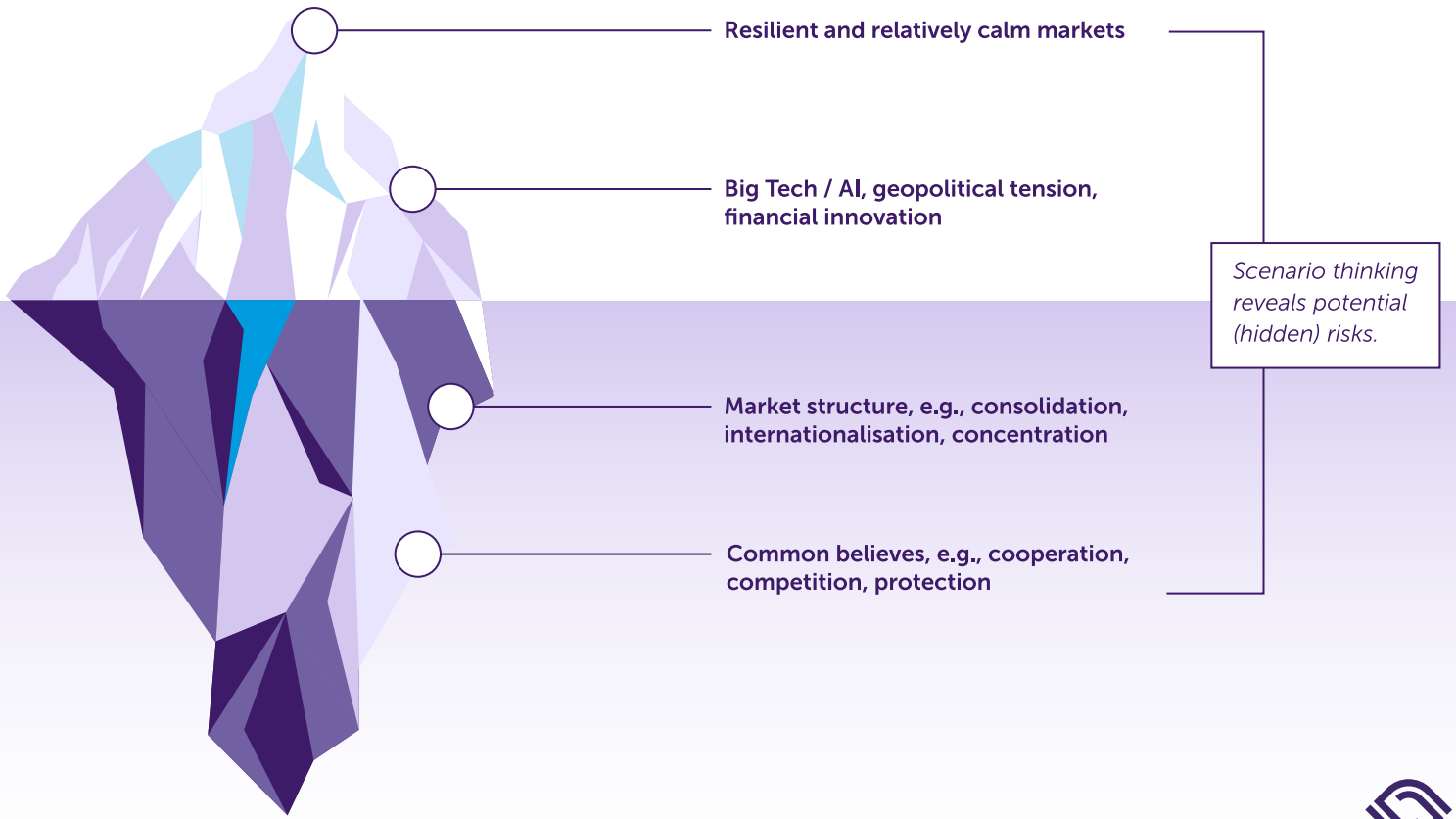
ANALYSIS REPORT

Thinking in scenarios in capital markets

In short Geopolitical tensions, technological dependencies and financial innovation increase hidden risks in capital markets. A loss of trust in the US dollar, combined with cyberattacks and stablecoin instability, could trigger systemic stress across a concentrated ecosystem, threatening European capital market infrastructure. This scenario highlights how interconnectedness and synchronized behaviour can amplify hidden risks. We urge market participants, supervisors and policymakers to embrace scenario thinking. By preparing for plausible futures, we can detect risks earlier, reduce crisis impact and strengthen resilience, transparency and fairness of European capital markets.



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Executive summary

The world is becoming more unpredictable. Geopolitical tensions, technological dependencies and financial innovation are reshaping the landscape. Capital markets may appear stable, but beneath the surface lie hidden risks that only emerge when stress hits. That is why now is the time to think ahead.

Capital markets are more complex and fragile than they seem. Crises, such as the Global Financial Crisis, the COVID-19 market shock and the LME nickel incident, show that systemic stress often arises from interconnectedness and synchronised behaviour, not isolated failures. When many actors react in the same way at the same time, even robust systems can unravel.

The AFM looks at critical market functions, such as issuance, investing, trading, market making, clearing and settlement, and identifies archetypical risks. Interconnectedness in these functions can amplify stress, especially under synchronised behaviour. Archetypical risks include institutional concentration, geographic dependency, hidden dependencies and behavioural convergence.

Through scenario thinking, we explore plausible futures that reveal vulnerabilities. One such scenario shows how a loss of trust in the US dollar, combined with cyberattacks and stablecoin instability, could ripple through a concentrated ecosystem and threaten European capital market infrastructure. These scenarios help us prepare, not predict, by building mental and operational resilience.

We call on market participants, supervisors and policymakers to actively embrace scenario thinking. Make it part of risk management, supervision and strategic planning. Ask the hard questions: What if things go wrong? What chain of events could follow?

By working together and focusing on system-wide dynamics and behaviour, we can:

- detect risks earlier;
- reduce the impact of future crises;
- and strengthen the resilience, transparency and fairness of European capital markets.

This is not just about financial stability. It is about safeguarding trust, protecting households and securing the future of the European economy.

1. Introduction

Capital markets are a cornerstone of the European financial system. They connect savers and investors with businesses and governments, enabling innovation, growth and long-term financial security. For Dutch households and pension funds, capital markets are essential for building future wealth. For companies, they offer scalable alternatives to bank financing. And for society, they support the real economy. AFM's capital market supervision focuses on promoting resilient, transparent and fair European capital markets.

Yet the stability of these markets cannot be taken for granted. The world is becoming more volatile and complex. Rapid technological change, geopolitical fragmentation and the rise of non-bank financial institutions (NBFIs) are reshaping the structure and behaviour of financial markets. Crypto assets are increasingly intertwined with traditional finance. AI is transforming trading, risk management and infrastructure. And global dependencies, on platforms, data providers and clearing systems, are growing deeper and more complex.

These developments introduce new risks. Not just for individual institutions, but for the system as a whole. Supervisors and financial institutions must now look beyond balance sheets and static maps. We must understand how market structures evolve, how behaviour shifts under stress and how hidden dependencies can amplify vulnerabilities.

Many systemic risks stem from concentration and dependency. Often in the form of liquidity stress. These risks are not always visible in calm times. They emerge when confidence erodes, when actors behave in sync or when infrastructure fails under pressure. Recent events such as the Archegos default[1] and the UK LDI gilt market stress[2] illustrate how fragile connections and behavioural feedback loops can destabilise seemingly robust systems.

Traditional supervisory tools, like static network mapping or entity-level stress tests, are not always sufficient. They capture structure, but not interaction. They show who is connected to whom, but not how those connections behave under stress. To address this gap, we advocate a risk-based approach centred on scenario thinking.

