2. The repo market: a cornerstone of sovereign liquidity and challenges for financial stability

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The repurchase agreement (repo) market, in which financial institutions temporarily exchange securities for cash while agreeing to repurchase them at a specified date, has become a key segment of short-term funding and bond market functioning, largely replacing unsecured funding. While commercial banks have traditionally been the main users of the repo market to meet their funding needs, central banks are also highly active participants, using it to conduct their operations, manage their investments and support bond market liquidity. Repo transactions enable market participants to manage their liquidity and meet funding needs without selling securities outright. With global outstandings of around USD 16 trillion, nearly 80% of which backed by sovereign debt, the repo market has undergone a profound transformation over the last decade, driven by the rise in sovereign bond issuance and monetary policy implementation by central banks. Several recent and successive episodes of market stress (2019, 2020, 2022, and 2025) have highlighted the dual nature of this market segment: while it guarantees the smooth circulation of cash and securities in normal times, it also constitutes a major channel of systemic contagion during periods of stress.

This systemic importance is accompanied by increasing vulnerabilities linked to the growing presence of non-bank financial entities, leverage and high concentration among participants. The repo market is traditionally intermediated by a small core group of major international banks whose capacity may be constrained by prudential rules, particularly the liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR), especially during periods of stress. These entities are allocating a growing proportion of their funding to hedge funds to support highly leveraged arbitrage strategies This trend exacerbates the risk of sharp price swings and fosters the emergence of contagion channels to the broader financial system in the event of a sudden liquidity squeeze. These vulnerabilities are further amplified by the prevalence of very short-term transactions - predominantly overnight in the United States - and by the application of risk management practices (haircuts and margin calls) that may at times be insufficient and that could prove procyclical in the event of a shock.

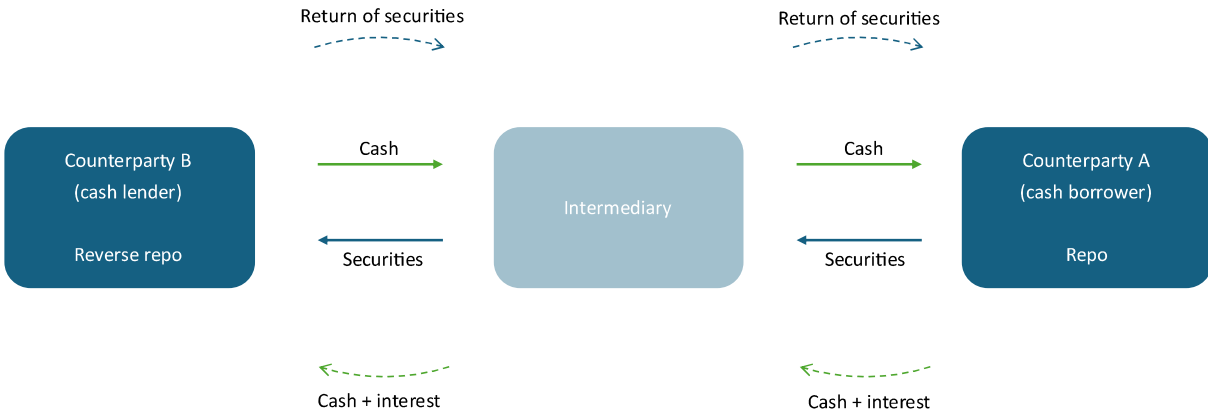
To mitigate these weaknesses, the market is currently undergoing major structural changes, foremost among them the expansion of central clearing. This transition is already well under way globally, as evidenced by the phased introduction of mandatory clearing for US government bond transactions and the significant levels of central clearing already reached for French, German and Italian government bonds (ranging from 30% to 60%, depending on the scope considered). Mandatory central clearing in the European Union could further strengthen the resilience of the European repo market. Regardless, adapting the macroprudential framework to enhance transparency appears essential.

2.1 The repo market is a key source of funding and supports liquidity in sovereign markets

A critical component of short-term funding and bond market functioning

The repo market holds a central position in today's financial architecture. In a repurchase agreement (repo), a financial institution temporarily exchanges securities for cash, committing to repurchase them at a pre-agreed date and price (see Figure 2.1). The mirror transaction from the perspective of the cash provider is known as a reverse repo. Although legally structured as a sale followed by a repurchase, a repo functions economically as a cash loan secured by collateral. As the repurchase price is fixed at the start of the contract, the party that receives the securities is theoretically not exposed to fluctuations in the price of the underlying asset during the term of the transaction. Residual exposure may nevertheless arise if the counterparty defaults between two margin calls, known as gap risk.[100] In this situation, the cash provider would have to liquidate the collateral to recover its funds.

Figure 2.1: Example of a repo with intermediation



i.

ii. Note: The intermediary, which simultaneously takes repo and reverse repo positions, is not essential.

iii. The solid green and blue arrows indicate transfers of cash and securities, respectively, at the start of the transaction, while the dashed green and blue arrows indicate the return of cash and securities, respectively, at maturity.

iv. Source: Banque de France, based on FSB (2026).

v.

The repo market enables financial institutions to access short-term funding against collateral, primarily sovereign bonds. It is a key component of liquidity management in the money market (see Chart 2.1), allowing securities holders to obtain cash without having to sell their securities outright. Repos thus offer a form of "liquidity without liquidation"[101] that is particularly valuable during times of financial stress, helping to limit forced asset sales that could exacerbate market disruptions. By facilitating the circulation of securities beyond their long-term holders, the repo market also supports the functioning and liquidity of sovereign bond markets. In particular, it underpins the activities of market makers that are continually buying and selling securities on the secondary market. To play this role, market makers must temporarily hold large inventories of sovereign bonds on their balance sheets. The repo market enables them to fund these inventories at low cost by using securities as collateral to borrow cash. The secured nature of repo trades lowers funding costs and facilitates the holding of sovereign bonds. This contributes to narrower bid-ask spreads and, in turn, improves market liquidity. More broadly, it enhances intermediaries' ability to absorb buying and selling flows without triggering significant price movements, thereby supporting the liquidity and resilience of sovereign bond markets. By signalling the relative scarcity of certain securities, adjustments to repo rates encourage holders to make them temporarily available, promoting their recirculation within the financial system and improving the effective liquidity of sovereign bond markets (see Box 2.1).

[100] Counterparty risk management mechanism designed to realign the estimated market value of collateral with the amount of cash lent.

[101] Coen (J.), Coen (P.) and Hüser (A.-C.) (2024), Collateral demand in wholesale funding markets, *Staff Working Paper* No. 1082, Bank of England, July.

Box 2.1: Rate formation and the role of public sector institutions in the euro area
By Mateo Caicedo Graciano, Lucas Devigne, Paul Domart et Claire Orliac

A repo transaction is negotiated at a rate that balances the supply of and demand for cash against collateral. This rate corresponds to the cost of borrowing cash against securities and fluctuates in the vicinity of the Eurosystem's deposit facility rate (DFR). Repo trades can be divided into two main types according to the type of collateral used.

- **General collateral (GC)**: the securities provided as collateral are regarded as interchangeable and grouped into broad, homogeneous classes, typically defined by sovereign jurisdictions.[102] The exact identity of the security at the time of the trade is irrelevant: what matters is that it belongs to a specific collateral class. The associated rates vary according to the credit quality of the securities: the German GC rate is usually lower than the Italian GC rate, as German bonds are considered safer (see Chart 1). Consequently, the party receiving these securities as collateral accepts a lower return because it bears less risk. In this case, the transaction primarily serves a funding purpose, and the repo is above all a means of accessing liquidity.
- **Specific collateral (SC)**: whereas some repo trades are primarily intended to meet funding needs, others are driven by the intent to acquire a specific security, for hedging purposes, settlement transactions, or delivery on the derivatives market. When market participants are seeking access to a specific type of collateral, the repo rate may trade well below GC rates, sometimes by several dozen basis points. Such securities are referred to as "special". The lower repo rate reflects the relative scarcity of the security: participants are willing to lend cash on more favourable terms in order to obtain temporary access to that security, thereby encouraging its recirculation within the market. The "specialness" observed since the Eurosystem started purchasing securities must be understood in this context: purchases may have decreased the relative availability of certain sovereign securities and created imbalances between supply and demand for those securities. More generally, during periods when high-quality collateral is relatively scarce, some repo rates may trade well below the DFR. Conversely, when specific securities are in demand but remain sufficiently available on the market, particularly during periods of quantitative tightening (QT) and positive net sovereign issuance, repo rates may move above or close to benchmark money market rates.

Repo rates serve as short-term interest rate benchmarks, complementing the rate for unsecured overnight transactions (€STR, or euro short-term rate) calculated and published by the European Central Bank (ECB). The €STR, GC repo and Euribor rates provide benchmarks for a wide range of financial products, including interest rate derivatives, loans and hedging instruments.

