Minding the Tails: Safeguarding Resilience of Non-Bank Finance – Speech by Deputy Governor Vasileios Madouros

09 April 2026 Speech

Good morning. I am delighted to join you here this morning – and thank you to Irish Funds for organising this event.[1]

As you know, a key part of our job at the Central Bank of Ireland is to focus on 'tail risks'. Not just what we expect *will* happen, but what *could* happen.

And the range of possible outcomes that *could* happen has recently widened considerably. What might have been considered close to unthinkable a few years ago, is no longer so.

Unpredictable geopolitical developments – including the ongoing conflict in the Middle East – have increased the likelihood of shocks hitting the global economy and the financial system.

In parallel, there are ongoing shifts happening *within* the financial system, with the emergence of new activities, new business models and new interconnections.

Chief amongst these is the continued growth of non-banks, a diverse sector that now holds around half of global financial assets and is at the heart of capital markets functioning.

Today, I want to talk about how we navigate this environment to safeguard resilience of this valuable source of financial intermediation, supporting the broader economy.

Opportunity, amid uncertainty

But before I do that, I want to talk about opportunity. Because we should not let uncertainty be a barrier to seizing the opportunities available – of which there are several.

Ireland's funds sector already plays an important role in intermediating flows of capital, with close to €6 trillion in assets under management, serving investors in Europe and globally.

This activity entails many economic benefits, including enabling retail investors to access capital markets and diversifying funding sources for companies.

As you know, though, Europe's economy is still very reliant on bank intermediation, with a smaller role for capital markets financing.

The good news is that there is now a clear recognition of the need to deepen, grow and integrate Europe's capital markets – and increased policy momentum to achieve that outcome.

That can support productive investment in Europe and, in doing so, strengthen our long-term economic prospects.

Another opportunity stems from technological advancements, which can not only improve existing financial services, but also lead to new, innovative financial services.

Tokenised finance is an important dimension of that, with the potential to make capital markets more efficient, accessible and integrated.[2]

This context matters. Ireland is already a centre for financial intermediation specialising in activities that are core to the functioning of capital markets.

Asset management – and the funds sector – are at the heart of that. So they have an important role to play in the further integration, deepening and digitalisation of European capital markets.

These are important opportunities for Europe, and therefore for Ireland. Indeed, not seizing these opportunities is itself a risk we need to guard against.

And, unlike exogenous shocks, that is very much within our collective control.

Resilience, amid uncertainty

Of course, opportunity and resilience need to go hand in hand.

For the benefits of increased capital markets financing to be realised, and sustained, this source of financial intermediation needs to be robust enough to withstand adverse shocks.

Otherwise, investors may not want to channel their savings to capital markets. And companies may not want to rely on these markets to fund their activities.

And that brings to the fore the role of non-bank financial intermediation. Non-banks – including the funds sector – are core participants of the capital markets ecosystem.

And, as I mentioned upfront, their role in global finance has been expanding. While the sector is very diverse, asset management has accounted for much of the growth in non-bank finance.

Given that shift in financial intermediation, our financial stability oversight frameworks cannot stand still.

Indeed, if an asset manager were to increasingly venture into new asset classes, their approach to risk management would need to adapt.

Similarly, as the composition of the financial sector itself is evolving, our approach – as a risk manager for the system as a whole – also needs to adapt.

In addition, over recent years, we have seen episodes where financial vulnerabilities in segments of the funds sector have contributed to market-wide disruptions.

During the "dash for cash" in 2020, amplified redemptions in funds investing in less liquid assets, such as corporate bonds, added to selling pressures at a time of deteriorating liquidity.[3]

And the LDI episode in October 2022 revealed how leverage-related vulnerabilities can lead to core market disruptions.[4]

In both instances, restoring market functioning required extraordinary central bank interventions.

These episodes were very different in nature. But they share common features: exogenous shocks hitting the financial system, and – in the presence of financial vulnerabilities – individually rational decisions by market participants becoming collectively damaging.

This points to the importance of a macroprudential lens in the regulation and oversight of non-banks, including funds.

The objective of this approach is not to constrain the vital role played by funds in delivering their economic functions. Nor is to treat funds like banks – which, of course, they are not.

On the contrary, it is to ensure that the funds sector continues to perform its core economic functions, serving investors and the real economy, even during periods of turbulence.

In essence, the aim is to safeguard collective resilience.