Scenario thinking allows us to explore plausible, high-impact futures. It helps us identify emerging vulnerabilities, test supervisory responses and prioritise attention where risks are most likely to materialise. Rather than predicting the future, we prepare for it – by imagining how disruptions might unfold and how behaviour might reinforce systemic stress.

This report outlines how scenario-based supervision can strengthen our ability to detect and mitigate systemic risks. It is structured as follows:

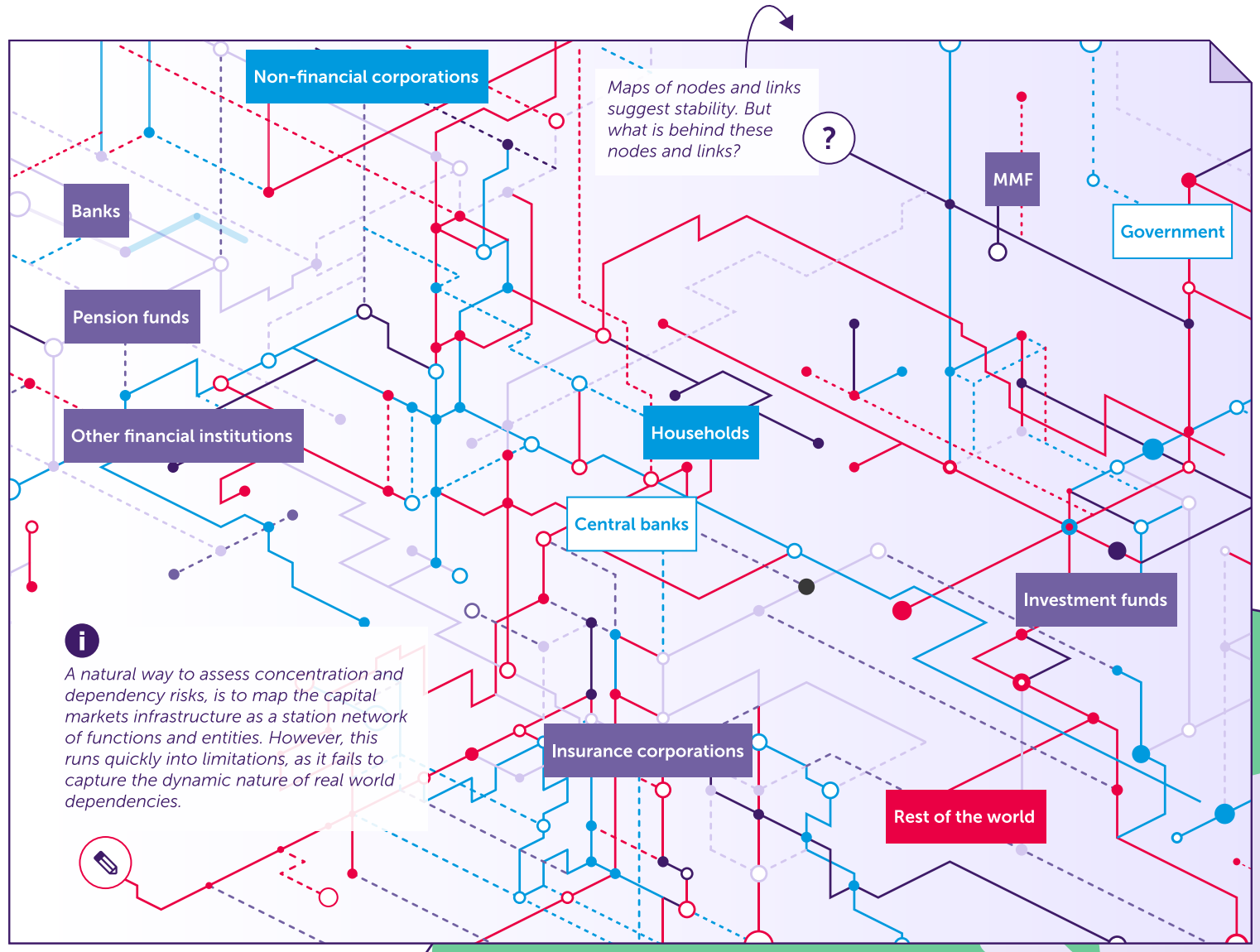
- Chapter 2 examines past crises to highlight hidden dependencies and behavioural dynamics;
- Chapter 3 introduces a functional framework for analysing market infrastructure;
- Chapter 4 presents a plausible future scenario that illustrates systemic fragility;
- Chapter 5 offers recommendations for supervisors and market participants.

By shifting our focus from static resilience to dynamic preparedness, we aim to build a supervisory approach that is fit for the future – one that protects market integrity, investor confidence and the long-term stability of the European financial system.

1 'TRV Risk Analysis - Leverage and derivatives - the case of Archegos', ESMA, May 2022.

2 'Putting Out the NBFIRE: Lessons from the UK's Liability-Driven Investment (LDI) Crisis', IMF, September 2023.

Figure 1 A map of the euro area financial system. Maps like this capture structure, not interaction. Source: ESRB[3]



3 'A map of the euro area financial system', ESRB, 2024.

2. Examples of market disruption: GFC, COVID-19 and LME nickel incident

The risk of capital markets failing due to dependencies on individual institutions is well known – but markets often fail because the capital markets infrastructure behaves differently than expected. Capital markets are dynamic: relationships between actors shift over time; either undiscovered substitutes are available but only used under stress, or theoretical substitutes fail under stress in practice, and the behaviour of market participants can change the nature of dependencies in unpredictable ways. A static overview cannot properly reflect the risks arising from these fluctuations.

Past crises such as the Global Financial Crisis (GFC), COVID-19 crisis and LME nickel incident offer important examples. The GFC is still a relevant example of the behavioural dynamics of a market crisis, especially since many of the current financial legislative frameworks emerged in the aftermath and as a result of it. In 2008, trust between banks evaporated and interbank lending froze.[4] Despite the presence of multiple liquidity sources in theory, none were available in practice due to fear of counterparty risk and banks' unwillingness to provide interbank liquidity. This behavioural shift turned a structurally interconnected system into a fragmented one, where liquidity dried up almost overnight. This crisis led to a wave of new regulations, intended to strengthen supervised institutions and increase their ability to withstand crises, but not addressing the dynamic relationships within capital markets.

The COVID-19 crisis unfolded in a related but distinct way (see paragraph 2.1). Whereas liquidity and solvency problems of banks were the focus of the GFC, the market stress during COVID originated largely outside the banking system, among non-bank financial institutions such as pension funds and investment funds. The core problem, however, was a similar collective demand for cash – where even well-capitalised institutions rush to sell safe assets to meet margin requirements, amplifying volatility through margining feedback loops. Most recently, in the LME nickel incident of 2022, concentrated positions and unexpected price movements triggered a disorderly market response, forcing the exchange to halt trading and cancel transactions – hurting price discovery and long-term trust in capital markets (see paragraph 2.2).

