



Banc Ceannais na hÉireann
Central Bank of Ireland

Eurosystem

The Central Bank of Ireland's response to the European Commission's consultation assessing the adequacy of macroprudential policies for non-bank financial intermediation (NBFI)

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Overview

The Central Bank of Ireland (“Central Bank”) welcomes the opportunity to provide views on the development of the macroprudential policy framework for non-bank financial intermediation (NBF1). Progressing this policy agenda is important to ensure that the regulatory framework remains fit for purpose, in light of the continued evolution of the financial system, globally and in Europe.

The Central Bank’s mission is to maintain monetary and financial stability, while ensuring that the financial system operates in the best interests of consumers and the wider economy. As a central bank, regulator and supervisor of a broad and diverse financial sector, including a large non-bank financial sector, we offer insights based on our experiences and responsibilities across both our investor protection and financial stability functions. This means that, when considering the role of non-bank finance, the Central Bank takes a holistic view on why this form of financial intermediation matters from a public policy perspective, including investor protection and financial stability. This broad mandate is reflected in our response to this targeted consultation.

In addition, Ireland hosts a large, internationally-oriented non-bank financial sector, with a particular specialisation in asset management and investment funds. Therefore, the focus of the Central Bank’s response is centred on investment funds. Strengthening the macroprudential lens in the oversight of the sector has been – and remains – a priority for the Central Bank, working with colleagues in Europe and internationally. This response reflects our own practical experience in recent years with introducing macroprudential policy measures for Irish-authorized property funds and GBP-denominated liability driven investment (LDI) funds. Our response is complementary to – and should be read alongside – that of the [Eurosystem response](#).

As context, the global NBF1 sector has grown significantly in recent years, largely driven by an increase in assets under management in the investment funds sector. In the euro area, both market-based and non-bank credit have roughly doubled since the global financial crisis, while overall assets of investment funds and other financial institutions (OFIs) accounted for 48% of euro area financial system assets at the end of 2022.¹

Ireland hosts a significant share of the European NBF1 sector. Measured by total asset value, Ireland has the second biggest investment funds sector in Europe and the fourth largest investment funds sector in the world. Within the European Union (EU), Ireland hosts the largest money market fund (MMF) sector as well as the largest exchange-traded funds (ETF) sector. Ireland is also the domicile of more than 90 per cent of collateralised loan obligations (CLOs) in

¹ Source: ECB Data Portal.

Europe, a type of special purpose entity (SPE) used to raise funding for (and in) credit markets. The sector supports economic activity in Europe and globally, with approximately half of Irish funds' assets invested directly into the global real economy, mainly via holdings of debt and equity securities issued by non-financial corporations (NFCs) and holdings of debt securities issued by governments.²

NBFI is a key component of capital markets activity. And, in turn, deeper and more developed capital markets entail many benefits for the broader economy. Capital markets diversify the sources of financing to the real economy, and enable diversification of investors' asset portfolios. In doing so, they support credit extension and the wider provision of financing to a range of entities, which include companies and households, as well as governments, banks and insurers. Overall, capital markets – which rely on NBFIs – provide a valuable alternative to bank finance, and supports broader economic activity. These economic benefits of increased financial intermediation via capital markets are reflected in the EU's Savings and Investment Union policy agenda.

For these benefits to be realised fully, this growing form of financing needs to be resilient when shocks hit. Like all forms of financial intermediation, in light of underlying vulnerabilities, the activities of investment funds can pose risks that can become systemically relevant. And, as the funds sector grows in size, so does its systemic importance. Systemic risk refers to a disruption to the provision of financial services caused by an impairment of all, or parts, of the financial system, with serious negative consequences for the real economy.³

The main sources of vulnerabilities in the investment funds sector stem from:

- (i) Vulnerabilities at a fund cohort level, specifically **leverage** and **liquidity mismatch**. The growth of the open-ended funds sector, among other factors, has changed the dynamics of liquidity demand and supply in certain segments of financial markets, particularly in periods of market stress, making systemic liquidity stresses more likely;⁴ and the use of leverage in some fund cohorts, combined with the larger size of the sector, means that shocks can result in rapid deleveraging with wider market impacts.
- (ii) The **interconnectedness** of the funds sector, which can act as the channels through which the sector can transmit and/or amplify the effects of a shock to other parts of the financial

² See Central Bank of Ireland (2023) '[Discussion Paper 11: An approach to macroprudential policy for investment funds](#)'.

³ This definition is derived from that used by the ESRB. See European Parliament (2010) '[Regulation No 1092/2010 of the European Parliament and of the Council](#)'.

⁴ See FSB (2022) '[Enhancing the Resilience of Non-Bank Financial Intermediation: Progress Report](#)', p. 1.

system or real economy. This can happen directly through the counterparty channel, or indirectly through the asset value/collateral channel.

While the assessment of systemic risk posed by the funds sector is still evolving, it is clear that any such assessment needs to account for the heterogeneity in investment funds' business models and, therefore, differences in the way in which fund cohorts can generate systemic risk. It also needs to take into account developments in the broader ecosystem of markets, including the composition of market participants and drivers of liquidity demand and supply in any systemic risk assessment. Indeed, some cohorts of funds display limited underlying vulnerabilities, such as liquidity mismatch or leverage, and/or play a more limited role as participants in core financial markets, reducing their systemic relevance.

Therefore, as the financial system evolves and the funds sector grows to become more integral to the wider functioning of several key financial markets, the regulatory framework also needs to adapt. The current framework has been developing from one that was largely designed around the protection of investors. While this investor protection-focused framework can help to address some funds-specific elements of systemic risk, it does not fully address them. Therefore, this development needs to continue. A complementary, macroprudential perspective is needed in the regulatory framework.

The overarching views of the Central Bank, as reflected throughout our responses to the individual questions put forward in the consultation document, are guided by the following principles, which are also outlined in our [Discussion Paper on an approach to macroprudential policy for investment funds](#) (DP11) and the Eurosystem's response to the European Commission's consultation:

- It is important that **resilience be built *before* crisis conditions occur**. Sufficient ex ante policies should be in place targeted at the identified sources of systemic risk, though ex post tools nevertheless remain important as part of a wider toolkit.
- In the case of investment funds, **resilience-enhancing measures need to work on a collective or aggregate basis, aimed at fund cohorts**.
- Policy measures could **either seek to limit underlying vulnerabilities and/or be targeted at the interconnectedness of the sector**, reducing contagion risk.
- As the nature and magnitude of systemic risks evolves, it is important that **policies have a degree of flexibility over time**.
- Policy intervention should be the result of a **careful balance between costs and benefits for the broader economy**.

- **Global co-ordination is a critical enabler** when designing a macroprudential policy framework for the funds sector. It is also important that macroprudential measures take a system-wide perspective and guard against the possibility that risks shift to other parts of the financial system.

These guiding principles in turn inform the Central Bank’s key policy priorities for developing a macroprudential framework for the NBF1 sector, which – consistent with the Eurosystem’s priorities – focus on the following: (1) implementing internationally-agreed reforms; (2) enhancing the macroprudential toolkit; (3) ensuring effective governance arrangements; (4) introducing system-wide stress testing for the EU; (5) enhancing data sharing; and (6) monitoring – and where needed, adjusting – the regulatory perimeter.

1. Implement internationally-agreed reforms

There are a number of internationally-agreed reforms to the global NBF1 regulatory framework with important macroprudential benefits that should be implemented in Europe. The Financial Stability Board (FSB), working with global standard setters including the International Organisation of Securities Commissions (IOSCO), have been leading these global efforts to enhance the resilience of the NBF1 sector, including to address vulnerabilities related to liquidity mismatch.

Liquidity mismatch is one of the primary potential vulnerabilities of fund cohorts that can generate systemic risk. Liquidity mismatch can arise when open-ended funds (OEFs) are invested in less liquid assets, while allowing their investors the opportunity to redeem their shares at a higher frequency. Whilst underlying dynamics may be manageable at the level of individual funds, they can have systemic implications when aggregated across a cohort of funds.

- **Firstly, implement reforms to enhance money market fund (MMF) resilience**

The Central Bank broadly supports the existing European Systemic Risk Board (ESRB) and European Securities and Markets Authority (ESMA) proposals to enhance MMF resilience. Specifically, we support the ESRB recommendation to increase liquidity levels in MMFs and also that these liquidity requirements could be eased in the face of a stress, with national competent authorities (NCAs) being able to specify the time-limit for which such easing would be permitted. This would increase liquidity levels in low volatility net asset value (LVNAV) and variable net asset value (VNAV) MMFs, empower NCAs to ease requirements during times of stress, and to re-establish them afterwards, with a coordination role for ESMA to ensure consistency and a level-playing field. This would also help reduce fire sales by MMFs, while the ability to reduce liquidity ratios in times of stress could potentially reduce shock transmission by creating incentives for funds to use cash instead of selling assets.