It is important, however, to distinguish these private market transactions and the Eurosystem's refinancing operations. Eurosystem national central banks act as liquidity providers to their monetary policy counterparties through main refinancing operations (MROs) with a one-week maturity and longer-term refinancing operations (LTROs) with a three-month maturity. Although the economic mechanism is similar (a cash loan against securities posted as collateral), these transactions are not carried out in the repo market: they are conducted bilaterally with the central bank against pledge collateral, unlike market repo transactions, which involve a transfer of ownership of the securities.

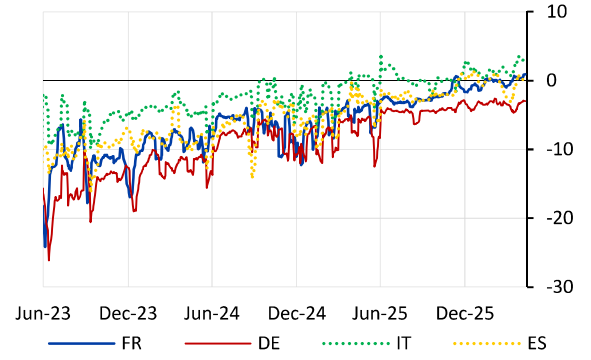
The MRO rate is one of the ECB's three key interest rates. Set at 15 bp above the DFR ("corridor width") since the Eurosystem's operational framework review came into force in September 2024, it helps to shape short-term money market financing conditions. The level of key interest rates and the level of excess central bank liquidity directly influence repo market rates. The latest review of the operational framework confirmed that, in an environment of ample liquidity, the DFR serves as the key benchmark rate around which money market

[102] For example, the "German GC rate on the spot/week maturity" designates the repo rate secured by German government bonds for a transaction that generally starts two business days after the trade date and matures one week later.

conditions fluctuate.[103] This anchoring ensures the effective transmission of monetary policy, for which short-term market interest rates constitute the primary transmission channel vehicle.

Chart 1: Spread between European O/N repo rates and the DFR

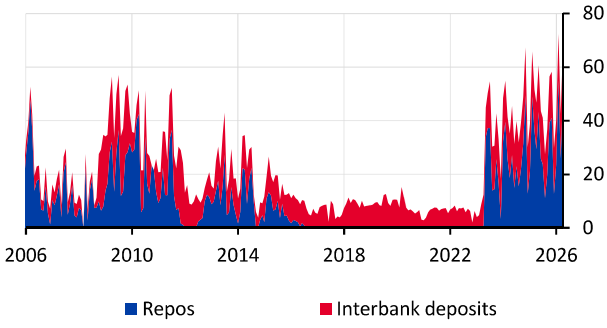
x: time / y: spread (bps)



Note: 10-day moving average. Volume-weighted spreads between GC repo rates and the DFR.
Sources: SFTDS, Banque de France.
Most recent value: 5 June 2026.

Chart 2: Average total monthly amount placed in the markets by the AFT

x: time / y: amount in EUR billion



Note: Reverse repos correspond to the AFT's cash investments with commercial banks (mostly primary dealers) in exchange for French government securities (OATs); deposits are cash investments with the same institutions but without associated repos.
Source: AFT Regulation.
Most recent value: April 2026

Public sector institutions participate directly in the private repo market. Central banks trade in this market for two reasons: firstly, the Eurosystem lends securities purchased under its unconventional purchase programmes (APP and PEPP)[104] to alleviate collateral scarcity; secondly, central banks invest on their own account by placing cash through reverse repos transactions to earn a return on it. Agence France Trésor (AFT) is also an active participant in this market through the active management of the French Treasury's cash position, placing tens of billions of euros in reverse repos against French government bonds (OATs), as well as in deposits with commercial banks (see Chart 2). These operations shape market activity, as they are closely aligned with the timing of the State's cash inflows and outflows: funds are invested ahead of government bond redemptions, coupon payments and the payment of civil servants' salaries, and following sovereign debt issuance or the collection of taxes and social security contributions.

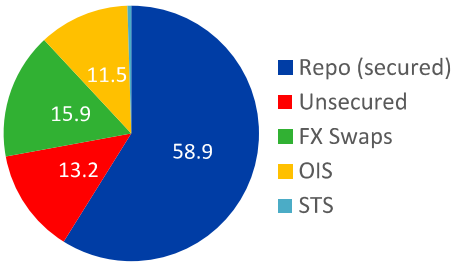
Repo and reverse repo activities play a vital role in the functioning of financial markets by facilitating the intermediation of liquidity and collateral. Banks and market intermediaries occupy a central role in this system, as they both intermediate between market participants and finance their own market positions through repo transactions (see Chart 2.2). On the one hand, repos provide a source of secured short-term funding for market participants in need of liquidity, such as certain leveraged funds,[105] by enabling them to temporarily post their securities as collateral. Conversely, they offer market participants with surplus cash, particularly money market funds, a low-risk and highly liquid investment vehicle. On the other hand, repos facilitate the temporary circulation of financial securities among market participants. Some long-term investors, such as insurers, can therefore temporarily lend the securities held in their portfolios in exchange for cash, thereby earning additional returns (see Charts 2.3 and 2.4). Banks and market intermediaries, in turn, borrow these securities for hedging purposes, notably to avoid settlement fails, for balance sheet management purposes, or as part of arbitrage and short-selling strategies. Some participants, such as hedge funds, may operate in either direction, depending on market

[103] ECB (2024), Changes to the operational framework for implementing monetary policy, 13 March.
[104] The asset purchase programme (APP) and the pandemic emergency purchase programme (PEPP) are the two main asset purchase programmes implemented by the Eurosystem, since 2015 and 2020 respectively. By purchasing large quantities of sovereign bonds and other securities, these programmes have contributed to a decrease in the amount of high-quality collateral available on the market. To mitigate these effects, the Eurosystem allows market participants to borrow some of the securities held in its portfolios through securities lending schemes.
[105] This trend has become particularly pronounced among leveraged funds since late 2024 (see Section 2.2).

conditions and arbitrage opportunities (see Box 2.2). Their presence is particularly significant in the major repo markets (United States, euro area, United Kingdom and Japan).

Chart 2.1: Share of money market segments in the euro area at the end of 2025

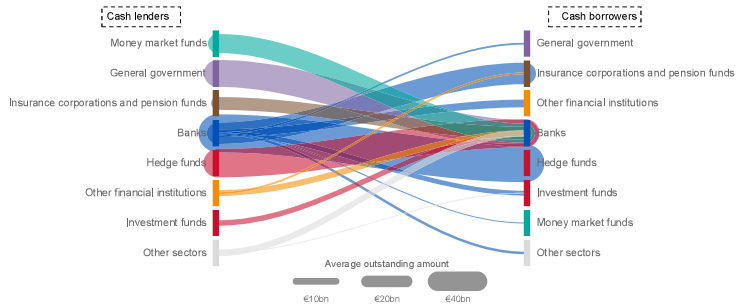
x: time / y: % share



Note: Average daily volumes in the fourth quarter of 2025. Short-term debt securities (STS) account for 0.5% of the market.
Sources: MMSR, Banque de France.

Chart 2.2: Cross-sector OAT repo positions during 2025

x: liquidity lending and borrowing sectors / average daily outstanding amounts in EUR billion

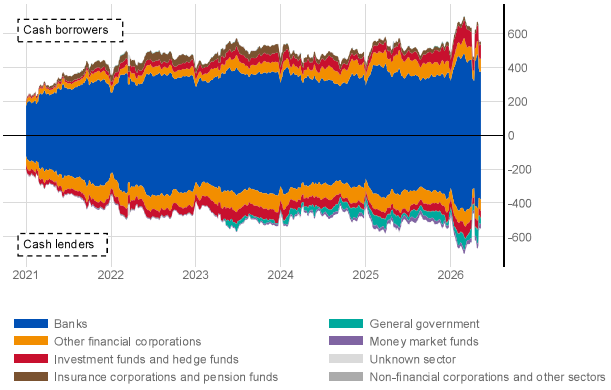


Note: The thickness of the bands corresponds to average daily outstanding cross-sector OAT repo positions in 2025. The transactions considered are OAT repos involving at least one counterparty subject to SFTR reporting. Transactions with central banks are excluded from the analysis due to incomplete data coverage. The exposures observed are, however, similar to those of general government transactions, albeit involving smaller amounts. The "other" category comprises CCPs (trading on their own account), non-financial corporations, financial vehicles and unidentified sectors.
Sources: SFTDS, Banque de France.

Very short-term transactions predominate in the market, with around half of the global oustanding stock maturing overnight. This maturity structure offers several advantages: first, it gives market participants considerable flexibility to adjust their balance sheet. Money market funds, for example, face constraints relating to daily redemptions, which may be substantial. By investing their surplus cash through overnight reverse repos, they are able to earn a return on their liquidity while retaining immediate access to it. Short maturities also help to limit exposure to fluctuations in the collateral value, as well as counterparty credit risk.