2.1 Trust, margin calls and the behavioural nature of liquidity – lessons from 2008 and 2020

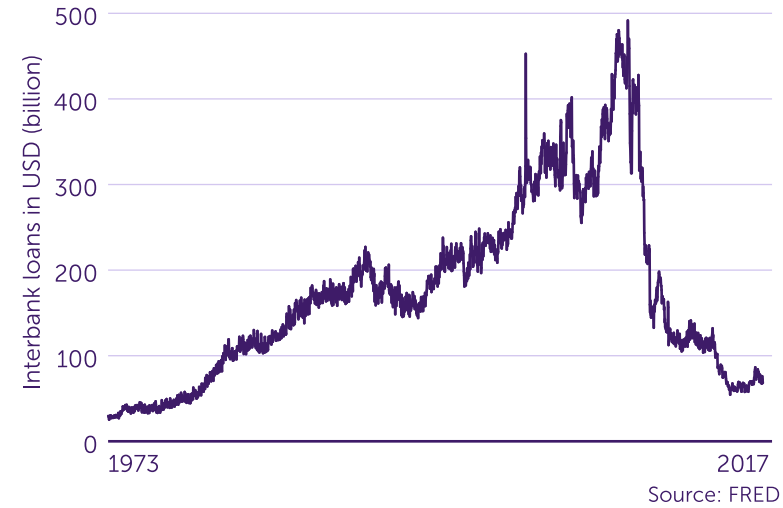


Figure 2 The GFC changed the dependency on interbank lending. Source: MarketCoinCap, Tether

4 'How the 2008 Financial Crisis Affected the Banking Sector', Investopedia, August 2023.

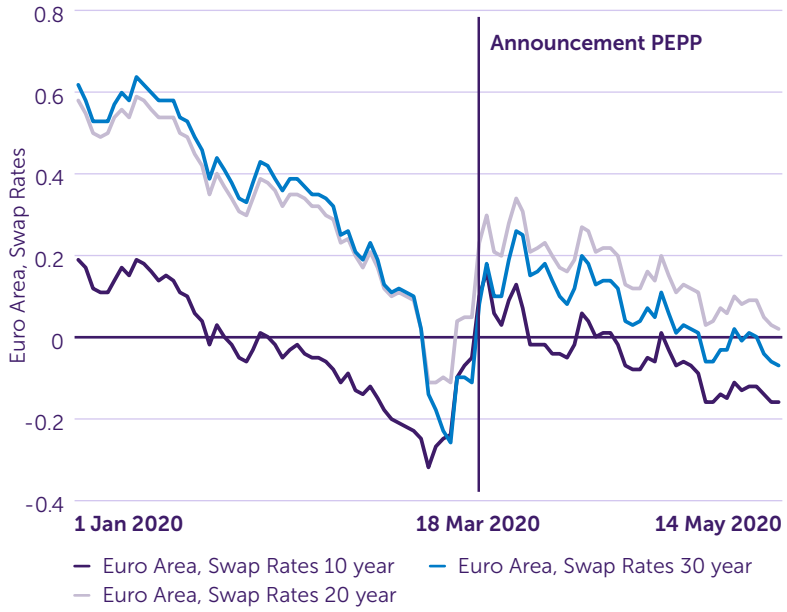


Figure 3 After a steady decline, yields dropped sharply in mid-March 2020, leading to sudden margin calls for pension funds, which faced liquidity strains in money market funds.

Source: Macrobond

The Global Financial Crisis and the COVID-19 crisis revealed a common fragility: liquidity can vanish even when balance sheets and infrastructure remain sound. In 2008, interbank lending froze as trust evaporated (see Figure 2). Banks with solid capital hoarded cash, fearing hidden losses at counterparties. Payment systems worked and collateral channels existed, yet the willingness to lend collapsed and central banks had to intervene.

Twelve years later, in 2020, Dutch pension funds triggered stress in euro-denominated money market funds in a related way.[5] When pandemic fears first sent yields plunging and then yields sharply reversed (see Figure 3), this meant sudden margin calls for pension funds. To meet these demands, funds liquidated government bonds and tapped euro-denominated money market funds (MMFs) simultaneously, which triggered huge outflows in these MMFs.[6] If the ECB had not introduced the Pandemic Emergency Purchase Programme (PEPP) on 18 March, which halted the rate rise and supported the money markets, the liquidity pressure on asset managers would have increased further. Again, the technical plumbing functioned, but collective behaviour drained funding markets.

Both episodes underscore that liquidity is behavioural, not structural. Post-GFC regulations fortified banks with capital and liquidity ratios and promoted central clearing yet could not pre-empt a non-bank run fuelled by collateral demands. Structural safeguards and stress tests strengthen individual institutions, but they cannot prevent the collective reflex to withdraw liquidity amid uncertainty, transforming localised stress into system-wide crises. Static network maps that show who is connected to whom miss the key variable: how participants react (to each other) when fear spikes.

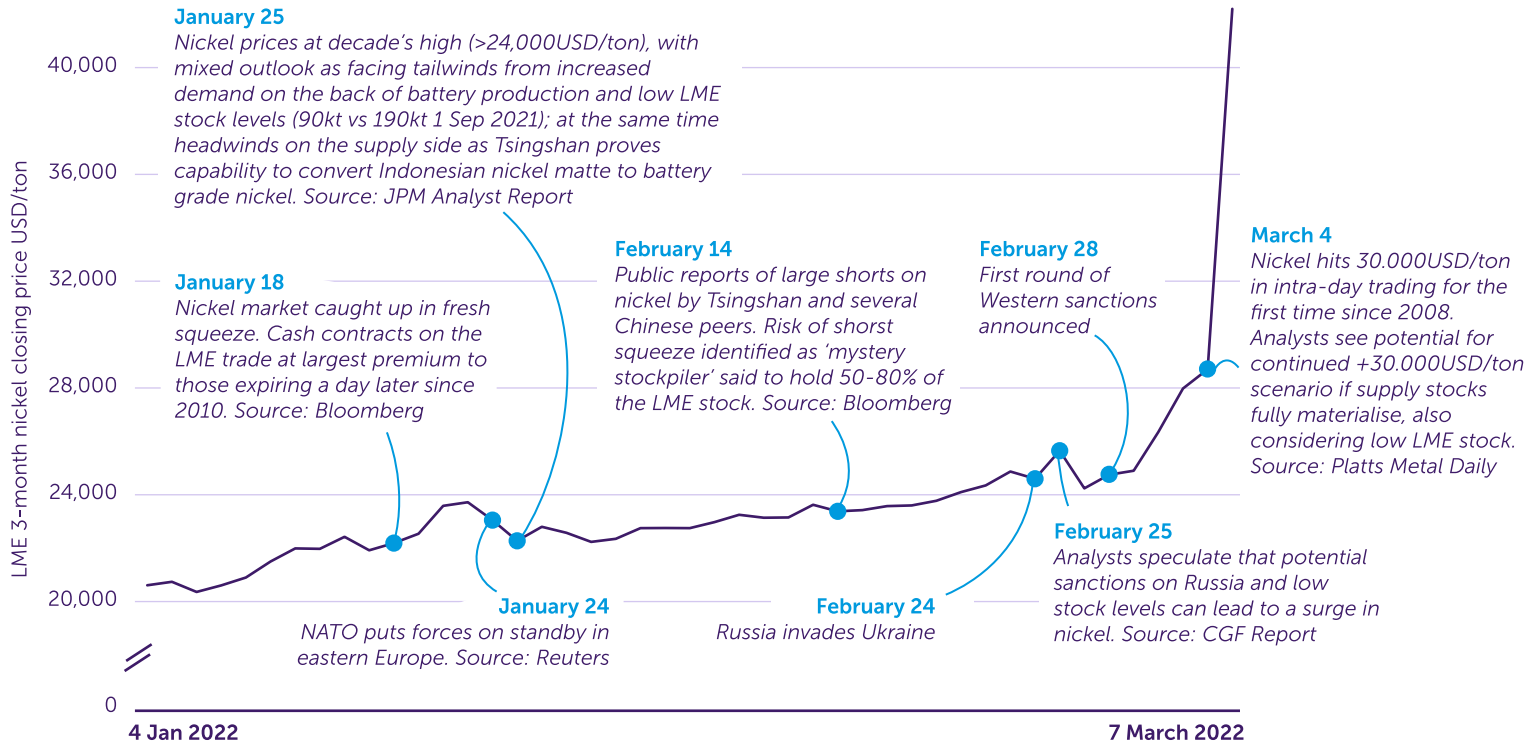
A hypothesis-driven supervisory lens might have asked: What if trust breaks down despite strong balance sheets? What if margining frameworks force simultaneous cash calls across liability-hedged investors? Such scenarios highlight the need for in-depth insights into behavioural feedback loops and stress-responsive coordination, naturally alongside more static overviews. The shared lesson from 2008 and 2020 is clear, however: robust structures cannot substitute for anticipating behaviour under stress.