The Central Bank also supports the implementation of proposals to de-couple the passing of certain liquidity thresholds from the requirement on a fund manager to consider implementing liquidity management tools (LMTs). This is important, as the link between passing liquidity thresholds and having to consider the implementation of LMTs seems to have acted to increase redemptions during the COVID-19 stress, as some investors feared not being able to withdraw all of their investment in the MMF at short-notice.

- **Secondly, move to implement the FSB’s recommendations for OEFs**

The Central Bank believes that one of the EU priorities should be the implementation of the framework for OEF liquidity management as set out in the FSB revised recommendations on the topic, alongside the accompanying IOSCO guidance, which has laid-out an international blueprint for reducing vulnerabilities posed by liquidity mismatch in OEFs.⁵ It is important that the EU moves to implement these internationally-agreed standards fully.

In its 2022 report on the effectiveness of policy recommendations from 2017 on liquidity management in investment funds, the FSB put forward a series of policy proposals to enhance the resilience of the fund sector by improving liquidity management in OEFs.⁶ Specifically, the FSB proposed measures to reduce the underlying structural mismatch in investment funds and enhance the international framework around the consideration and use of LMTs, particularly price-based LMTs. This includes proposals on (i) greater use and greater consistency in the use of anti-dilution LMTs; and (ii) basing redemption terms offered on the liquidity of a fund’s portfolio (including categorising funds on that basis into liquid, less liquid, and illiquid). The Central Bank believes these proposals would introduce a necessary level of systemic resilience for liquidity management across the funds sector.

- (i) In terms of **encouraging more use and more consistent use of anti-dilution LMTs**, we acknowledge that the EU has started the process of implementing elements of this framework. The recent review of the Undertakings for the Collective Investment in Transferable Securities (UCITS) Directive and the Alternative Investment Fund Managers Directive (AIFMD) has included changes to harmonise the LMTs available, accompanied by further guidance from ESMA on the characteristics and use of such tools. The Central Bank believes that, from both a macroprudential and investor protection perspective, the focus in this area needs to be on encouraging more use and more consistent use of anti-

⁵ See FSB (2023) '[Revised Policy Recommendations to Address Structural Vulnerabilities from Liquidity Mismatch in Open-Ended Funds](#)', and IOSCO (2023) '[Anti-dilution Liquidity Management Tools – Guidance for Effective Implementation of the Recommendations for Liquidity Risk Management for Collective Investment Schemes](#)'.

⁶ See FSB (2022) '[Assessment of the Effectiveness of the FSB’s 2017 Recommendations on Liquidity Mismatch in Open-Ended Funds](#)'.

dilution LMTs, in both normal and stressed times, to reduce the scope for first mover advantage in OEFs. Given the importance of LMTs in the revised FSB recommendations, the European Commission and regulatory authorities in the EU should seek to ensure – through setting clearer regulatory expectations – effective and consistent use of anti-dilution LMTs across OEFs.

Rates of tool activation require careful monitoring following the implementation of the ESMA guidance to ensure that the ultimate desired policy outcomes of the FSB proposals are being delivered. The Central Bank recognises that recent legislative changes to the AIFMD mean that priority should be given to achieving those outcomes through non-legislative routes. Nevertheless, absent a material uplift in activation and consistency of application, the European Commission would need to consider future legislative amendments to place a default requirement on OEFs that such anti-dilution LMTs should be used at all times, even on a partial basis, for funds in the less liquid category, in particular.

Reflecting our support for international work led by the FSB and IOSCO on liquidity risk management in OEFs, the Central Bank is undertaking work to better understand how price-based LMTs are used by Irish-domiciled funds. The Central Bank is also exploring in more depth some of the key implementation challenges to inform operational discussions internationally on this issue. This includes work on issues such as incorporating the market impact of asset sales into swing factors, inconsistencies in the use of these tools, and their use in normal as well as stressed conditions.

- (ii) In relation to the FSB’s proposals on classifying funds, the Central Bank believes the European Commission should request that the relevant authorities in the EU consider how these proposals can be implemented. This is a crucial building-block of implementing the FSB’s revised recommendations and much of the technical detail has been left to jurisdictions to design, accounting for the specificities of their local markets. Therefore, the relevant regulatory authorities - the European Supervisory Authorities (ESAs), ESRB, ECB and NCBs/NCAs - should now elaborate how this framework will be implemented in the EU. Formal work has yet to commence at an EU-level on the proposals to classify funds according to the liquidity of their assets.

- **Thirdly, once finalised, implement the FSB’s recommendations on enhancing the liquidity preparedness of NBFIs for margin and collateral calls**

Recent FSB work has identified weaknesses in risk management and governance as key causes of inadequate liquidity preparedness of some non-bank market participants during recent episodes of liquidity stress in markets. In response, the FSB has consulted on key policy

recommendations focused on managing and mitigating the impact of spikes in margin and collateral calls in the NBF1 sector. The Central Bank believes that any new international standards should be implemented across Europe, and internationally, in a consistent manner.

- **Fourthly, support the FSB’s ongoing work on non-bank leverage**

The Central Bank is supportive of the FSB’s ongoing work on addressing vulnerabilities from non-bank leverage. The FSB, working with IOSCO, is undertaking and coordinating policy work to enhance the monitoring of, and address financial stability risks from leverage in NBF1. Following the conclusion of this work, the Central Bank encourages the European Commission to undertake an assessment of any necessary legislative changes in the EU, and if deemed appropriate, to present this to the co-legislators for implementation in the Union, and also to encourage consistency in implementation globally.

2. Enhance the macroprudential toolkit for non-banks

Notwithstanding the development of the regulatory framework, as referred to previously, together with the recent changes as part of the AIFMD review, the Central Bank believes that targeted enhancements in the macroprudential toolkit that is available to authorities to guard against the build-up of systemic risk are merited. For instance, there is no explicit macroprudential tool available to address risks from liquidity mismatches in OEFs. In addition, there is the potential for UCITS funds to gain leverage exposures using the Value-at-Risk (VaR) approach which needs to be reviewed.

- **Firstly, explore the introduction of an explicit macroprudential tool to address risks from unmitigated liquidity mismatch in OEFs**

As outlined in [DP11](#), the Central Bank believes that the further exploration of macroprudential policy options, including additional tools, may be warranted to mitigate risks that can arise from liquidity mismatch. Such a tool could potentially be modelled on the existing Article 25 of the AIFMD tool for leverage, but be designed to specifically target unmitigated liquidity mismatch in OEFs. Ideally, this tool could be used to address risks and improve the resilience of fund cohorts across both Alternative Investment Funds (AIFs) and UCITS, depending on the nature of the systemic risk posed by cohorts of either fund type. Consistent with the existing Article 25 of the AIFMD tool for leverage, an equivalent liquidity tool should be discretionary and ex ante in nature, aimed at preventing the build-up of risk, and activated ex ante in the case of a risk to financial stability. Further consideration would be required on the precise design of such a tool, but priority should be given to providing authorities with the power to apply this on the liability side of funds. For instance, one option could be to provide authorities with the power to specify

longer notice periods for specific fund types on an ex ante basis, if this is warranted to safeguard financial stability.

- **Secondly, explore the introduction of a tool to address systemic risk from the UCITS cohort that follow a Value-at-Risk (VaR) approach to leverage**

In relation to the risks from excessive leverage, the Central Bank believes that further exploration is warranted in relation to the cohort of UCITS funds that follow an absolute VaR approach under the UCITS Directive, and whether they might present a systemic risk.

While most UCITS funds are already subject to a leverage limit, the UCITS framework permits the use of VaR to measure the maximum potential loss due to market risk. This latter cohort of funds, especially if using absolute VaR, may reach levels of leverage that are considered “substantial” according to AIFMD definitions. This leaves a potential shortcoming in the regulatory toolkit to limit leverage-related risks in the funds sector.

The Central Bank views, as a priority, the need to assess whether leverage-related vulnerabilities in this cohort of funds have the potential to contribute to systemic risk. To facilitate this, all UCITS funds using VaR should be required to report regularly on their leverage based on the commitment approach. Should these funds be found to have the potential to pose a risk to broader financial stability, the ability to impose additional constraints would enhance the existing macroprudential toolkit. This could potentially resemble the use of Article 25 of the AIFMD, for those UCITS funds using VaR. The Central Bank believes, subject to the assessment above, that the detail and design of such a tool needs to be explored in further detail.

3. Effective governance arrangements

An effective governance framework is an important building block of strengthening the macroprudential perspective in the regulation of the NBF1 sector. Without a mechanism for coordination of macroprudential measures for NBF1 entities across the EU, the effectiveness of such measures in achieving their ultimate objectives could be diminished. In order to function effectively, such a macroprudential framework would ideally have a high degree of consistency internationally. The introduction and calibration of specific macroprudential tools in one jurisdiction can have impacts in other jurisdictions and there is a risk that macroprudential policy ‘leakage’ could arise, which could limit the effectiveness of any intervention and could result in a shift of underlying vulnerabilities across borders. Indeed, in the design of our non-bank macroprudential measures for specific cohorts of investment funds, the Central Bank has highlighted the importance of cross-border cooperation to ensure the effectiveness of these measures. Therefore, in the Central Bank’s view, a focus on two targeted elements would be merited:

- **Reciprocation**

The Central Bank believes there needs to be a more formal framework in the EU for reciprocation and, ideally, a way internationally of fostering dialogue on policy measures with a view to avoiding leakage. In recent years the Central Bank has consistently called for the development of a reciprocation framework for NBFIs macroprudential policies, including in [DP11](#), which was published last year.