Chart 2.3: Cash borrowing and lending on the OAT repo market, by sector

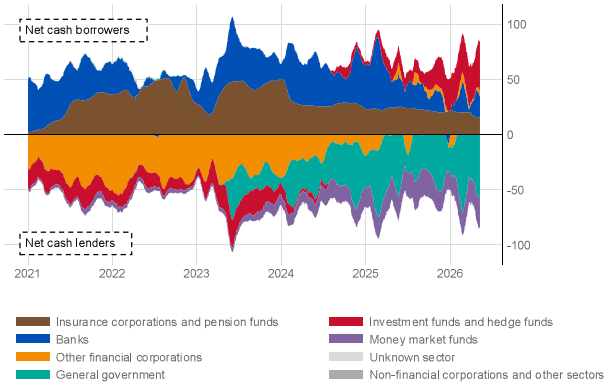
x: time / y: amount in EUR billion



Note: 7-day moving average. The transactions considered are OAT repos involving at least one counterparty subject to SFTR reporting. Transactions with central banks are excluded from the analysis due to incomplete data coverage. The exposures observed are, however, similar to those of transactions with general government, albeit involving smaller amounts. The "other" category comprises CCPs (trading on their own account), non-financial corporations, financial vehicles and unidentified sectors.
Source: SFTDS, Banque de France calculations.
Most recent value: 5 June 2026.

Chart 2.4: Net borrowing and lending positions on the OAT repo market, by sector

x: time / y: amount in EUR billion

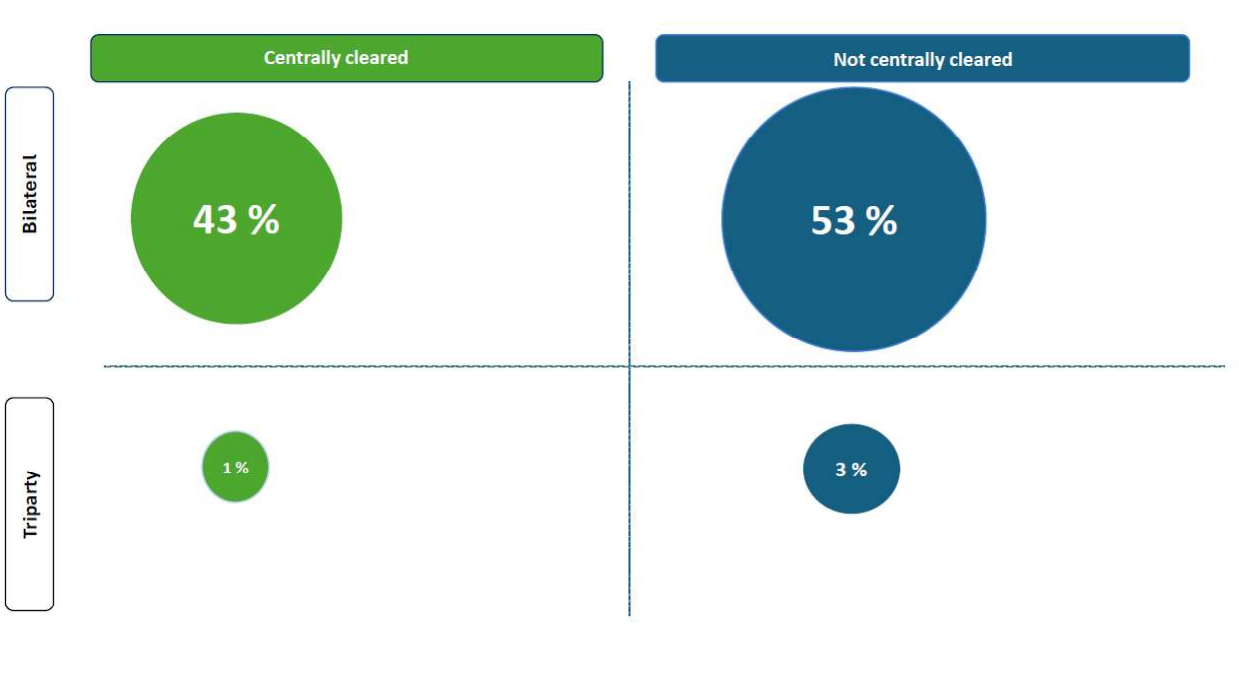


Note: 20-day moving average. The transactions considered are OAT repos involving at least one counterparty subject to SFTR reporting. Transactions with central banks are excluded from the analysis due to incomplete data coverage. The exposures observed are, however, similar to those of transactions with general government, albeit involving smaller amounts. The "other" category comprises CCPs (trading on their own account), non-financial corporations, financial vehicles and unidentified sectors.
Source: SFTDS, Banque de France calculations.
Most recent value: 5 June 2026.

Segmented and evolving market structure

The repo market is structured along two dimensions: the clearing arrangement (bilateral or centrally cleared) and the settlement arrangement (direct or through a triparty agent). This dual segmentation creates four distinct market segments, of which the non-centrally cleared bilateral repo (NCCBR) segment, characterised by direct settlement, remains the largest. It accounts for around 50% of the global outstanding stock and, depending on the scope considered, up to 70% of transactions in France and the euro area (see Figure 2.2). This reflects participants' continued preference for flexible, albeit less standardised, transactions that allow tailored negotiation of maturities, collateral type and haircuts.

Figure 2.2: Breakdown of the main OAT repo market segments in 2025



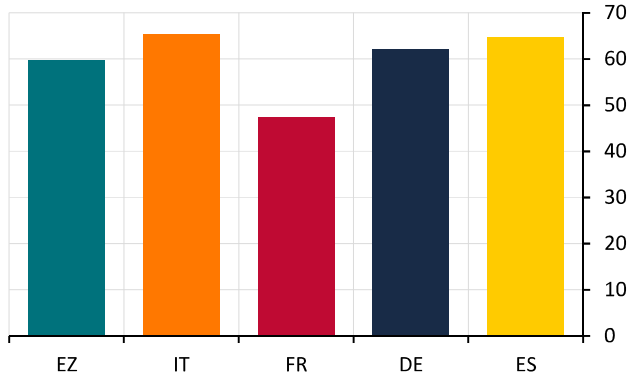
Note: The size of the bubble reflects the relative size of each market segment at end-2025. The data used cover only transactions involving at least one counterparty subject to SFTR reporting. This probably causes the amounts of non-cleared repos to be underestimated, as some bilateral transactions fall outside the scope of reporting. Adjusting the scope based on FSB estimates (2026) suggests that the share of non-cleared transactions could be nearly 70% across the euro area.
Sources: SFTDS, FSB (2026), Banque de France.

Approximately 40% of outstanding repo market transactions are cleared through a central counterparty (CCP).[106] This segment centralises clearing and may also rely on triparty agents for collateral management. By replacing multiple bilateral exposures with a single exposure to the CCP, central counterparties reduce participants' counterparty credit risk. They also mitigate contagion risk, facilitate multilateral netting and promote greater standardisation of market practices, particularly with regard to contractual arrangements, collateral valuation, margining and haircuts (see Chart 2.6 and Section 2.3). Central clearing is especially well established in the interdealer sovereign bond repo market, where it enables intermediaries to optimise their balance sheet capacity. Between 50% and 60% of European government bond repo outstanding are now centrally cleared, with particularly high shares for major issuers such as France, Germany and Italy (see Chart 2.5). However, this growth mainly applies to transactions between banks and market intermediaries; bilateral transactions continue to dominate repos involving non-bank investors in the dealer-to-client (D2C) segment.

[106] Financial Stability Board (2026), Vulnerabilities in Government Bond-Backed Repo Markets, 4 February.

Chart 2.5: Share of CCP-cleared repos at end-2025, main European jurisdictions

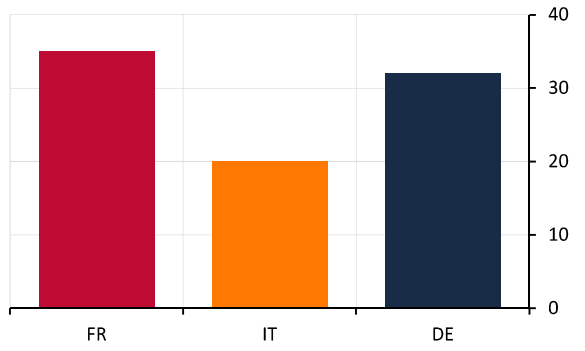
x: time / y: % share



Note: The data used cover only transactions involving at least one counterparty subject to SFTR reporting. This probably causes the amounts of non-cleared repos to be underestimated, as some bilateral transactions fall outside the scope of reporting. Adjusting the scope based on FSB estimates (2026) suggests that the share of non-cleared transactions could be nearly 70% across the euro area.
Source: SFTDS, Banque de France calculations.