Safeguarding resilience: shifting our focus towards implementation and surveillance

This is the 'why'. Let me now turn to the 'how'.

Strengthening the financial stability lens in the oversight of the funds sector has been – and continues to be – an important, multi-year priority for us at the Central Bank.

This has been consistent with the policy agenda at a global level.

In recent years, the FSB and IOSCO have agreed several policy recommendations, on money market funds, open-ended funds, margin preparedness and leverage in the non-bank sector.[5]

Much of this has been in response to vulnerabilities exposed by recent episodes of stress in segments of the non-bank sector.

International work has also focused on the supply of liquidity in markets, recognising that market functioning depends on the interaction between supply and demand for liquidity.

Domestically, we have introduced targeted measures in two segments of the investment fund sector: sterling LDI funds, working with colleagues from across Europe, and property funds.[6]

While there is more to do to develop the macroprudential framework for non-banks fully,[7] our focus is now gradually shifting towards implementation and surveillance.

Implementation is crucial, translating policy objectives into real-world outcomes.

Our focus in this area covers implementation of both internationally-agreed and EU policy initiatives, as well as the two domestic measures we have introduced.

And, of course – like with all our policy interventions – this work also entails monitoring and assessing the effectiveness of our domestic measures.

Surveillance is an essential bedrock to financial stability oversight.

The funds sector is large, diverse, complex and constantly changing. And, at a global level, our understanding of how the sector contributes to systemic risk is still evolving.

In recent years, we have been investing in analytical frameworks, including better data, to monitor and evaluate potential financial vulnerabilities – whether due to liquidity mismatch, leverage or interconnectedness – across the sector.[8]

We also complement that systematic monitoring with a series of deeper dives into parts of the sector that share similar characteristics.

And, crucially, we communicate the insights from our work on implementation and on surveillance. Which is an important tool to effect outcomes, in and of itself.

Because understanding the nature and evolution of financial vulnerabilities at the level of the system can help individual entities better understand, and manage, their own risks.

In focus: liquidity management by Irish open-ended funds and the Irish hedge fund sector

In that context, I wanted to use today's opportunity to convey the main insights from two in-depth assessments we have concluded recently.

The first relates to the theme of implementation and is on liquidity management by open-ended funds.

The second relates to the theme of surveillance and is on financial vulnerabilities in the Irish hedge fund sector.

Let me also take this opportunity to acknowledge the constructive engagement of the sector with this work, including through providing data to enable our assessment.

Implementation – liquidity management by open-ended funds

Starting with liquidity management by open-ended funds, this has been an area of regulatory focus – at a global level – for about a decade now.

This is because of the potential mismatch between the redemption frequency of open-ended funds, which is often daily, and the liquidity of the underlying assets in which they invest.

In times of stress, liquidity mismatches can lead to 'first-mover advantage' dynamics, resulting in amplified redemption pressures and asset sales.

Following the 'dash for cash' in 2020, the FSB published revised policy recommendations on liquidity risk management by open-ended funds in 2023, accompanied by guidance by IOSCO.[9]

A key focus of these revised recommendations was on the availability and use of liquidity management tools (LMTs).

And, specifically, tools that aim to ensure that the costs of asset sales are borne by redeeming investors, rather than investors remaining in the fund.

These are sometimes referred to as price-based LMTs, and include swing pricing, anti-dilution levies or redemption fees.

These tools, first and foremost, protect fund investors. But they also strengthen collective resilience, by guarding against potential first-mover advantage dynamics in open-ended funds.

The policy intent of the revised FSB recommendations in 2023 has been to lead to greater availability, use, and consistency in use, of such tools.

Recent changes to the legislative framework in Europe, which are coming into effect soon, also contained enhancements to liquidity management requirements.

So, in recent months, we sought to understand better how these tools are being used by Irish-domiciled funds and explore some of the implementation challenges.

Let me give you our headline conclusions.[10]

First, there is widespread availability of price-based LMTs.

Our analysis suggests that these tools are now widely available in the Irish investment funds sector.

Around 85% of open-ended funds have at least one price-based LMT. The availability of those tools has increased by around 40% over the past half decade across the sector.

And that is a positive outcome. It means that asset managers are better equipped to allocate transaction cost across investors and to mitigate the effects of liquidity mismatches.

Second, use remains less widespread.

Our survey of asset managers examined how often these tools were employed over a two-year period, between 2022-3.

The share of funds using these tools on at least one occasion over that period was well below availability levels.