Elements of existing regulations, such as Article 40 of the Markets in Financial Instruments Regulation (MiFIR), could potentially offer a useful template for how such a coordination mechanism could operate in practice. For instance, such a provision could empower ESMA to consider, on the basis of an NCA-proposed domestic measure, whether such a measure should be adopted EU-wide. Such a coordination mechanism would strengthen the effectiveness of national measures, while guarding against the potential for regulatory fragmentation or arbitrage across the EU. For example, if an NCA were to implement leverage limits for a group of funds undertaking a particular activity operating in their jurisdiction, the reciprocation mechanism would ensure that funds with a similar systemic risk profile in other Member States would also be subject to those limits, if deemed appropriate, given the nature and magnitude of their activities.

- **'Top-up' powers**

An additional mechanism to enhance coordination across the EU would be to grant ESMA 'top-up' powers for specific macroprudential tools to address systemic risk across the EU. Specifically, were ESMA, in consultation with national macroprudential authorities and competent authorities, and after consulting with the ESRB, to judge that a cohort of funds posed a systemic risk to an EU Member State, or the EU as a whole, they could be given the power to either 'top-up' existing national measures or, where none already exist, to request the implementation of specific macroprudential measures. This would be limited to a small number of *ex ante* macroprudential tools, and be based on a set of principles and powers agreed in advance.

The Central Bank believes that a focus on the above two elements will be important given the highly cross-border nature of NBFIs, particularly the funds sector. More generally, it is crucial that cooperation between European and national macroprudential and competent authorities should be strengthened for the broader non-bank financial sector.

4. System-wide stress testing in the EU

The Central Bank supports the introduction of a system-wide stress test in the EU as an important tool for exploring the response of a diverse set of market participants to adverse shocks, and the potential implications of such collective responses for the functioning of core systemic markets. To ensure a system-wide exercise in the EU is as robust and useful as possible, regulators should aim to complement desktop-based exercises through iterative engagement with key market participants, creating a feedback loop between scenarios and potential behaviours.

System-wide stress testing remains at an early stage of development and there are data and methodological challenges to overcome. However, progress is being made on these fronts across multiple public institutions, both within and outside of the EU, which are improving the standard of system-wide stress testing more generally. Conducting a system-wide stress test in the EU would require cross-sectoral supervisory cooperation and enhanced data and information sharing. By design, a system-wide stress test would cover a wide range of market participants, including banks, insurers, funds and central counterparties (CCPs). As these are supervised by different authorities, conducting a system-wide stress test would require close supervisory collaboration. Similarly, data harmonisation across jurisdictions is essential for effective stress tests. The Central Bank is supportive of such initiatives to develop a system-wide stress test in the EU.

5. Enhance NBFi data and data-sharing arrangements

- **Data are a critical enabler for assessing potential vulnerabilities in the NBFi sector**

Data are a key enabler of an effective macroprudential policy framework, as noted in last year's [DP11](#). The issue of data gaps was a recurring theme both in industry's feedback to DP11 and at the Central Bank's follow-on international conference in May this year, at which the issue of internationally consistent definitions also featured heavily in discussions.⁷

In recent years, there has been considerable progress in filling data gaps for the NBFi segment of the financial system. Nevertheless, important gaps remain. Data gaps are even more material for parts of the NBFi segment of the financial system that are not regulated, limiting authorities' capability to monitor the regulatory perimeter. Progress to fill material data gaps (building on the FSB work internationally), and to enhance the quality of existing data, while being mindful of the cost to industry and seeking to address these in an efficient manner, is a necessary building

⁷ See Central Bank of Ireland (2024) '[Feedback Statement to DP11: an approach to macroprudential policy for investment funds](#)'.

block to strengthen authorities' collective understanding of the NBF1 sector's contribution to systemic risk.

- **Enhance data access and data-sharing across European authorities**

Access to high-quality data is necessary to strengthen regulators' collective understanding of NBF1s' contribution to systemic risk. The Central Bank believes that regulators' priority with regards to data should be ensuring the sharing, usability and high quality of existing data collections. Only once existing collections have been exhausted, including combining existing data sources, should authorities decide whether a new data collection is required for macroprudential reasons. As part of this process, authorities should also determine whether certain elements of data reporting can be dropped where they are judged not to add sufficient value.

Improvements to data sharing arrangements across EU authorities needs to progress swiftly. The Eurosystem collects a range of data from NBF1s for statistical purposes, while relevant NCAs collect a range of supervisory data from regulated NBF1 entities. In practice, arrangements for sharing these data across authorities are insufficient. For example, access of Eurosystem central banks to granular regulatory data on NBF1s is limited in most cases. And, while the Central Bank acknowledges the efforts made to date in the EU, the Eurosystem as a whole does not have direct access to entity-by-entity supervisory data reported under the AIFMD/UCITS, the Money Market Fund Regulation (MMFR), Solvency II, and the Markets in Financial Instruments Directive (MiFID). Similarly, supervisory authorities do not have direct access to granular data collected by the Eurosystem for statistical purposes.

The Central Bank considers that, at a European level, domestic and cross-border data and information sharing between national central banks and national supervisory authorities should be strengthened. An avenue to achieving this is to incorporate provisions in the relevant EU regulations allowing direct access by Eurosystem central banks to cross-border and domestic non-bank regulatory data, under their financial stability mandates, and similar provisions allowing supervisory authorities direct access to granular data collected by the Eurosystem for statistical purposes. Additionally, legal constraints that hinder such data access and usage should be addressed.

- **Develop internationally consistent risk metrics for liquidity mismatch and leverage**

The Central Bank actively supports the workstreams at the FSB to develop consistent metrics for leverage across the NBF1 sector and developing the toolkit to monitor liquidity mismatch in OEFs, by enhancing available metrics of liquidity mismatch, including through better data on redemption terms for funds.

6. Monitor the regulatory perimeter

The regulatory perimeter is a key consideration in designing a macroprudential framework for NBFIs. A material share of assets under management in the EU are not managed out of funds regulated under AIFMD or UCITS, but rather from discretionary mandates (covered under the MiFID) and a range of other vehicles such as family offices.

There are two important implications of this:

- **Firstly, there is merit in expanding data availability and systemic risk assessment to areas beyond regulated investment funds**

The Central Bank believes there is merit in expanding data availability and systemic risk assessment to areas of asset management activity beyond regulated investment funds, including to discretionary mandates and family offices. The latter may pose certain similar risks (e.g. arising from synthetic leverage or inadequate preparedness to meet margin calls) to their counterparts regulated under AIFMD/UCITS, but – because they lie outside of the regulatory perimeter – there is very limited information to gauge the magnitude of the risks. Any additional data collection would, of course, need to be proportionate to the risks posed by these entities and subject to a cost-benefit assessment.

- **Secondly, a holistic approach to addressing systemic risk should be both entity- and activity-based**

An activity-based approach, in particular, could help to avoid potential policy leakage into unregulated entities. Where warranted, designing measures in such a way where they could address similar vulnerabilities, regardless of regulatory regime, would close an existing opportunity for regulatory arbitrage, and address systemic risks more effectively. However, as stated previously in [DP11](#), the Central Bank is not proposing a ‘one size fits all’ approach given the diversity of NBF1 activity. As recognised above, the funds sector is diverse, with different types of fund cohorts presenting different systemic risk profiles. This difference needs to be accounted for in any systemic risk assessment, especially where a cohort of funds does not display underlying vulnerabilities.

As an underlying concept, the Central Bank supports an activity-based approach, complementing an entity-based approach. In practice, there are complex issues to be further explored regarding the framework for evaluating when activity-based measures would be optimal, either on their own or in conjunction with entity-based measures. Indeed, the boundary between the two can be blurred and often measures applied in one form relate to the other.

Conclusion

This response sets out the policy positions the Central Bank believes the European Commission should consider in developing a comprehensive macroprudential framework for NBFIs in the EU. It represents the Central Bank's perspective as both a securities market regulator and as a central bank, whilst benefitting from the Central Bank's experience in implementing domestic macroprudential policy measures for specific cohorts of investment funds. As mentioned above, this response should be read alongside that of the [Eurosystem response](#) to the European Commission consultation. In addition, the Central Bank's response to the specific questions included in the European Commission consultation paper can be found in the annex below.

Annex A: Facts and figures on the NBF1 sector in Ireland

The table and charts shown in this annex are taken from the Central Bank’s [Market Based Finance Monitor](#), 2023 edition.