Chart 2.6: Share of repos subject to netting on European repo markets in 2025, by jurisdiction

x: time / y: % share



Source: SFTDS.
Most recent value: 5 June 2026.

Since 2021, sponsored clearing models have been developed to broaden access to central clearing beyond the relatively small circle of banks. These models are primarily target at asset managers and investment funds, which remain largely active in the non-cleared bilateral segment. Under sponsored clearing arrangements, the client becomes a direct participant of the clearing house for margining and settlement purposes, while receiving the operational support and financial guarantees of a direct clearing member, usually a bank acting as a sponsor. The sponsor covers contributions to the default fund and may also provide cash and collateral management services. Guaranteed sponsored clearing models have also emerged, particularly to meet the needs of hedge funds. Here, the sponsoring bank not only guarantees the client's operational obligations but also assumes full liability to the CCP for any losses arising from a potential default by the client (see Section 2.3). However, despite the innovative solutions offered, notably by LCH SA (Sponsored Clearing) and Eurex (ISA Direct), these models have yet to be widely adopted in Europe. Sponsored models accounted for just 1% of euro transactions in 2021. That share has since risen to 5.8%,[107] largely due to the attractive terms offered by banks for bilateral transactions. By contrast, the US market has experienced much broader adoption and rapid growth of these models in recent years,[108] illustrating their suitability for the economic and operational constraints faced by market participants (see Box 2.3).

Triparty repo transactions may take place in either the bilateral or the centrally cleared segment. The triparty dimension relates to collateral management, which is outsourced to a third party known as a triparty agent, typically a central securities depository (CSD) or a similar institution. Unlike a CCP, this agent does not bear any counterparty risk, but is mandated to perform collateral-related operational functions, such as selection and daily valuation of securities, application of haircuts, margin calls and settlement.

Interconnected players in a globalised market

The repo market is characterised bya core-periphery structure that is heavily concentrated around a handful of global systemically important banks (G-SIBs), which act as intermediaries for a periphery of diverse participants, including money market funds, hedge funds, asset managers, insurers and smaller banks. This centrality is both functional and structural: nearly 90% of transactions are channelled through bank intermediaries, while direct

[107] ICMA (2026), International Capital Market Association European Repo Market Survey, March.
[108] Copeland (A.) and Kahn (R. J.) (2025), The Rise of Sponsored Service for Clearing Repo, *Liberty Street Economics*, 8 October.

relationships between non-banks are marginal.[109] Intermediaries operate according to a matched-book model, acting simultaneously as borrowers and lenders to transform the liquidity, maturity and collateral needs of market participants (see Figure 2.1).

Market flows also reveal functional and geographical specialisation. Hedge funds have been the main net cash borrowers since mid-2024, mainly to finance leveraged strategies in sovereign bond markets. Their global outstanding repo positions stood at nearly USD 3.3 trillion at the end of 2025, or about 25% of their assets, reflecting the growing use of arbitrage strategies such as basis trade (see Section 2.2 on the role of hedge funds). Money market funds play a central role as cash providers, particularly in the triparty segment, where they are looking for liquid, safe investments with low regulatory capital requirements.[110]

The US dollar dominates these intermediation activities, accounting for approximately 66% of the global outstanding repo market.*[111]* In this regard, European banks occupy a strategic position as an offshore US dollar hub: they capture a significant share of the US dollar liquidity provided by US money market funds, and redistribute it to other European banks, hedge funds or offshore investment funds. Dollar-denominated repos by euro area entities account for nearly 40% of their total outstanding repo volumes, i.e. on a par with their euro-denominated activity. United Kingdom-based entities often play a bridging role in these transatlantic US dollar liquidity flows, connecting US markets with financial institutions in continental Europe.[112]

The activities of major European banks, including French ones, in the dollar repo market form a central part of their overall liquidity management, particularly through flows between European parent companies, US subsidiaries and London-based entities. A significant proportion of cross-border repo flows actually consists of intra-group transactions within banking groups, used to rapidly reallocate liquidity and collateral between jurisdictions. These intra-group flows involve huge volumes, amounting to some EUR 700 billion per day for euro transactions and USD 350 billion for dollar transactions, and are predominantly in very short-term (often overnight) maturities.[113] The share of very short-term transactions is actually significantly higher in intra-group transactions than in transactions with external counterparties, reflecting their central role in sophisticated global cash and collateral management. These internal transactions also help to optimise prudential constraints, especially the leverage ratio. For example, European banks frequently scale back their repo positions in the United States as quarter-end regulatory reporting dates approach, in order to temporarily limit the size of their published balance sheet, a technique known as window dressing. The contraction in repo funding is partially offset by increased use of FX swaps, which allow banks to obtain dollars under more favourable accounting and prudential treatment.[114] These adjustments account for some of the strong seasonal pressures observed in dollar funding markets at each quarter-end.

Essential functions for rate formation and the transmission of monetary policy

Besides its role in funding and intermediation, the repo market is a key channel for the operational transmission of monetary policy and a vital anchor for short-term interest rates. Central banks steer monetary conditions through their key rates, which determine refinancing costs for institutions with access to central bank money (see Box 2.1). Banks then redistribute the liquidity they have obtained to a range of financial institutions, including non-banks, through a variety of channels. Any disruption to the repo market may therefore disrupt the transmission of monetary policy and fragment financing conditions.

By lending cash against collateral through their main refinancing operations and standing facilities, central banks guide short-term interest rates and signal the monetary policy stance. In times of stress, repo facilities

[109] FSB (2026), *op. cit.*
[110] Cenicola (A.) et al. (2026), Who participates in repo?, OFR, 31 March.
[111] FSB (2026), *op. cit.*
[112] Hermes (F.) *et al.* (2025), The international dimension of repo: five new facts, Working Paper Series no 3065, European Central Bank, August.
[113] *Ibid*.
[114] *Ibid*.

also act as a safety net by enabling intermediaries to obtain cash quickly against high-quality assets. Mechanisms such as the US Federal Reserve's Standing Repurchase Agreement Operations programme[115] or the emergency operations taken by the Bank of England during the 2022 gilt crisis illustrate this stabilising function. By limiting the risk of fire sales of sovereign bonds, these mechanisms help to safeguard market functioning and financial stability.

The reduction in excess liquidity is now changing this configuration. As they shrink their balance sheets, central banks gradually return government bonds to the market while reducing excess bank reserves. The repo market is thus shifting from a collateral-seeking environment to a liquidity-seeking one, in which funding needs once again take centre stage. This development has strengthened the role of the GC segment (where the exact identity of the security provided as collateral does not matter), particularly for banks and primary dealers, which play a balance sheet intermediation role by temporarily absorbing sovereign bond issuance. Leverage ratio and capital requirements penalise even temporary gross balance sheet expansions, reducing intermediaries' ability to fund and intermediate bond markets. Repos allow these newly issued bonds to be converted into short-term liquidity without liquidating the underlying assets. The normalisation of central bank balance sheets in the major monetary areas, and particularly in the euro area, has thus repositioned the repo market as a key channel of liquidity provision, partially replacing the abundant liquidity previously provided by central banks. This shift is also fuelling growth in the cleared segment, especially the sovereign bond interdealer market.

2.2 Growing vulnerabilities linked to leverage, market practices and intermediation

The repo market is a vital infrastructure for financing the economy and bond market liquidity, but its current structure harbours vulnerabilities that could make it a powerful channel for systemic contagion in times of stress. These vulnerabilities stem from three key drivers: inadequate and procyclical risk management; the build-up of significant leverage by non-banks, particularly hedge funds; and highly concentrated intermediation, relying on banks whose balance sheet capacity could quickly become constrained.

Procyclical funding mechanisms (haircuts, margins and collateral)

Margin and haircut mechanisms could amplify market shocks. During periods of heightened volatility or falling bond prices, margin calls increase, while lenders demand more collateral to keep positions open. This forces highly leveraged participants to raise cash quickly, often by selling assets. These sales, in turn, depress market prices, triggering further margin calls and fuelling negative feedback loops (see Figure 2.3). Such liquidity spirals were observed during several recent episodes of stress in bond markets, notably the "dash for cash" in March 2020 and the UK LDI fund crisis in 2022. They illustrate the potentially procyclical nature of risk management practices in repo markets.

The repo market uses risk management mechanisms that help to protect individual transactions but that may also generate procyclical dynamics and amplify system-wide financial stress. Firstly, the widespread use of zero haircuts in the non-cleared bilateral segment supports significant leverage build-up. Based on our analysis of SFTDS data, between 50% and 70% of bilateral transactions in EGB and OAT sovereign debt are executed without a haircut (see Chart 2.6). While the absence of a haircut can be explained at the microeconomic level by mechanisms for netting positions and risk at the overall portfolio level, or by the bargaining power of major players in a competitive market, at the macroeconomic level it conceals an accumulation of leverage that greatly increases the system's vulnerability to liquidity shocks.