5 'Interconnectedness of derivatives markets and money market funds through insurance corporations and pension funds', Financial Stability Review – ECB, November 2020.

6 'Marktschokken coronacrisis tonen liquiditeitsrisico vermogensbeheerders', AFM, December 2021.

2.2 The 2022 LME nickel incident – a case for hypothesis-driven risk mapping

The nickel market disruption on the London Metal Exchange (LME) in March 2022 demonstrates how traditional, static mapping of financial infrastructure can obscure critical vulnerabilities. A single participant held an exceptionally large short position, distributed through multiple brokers and across both LME and OTC markets. This created a concentration of exposure that was structurally fragmented and, as a result, functionally invisible. Even using available reporting data[7] it would have been extremely difficult to identify the build-up of these exposures ex ante. The absence of a consolidated risk view meant that no single actor, including the exchange, could fully assess systemic exposure until the market came under acute stress.[8]



Source: LME

Figure 4 LME nickel incident was due to a combination of inherent ecosystem vulnerabilities and exogenous triggers.

7 EMIR data provides insight into derivatives positions.

8 'Independent nickel market review', LME, January 2023.

When geopolitical tensions drove prices higher (see Figure 4), margin calls triggered a rapid short squeeze. Short sellers attempted to exit positions simultaneously, leading to behaviourally synchronised actions that drove prices up further in a self-reinforcing loop. Liquidity dried up as market makers and counterparties withdrew and clearing members faced rising collateral demands. These chain dependencies – between brokers, clearing houses and trading venues –intensified dynamically and proved fragile under stress. In the end, the LME took the unprecedented decision to close its nickel market to protect its clearing members from excessive margin spikes and the venue remained closed for more than a week while the LME waited for conditions to stabilise[9].

Compounding this was a critical structural factor: the global dependency on the LME for nickel price discovery. As the world's dominant venue for benchmark pricing, the LME's price signals underpin a wide array of contracts, physical trade and risk management activities across jurisdictions. In effect, the LME functions as a single point of failure for global nickel pricing. When the exchange halted trading and cancelled transactions, it not only disrupted immediate settlement but also undermined confidence in the reliability of global reference pricing – amplifying the systemic implications.[10]

Risks were overlooked because conventional mapping focuses on formal structures – who is connected to whom and who can be a substitute – rather than on dynamic dependencies and behavioural co-movements. It fails to capture latent risks that emerge only under stress: hidden concentrations, opaque cross-venue exposures and the cascading effects of liquidity withdrawal. Since then, mitigating measures have been taken, such as the introduction of daily price limits, stricter member eligibility requirements and increasing transparency of the OTC LME markets. Nevertheless, a hypothesis-driven, risk-based approach – starting from plausible disruption scenarios – would have focused (supervisory) attention on large directional exposures, functional monopolies in price formation and margining chains, thereby exposing vulnerabilities before they crystallised.

Past crises underscore the need to move beyond institutional oversight and traditional stress tests and towards a functional understanding of market infrastructure. A (top-down) network map fails to reveal this behavioural risk, as it captures structure, not interaction. Rather than focusing solely on stress testing individual entities, it is essential to examine how key market functions – such as trading, clearing and settlement – interact and depend on one another. This functional lens allows for identification of systemic vulnerabilities that may not be visible through traditional mapping.

9 'LME suspends Nickel trading amid metals volatility', FOW, March 2022.

10 To illustrate how relatively small premeasures can be easily overlooked from a supervisory stance but have major implications, consider the amplifying factor that the LME had no price-based circuit breakers in place at the time. Unlike many markets with built-in volatility limits, there were no predefined thresholds to pause trading during extreme price movements. This omission allowed the price to spike uncontrollably past $100,000 per ton before the exchange intervened manually.

3. Critical market functions

Capital markets are a foundational element of the financial system, serving as a competitive mechanism to channel savings into productive investment. They connect a broad spectrum of savers – from individual households to institutional investors such as pension funds and insurers – with businesses and governments seeking funding for growth, innovation and operational needs. Through instruments such as equities, bonds and derivatives, capital markets offer diversified investment opportunities that support wealth creation and capital formation. For issuers, these markets provide a scalable and often more competitive alternative to traditional bank lending. By mobilising resources across a wide investor base, capital markets promote economic efficiency and financial inclusion. In contrast to a bank intermediation model, which centralises functions within single institutions (banks), capital markets operate through a decentralised network of specialised entities.

Capital markets disaggregate critical market functions – investment, issuance, trading, market making, clearing and settlement – across a network of specialised institutions. Asset managers, pension funds and retail investors deploy capital. Investment banks and underwriters assist issuers. Trading venues and brokers facilitate transactions. Independent market makers provide liquidity. Central counterparties (CCPs) clear trades. And custodians manage settlement. This structure allows for greater specialisation and diversifies risk-taking, leading to increased competition and efficiency. It also reduces the direct spillover effects seen in vertically integrated bank models, as balance sheet exposures are compartmentalised. There is a broad consensus that market finance should be stimulated and dependencies on bank finance should be reduced. See, for example, last year's Draghi report on EU competitiveness.[11]

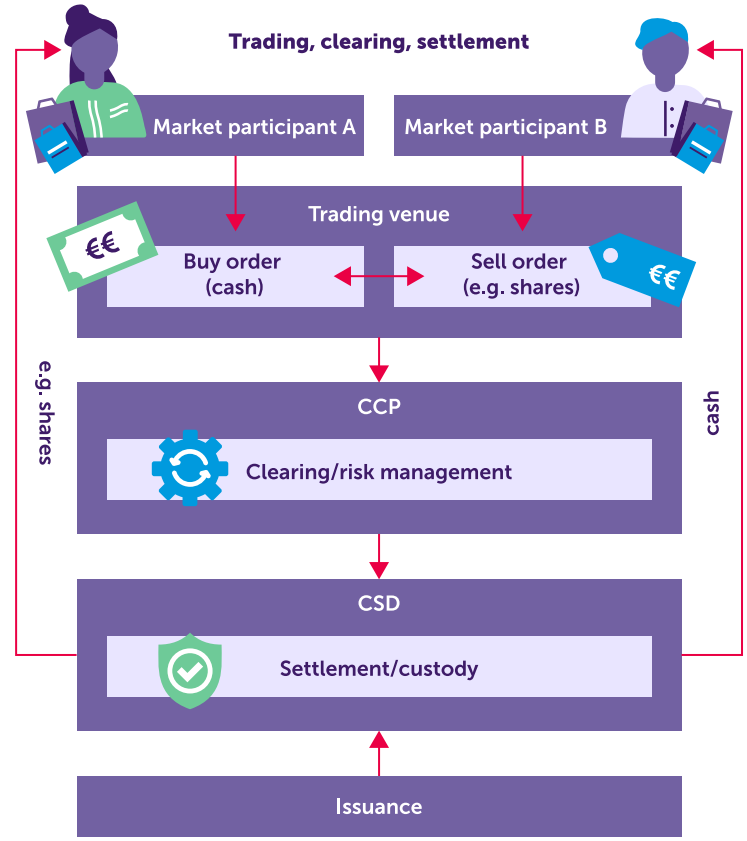


Figure 5 Capital markets disaggregate critical market functions – investment, issuance, trading, market making, clearing and settlement –across a network of specialised institutions.