Of course, it is important to recognise that there is significant diversity within the open-ended funds sector.

The good news is that these tools are used more frequently by funds with greater exposure to less liquid assets, such as high-yield bonds.

And that the use of these tools increases during periods of stress, as one would expect.

Still, only about half of high-yield bond funds used price-based LMTs during the two year-period covered by the survey, which also included episodes of market turbulence.

So there is further scope to see increased use of such tools, as part of day-to-day liquidity management by open-ended funds.

Third, the approach to use varies, with the market impact of transactions accounted for by only a small proportion of funds.

When using price-based LMTs, fund managers seek to estimate – and allocate appropriately – the full costs of conducting a trade.

These costs can be explicit, such as broker commissions or taxes.

Or they can be implicit, because of a difference between the valuation of an asset and the price at which it is sold, including because the trade itself might have an impact on market prices.

The market impact estimate – which is likely to be more important in less liquid markets – is particularly relevant to guard against first-mover advantage dynamics in open-ended funds.

Our analysis suggests that the use of a specific market impact estimate – beyond what is captured in bid-ask spreads – remains low across the sector, at around 15% of funds.

So, again, there is scope to see greater consistency in use of LMTs, including in terms of the incorporation of any significant market impact estimates.

Of course, the estimation of implicit costs can entail operational challenges.

So, to support use of these tools, today we have also published a document outlining good practices in the determination of implicit costs.[11]

Overall, this is an area where we want to continue to a see a shift in outcomes: towards greater use, and greater consistency of use, of price-based LMT.

The ongoing data that we now collect on the availability and use of LMTs, as well as on fund flows, will help us monitor progress on an ongoing basis.

And, as we have outlined in our recent Regulatory and Supervisory Outlook report, the use of LMTs, specifically by bond funds, will be an area of supervisory focus this year.

Ultimately, the aim is to translate the policy intent of the FSB and IOSCO recommendations, as well as the updated requirements in the European framework, into real-world outcomes.

Surveillance – hedge funds

Let me now turn to our in-depth assessment of the hedge fund sector in Ireland.

The reason behind our focus on this segment of the funds sector has been two-fold.

First, at a global level, hedge funds have been playing an increasingly important role in core markets, including in US and European sovereign debt markets.[12]

Second, when we look domestically, this is one of the segments of the funds sector that has amongst the highest levels of leverage.

So, in recent months, we have been evaluating more closely the risks and vulnerabilities stemming from the activities of hedge funds based in Ireland.

Let me give you our headline conclusions.[13]

First, the hedge fund sector is large, but diverse. And that diversity supports resilience.

In total, the Irish hedge fund sector has around €400bn of assets under management.

We estimate it accounts for around 4% of the global hedge fund sector, and more than half of the hedge fund sector in Europe.

But equally important is the diversity of the sector. Hedge funds are a broad grouping. Within that, there is a wide range of different strategies.

And that diversity matters from a systemic risk perspective.

Let me give you a simple comparison. The sterling LDI sector in Ireland had about €350bn of assets under management just before the Gilt market disruption of 2022.

But sterling LDI funds are particularly homogeneous. Their investments are largely concentrated in Gilts, and their investors are largely UK pension funds.

By contrast, hedge funds are far more heterogeneous. The investments are spread globally and across different asset classes, while investors are from across sectors and countries.

That diversity – in and of itself – supports systemic resilience.

Second, certain hedge fund strategies entail higher vulnerabilities.

Because of that diversity, in our assessment, we examined in more detail potential vulnerabilities associated with different hedge fund strategies.

For example, while leverage is employed across the Irish hedge fund sector, it is not equally distributed across different strategies.

Leverage-related vulnerabilities are particularly elevated for Relative Value funds. Depending on the definition, the weighted average leverage of these funds is around 30-45 times.

Relative Value funds also have a particular concentration on repo borrowing, relative to other hedge funds strategies, making them particularly reliant on repo market functioning.

When we looked at the risk of margin calls, Relative Value funds again exhibited higher vulnerability relative to other cohorts.

As did credit hedge funds, which also tend to have less liquid investments as well as strong interconnections to credit markets.

This matters because credit markets are core to the functioning of the financial system and the real economy.

Third, the market footprint of the Irish hedge fund sector is modest, limiting systemic impacts.

So if there are leverage-related vulnerabilities, does this raise the potential for systemic implications from the Irish hedge fund sector?

Well, on its own, this is unlikely. And this is because the market footprint of the sector is limited.