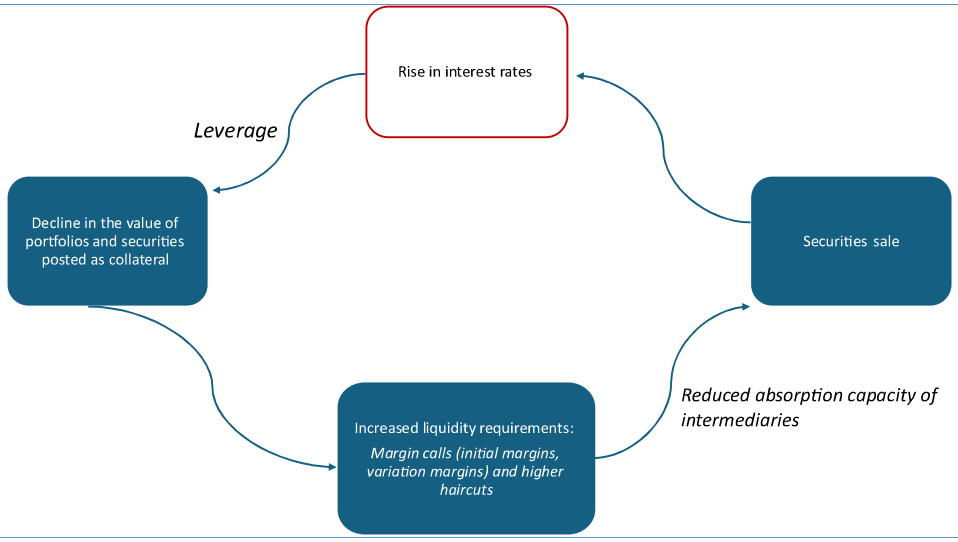
The market's maturity profile is an additional factor of vulnerability. A large proportion of repo trades are concluded on a very short-term basis, often overnight, requiring massive daily rollover of positions. This reliance

[115] Previously called the *Standing Repo Facility*.

exposes borrowers to a high level of risk in the event that cash lenders suddenly withdraw or financing conditions deteriorate. An inability to roll over transactions could lead to rapid and disorderly deleveraging.

Finally, collateral reuse[116] plays a major role in ensuring the smooth functioning of the repo market. While studies examining the banking sector's overall financing activity in the euro area (including securities lending) have estimated that between 50% and 75% of sovereign collateral is reused,[117] more recent research focusing exclusively on the European repo market puts this figure at around 12%.[118] According to this research, this amounts to nearly EUR 50 billion exchanged per day and creates intermediation chains comprising an average of three successive nodes. Although this mechanism mitigates situations of collateral scarcity, particularly for the most sought-after sovereign bonds, it lengthens intermediation chains and increases interdependencies between financial participants. A local disruption, such as a counterparty default, an operational difficulty or the precautionary retention of collateral, could thus spread rapidly to the rest of the system. In times of stress, these dynamics can promote collateral hoarding,[119] sharply curtailing the liquidity available in the repo market and exacerbating pressures in the underlying sovereign bond markets.

Figure 2.3: Stress transmission channels in the repo market



Source: Banque de France

[116] This is made possible by the legal structure of repos: by temporarily becoming the owner of the security, the liquidity provider gains the right to reuse it in a new transaction with a third party, provided the collateral can be returned at maturity.
[117] Jank (S.) et al. (2022), Safe asset shortage and collateral reuse, *Working Paper*, Econstor, July.
[118] Alexiou (G. A.) *et al.* (2025), Repo collateral reuse and liquidity windfalls, *Working Paper Series*, n° 3147, BCE.
[119] Luu (D. T.) et al. (2021), Collateral unchained: Rehypothecation networks, concentration and systemic effects, *Journal of Financial Stability*, Vol. 52, February.

The central role of leverage and hedge funds

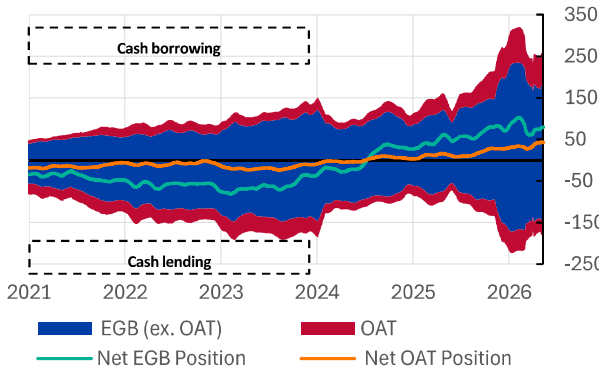
Hedge funds now play a central role in the functioning of repo and sovereign bond markets. They make extensive use of repo financing to support leveraged strategies, with outstanding amounts estimated at around USD 3.3 trillion at end-2025,[120] or nearly 25% of their assets. This volume of repo financing reflects the nature of the strategies employed, particularly arbitrage transactions such as cash-futures basis trades (see Box 2.2). These strategies increase interdependencies between bond, derivatives and secured finance markets.

In this setting, hedge funds are playing an increasingly prominent role in holding sovereign debt. Banks and primary dealers, which are more constrained by prudential requirements and balance sheet costs, have less capacity to hold bond issues over the long term (despite the high-quality liquid assets [HQLA] requirements under the LCR). Hedge funds are thus absorbing an increasing share of sovereign debt positions through repo financing. In the euro area, they are thought to account for a significant share of the demand directed towards primary dealers during sovereign auctions. Chart 2.7 shows a marked increase in hedge funds' net positions in European repo markets, particularly in euro area government bonds and French OATs. This trend reflects a growing reliance on repo financing to support leveraged strategies, with a marked acceleration from 2024 onwards.

The rise of these strategies is taking place against a market backdrop characterised by exceptionally favourable financing conditions, particularly in the segment comprising repos backed by high-quality sovereign securities. A significant share of transactions involving hedge funds are subject to low or even zero haircuts,[121] fuelling significant use of leverage and strong sensitivity to financing conditions (see Chart 2.8). This configuration supports shock propagation mechanisms. In the event of increased volatility or a fall in bond prices, margin calls and higher haircuts force hedge funds to liquidate their positions to raise cash. These fire sales exert further downward pressure on prices, fuelling a negative feedback loop that could turn a local shock into system-wide stress, as observed during episodes of tension in the bond markets.

Chart 2.7: Hedge fund positions in European repo markets

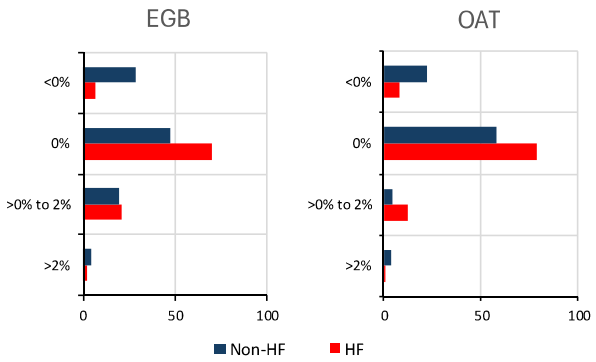
x: time / y: amount in EUR billion



Note: 20-day moving average. The transactions considered involve at least one entity subject to SFTR reporting. Hedge funds are identified using data from the Lipper and ECB databases, including funds domiciled in the Cayman Islands, Bermuda and the British Virgin Islands.
Sources: SFTDS, LSEG Lipper, ECB, Banque de France calculations.
Most recent value: 5 June 2026.

Chart 2.8: Haircuts paid by hedge funds on non-cleared European debt repos

x: % of repo transactions / y: haircut



Note: Average from 1 January 2025 to 5 June 2026.
Source: SFTDS, Banque de France calculations.