11 'EU competitiveness: Looking ahead', EC, September 2024.

However, this separation into critical market functions introduces its own risk dynamics. The interdependence among these distinct actors creates complex transmission channels during periods of stress. For example, dislocations in liquidity provision by market makers, or disruptions at a key clearing house, can have systemic repercussions across the broader financial system. The reliance on a limited number of highly specialised service providers – particularly in areas such as clearing, trading infrastructure or large-scale asset management – creates operational concentration risks. In such an international environment, the failure or withdrawal of a single key participant can destabilise core market functions. Additionally, competition among intermediaries such as market makers or trading venues may drive efficiency, but it also incentivises risk-taking in the pursuit of market share. Unlike traditional banking, however, these activities tend to be highly specialised, technology-driven and capital-intensive, which raises barriers to entry for new participants. Over time, this can result in a concentrated market structure dominated by a few large players – a situation where intense competition initially benefits consumers but eventually leads to consolidation, limited innovation and potentially higher costs or worse outcomes for market participants.

Critical market functions are the starting point for risk hypotheses and scenario analysis. In a risk-based approach, defining critical market functions forms a framework to analyse risks in capital markets, such as dependencies, concentration and associated risks. They define what we consider to be important and where potential concerns lie. Institutions obviously play an important role in each market function, but what happens between them is of equal importance. Based on these market functions, we construct concrete risk hypotheses or scenarios. These risk hypotheses are built upon the insights we have into the market functions, including relevant players and their behaviour and interactions, and turn them into clear questions for supervision, such as "What will happen if ...?" They provide guidance in identifying dynamic risks that are not immediately visible through static mapping alone but preparable through imagination.

This approach is relatively recent in supervisory practice and is gaining traction. Supervisors have traditionally relied on stress tests and static balance sheet data to gauge resilience, but these tools often miss how risks propagate through institutions and infrastructures. The Bank of England has pioneered a similar perspective with its system-wide exploratory scenarios (SWES), designed to capture how different market participants might react simultaneously under stress and how those reactions interact.[12] This shift reflects a growing recognition: it is not only the strength of individual firms that matters, but also the growing complexity of interconnected markets and the dynamics that emerge when individual firms respond together.[13] There are, however, some good reasons why scenario-based analyses have been less prominent historically. Scenario analyses are usually complex and mostly deliver results only indirectly, which is uncomfortable at times and harder to justify. A technical, more static, institutionally focused approach gives supervisors and their stakeholders a better sense of doing the right things: it is simpler – which is often a very sensible argument. Moreover, in-depth knowledge of individual institutions helps us fuel a functional, scenario-based analysis. For this reason, both approaches are important to the AFM.

12 'The Bank of England's system-wide exploratory scenario exercise final report', Bank of England, November 2024.

13 See, for example, 'Higher-order headaches lurking in the financial system', FT, August 2025.

4. Imagining a plausible future scenario: the potential meltdown of the dollar

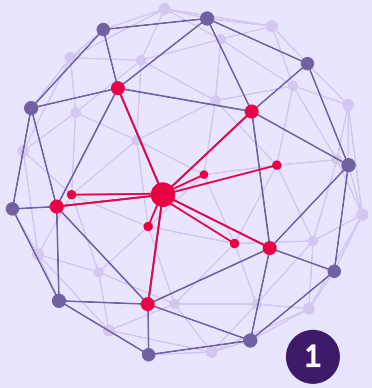
Scenario analysis is not about predicting the future, it is about preparing for it. As supervisors, we face an environment where the future is inherently uncertain and shaped by countless possible trajectories. Our role is not to forecast which path will materialise, but to identify those pathways where risks may emerge that are both unknown and impactful – potentially leading to crises.
We begin by recognising that the future cannot be captured through static models or linear extrapolations. Instead, we use past crises and structural vulnerabilities to identify archetypes of risk – in the case of the stability of the ecosystem, each is tied to concentration and dependency (see Box 1). These archetypes, combined with relevant developments such as AI-driven financial infrastructure, geopolitical fragmentation or crypto-based finance, form a dynamic framework for constructing supervisory scenarios.

In this approach, plausibility matters more than probability. A scenario does not need to be merely quantifiably likely – it needs to be possible and impactful. Focusing on narratives helps to stretch our thinking and expose blind spots. For example, a plausible scenario might involve a dominant AI-based trading platform failing due to a model error, triggering liquidity stress across multiple market functions. While the probability of this exact event may be low, its plausibility – and the systemic consequences it could unleash – make it worth exploring. These scenarios serve multiple purposes. They help to prepare mentally for unfamiliar developments, operationally test risk management or supervisory responses and strategically focus attention on areas of emerging fragility. Rather than aiming to predict the future, we aim to construct compelling and relevant narratives that guide our inquiry. This makes it possible to move beyond static mapping and into dynamic risk management and supervision

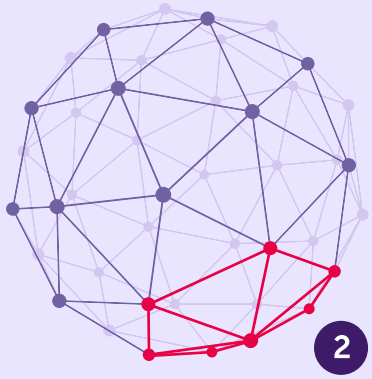
Box 1. RISKY DEPENDENCIES Four archetypes

To understand systemic vulnerabilities in capital markets, we identify four recurring archetypes of risks that stem from concentration and dependency. These archetypes help at anticipate **how stress can propagate through the financial system**, especially in a future shaped by technological, geopolitical, and structural shifts.

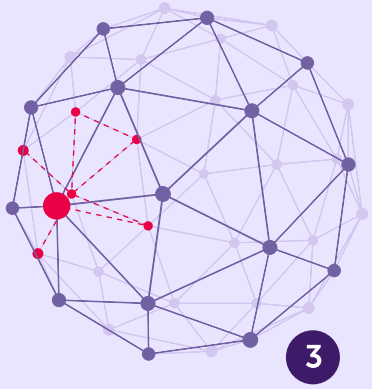
1. Institutional dependency
When a small number of institutions dominate multiple market functions or control critical infrastructure, the system becomes fragile. Their failure can trigger cascading disruptions. For example, a major clearinghouse integrating trading and settlement functions could become a single point of failure. Future risks may arise from dominant AI-driven trading platforms or vertically integrated crypto exchanges that centralize liquidity, custody, and execution.



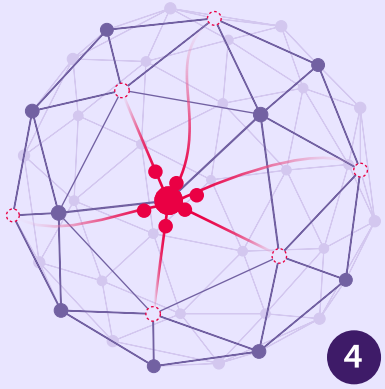
2. Geographic dependency
Reliance on non-EU entities for essential services such as clearing, data provision, or asset management creates exposure to foreign legal and political environments. This dependency limits the EU's ability to respond during crises. A plausible future risk includes geopolitical tensions disrupting access to U.S. based cloud infrastructure used by European trading venues, or regulatory divergence affecting cross-border crypto asset assurance.