Table 1: Overview of the NBF1 sector in Ireland

Number of entities and AuM for each fund category; Q2 2023

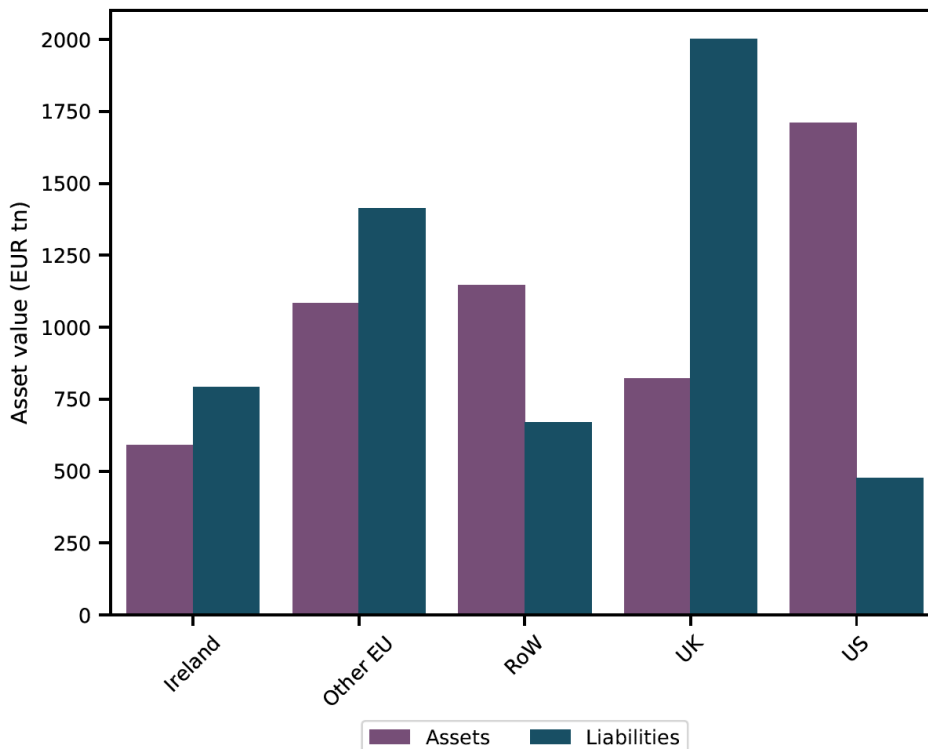
	Number of Entities	AuM (€ billion)	5-year % AuM growth
Equity Funds	2,466	1,465	85
Bond Funds	1,231	976	48
Other Funds	1,945	635	62
Hedge Funds	444	266	19
GBP LDI Funds	322	219	-21
Property Funds	208*	35*	36
MMFs	86	678	36
SPEs	3,364	1,090	55
Total	10,021	5,354	50

Source: Central Bank of Ireland.

Notes: Data as of 2023 Q2. Data marked with * relate to end-2022 data for Irish property funds captured by the macroprudential measures.

Chart 1: Ireland is an international financial hub intermediating capital flows

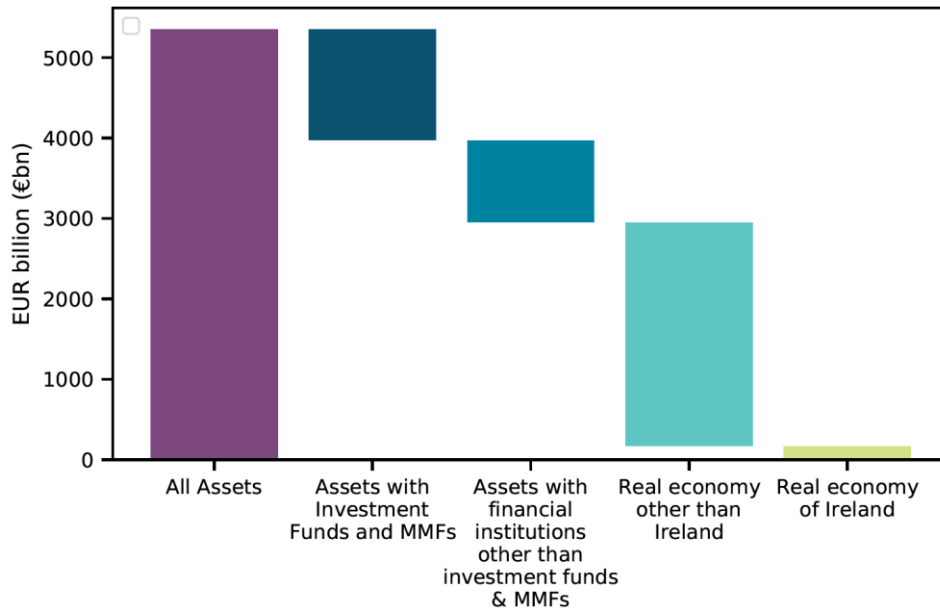
Total assets and liabilities of Irish Market-Based Finance by region of exposure; Q2 2023



Source: Central Bank of Ireland.

Chart 2: Irish NBF1 is an important source of financing for the global real economy

Exposures of Irish Market-Based Finance to the real and financial economies; Q2 2023



Source: Central Bank of Ireland.

Notes: Financing for the real economy includes assets issued by NFCs (non-financial corporations) or governments and property and land assets.

Annex B: Responses to the consultation questions

Question 1: Are there other sources of systemic risks or vulnerabilities stemming from NBFIs' activities and their interconnectedness, including activity through capital markets, that have not been identified in this paper?

Please see the Eurosystem response.⁸

Question 2: What are the most significant risks for credit institutions stemming from their exposures to NBFIs that you are currently observing? Please provide concrete examples.

Please see the Eurosystem response.

Question 3: To what extent could the failure of an NBF1 affect the provision of critical functions to the real economy or the financial system that cannot easily be replaced? Please explain in particular to which NBF1 sector, part of the financial system and critical function you refer to, and if and how you believe such knock-on effect could be mitigated.

Please see the Eurosystem response.

Question 4: Where in the NBF1 sectors could systemic liquidity risk most likely materialise and how? Which specific transmission channels of liquidity risk would be most relevant for NBF1? Please provide concrete examples.

Please see the Eurosystem response.

Question 5: Where in the NBF1 sectors do you see build-up of excessive leverage, and why? Which NBFIs could be most vulnerable? Please provide concrete examples.

Please see the Eurosystem response.

Question 7: Considering the role NBFIs have in providing greater access to finance for companies and in the context of the capital markets union project, how can macroprudential policies support NBFIs' ability to provide such funding opportunities to companies, in particular through capital markets? Please provide concrete examples.

Please see the Eurosystem response.

Question 8: What are pros and cons of giving the competent authority the power to increase liquidity buffer requirements on an individual or collective basis in the event of system-wide financial stability risk? Under which other situation do you believe MMF liquidity buffers should be increased on an individual or collective basis by the competent authority? Please explain.

⁸ The Eurosystem have agreed a common [Eurosystem response](#) to a number of the consultation questions. The Central Bank of Ireland response should be read in parallel to the response of the Eurosystem.

Please see the Eurosystem response.

Question 9: How can ESMA and ESRB ensure coordination and the proper use of this power and what could be their individual roles? Please provide specific examples or scenarios to support your view.

ESMA should play a coordinating role in encouraging fund managers to use liquidity buffers in times of stress and to rebuild buffers following a stress. As outlined in the Eurosystem response to question 8, higher overall liquidity requirements should be prioritised to enhance the resilience of EU MMFs that invest in private debt. Insofar as there is a role for authorities, they should engage with funds on the use of buffers, which should be temporary and used only as needed to manage their liquidity during a stress event. NCAs should have the power to specify a time limit defining the period during which MMFs may opt to use their liquidity buffers. Coordination by ESMA during this process would help avoid distortions within the Single Market. Similarly, ESMA could coordinate the guidance given by different NCAs with respect to rebuilding buffers following a period of stress.

Question 10: In view of the new UCITS supervisory reporting obligations and improvements to AIFMD reporting, how could reporting requirements under the MMFR be aligned, simplified and improved to identify stability risks (such as liquidity risks) and to ensure more efficient data sharing?

ESMA has established a workstream which will focus on: (a) reducing areas of duplication and inconsistencies between the reporting frameworks in the asset-management sector and other sectors of the financial industry; and (b) improving data standardisation and efficient sharing and use of data already reported within any EU reporting framework by any relevant competent authority, at EU or national level. The AIFMD and UCITS review, in addition, requires ESMA to develop several new technical standards and amend existing ones to align them with the Level 1 changes. For these reasons, it is difficult to make a determination of how requirements under the Money Market Fund Regulations (MMFR) could be aligned, simplified, and improved with AIFMD reporting (EU reporting and national reporting) to identify stability risks and ensure more efficient data sharing.