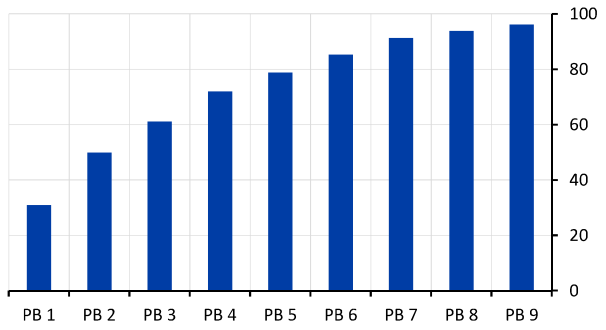
This activity is also highly concentrated: a handful of hedge funds rely heavily on the intermediation services of a few major banks acting as prime brokers (see Chart 2.9). This twofold concentration means that, in times of stress, a reduction in risk appetite or balance sheet constraints affecting these intermediaries could quickly translate into

[120] Office of Financial Research, SEC Form PF.
[121] Haircuts may even be negative. This counterintuitive situation is mainly explained by strong demand for certain sovereign securities considered to be scarce (leading liquidity providers to offer less favourable terms in order to obtain them), by the significant bargaining power of large hedge funds vis-à-vis banks, and by portfolio-wide margin netting practices (FSB (2026), *op. cit.*; Hermes (F.) *et al.* (2025), *op. cit.*).

refinancing risk for the funds. The risk is further exacerbated by the prevalence of short-term funding maturities: nearly 70% of hedge fund transactions mature in less than 15 days, in a repo market where nearly three-quarters of transactions across all market participants feature similar time horizons (see Chart 2.10). However, the largest hedge funds are characterised by more frequent use of term financing, particularly in relation to the most liquid EGBs, including OATs. This ability to secure funding over longer horizons helps to limit their immediate exposure to refinancing risk compared with smaller players. Conversely, the rise of term financing may increase banks' intermediation needs when final liquidity providers, such as money market funds, favour shorter maturities. This maturity mismatch is likely to be partially absorbed by intermediaries, increasing their exposure to maturity transformation risk during periods of market stress.

Chart 2.9: Bank concentration in hedge fund financing in 2025

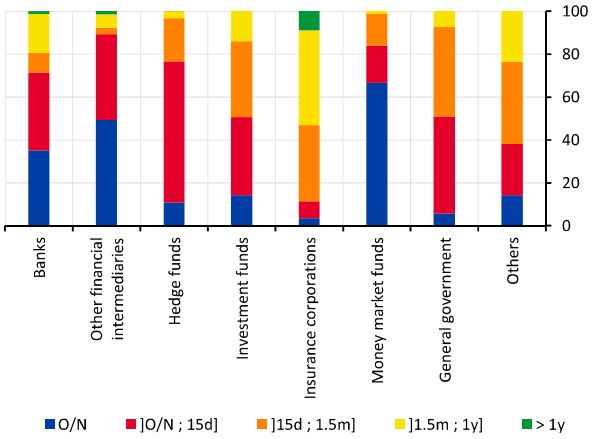
x: banks / y: % share



Note: PB denotes prime brokers. On average, the three largest borrower hedge funds account for 43% of exposure at these institutions.
Source: SFT, Banque de France calculations.

Chart 2.10: Maturity profile in the OAT repo market in 2025, by participant

x: sectors / y: % share



Note: The maturity profile is calculated using monthly snapshots of outstanding OAT-backed repos observed between January 2025 and January 2026. The maturities correspond to the residual maturity of the transactions. Repos without a pre-agreed maturity (open repos) are excluded. For most sectors, the maturity profile is derived from liquidity borrowing transactions; for government and money market funds, which are structurally net lenders of liquidity, it is calculated from liquidity lending transactions. O/N refers to overnight maturities.
Source: SFTDS, Banque de France calculations.

Box 2.2: What are the risks associated with hedge fund strategies in the US sovereign debt market?
By Christin Thibauld, Raphael Vives and Xavier Denis

Strong growth in leveraged strategies in the US Treasuries market

In recent years, hedge funds have significantly increased their exposure to strategies that seek to capitalise on valuation gaps between US Treasuries (USTs) and derivatives backed by USTs of equivalent maturity. Basis trade strategies seek to profit from the expected convergence between UST prices and the associated futures contracts. Swap spread strategies, meanwhile, seek to profit from the expected convergence between UST yields and the swap curve (see Figure 1). In both cases, hedge funds' long UST positions are generally financed largely through repos, making them heavily dependent on financing conditions in that market.[122] As margins are razor-thin, these strategies are only profitable when dealing with very large volumes, which assumes significant leverage.

[122] The International Monetary Fund estimates that, on average, 99% of the amount invested in USTs by hedge funds is borrowed.

Hedge funds held more than USD 2 trillion worth of USTs[123] in the second quarter of 2025, financed by nearly USD 1.8 trillion in borrowing.[124] They have estimated exposures of over USD 1 trillion to basis trade strategies[125] and more than USD 630 billion to swap spread strategies.[126] Swap spread positions more than doubled between the first quarter of 2024 and the second quarter of 2025. It is therefore these positions that contributed most to the acceleration in hedge funds' leveraged positions in recent times. Whereas the trend between 2021 and 2025 was characterised by a steep increase in leveraged positions in USTs,[127] more recently, basis trade position volumes[128] appear to have stabilised, while the volumes of swap-spread positions continue to rise sharply.

Since 2021, the rise in swap spread and basis trade volumes among hedge funds betting on convergence between UST and derivative prices has largely been driven by asset managers' preference for increasing the duration of their bond portfolios through derivatives, rather than through direct purchases of USTs, taking advantage of their high liquidity, the reduced balance sheet impact, and the creation of implied leverage.[129] This preference for derivatives on the part of asset managers therefore explains the existence of a structural valuation gap with their underlying assets (USTs) and reflects the increase in futures prices relative to the underlying USTs.

Vulnerabilities linked to financing and UST market structure

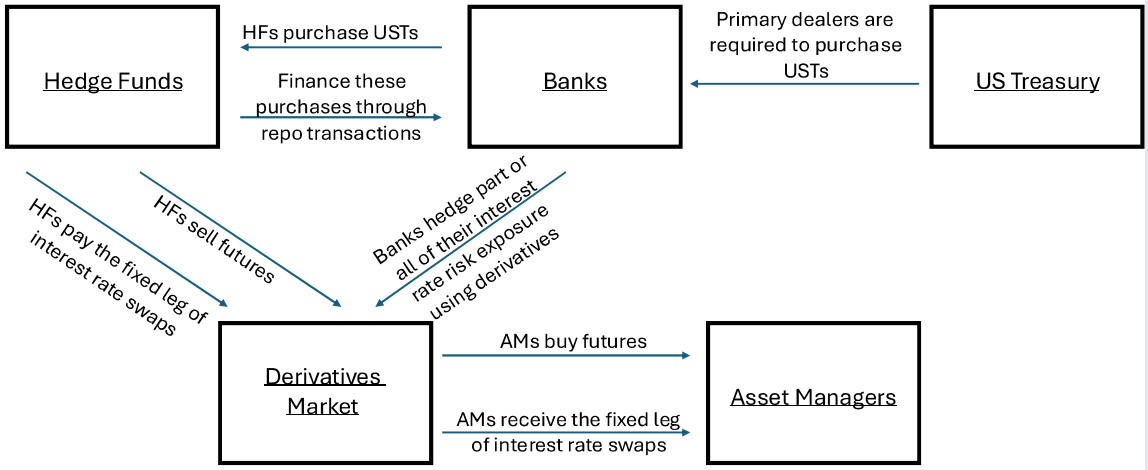
A deterioration in financing conditions in the repo market could lead to forced and rapid unwinding of these strategies. The fact that hedge funds finance their long UST positions through short-term borrowing (repos) makes these strategies highly dependent on financing conditions, and therefore on the volatility observed on US money markets. A rise in repo financing costs,[130] a reduction in banks' balance sheet capacity, or a sudden and adverse movement in spreads, as observed on several occasions since 2020 (during the pandemic and in April 2025, in particular), could once again disrupt this highly sensitive ecosystem. Note that in contrast to what was observed in the wake of Liberation Day in April 2025,[131] when the forced unwinding of these speculative positions (particularly on swap spreads) triggered a surge in long-term UST yields, market participants have not reported any such dynamics since the start of the conflict in Iran. A volatility spike in the UST market could lead to significant liquidity requirements for hedge funds through increased margin calls from their counterparties in the repo market and a rise in demands for overcollateralisation,[132] particularly when positions are rolled over. At the same time, in the case of futures and swaps (where these are cleared), a rapid rise in volatility could also cause an increase in margin calls from clearing houses. In order to meet these additional liquidity requirements, hedge funds could be forced to sell their UST holdings, sometimes rapidly and abruptly, thereby undermining these strategies and potentially triggering a cascade effect. Furthermore, as banks' balance sheets are constrained by regulatory ratios, they are not always able to cope with an influx of UST supply onto the secondary market from hedge funds, which can then have a significant upward impact on US interest rates (depreciation of USTs).