3. Hidden interconnectivity
Latent links between institutions, such as shared technology providers, rehypothecation chains, or common safe-haven assets, can become active under stress, creating unexpected contagion pathways. For instance, power outage at a shared datacenter of a cyber attack on a widely used AI model could simultaneously affect multiple asset managers and lenders, revealing hidden dependencies that were previously overlooked.

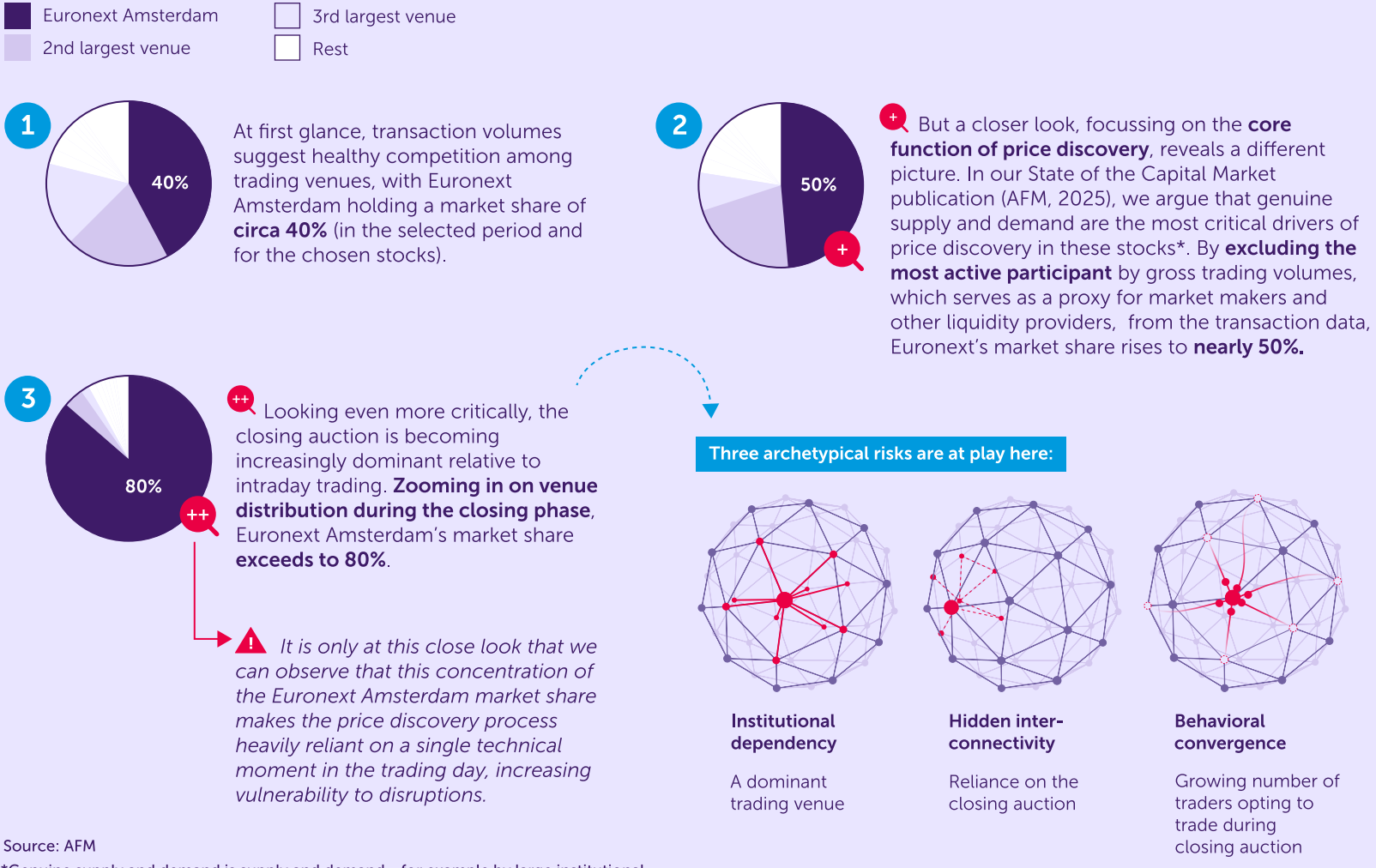


4. Behavioral convergence
Even without direct connections, institutions may behave similarly under stress due to shared models, incentives, or constraints. This synchronized behavior can amplify volatility and drain liquidity. A future example could be widespread de-risking triggered by a sudden drop in tokenized asset valuations, where algorithmic strategies across firms respond identically, leading to flash crashes or liquidity spirals.



Box 1 *(continued)*. Example of overlooking potential risks: the Euronext closing auction

The archetypical risks as described above often **interact to create significant vulnerabilities**. In the example below, we illustrate this by an example of the Euronext Amsterdam closing auction. When examining transaction volumes of some of the most actively traded stocks on Euronext Amsterdam, it becomes clear that the closing auction is rapidly emerging as a potential operational single point of failure. Three archetypical risks are at play here.



Source: AFM

*Genuine supply and demand is supply and demand - for example by large institutional buyers and sellers - that is not immediately hedged in the same or related markets.

Scenario-based thinking helps to better prepare for a potential future by considering the interconnectedness of the financial markets and their players. Several scenarios may be used, such as a major electronic outage causing the malfunctioning of all relevant market infrastructures and connected market participants, or escalating geopolitical tensions resulting in certain services no longer being provided and thus certain market functions no longer being offered (such as large EU parties no longer having access to US markets or vice versa).

In this analysis we have chosen to focus on a scenario that is both plausible and impactful and that captures as many elements as possible of the interconnectedness that we have identified (see paragraph 4.1). This scenario should not be interpreted as the only scenario that the AFM would consider or the most likely one; it merely functions as a means of strategic thinking, with the added benefit of exposing vulnerabilities. The scenario that we have chosen revolves around a loss of trust in the US dollar and US Treasuries. These function as the world's financial "anchor" and liquidity instrument, and any disruption here would expose the cracks in Europe's financial edifice that have been papered over in stable times.

4.1 The potential meltdown of the dollar

The scenario

The global financial system relies on the dollar and US Treasuries, but a slow erosion of trust in these could set off a chain of events that destabilises Europe's capital markets. For decades, Treasuries have been treated as the ultimate safe collateral, held by central banks, insurers and pension funds. Yet US political brinkmanship, repeated threats of technical default and a rising debt burden have begun to chip away at that confidence. Investors do not necessarily sell Treasuries outright, but they rush to hedge their dollar exposures. What looks like prudent risk management in isolation becomes destabilising when large institutions act in sync.