Nevertheless, this workstream may consider the following high-level improvements:

- **Standardisation of Concepts and Measures:** Align data templates and metrics across MMFR and AIFMD reporting to promote consistency and reduce different approaches to measures and concepts.
- **Liquidity Risk Indicators:** Include mandatory reporting of metrics that directly assess liquidity risks, such as daily liquidity profiles, portfolio maturity ladders, and reliance on short-term funding.
- **Granular Exposures:** Require reporting of holdings with more granular details, including issuer breakdowns and credit rating distributions, to enable supervisors to analyse information and extract bespoke data without having to further burden industry with additional data requests.

- **Centralised Repository:** Establish a central repository for all regulatory data collected under MMFR and AIFMD reporting. This should also include third party databases whereby characteristics information on holdings is made available to NCAs.
- **Eliminate Repetitive Requests:** Eliminate requesting the same data multiple times from multiple sources.

Question 11: Do you believe that the proposed enhancements to the stress testing framework listed above are sufficient to identify and mitigate liquidity risks effectively? If not, what specific elements would you suggest including in the strengthened supervision and remediation actions for detecting liquidity risks?

Please see the Eurosystem response.

Question 12: What are the costs and benefits of introducing an EU-wide stress test on MMFs? Should this stress test focus mainly on liquidity risks?

Please see the Eurosystem response.

Question 13: What are your views on the EU ban on a reverse distribution mechanism by MMFs?

The Central Bank holds the view that permitting use of the reverse distribution mechanism (RDM) was in the best interest of investors during the period of negative interest rates. The Central Bank permitted, with appropriate safeguards, the use of RDM in 2012. This was informed by the fact that there was clear evidence at the time that investors wished to remain invested in constant net asset value (CNAV) MMFs even where this meant that the negative yield would be represented through a reduced number of shares as opposed to a reduced daily valuation of those shares. Moreover, if investors preferred, there were alternatives available including the possibility to switch to a VNAV MMF or to exit the MMF. The Central Bank set a high bar for permitting use of the RDM by requiring unanimous shareholder approval. Nevertheless, the Central Bank recognised that other authorities had a different opinion and, in January 2019, we issued a [joint statement](#) with the Commission de Surveillance du Secteur Financier (CSSF) which stopped the practice of MMFs using the RDM.

Question 14: Can you provide insights and data on how the reverse distribution mechanism has impacted in practice the stability and integrity of MMFs?

In the Central Bank's experience, centred on euro-denominated MMFs during the period of negative interest rates prior to the MMFR, the RDM did not negatively impact the stability and integrity of MMFs. We did not observe operational issues or systemic problems, nor were we informed of any investor complaints. Our conclusion from this experience was that the RDM functioned as intended, preserving the stability and integrity of short-term, constant NAV MMFs.

Question 15: Should regulatory requirements for MMFs take into account whether the instrument they are investing in is admitted to trading on a trading venue (regulated markets, multilateral trading facilities or organised trading facilities) with some critical level of trading activity? Please explain your answer.

The Central Bank believes there is insufficient evidence to support the proposed change to regulatory requirements for MMFs to take into account whether instruments they invest in are admitted to trading venues. As a guiding principle, regulatory requirements for MMFs need to reflect the liquidity – including the resilience of that liquidity – of underlying assets. There are a number of factors that can affect the liquidity of underlying assets, including – but not limited to – whether an asset is admitted to trade on a trading venue and the degree of trading activity on that venue. However, before making a change to regulatory requirements on the basis of that proposed link, further quantitative work is required to establish the size of the impact of admittance to trade on a venue on the liquidity of the underlying assets.

Question 16a: What is the supervisory practice and your experience with monitoring and detecting unmitigated liquidity mismatches during the lifetime of OEFs?

Liquidity mismatch is a key underlying vulnerability for fund cohorts, particularly for OEFs invested in less liquid assets. Investors in such an OEF may have an incentive to redeem ahead of other investors if they believe that the fund will sell their most liquid assets first in response to redemption requests. This first-mover advantage dynamic can lead to ‘excess’ redemptions and asset sales in times of stress. Whilst this behaviour may be manageable at the level of individual funds, when aggregated across a cohort of funds it can amplify market disruptions, with adverse implications for the rest of the financial system and the real economy.

The Central Bank is supportive of the implementation of the FSB’s proposals to enhance the liquidity management of OEFs. In their 2023 report revising policy recommendations on liquidity management in investment funds, the FSB has put forward a series of policy proposals to enhance the resilience of the fund sector by improving liquidity management.⁹ Specifically, the FSB proposed measures to reduce the underlying structural mismatch in OEFs and to enhance the international framework around the consideration and use of LMTs, particularly price-based LMTs. The Central Bank believes these proposals would introduce a necessary level of systemic resilience for liquidity management across the funds sector.

The Central Bank has a data-led, risk-based approach to the supervision of OEFs that prioritises supervisory resources based on the assessed risks of individual funds and fund managers. This approach speaks to the Central Bank’s mandates across the areas of investor protection, financial stability, and market integrity. More specifically, the Central Bank uses a proprietary risk model that considers both the likelihood and impact of distress in a fund or cohort of funds, based on key metrics including liquidity transformation and redemption coverage ratios. These metrics help supervisors to identify and monitor potential liquidity mismatches.

The Central Bank is undertaking work to better understand how price-based LMTs are used by Irish-domiciled funds, reflecting our support for international work led by the FSB and IOSCO on liquidity risk management in OEFs. The Central Bank is also exploring in more depth some of the key implementation challenges to inform operational discussions internationally on this issue. This includes work on issues such as incorporating the market impact of asset sales into swing

⁹ FSB (2023), [“Revised Policy Recommendations to Address Structural Vulnerabilities from Liquidity Mismatch in Open-Ended Funds”](#).

factors, inconsistencies in the use of these tools, and their use in normal as well as stressed conditions.

Question 17: What is the data that you find most relevant when monitoring liquidity risks of OEFs?

The data the Central Bank finds most useful for monitoring liquidity risks among OEFs include:

- High-frequency and detailed reports on net redemptions or outflows. These reports include information on dealing frequency and volume as well as redemption frequency and volume.
- Asset liquidity profiles including instrument type, maturity, credit quality, sector, issuer details, etc.
- Use of LMTs (e.g. notice periods, swing pricing, redemption limits and suspensions) and details of redemption terms.
- Use of repos and derivatives including margin/collateral requirements;
- Details of funds' investor bases.
- Results from stress tests and scenario analyses.

Question 18: What supervisory actions do you take when unmitigated liquidity mismatches are detected during the lifetime of an OEF?

The Central Bank has developed a proprietary risk model which considers the risk of a fund or cohort of funds to the Central Bank's objectives with respect to investor protection, market integrity, and financial stability. Metrics to help understand potential risks in liquidity transformation are a key component of this model. Where an OEF presents with potential liquidity mismatch, the Central Bank would engage to probe the relevant management company's liquidity risk management framework and liquidity stress testing practices to ensure adherence with relevant regulations and guidelines.

The Central Bank's supervisory approach utilises available data combined with the direct engagement with the fund or manager to assess emerging issues. This assessment involves identifying the root cause of the issue, as well as the potential impact on investors and possible spillover effects to other funds. The Central Bank can impose a Risk Mitigation Programme (RMP) in order for the fund or asset manager to adequately address and mitigate the risk that has emerged. Failure to adhere to the requirements of an RMP can lead more intensive supervisory action including enforcement sanction and the risk of the fund's authorisation being removed.

Should the Central Bank detect liquidity mismatches across a cohort of funds, potentially posing a systemic risk, the supervisory and macroprudential functions of the Central Bank would work together to decide the most appropriate set of actions. These might be targeted supervisory actions relating to specific firms or they could be system- or cohort-wide actions.

Question 19: On the basis of the reporting and stress testing information being collected by competent authorities throughout the life of a fund, how can supervisory powers of competent authorities be enhanced to deal with potential inconsistencies or insufficient calibration between the

LMTs selected by the manager for a fund or a cohort of funds and their assets and liabilities liquidity profile? How can NCAs ensure that fund managers make adjustments to LMTs if they are unwilling to act? How could coordination be enhanced at the EU level?

Focused authorisation practices, regular supervisory reviews, and stress testing are examples of existing ways authorities can address inconsistencies between LMTs and a fund's liquidity profile. First, focused authorisation practices can ensure that LMTs selected are sufficiently robust and diverse. Second, supervisors can conduct regular reviews of a fund's LMTs and liquidity risk management practices with the option to issue enhanced guidance on the selection and use of LMTs, based on a fund's liquidity profile. Third, supervisors can require funds to perform stress tests to assess how LMTs would function under various market conditions.

However, an over-reliance on stress test results can potentially be misleading. Stress tests are designed to simulate specific scenarios, but real-world crises can unfold differently. The accuracy of stress test results also hinges on the quality of data used. Furthermore, stress tests are often conducted with a short-term horizon, neglecting long-term risks that might emerge gradually over time.