Structural factors also increase the risks associated with these positions and cause the spread between USTs and their derivatives to widen. This is particularly true of the sharp increase in the supply of US government debt in recent years: faster growth in the supply of USTs relative to demand may thus lead, all other things

[123] The Bank for International Settlements (BIS) estimates that hedge funds' long positions in USTs stood at USD 2.379 trillion in the second quarter of 2025. BIS (2025), Sizing up hedge funds' relative value trades in US Treasuries and interest rate swaps, *BIS Quarterly Review*, 8 December.
[124] Hedge funds' net borrowing position in the repo market is estimated at USD 1.8 trillion. Cenicola (A.) *et al.* (2026), *op. cit.*
[125] Close to its all-time high (97th percentile), estimated by Bloomberg Intelligence at USD 1.18 trillion in November 2024.
[126] BIS (2025), op. cit.
[127] Between 2022 and 2025, hedge funds' repo transactions rose by 154% and their borrowing from banks by 83%. Bright (S.) et Hamandi (H.) (2026), Calm markets and underlying risks, *The OFR Blog*, 26 March.
[128] BIS (2025), op cit.
[129] Iorio (B.) *et al.* (2024), Why do mutual funds invest in treasury futures, *FEDS Notes*, 10 May.
[130] On 22 May, the Secured Overnight Financing Rate (SOFR) stood at 3.55%, after averaging 3.64% between 1 January and 22 May.
[131] Banque de France (2025), *Financial Stability Report*, June.
[132] Glicoes (J.) *et al.* (2024), Quantifying treasury cash-futures basis trades, *FEDS Notes*, 8 mars; et Kahn (R. J.) et McCormick (M.) (2025), Proportionate margining for repo transactions, *FEDS Notes*, 14 February.

Figure 1: Financial flows connected with hedge funds' leveraged strategies

vi.



vii.
viii.
ix. Source: Banque de France.

being equal, to a structural depreciation of USTs relative to derivatives, such as futures and swaps. In recent years, this situation has pushed swap spreads into negative territory (swap rates lower than UST yields of the same maturity), particularly at the long end of the sovereign curve.

Finally, hedging positions in UST derivatives are extremely concentrated: at 23 January 2026, the eight largest short positions in 10-year UST futures contracts were estimated to account for more than 30% of total short positions. They account for nearly 50% of those on the five-year contract.[133] This increases the vulnerability of these speculative positions and the risks in the event of rapid and disorderly unwinding.

The reliance of these strategies on short-term funding therefore represents a potential channel through which stresses could spread between money markets, interest rate derivatives markets and the UST market.

Concentrated intermediation and structural vulnerabilities

Significant centralisation of repo intermediation with a handful of major banks means that risks are heavily concentrated. In the euro area, five institutions alone account for nearly two-thirds of repo financing for hedge funds, while in the United States a few large banks dominate the prime brokerage sector. Reliance on a handful of intermediaries creates systemic vulnerability: a decline in risk appetite, balance sheet constraints or operational difficulties affecting a key bank could quickly disrupt access to funding for a large part of the system. This vulnerability is exacerbated by a twofold concentration of exposures. Not only is hedge fund financing concentrated with a few key banks, but the exposure of these banks is in turn also concentrated with a small number of large funds. As such, the main borrowing hedge funds likely account for a significant proportion of the banks' total exposure to the sector, given that, in the case of the main European institutions, the three largest hedge funds clients accounted on average for 43% of total exposure to the sector at the end of 2025. This configuration increases the risk of bilateral contagion between systemically important institutions and highly leveraged entities.

Internationalisation of the repo market also exacerbates these structural vulnerabilities. Major European banks play a central role in the functioning of the offshore dollar market by redistributing the liquidity provided by US money market funds to banks, hedge funds and international investors. The role of European banks as a hub for US dollar financing increases the interconnectedness of US and European markets. A squeeze on dollar liquidity or a shock affecting the US repo market could therefore quickly feed through to the financing conditions of

[133] Bloomberg (2026), Treasury basis position hits highs as market calm, net short holders concentrated in TY and US Contracts, 23 January.

European intermediaries. Conversely, balance sheet constraints affecting European banks could reduce their capacity of these institutions to redistribute this liquidity to the rest of the global financial system. Intragroup flows also play an important role in this architecture. A significant proportion of cross-border repo transactions consists of intra-group transactions within large banking groups, used to rapidly redistribute liquidity and collateral between jurisdictions and to optimise prudential constraints. These adjustments increase the repo market's global integration, but also its sensitivity to international financing pressures.

The repo market is also closely linked to other segments of global finance, notably FX swaps, facilitating the rapid transmission of stress between money markets, collateral markets and foreign exchange markets. Prudential constraints may also prompt procyclical adjustments to bank balance sheets. Window dressing – temporary reductions in repo activity in the run-up to regulatory reporting dates – regularly cause liquidity strains and increased volatility in financing rates.

Finally, this concentration is accompanied by a lack of full visibility on the aggregate risks. As the market goes ever more digital, major leveraged players are using electronic platforms to approach multiple banks simultaneously, deliberately fragmenting their flows to maximise their access to funding. A direct consequence of this fragmentation is that each intermediary now sees only a limited fraction of its client's total activity. This inability of banks to assess their counterparties' overall exposure makes it considerably harder to assess systemic risk and identify vulnerabilities before periods of stress arise.

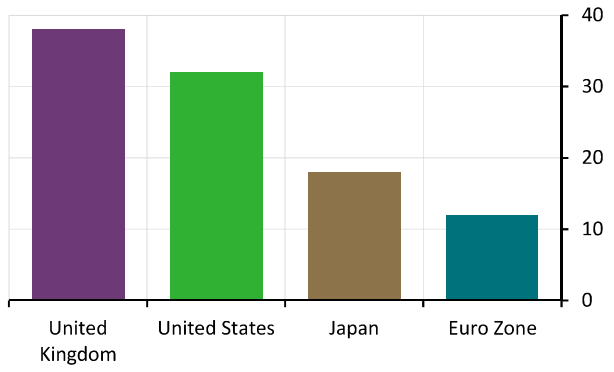
Significant interactions with sovereign markets and monetary policy

The repo market occupies a central place in the functioning of sovereign markets and monetary policy transmission. By supporting the financing of bond portfolios, the circulation of collateral and the liquidity of market makers, it is a vital infrastructure for the orderly functioning of government debt markets (see Chart 2.11). However, this interdependence means that tensions in the repo market can quickly spill over into sovereign bond markets and, more broadly, into the economy's financial conditions. Widespread use of repo financing to underpin leveraged positions creates, in particular, a direct transmission channel between funding stress and bond market volatility. In times of stress, heightened volatility or a fall in sovereign bond prices may lead to margin calls and an increase in investors' liquidity requirements.

Forced sales can fuel self-sustaining dynamics of falling prices and rising volatility, turning a market correction into a system-wide crisis. Recent events have highlighted this vulnerability. In March 2020, the massive unwinding of arbitrage strategies involving USTs led several hedge funds to rapidly sell off sovereign bonds, despite these being regarded as the safest assets in the global financial system (see Chart 2.12). This triggered a sharp deterioration in liquidity in the UST market and necessitated a major intervention by the Fed (UST purchase programme). Similarly, during the crisis in UK government bonds (gilts) in September 2022, the sudden rise in sovereign yields triggered massive margin calls for pension funds employing liability-driven investment (LDI) strategies. These strategies are based on borrowing liquidity in the repo market to finance long-term bond positions. Forced gilt sales to meet these margin calls amplified the increase in UK rates and prompted the Bank of England to take emergency action to restore the orderly functioning of the bond market. These episodes show that pressures on the repo market are not just a short-term funding issue: they can directly affect the liquidity and stability of sovereign markets (see Box 2.3). In the euro area, this vulnerability is of particular significance at a time of rising public financing needs and the growing role of non-banks in sovereign debt markets.

Chart 2.11: Size of the repo market relative to the sovereign debt market in 2025

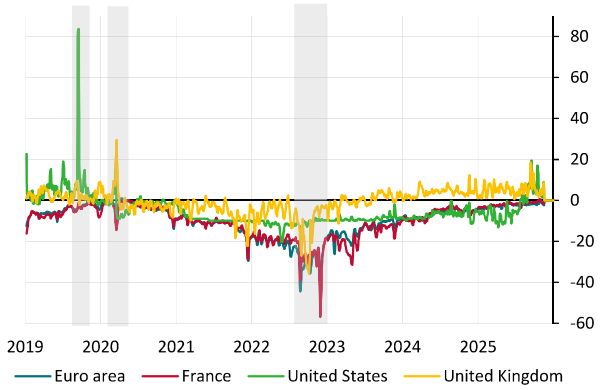
x: country / y: % share



Note: Similar levels are observed for the main European jurisdictions in the repo market within the narrower SFTDS scope: around 10% and 11% for France, Italy and Germany; 6% for Spain.
Source: ECB, Banque de France, Banque de France calculations.

Chart 2.12: Spreads between GC repo rates and central bank deposit rates

x: time / y: spread (bps)



Note: 5-day moving average. The shaded areas indicate crises in the repo market (surge in rates in the United States in September 2019, euro area "dash for cash'" in March 2020, LDI crisis with volatility spikes in the euro area in September 2022).
The euro area sample corresponds to the average of the four main jurisdictions in Europe's repo market (France, Germany, Italy and Spain).
Sources: FRBNY, ECB, Bloomberg, Banque de France calculations.