I started by highlighting the growing importance of the global hedge fund sector in sovereign debt markets.

So one of the key areas we examined as part of this work was the relative importance of the Irish hedge fund sector in holding of, or trading in, sovereign debt securities.

In practice, this is very small – less than 0.2% of the estimated stock of outstanding sovereign debt in core markets.

Similarly, across all asset classes, the maximum footprint of the sector was around 2%. Again, this is relatively modest.

So, while there are residual uncertainties, our overall assessment is that the sector – on its own – is unlikely to pose systemic vulnerabilities.

There is a ‘but’, however. And it is an important one. There are similar funds, with similar strategies, and similar exposures, in other jurisdictions.

So we can only understand the macro-financial effects of increased hedge fund participation in core markets by considering the collective response of global hedge funds to adverse shocks.

This is why a key outcome of our work will be engagement with authorities internationally, as we collectively seek to put together the pieces of the global puzzle of capital markets.

In addition, we will use the insights from this assessment to enhance our regular surveillance of segments of the hedge fund sector that exhibit the most material vulnerabilities.

Because exposures, concentration, and ultimately systemic vulnerabilities are not fixed – they evolve over time.

Conclusion

Let me finish here, by going back to where I started. We are navigating an environment of both rising tails risks and an evolving financial system.

In this context, strengthening the financial stability lens in the oversight of the non-bank sector, including asset management, remains an important priority.

Globally and in Ireland, we have made meaningful progress in recent years, but this is an ongoing journey.

The next phase of the journey will increasingly focus on effective implementation and strengthened surveillance.

The goal is safeguarding collective resilience, amid the ongoing shocks and shifts.

Not for its own sake, but as a foundation that enables the financial system to weather shocks, serve the real economy, and seize the opportunities ahead.

Thank you for listening this morning.

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[1] I am very grateful to Mark Cassidy, Brian Gallagher, Neil Killeen, Darragh McLaughlin, Naoise Metadjer, Kitty Moloney, Cian Murphy, Arya Pillai, Martina Sherman, Sean O’Sullivan and Brid White for their advice and assistance in preparing these remarks.

[2] See Central Bank of Ireland (2026) ‘DLT and Tokenisation in Financial Services’, *Discussion Paper 12* (PDF 1.37MB).

[3] See FSB (2020) ‘Holistic review of the March market turmoil’.

[4] See Pinter (2023) ‘An anatomy of the 2022 Gilt market crisis’, *Bank of England Staff Working Paper*, No. 1019, and Dunne et al (2023) ‘Irish-Resident LDI Funds and the 2022 Gilt Market Crisis’, *Central Bank of Ireland Financial Stability Note*, Vol. 2023, No. 7 (PDF 400.48KB)

[5] See FSB (2025) ‘Enhancing the resilience of non-bank financial intermediation: Progress report’

[6] See Central Bank of Ireland (2022) ‘The Central Bank’s macroprudential policy framework for Irish property funds (PDF 461.08KB)’, and Central Bank of Ireland (2024) ‘The Central Bank’s macroprudential policy framework for Irish-authorised GBP-denominated LDI funds (PDF 379.32KB)’

[7] See Eurosystem (2024) 'Eurosystem response to EU Commission's consultation on macroprudential policies for non bank financial intermediation (NBFI)'

[8] See, for example, Central Bank of Ireland (2024) 'Market-based finance monitor (PDF 3.37MB)',and Central Bank of Ireland (2025) 'In focus: The Irish NBFI sector during the April market volatility episode', *Financial Stability Review* (PDF 1.47MB)

[9] 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'

[10] See Gallagher and White (2026) 'Availability and use of Liquidity Management Tools in Irish-domiciled hedge funds', *Central Bank of Ireland Staff Insights*,

[11] See Central Bank of Ireland (2026) 'Good Practices on incorporating implicit costs into the calibration of price-based LMTs'

[12] See Sushko and Todorov (2025) 'Sizing up hedge funds' relative value trades in US Treasuries and interest rate swaps', *BIS Quarterly Review*, December, Barth et al (2025) 'The cross-border trail of the Treasury basis trade', *FEDS Notes*,; and Ferrara et al (2024) 'Hedge funds: good or bad for market functioning', *ECB Blog*,

[13] See Fragkou et al (2026) 'Financial stability risk assessment of Irish Hedge Funds', Central Bank of Ireland Signed Article (PDF 1.4MB)