While NCAs cannot replace funds' own risk management practices, they can ensure that funds make necessary adjustments to LMTs through the enforcement of existing regulations and, where appropriate, increasing the degree of prescription in regulations. NCAs can hold fund managers accountable for adhering to regulations on liquidity risk management, and by issuing sanctions against non-compliant firms. As set out in our recent [Discussion Paper](#), it is not the aim of macroprudential policy to replace or substitute for funds' or investors' own risk management practices, including liquidity management. The Central Bank acknowledges the challenges associated with NCAs directing fund managers as to the LMTs they should utilise, given that fund managers possess a deep understanding of the fund's assets, liabilities, and overall risk profile. Moreover, sole responsibility fosters a strong sense of accountability for the fund's liquidity, potentially leading to more prudent LMT selection and timely decision-making.

The Central Bank supports more use, and more consistent use, of anti-dilution LMTs alongside careful monitoring of LMT activation by firms. As set out in the narrative section of our response, the Central Bank supports the FSB proposal to encourage more use, and more consistent use, of anti-dilution LMTs. Rates of tool activation require careful monitoring following the implementation of the ESMA guidance to ensure that the ultimate desired policy outcomes of the FSB proposals are being delivered. The Central Bank recognises that recent legislative changes to the AIFMD mean that priority should be given to achieving those outcomes through non-legislative routes. Nevertheless, absent a material uplift in activation and consistency of application, the European Commission would need to consider future legislative amendments to place a default requirement on OEFs that such anti-dilution LMTs should be used at all times, even on a partial basis, for funds in the less liquid category, in particular.

Reflecting our support for international work led by the FSB and IOSCO on liquidity risk management in OEFs, the Central Bank is undertaking work domestically to understand better how price-based LMTs are used by Irish-domiciled funds. We are also exploring in more depth some of the key implementation challenges to inform operational discussions internationally on

this issue. This includes work on issues such as incorporating the market impact of asset sales into swing factors, inconsistencies in the use of these tools, and their use in normal as well as stressed conditions.

Question 23: When monitoring or using results of liquidity stress tests, are you able to timely collect underlying fund data used by managers and the methodology used for the simulation? Are there other aspects that you find very relevant when monitoring the stress tests run by managers?

Please see the Eurosystem response for a combined response to questions 23 and 24.

The response below serves to augment the Eurosystem response based on the Central Bank's specific supervisory practices and experiences.

While the Central Bank collects details of the parameters and results of fund-level stress tests, the lack of standardisation for stress testing by AIFs can make it difficult to use these data effectively. The Central Bank collects details of the parameters and subsequent results of stress tests conducted by MMFs and AIFs on a regular basis¹⁰ as a result of our obligations under the MMFR and AIFMD, respectively. The level of detail and usability varies significantly between these two legislations and reporting frameworks. The use of a standardised set of parameters and scenarios for MMFs across the Union increases the usability of the data and comparability across fund types, managers and countries. By contrast, notwithstanding the liquidity stress testing guidelines published by ESMA, no such standardisation exists for AIFs making it difficult to use data to monitor stress tests. Currently no such reporting is available to UCITS however this is likely to change in the near future. The use of standardised parameters and scenarios, at a fund or system level, is essential to ensure that stress testing data can be used as an effective supervisory tool.

Information collected from stress testing at the fund level is primarily used to inform the supervision either of that specific fund or of funds in the same cohort. This is illustrated by the Central Bank's use of MMF stress testing data. As per Article 28 MMFR, stress test results are monitored on a quarterly basis for the largest MMFs in the jurisdiction. The Central Bank analyses stress test results for significant outliers relative to either the MMF type or its base currency. Supervisors engage with the fund management company of MMFs that have been identified as outliers to understand why these funds are behaving differently to peers under stressed scenarios. Supervisors will ascertain what actions have been taken by the fund manager and to what extent vulnerabilities have been identified. During this engagement, insight is sought in relation to the fund manager's internal stress testing results and how these compare to the ESMA guidelines. This information contributes to enhance supervisory identification of any trends or concerns across the MMF cohort.

Question 24: How do you use information collected from stress tests at fund level for other supervisory purposes and for monitoring systemic risks?

Please see the Central Bank's response to Question 23 above.

¹⁰ These data are collected quarterly for MMFs with AUM greater than €100m and quarterly for AIFs managed by an Irish AIFM with AUM greater than €500m.

Question 25: What are the main benefits and costs of introducing a stress test requirement at the asset management company level and how could this be organised?

Please see the Eurosystem response.

Question 26: What are your views on the preparedness of NBFIs operating in the EU in meeting margin calls, and on the ways to improve preparedness, taking into account existing or recently agreed EU measures aimed at addressing this issue? Please specify the NBF1 sector(s) you refer to in your answer?

Please see the Eurosystem response.

Question 27: What are relevant risk metrics or tools that can be used to effectively monitor liquidity and margin preparedness across all NBF1 entity types? Please provide examples specifying the sector you refer to.

For the funds sector, there are a variety of metrics and tools used to monitor liquidity and margin preparedness. These include liquidity risk metrics that assess the likelihood and severity of liquidity risks faced by funds, considering factors like funds' asset liquidity profile, their redemption frequency, the availability of high-quality liquid assets, and the adequacy of liquidity buffers to meet stressed liquidity calls. There are also metrics to assess risks associated with overconcentration in specific asset classes, issuers, or counterparties that consider factors like diversification levels, potential price movements, and potential margin call concentration on a single counterparty. Investor behaviour risk metrics assess the potential impact of investor behaviour on liquidity during stressed periods, considering factors like investor redemption patterns, sensitivity to NAV fluctuations, and potential for herd behaviour. Margin call risk metrics evaluate the firm's vulnerability to margin calls, considering factors like leverage ratios, exposure to instruments with high margin requirements, and the availability and effectiveness of contingency funding plans. Margin call metrics also consider diversification levels, potential price movements, potential margin call concentration on a single counterparty and the adequacy of liquidity buffers to meet stressed margin calls.

Careful monitoring of the anti-dilution LMTs available to funds, and their rates of activation, is an important way regulators can effectively monitor liquidity preparedness. These are tools that fund managers can employ which, if used as part of the day-to-day liquidity risk management in funds, can be effective at reducing first-mover dynamics thereby limiting the impact of liquidity mismatch in funds. As noted above, the Central Bank is undertaking work to better understand how price-based LMTs are used by Irish-domiciled funds.

Stress testing metrics evaluate the effectiveness of a firm's stress testing framework, considering factors like the severity and duration of stress scenarios. More broadly, liquidity stress testing can include bottom up approaches such as the [ESMA stress simulation framework \(STRESI\)](#), macroprudential stress testing such as outlined in [Fiedor and Katsoulis \(2019\)](#) and system wide stress testing such as outlined in [Sydow et al. \(2024\)](#).

Finally, regular supervisory engagement is also a tool that can be used to monitor liquidity. This includes the review of liquidity management, contingency funding plans, the selection and use of LMTs, and adherence to investment guidelines and restrictions.

Question 30: What would be the benefits and costs of creating a framework or a label in EU legislation for certain money market instruments (such as commercial papers) to increase transparency and standardisation? Should the scope of eligible instruments to such framework/label be aligned with Article 3 of Directive 2007/16/EC? If not, please suggest what criteria would you consider for identification of eligible instruments.

Please see the Eurosystem response.

Question 31: Would the presence of a wider range of issuers (notably smaller issuers) to fund themselves on this market, and therefore diversify their funding sources, be beneficial or detrimental to financial stability?

Please see the Eurosystem response.

Question 32: What are your views on why euro-denominated commercial papers are in large part issued in the 'EUR-CP' commercial paper market outside the EU? What risks do you identify? Please provide quantitative and qualitative evidence, if possible.

Please see the Eurosystem response.

Question 33: What could be done to improve the liquidity of secondary markets in commercial papers and certificates of deposits?

Please see the Eurosystem response.

Question 34: Considering market practice today, is the maturity threshold for 'money market instruments' (up to 397 days) in the Eligible Asset Directive 2007/16 sufficiently calibrated for these short-term funding markets?

Please see the Eurosystem response.

Question 35: Do you think there is a risk with the high concentration of this market in a few investors (MMF and banks)? Please elaborate.

Please see the Eurosystem response.

Question 36: How could secondary markets in these money market instruments attract liquidity and a more diverse investor base, while relying less on banks buying back papers they have helped to place?

Please see the Eurosystem response.

Question 37: What are the benefits and costs of introducing an obligation to trade on trading venues (regulated markets, multilateral trading facilities and organised trading facilities) for such instruments?

Please see the Eurosystem response.

Question 38: Can the possibility to trade on a regulated venue increase the chances of secondary market activities in a systemic event, for instance by acting as a safety valve for funds that need to trade these assets before maturity (especially when facing strong redemption pressures, like for MMFs)?

Please see the Eurosystem response.

Question 39: How would you assess the level of preparedness of commodity derivatives market participants in terms of meeting short-term liquidity needs or requests for collateral to meet margins? Please rank from 1 to 5 (lowest to highest) the level of preparedness for the following participants by sector: insurance companies, UCITS funds, AIFs, commercial undertakings, investment firms, pension funds.