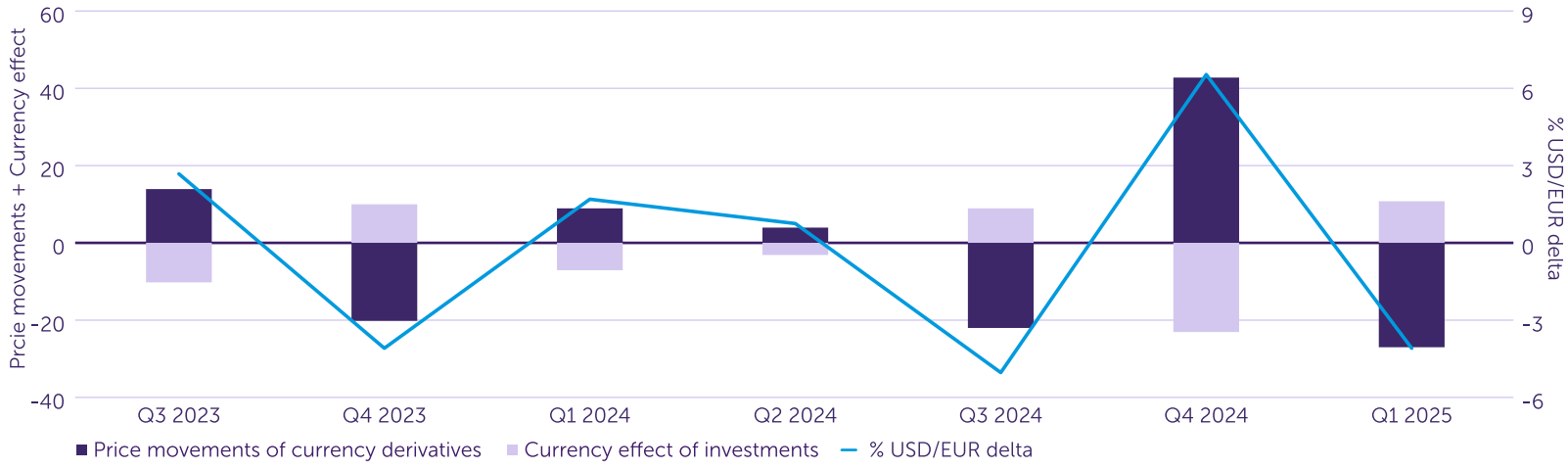


Figure 7 Dutch pension funds feel the pain of a weak dollar on only partially hedged assets. Source: DNB

European institutions feel the pressure first. Large foreign holders of US Treasuries, such as Dutch and Danish pension funds, gradually expand US dollar hedging, putting self-reinforcing pressure on the dollar.[14] The cross-currency basis widens, draining returns on dollar-denominated assets and forcing portfolio reallocations. The market for US Treasuries, while one of the most liquid, is not immune to market-microstructure imbalances, as seen in past liquidity events, and loses its status as frictionless collateral, with dealers and CCPs starting to apply higher haircuts. In a system built on the assumption that these assets are the foundation of capital markets infrastructure, even modest repricing triggers significant margin calls and undermines liquidity and confidence. A cyberattack with otherwise limited consequences for the Eurosystem settlement system T2/S[15] impairs or delays settlements at the largest CSDs, which shocks the market further, triggering even more margin calls. A major clearing member fails to meet these margin calls, which forces a dominant CCP to impose higher margins and suspend some of its largest participants.

At the same time, USD-denominated stablecoins, actively marketed as a seamless bridge between crypto and traditional finance, have become a new fault line. These coins, used extensively by European trading venues and money market funds for instant settlement, are supposed to be fully backed by short-term Treasuries. However, as the dollar drops, the value of these stablecoins follows suit and people will want to move away from (sell) them. A large redemption run on stablecoins forces stablecoin issuers to liquidate collateral into a falling market. This further steepens the price drop and feeds volatility back into the Treasury market.

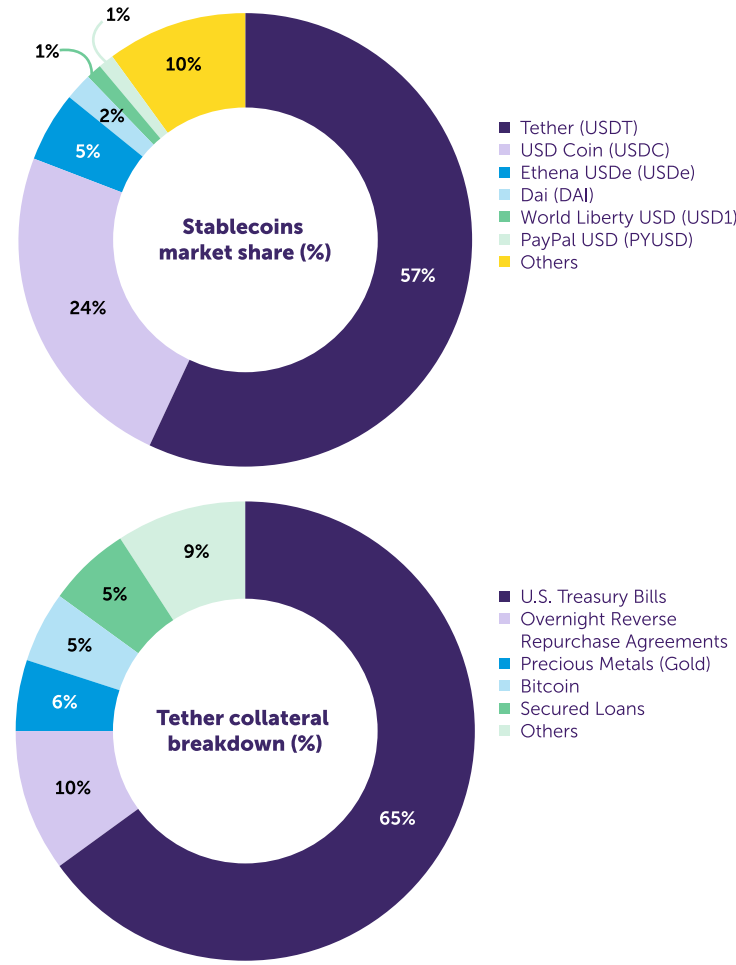


Figure 8 Tether (USDT) and USD Coin (USDC) dominate the market for stablecoins (top). Tether is backed predominantly by US Treasuries (bottom). Source: MarketCoinCap, Tether

14 See, for example, 'Weaker US dollar hits pension funds harder than price losses', DNB, June 2025.

15 'What is TARGET2?', DNB

Policy responses prove fragmented just when clarity is most needed. While the US Treasury market cracks, the ECB and Federal Reserve hesitate to coordinate, fuelled by decreasing political willingness to provide emergency liquidity. Markets interpret the hesitation as a sign of ever-growing division. The People's Bank of China (PBOC), by contrast, seeing an opportunity to step in, acts decisively, offering renminbi liquidity lines to several European countries that are hurt by markets. While this provides some temporary relief, it introduces a new dependency: European stability underwritten by non-traditional political alliances. For supervisors, the events raise uncomfortable questions about sovereignty and geopolitics in financial markets. Euro area stability again faces threats from political and economic fragmentation, both inside and outside the European Union.

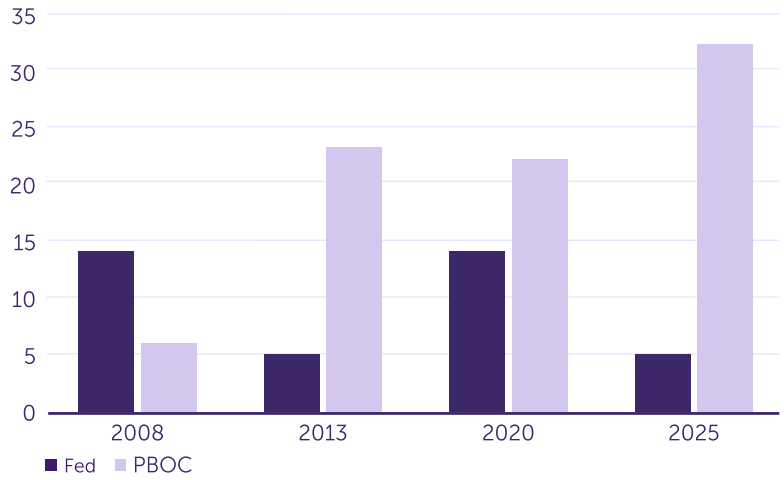


Figure 9 PBOC gradually expands its network of RMB swap lines building alliances across the globe, while the Fed uses swap lines as an emergency liquidity backstop. Source: Fed, PBOC

Households experience the crisis not through the technical failure of capital markets infrastructure, but through their savings. Pension funds are hurt by losses on their partially hedged dollar assets and rising costs to expand dollar hedges. Retail funds, facing sudden redemption pressure, are forced to facilitate withdrawals. Popular AI-driven fintech investment apps, mainly used by younger investors, shift households out of crypto into euro stablecoins at exactly the wrong time. Younger investors feel the pain of embracing the crypto ecosystem as a new 'safe haven', while older households see traditional promises weakened. The outcome is not just financial loss but a deep (political) division between generations and erosion of trust in the system's fairness and reliability.

