 300 bps minimum. Buffer usability approach refers to a yield buffer requirement that allows for a deviation below 300 bps if the preceding 3 months have had values above 300 bps. Where zero is present in the place of a bar this indicates that no additional gilt sales were required for compliance.

The benefits of a yield buffer, to both investors and the wider economy, arise from the reduced probability of a similar crisis reoccurring due to the behaviour of LDI funds. If LDI funds are not forced to sell gilts to unwind their leverage, unrealised losses on gilt positions will not be realised by their investors. Equally, the probability of severe disruptions in the gilt market due to the behaviour of LDI funds should be reduced. This would entail benefits for other investors in gilts as well as the broader economy and

[10] This should not be interpreted as suggesting that total gilt sales would be higher if either buffer had been in place. This analysis is focused on estimating the quantity of gilt sales required for funds to meet the buffer requirement, assuming they can only do so by deleveraging via gilt sales. In practice, LDI funds may have been able to access additional recapitalisations from investors – with this being moreso the case if a higher buffer level allowed them to wait for longer. The fund's actual gilt sales are captured in the movement in the buffer over August-October that is captured in the counterfactual, and analysis suggests that this level of sales would also have been lower if all funds had a minimum buffer of 300 bps entering the crisis.

financial system, given the importance of gilt market in the United Kingdom.

Transitional costs should be limited, as GBP LDI funds have already undertaken significant adjustment to comply with the measures outlined in November 2022's letter. LDI funds now have yield buffers that are above 300 bps, with this adjustment largely coming via deleveraging. In addition, they have incorporated 300 bps as a trigger point at which they request recapitalisations, and target a yield buffer level in excess of 300 bps after recapitalisation.

As the Central Bank is proposing to codify a yield buffer that funds have already made adjustments to comply with, it is anticipated that the initial costs of such a policy have already been absorbed. As funds have already adjusted their yield buffer level, they do not have to sell any additional gilts to deleverage, nor do investors have to provide additional capital to the fund. Any secondary impact from funds and investors activity to come into compliance with the yield buffer will also have been absorbed.

There may be costs that will accrue over time, beyond the immediate transition costs imposed. If investors have allocated more capital to their LDI funds to maintain the same level of hedging, this capital will not be receiving a superior return on other assets elsewhere. Thus, there may be an opportunity cost for investors, in the form of lower returns for scheme members. However, the measures would not disrupt the core function of LDI funds, which is to hedge their investors' liabilities, rather than generate leveraged returns. Finally, if LDI funds have less demand for long-ended gilts, then there may be less liquidity in long-ended gilts during non-stressed conditions, although the risk of market dysfunction during stressed times is reduced.

GBP LDI funds have already undertaken significant adjustment to comply with the measures initially outlined.

7. Questions and Providing Feedback

The Central Bank invites all stakeholders to provide comments on this Consultation Paper and on the draft Guidance that forms part of this Consultation Document. Please provide feedback by filling in the response form, available at this address: http://centralbank.ie/IFD. The deadline for receiving feedback is 18 January 2024.

The Central Bank requests that reasons are given for the responses to all questions answered and that submissions that suggest changes to the proposals in the Consultation Paper be supported, where possible, by evidence, which will aid our consideration of the issues. The list of questions is outlined below:

Question 1

Do you have any specific feedback on the scope of the measures and the proposed definition of LDI funds as set out in the consultation paper?

Question 2

For the liquidity guidance, would you see merit in setting a minimum speed for the transformation of non-eligible assets into eligible assets (in days)? What would you consider the right minimum number of days, considering the settlement period for posting collateral to maintain leverage (repurchase agreements and/or derivatives)?"

Question 3

Do you have any specific feedback on the proposed calibration of the measures, including the proposed treatment of third party assets in the yield buffer, the buffer usability proposal and the level of the yield buffer?

Question 4

Do you have any specific feedback with the proposed approach to the implementation of the measures?

Question 5

In addition to the analysis provided in the consultation paper, what potential unintended consequences do you see from the proposed measures, and how could these be mitigated?

Question 6

Do you have any further feedback on the proposals outlined in the consultation paper?

The Central Bank intends to make feedback available on its website after the deadline for receiving responses has passed. Please do not include commercially sensitive material in your response, unless you consider it essential. If you do include such material, please highlight it clearly, so that reasonable steps may be taken to avoid publishing that material. This may involve publishing feedback with the sensitive material deleted and indicating the deletions.

While as indicated above, the Central Bank will take reasonable steps to avoid publishing confidential or commercially sensitive material, the Central Bank makes no guarantee that it will not publish any such information and accepts no liability whatsoever for the stakeholders' consultation responses that are subsequently published by the Central Bank. Please be aware that you are making a submission on the basis that you consent to us publishing it in full.

Annex

Summary Table of Measures

Item	Description
Buffer level	Irish authorised GBP denominated LDI funds must maintain resilience to a minimum of 300 bps increase in yields.
Scope of buffer	The yield buffer applies to Irish authorised GBP denominated LDI funds only, and to all such funds equally
Definition of GBP LDI funds	The population of GBP LDI funds that the codification would apply to will be identified from their investment strategy. The definition proposed is: "*Any fund whose investment strategy seeks to match the interest rate or inflation sensitivity of their assets to that of their investors' liabilities.*"
Buffer composition	Only assets on the funds balance sheet are included in the calculation of the buffer, and not assets its investors own (but the fund is authorised to use). All fund's exposures considered in calculating buffer.
Reporting	Monthly averages of daily yield buffer are reported at month-end. The yield buffer in each reporting observation should be greater than or equal to 300 bps.
Buffer usability	In order to provide limited flexibility to facilitate buffer usability, looking back over the last four reporting observations, one of the reporting observations can be below 300 bps in exceptional circumstances.
Buffer dis-application	The Bank may temporarily dis-apply the yield buffer requirement should there be a significant, market-wide shock to financial stability. This would ultimately be a judgement, based on market intelligence, firm engagement and external indicators.
Liquidity guidance	It is proposed that targeted guidance on liquidity also accompanies the yield buffer. The proposed high-level guidance is as follows: "*Funds should ensure that they maintain sufficient holdings of assets which are eligible to meet margin or collateral calls that result from adverse market circumstances, or assets which can be transformed into such eligible assets with requisite speed.*"

Notification to the Central Bank of Ireland	If funds in scope of the measure anticipate substantive and/or prolonged deviations below 300 bps, they must notify the Central Bank.

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