An assessment of the preparedness of commodity derivatives market participants to meet short-term liquidity needs or margin calls is hampered by the lack of relevant regulatory reporting data. First, it is important to bear in mind that the preparedness to meet short-term liquidity needs is not static and can shift rapidly as a result of market conditions. Second, given the lack of comparable data available across sectors, it is not possible to rank the relative preparedness of sectors, other than on a subjective basis.

Question 40: In light of the potential risk of contagion from spot markets or off-exchange energy trading to futures markets, do you think that spot market participants should also meet a more comprehensive set of trading rules for market participation and risk management? Please elaborate on your response.

It is not clear that such rules could be applied to spot market participants where they are unregulated entities trading outside regulated trading venues. Energy spot markets largely sit outside the regulatory perimeter of MiFID / NCAs / ESMA and therefore the input of the Agency for the Cooperation of Energy Regulators (ACER) would be needed to address this question.

Even were a more comprehensive set of trading rules introduced, they should not make it more difficult for spot market participants to mitigate commercial risk, many of which are small businesses. Putting in place a series of stricter trading rules runs the risk of unintended consequences in terms of the price that consumers and corporates pay for essential commodities that need to be carefully considered. The energy crisis following Russia's invasion of Ukraine demonstrated the important role played by over-the-counter (OTC) trading. It became so costly for participants to transact on exchange due to the rapidly increasing margin calls that participants instead resorted to trade OTC.

Question 41: How can it be ensured that the functioning of underlying spot energy markets and off-exchange energy trading activity does not lead to the transmission of risks to financial markets?

As noted in our response to question 40, spot markets largely sit outside the existing regulatory perimeter of MiFID / NCAs / ESMA. However, ESMA and ACER have a coordination role in common areas of competence and so they may be best-placed to conduct any relevant market oversight functions. Where this oversight entails analysis of systemic risk, this might also require ESRB involvement.

Question 42: To what extent do you see emerging liquidity risks or market functioning issues that can affect liquidity in other markets? Can you provide concrete examples?

Generally, liquidity mismatches are a key vulnerability for NBFIs that can amplify shocks and, because of the interconnectedness of the NBFIs sector, cause disruption and spillovers across

markets and potentially the real economy. Such a dynamic can lead to broader financial stability concerns, as evidenced by the September 2022 disruption in the UK gilt market.

There are specific liquidity risks associated with hidden and synthetic leverage. Limits on data collection and disclosure mean that certain aspects of NBF1 leverage can remain hidden to both market participants and to regulatory authorities. This is particularly the case for synthetic leverage in which NBFIs use derivatives to create exposures based on the value of underlying assets. NBFIs with material synthetic leverage can be vulnerable to unanticipated changes in the value of the underlying assets which can lead to margin calls or increased haircuts. In the case of the LDI crisis, rising margin calls on synthetic leverage positions in derivatives and repo markets led to forced gilt sales and a feedback loop between gilt sales and additional margin calls. There is also evidence of LDIs selling MMF shares ([Dunne et al., 2023](#)), thus a shock to one NBF1 sector can spill over to another sector, in this example in the form of redemption requests. This can lead to further asset selling and can impact other markets.

Question 43: What are other tools than those currently available under EU legislation which could be used to contain systemic risks generated by potential pockets of excessive leverage in OEFs?

Please see the Eurosystem response.

Question 44: What are, in your view, the benefits and costs of using yield buffers for Liability-Driven funds, such as it was done in Ireland and Luxembourg, to address leverage?

In November 2023, the Central Bank consulted on a proposal to codify and, in certain cases, augment the existing yield buffer measure via the use of Article 25 of the AIFMD.¹¹ The yield buffer aims to strengthen the resilience of this cohort of funds to reduce the probability that they would amplify any future stress in the UK gilt market. Given the cross-border nature of GBP-denominated LDI funds, the Central Bank have sought to ensure international coordination in codifying these measures. To this end, our consultation paper represented an aligned public consultation with the CSSF in Luxembourg who also published a similar consultation paper and final framework on GBP-denominated LDI funds.

The expected incremental cost for Irish-authorized GBP-denominated LDI funds of codifying the yield buffer is expected to be limited, while counterfactual analysis suggests that a yield buffer would have made LDI funds materially more resilient to the gilt market shock of September 2022. The Central Bank estimates that, had a yield buffer been in place, LDI fund leverage would have been almost a third lower in September 2022 than was actually the case.

There are additional benefits associated with the specific choice of a yield buffer rather than a single leverage limit. During the gilt market crisis, the impact of LDI fund leverage interacted with the sensitivity of their exposures to changes in interest rates (i.e. their duration). Two LDI funds with an identical share of repo relative to total assets, but with gilt portfolios with different duration would have seen materially different levels of demand for additional collateral, as well as different impacts on NAV. The yield buffer therefore places an upper limit on the amount of leverage that an LDI fund can employ, given the interest rate sensitivity (duration) of its

¹¹ See Central Bank of Ireland (2023) '[Macprudential measures for GBP Liability Driven Investment funds](#)'.

portfolio. For a fund to have a yield buffer of at least 300 bps, it means its NAV must be at least as large as the decrease in portfolio value that would occur should yields rise by 300 bps.

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 financial system.

Question 45: While on average EU OEFs are not highly leveraged, are there, to your knowledge, pockets of excessive leverage in the OEF sector that are not sufficiently addressed? Please elaborate with concrete examples.

Please see the Eurosystem response.

Question 47: Are you aware of any NBF1 sector entities with particularly high leverage in the EU that could raise systemic risk concerns?

In Ireland, leverage among NBF1 entities is highest in GBP-denominated LDI funds, property funds, and hedge funds. Leverage is a key component of the strategy of LDI funds. In the 2022 gilt market crisis, triggered by UK government's 'mini budget announcement', a sudden and material increase in gilt yields realised interest rate risk on GBP-denominated LDI funds' portfolios. In light of their high levels of leverage, LDI funds were forced to sell gilts leading to further increases in yields. LDI funds' use of leverage, interacting with the sensitivity of their portfolios to interest rates, ultimately posed a risk to financial stability. In response, the Central Bank introduced a macroprudential measure to address risks from high leverage that required GBP-denominated LDI funds to maintain resilience to a minimum 300 basis points increase in gilt yields.

In 2022 the Central Bank introduced a leverage limit to address pockets of high leverage in the Irish property fund sector. The aim of this macroprudential measure was to safeguard the resilience of this growing form of financial intermediation, so that property funds are better able to absorb, rather than amplify, future adverse shocks.

Finally, the Central Bank continues to monitor use of leverage by hedge funds located in Ireland. On-balance sheet leverage in hedge funds trended upwards from 2018 to 2021, but reduced slightly in 2022.

Across the EU, particular attention should be paid to the cohort of UCITS funds that follow an absolute VaR approach to limit their global exposures to risk. These UCITS funds might acquire leverage that is considered substantial according to AIFMD definitions, especially those using absolute VaR. This leaves a gap in the macroprudential toolkit to contain leverage-related risks in the investment funds sector. Please see the Eurosystem response to question 43 for greater detail on this cohort of UCITS funds.

Beyond the regulated fund sector, leverage is also used in discretionary mandates under MiFID or in family offices. As noted already in the section of the narrative overview on the regulatory perimeter, risks associated with the use of leverage can be similar for these entities though their

investment structures are different. For this reason, the Central Bank believes there is merit in expanding data availability and systemic risk assessment beyond the regulated funds sector to discretionary mandates and family offices. Any additional data collection would, of course, need to be proportionate to the risks posed by these entities and subject to a cost-benefit assessment.

Question 48: Do stakeholders have views on macroprudential tools to deal with leverage of NBFIs that are not currently included in EU legislation?

Article 25 of AIFMD is currently the only specifically-designed ex ante macroprudential tool in EU funds legislation. The provisions of Article 25 state that NCAs may impose additional limits to the level of leverage that AIFMs may employ when required in order to ensure the stability and integrity of the financial system. Aside from Article 25, tools included in EU legislation have generally been designed for the protection of investors rather than reducing the systemic risk posed by the investment fund sector to the broader financial system and the real economy. While these are complementary perspectives, the underlying risks they are addressing require a different regulatory approach.

The yield buffer introduced by the Central Bank alongside the CSSF as an “other restriction” under Article 25 of the AIFMD is a novel macroprudential measure designed to address risks from leverage among funds. The Central Bank judged that a single leverage limit was not the appropriate policy tool for Irish-authorized 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. The yield buffer instead limits funds’ leverage based on the duration of their portfolio and, as such, it was codified as an “other restriction” under Article 25 of the AIFMD rather than as a single leverage limit.