Pre-mortem lessons learned

What this scenario shows is that archetypical risks resurface in new forms and shapes (see Box 2). Europe's capital market vulnerabilities revealed themselves on several fronts at once. There was a reliance on pivotal institutions, such as a few CSDs and CCPs and global clearing banks, and just a few dominant USD stablecoin issuers that critically depend on US dollar funding. Critical market functions inherently depended on US fiscal credibility, FED swap lines and US-based custodians of stablecoin collateral, creating strong US political dependency. Hidden interconnectedness through rehypothecated Treasuries and stablecoin backing meant the same collateral supported multiple chains of leverage on- and off-chain. Common risk models and exit-door strategies drove banks, pension funds and retail investors to flee dollar exposure and redeem stablecoins in near-perfect unison, turning prudent risk management strategies into a downward spiralling stampede.

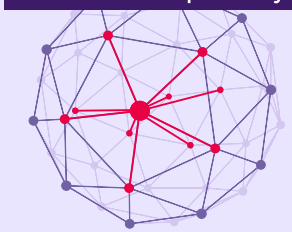
Static maps of capital markets infrastructure cannot capture how these interactions unfold. Supervisors can measure CCP exposures, hedge ratios or IT dependencies in isolation. They can mandate buffers and resilience frameworks such as EMIR and DORA. But maps of nodes and links suggest stability until multiple stress events in a rapidly changing environment hit at once. Such a map shows the critical points and interdependencies but not the magnitude and/or volatility of the flows that go through them. They do not show how a cyber outage interacts with hedging flows, or how AI-driven strategies magnify downward spirals. It is not the presence of each risk but their simultaneity and mutual reinforcement that overwhelms the system. Moreover, the heart of the paradox of the scenario is this: resilience in normal times masks fragility in crisis.

Box 2. Magnifying spirals: from structure to behaviour and back again

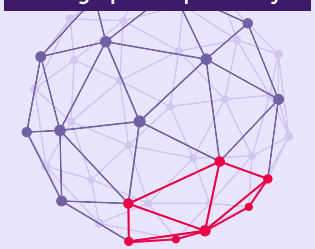
Static maps of capital markets infrastructure suggest stability until multiple stress events in a rapidly changing environment hit at once. It is not the presence of each risk but their **simultaneity and mutual reinforcement** that overwhelms the system. We have listed some examples below.

FEEDBACK LOOP	SHORT DESCRIPTION	DOMINANT RISK ARCHETYPE
Dollar-hedging spiral	Loss of confidence in Treasuries leads pension funds to expand USD hedging. The widening FX basis increases hedging costs, prompting even more hedging; a self-reinforcing liquidity drain.	**2, 4**
Collateral & margin spiral	Falling Treasury prices lead to higher haircuts, margin calls and forced sales with further price declines as a result. Liquidity evaporates in markets built on Treasuries as 'risk-free' collateral.	**1, 3**
Stablecoin redemption loop	Declining Treasury values weaken stablecoin collateral; redemptions trigger more collateral liquidation, amplifying volatility in both crypto and traditional markets.	**1, 3**
Infrastructure stress loop	Cyberattack or settlement outage causes delayed payments, with uncertainty leading to increased margins, CCP liquidity stress and possible defaults, which in turn triggers further margin hikes. Operational disruption amplifies financial instability.	**1, 3**
Policy coordination / geopolitical feedback	Breakdown of Fed-ECB coordination erodes market confidence. This fragmentation raises risk premia. PBOC liquidity lines provide short-term relief but increase strategic dependency.	**1, 2**
Household & fintech behavioural loop	AI-driven investment apps and retail investors simultaneously shift into stablecoins, mistaking them for safe assets, thereby worsening the redemption spiral.	**3, 4**

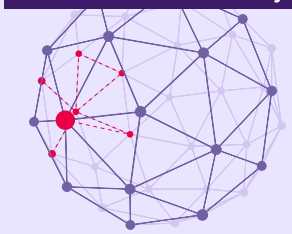
1 Institutional dependency



2 Geographic dependency



3 Hidden interconnectivity



4 Behavioural convergence

5. Conclusion

Future financial crises will arise from the convergence of unexpected circumstances, often with an exogenous trigger, as past crises have taught us. Past crises or crisis events such as the GFC, the COVID-19 market crash and the LME nickel incident, but also the Einar Aas NASDAQ episode of 2018[16], the Archegos default and the UK LDI gilt crisis, all show how sudden catalysts can destabilise a system already marked by concentration and dependencies. Often it is not (only) the fall of a pivotal institution that leads to a crisis but the interaction of different dependencies: concentration at a pivotal node, geographic reliance (on non-EU actors), non-obvious contagion through operational or technological disruptions and behavioural synchronisation that amplifies market dynamics.

Because such crises cannot be predicted with precision, risk management requires imagination: risk hypotheses and scenarios may prove more valuable than static maps or traditional tools such as isolated stress tests. The point is not quantified probability but plausibility, which is a combination of reasonability and believability. Quantified static mapping of market infrastructures can provide a false sense of security, since it does not capture how simultaneous events in an emergent system reinforce each other. By working with scenarios and asking "what if it goes wrong, and what chain of events would follow?" it is possible to build both mental and operational resilience.

For supervisors and market participants alike, the task is to prepare for these scenarios and align tools and behaviour accordingly. Supervisors must test how their instruments would perform under the pressure of such scenarios, while market actors must look beyond their individual business models to consider how they would react and what would happen if their reactions coincided with and reinforced everyone else's. The task is to prepare for these scenarios and align tools and behaviour accordingly. By focusing on plausible dynamics instead of exhaustive checklists, both supervisors and firms can achieve smarter oversight with less administrative burden – a wish that would be enthusiastically welcomed by both the industry and policymakers.

The AFM supports a move to European supervisory approaches that look system-wide and focus explicitly on dynamics and behaviour, rather than static structures alone. For supervisors this means building a living record of risk hypotheses and scenarios, developed in consultation with our European supervisory colleagues, international academia, policymakers and the financial industry, to ensure diverse perspectives on how shocks may unfold. These scenarios should then be tested both quantitatively, through data and models, and qualitatively, through discussions and round tables conducted by supervisors for a system-wide view, but also through self-assessments within institutions. The emphasis should shift away from static resilience measures (i.e. more regulation), such as capital buffers or technical failover plans, towards executive-level scenario thinking: what would we do if this chain of events happened?

Consequently, this may tilt the focus from mitigation to impact reduction. Just as pilots and emergency responders train for crises they may never face, the financial industry should engage in emergency preparedness exercises and training, for example simulating cyberattacks or sudden foreign capital constraints. Only by preparing for dynamic, system-wide shocks can Europe's capital markets strengthen the resilience, transparency and fairness that European households expect, and that the sustainable future of the European Union economy depends on.

16 'Two defaults at CCPs, 10 years apart', BIS, December 2018.