As set out in the Eurosystem responses to questions 43 and 45, the cohort of UCITS that follow an absolute VaR approach represent a potential gap in the macroprudential toolkit to contain leverage-related risks. As noted above in our response to question 47, the Central Bank believes that further exploration of an explicitly macroprudential tool to address excessive leverage among this cohort of UCITS is warranted. While UCITS funds are subject to a leverage limit, the UCITS framework permits the use of VaR to measure the amount of leverage deployed by a fund through the estimation of a maximum potential loss due to market risk. The cohort of funds availing of this option, especially if using absolute VaR, may reach levels of leverage that are considered substantial according to AIFMD definitions. Notwithstanding the fact that this cohort of UCITS must ensure adherence to UCITS rules around asset eligibility and diversification, as well as disclosure requirements, this still leaves a potential shortcoming in the regulatory toolkit to limit leverage-related risks in the funds sector. The Central Bank views, as a priority, the need to deepen our understanding of this cohort of funds and to assess whether this cohort has the potential to pose a systemic risk. Should this cohort be found to pose a risk to financial stability, the Central Bank supports imposing leverage constraints, potentially modelled as the extension of Article 25 under AIFMD, to UCITS funds using VaR.

Question 52: Do you have concrete examples of links between banks and NBFIs, or between different NBF1 sectors that could pose a risk to the financial system?

Please see the Eurosystem response.

Question 53: What are the benefits and costs of a regular EU system-wide stress test across NBF1 and banking sectors? Are current reporting and data sharing arrangements sufficient to perform this task? Would it be possible to combine available NBF1 data with banking data? If so, how?

Please see the Eurosystem response.

Question 54: Is there a need for arrangements between NBF1 supervisors and bank supervisors to ensure timely and comprehensive sharing of data for the conduct of an EU-wide financial system stress tests? Please elaborate.

Please see the Eurosystem response.

Question 55: What governance principles already laid out in existing system-wide exercises in the EU, such as the one-off Fit-for-55 climate risk scenario analysis or the CCP stress tests conducted by ESMA, could be adopted in such system-wide stress test scenario?

A key lesson from existing system-wide exercises is that stress testing should be conducted with an awareness of the changeability of circumstance and conditions. The environment within which such exercises are conducted – whether ecological, economic, cultural or legal – is dynamic. As already mentioned in the narrative section of our response, a key principle that could overcome this challenge is that a system-wide exercise include iterative engagement with key market participants, with a feedback loop between scenario and potential behaviours. The Central Bank believes that an EU system-wide stress test should aim to move beyond a desktop-based exercise to involve real engagement with a range of market participants.

Another lesson from existing system-wide exercises is the importance of arrangements to ensure effective data-sharing between supervisory institutions. For more on this topic, please see the Eurosystem response to question 54.

Question 57: How can we ensure a more coordinated and effective macroprudential supervision of NBFIs and markets? How could the role of EU bodies (including ESAs, ESRB, ESAs Joint Committee) be enhanced, if at all? Please explain.

Please see the Eurosystem response.

Question 58: How could the currently available coordination mechanisms for the implementation of macroprudential measures for OEFs by NCAs or ESAs (such as leverage restrictions or powers to suspend redemption on financial stability grounds) be improved?

Please see the Eurosystem response to question 57.

Question 59: What are the benefits and costs of introducing an Enhanced Coordination Mechanism (ECM), as described above, for macroprudential measures adopted by NCAs?

Please see the Eurosystem response to question 57.

Question 60: How can ESMA and the ESRB ensure that appropriate National Macroprudential Measures (NMMs) are also adopted in other relevant EU countries for the same (or similar) fund, if needed?

Please see the Eurosystem response to Question 57.

Question 61: Are there other ways of seeking coordination on macroprudential measures and possibly of reciprocation? What could this system look like? Please provide concrete examples/scenarios and explain if it could apply to all NBFi sectors or only for a specific one.

Please see the Eurosystem response to Question 57.

Question 62: What are the benefits and costs of improving supervisory coordination over large (to be defined) asset management companies to address systemic risk and coordination issues among national supervisors? What could be ESMA's role in ensuring coordination and guidance, including with daily supervision at fund level?

Generally, further efforts to advance the harmonisation of supervisory approaches across the EU and to ensure a consistent treatment of risk in the NBFi sector are to be welcomed. Please see the Eurosystem response to question 57 for discussion of a framework for coordination of macroprudential policy for NBFi within the EU.

Specifically in the context of this proposal, it is important to differentiate between the activity and structure of asset management. Asset managers are not consolidated balance sheet businesses in the same way as banks. As such, the asset manager itself is not the correct entity on which to focus systemic risk assessments. Indeed, the aggregated behaviour of individual funds can generate systemic risk, even where these funds are from different asset managers. As a result, the focus from a macroprudential perspective should be on cohorts of funds with similar investment strategy and asset allocation.

Question 64: What are the benefits and costs of having targeted coordinated direct intervention powers to manage a crisis of large asset management companies? What could such intervention powers look like (e.g. similar to those in Article 24 of EMIR)?

As noted in our response to Question 62, it is important to differentiate between the activity and structure of asset management. From a macroprudential perspective, regulatory assessments and interventions should be made at the level of the fund cohort, not at the level of the asset management company. However, should there be an operation issue at an asset management company that affected its funds, then direct intervention at the level of the asset management company would be appropriate.

Question 65: What are the pros and cons of extending the use of the Enhanced Coordination Mechanism (ECM) described under section 6.1 to other NBFi sectors?

Please see our response to Question 59 above.

Question 66: What are the benefits and costs of gradually giving ESAs greater intervention powers to be triggered by systemic events, such as the possibility to introduce EU-wide trade halts or direct power to collect data from regulated entities? Please justify your answer and provide examples of powers that could be given to the ESAs during a systemic crisis.

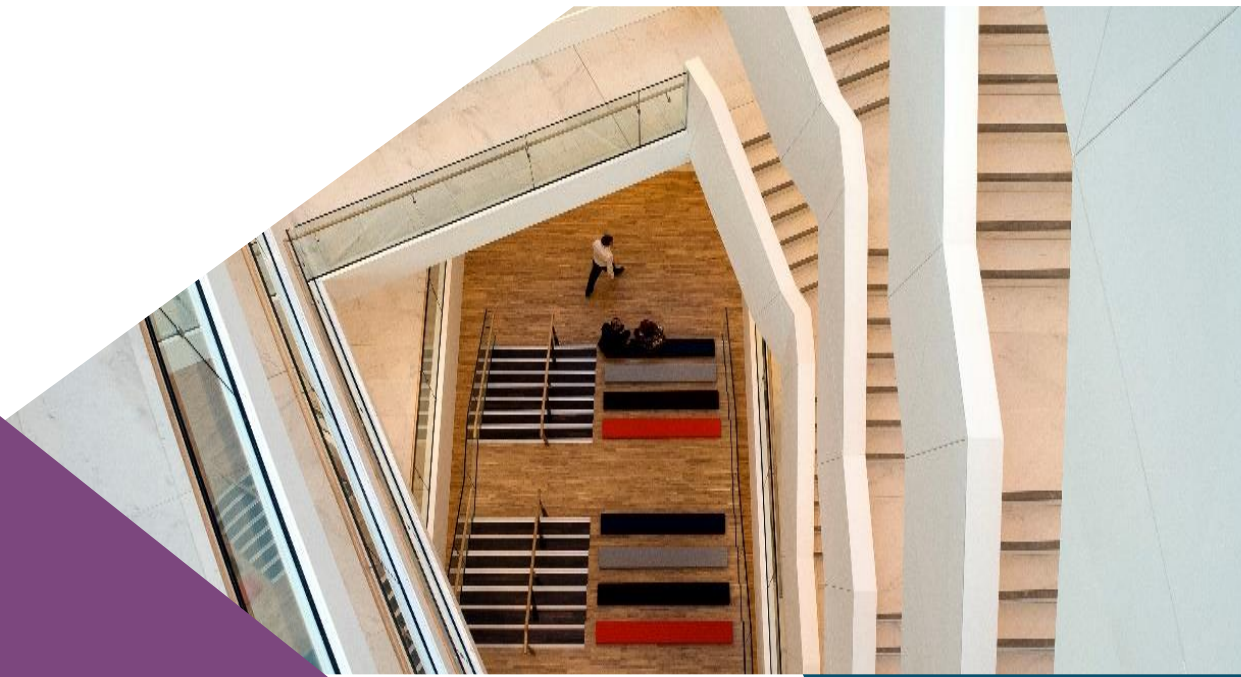
Please see the Eurosystem response to Question 57.

Question 67: What are the benefits and costs of a more integrated system of supervision for commodities markets where the financial markets supervisor bears responsibility for both the financial and physical infrastructure of the commodity futures exchange, including the system of rules and contractual terms of the exchange that regulate both futures and (cash/physical) forward contracts?

NCA's of financial markets have a supervisory role in respect of commodity derivatives but may not have any oversight role in respect of cash / physical markets where these are not financial instruments (i.e. they are regulated under the Regulation on Wholesale Energy Market Integrity and Transparency and ultimately by ACER rather than under MiFID and by ESMA). There is an existing cooperation mechanism between ACER and ESMA, and this could be leveraged to enhance macroprudential supervision of these disparate markets, with a communication / coordination role for NCA's.

Question 68: Are there elements of the FSB programme on NBF1 that should be prioritised in the EU? Please provide examples.

Please see the Eurosystem response.



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