The repo market also plays a vital role in the transmission of monetary policy. Repo rates serve as a key anchor for short-term monetary conditions and support the distribution of liquidity throughout the financial system. Central banks, especially the Fed, use repos and reverse repos directly as an operational tool of monetary policy, while repo market conditions influence the formation of money market rates and government bond yields. The unconventional policies pursued since the Global Financial Crisis have profoundly altered this balance. Asset purchase programmes (quantitative easing, QE) carried out in the euro area removed a significant proportion of sovereign bonds from the market, reducing the amount of available collateral and compressing repo rates, in some cases to below central bank key rates. The scarcity of high-quality collateral heightened the specialness of highly sought-after sovereign bonds. Conversely, the phase of monetary normalisation and central bank balance sheet reduction (quantitative tightening, QT) has gradually increased financing conditions in the repo market. Reduced excess bank liquidity and increased sovereign bond issuance are reinforcing the role of repo as the main channel for secured market financing. In this new environment, pressures in the repo market may feed through more directly to government financing conditions and overall monetary conditions.

Finally, the internationalisation of the repo market contributes to the cross-border transmission of monetary and financial shocks. The dollar's dominance of secured finance markets means that tighter US dollar financing conditions or a change in US monetary policy could quickly affect repo conditions in Europe and other major jurisdictions. This interdependence increases the systemic importance of the repo market within the global financial architecture.

Box 2.3: What impacts can be observed from the repo stress test?

By Émilie Da Silva, David Gauthier and Aymeric Schneider

To better understand the risks, the Banque de France included a repo market model in the system-wide stress test that it conducted in 2026. This modelling draws on work by the European Central Bank (ECB) to simulate the spread of financial shocks within a financial system comprising banks, investment funds and insurers. The ECB's ISA model highlights the financial stability implications of the interconnections between these three sectors through two main channels.

- The liquidity channel: when one participant obtains liquidity from another, the latter's liquidity position worsens.
- The default channel, which results in losses for counterparties. Liquidity needs can trigger forced sales of financial securities, causing their prices to fall and generating losses for the other agents who hold them.

The extension developed by the Banque de France incorporates institution- and transaction-level repo market dynamics by drawing on the granular data available in the Securities Financing Transactions Data Store (SFTDS) database. Reporting requirements apply to European financial and non-financial counterparties (including non-EU branches), as well as to European branches of foreign entities. Reporting entities provide detailed information on the collateral used (ISIN code), as well as a set of transaction characteristics that are relevant to the simulation, including volume, maturity, rate and haircut. The data cover repos and reverse repos.

Our model highlights two repo-specific channels of shock transmission.

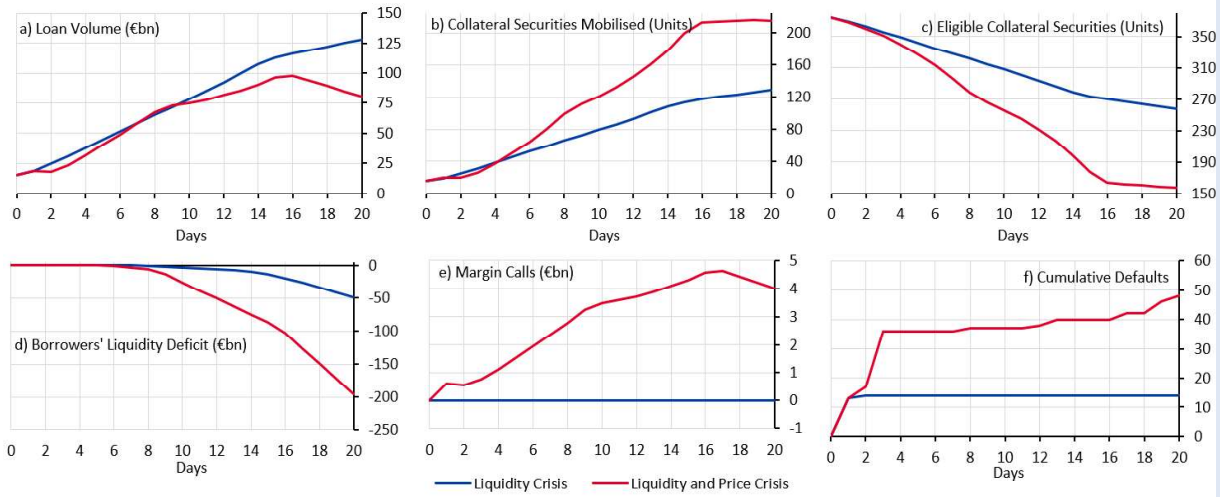
- Collateral channel: falling asset prices reduce the value of collateral, squeeze borrowing capacity in the repo market and force borrowers to provide more collateral for the same funding.
- Liquidity redistribution: when the price of securities posted as collateral falls, borrowers face margin calls and must transfer cash to their lenders to maintain their positions. This mechanism compresses borrowers' effective financing capacity. Similarly, outstanding long-term repo positions translate into an additional liquidity requirement at maturity. When participation in the repo market no longer provides sufficient liquidity, agents facing constraints turn to alternative funding sources, such as unsecured borrowing or asset sales.

Our analytical framework enables us to examine several scenarios.

- Scenario 1 – liquidity shock:
  - Increased liquidity requirements, combined with stable prices (no margin calls), lead to greater use of repos and rollovers. In this scenario, securities-backed cash loans rise steadily, reaching EUR 125 billion after one month (see Chart 1.a), while borrowers' liquidity increases.
  - As a result, the number of securities mobilised increases (see Chart 1.b), while the stock of securities available to be mobilised decreases (see Chart 1.c). Borrowers are able to mobilise sufficient collateral to meet their liquidity needs.
  - The market remains broadly functional, with few defaults (see Chart 1.f).
- Scenario 2 – liquidity shock and falling prices:
  - Falling asset prices trigger margin calls, which rise gradually to reach EUR 5 billion before beginning to decrease as the pool of collateral that can be mobilised shrinks (see Chart 1.e).
  - The number of securities that borrowers can mobilise as collateral decreases (see Chart 1.c), curtailing borrowing capacity.
  - The number of entities in default is higher than in the scenario featuring only a liquidity shock. The increasing amount of margin calls and the reduced supply of liquidity in the repo market prevent some borrowers from meeting their obligations, causing them to default (see Chart 1.f).

Charts 1: Liquidity shock and price fall scenarios:

x : days / y: %



Note: This figure is based on a sample of financial institutions participating in the repo market and included in the dataset used for the ISA model simulation. The values shown represent the total volume for the sample in the O/N maturity. The simulation is based on SFTD data at 19 June 2024. The scenarios considered are as follows: (i) a liquidity crisis characterised by a 3% daily increase in the regulatory cash requirement; (ii) a combined liquidity and price crisis, incorporating the increased cash requirement along with a 5% fall in prices in each period. Chart (a) shows the amount of liquidity loaned/borrowed; Chart (b) shows the number of collateral securities mobilised; Chart (c) shows the number of unencumbered collateral securities. The sum of the securities that have been mobilised and those that are available to be mobilised therefore corresponds to the total number of securities. Chart (d) shows borrowers' liquidity requirements. Chart (e) shows the daily amount of margin calls. Chart (f) shows the number of entities in default.
Source: Banque de France, authors' calculations.

Our model therefore illustrates how, in times of crisis, the disruption of the repo market can act as a factor that amplifies shocks. As the value of the collateral falls, participants in need of liquidity find their access to the repo market restricted. To meet their liquidity requirements, they will therefore be forced to sell securities. As in the ISA model on which our repo market simulation is based, forced sales exacerbate the fall in prices, creating feedback loops that amplify the stress.

2.3 Making the repo market more resilient: instruments, limits and the macroprudential framework

In light of the structural vulnerabilities and recent episodes of stress, the repo market's regulatory framework is receiving renewed attention from international and European authorities. The challenge for regulators is to design a framework capable of limiting the build-up of leverage among non-banks and mitigating procyclical dynamics, without hindering the financing and liquidity of sovereign markets. To meet this twofold requirement, regulatory discussions are focusing on three main areas: direct regulation of haircut practices, extension of central clearing, and enhanced risk monitoring.

Introduction of haircut floors

The introduction of haircut floors is primarily intended to ensure adequate coverage against credit risk; it also helps to limit excessive build-up of leverage in repo markets and to reduce the procyclicality of secured finance. Besides providing protection against counterparty default, an ex ante minimum haircut ties up a portion of capital and prevents participants from financing themselves indefinitely against collateral, as leverage is mechanically limited. This approach builds on the 2014 recommendations of the Financial Stability Board (FSB), which proposed minimum haircuts ranging from 0.5% to 10%, according to the type of asset, issuer and maturity, in order to contain the risks of disruptive margin calls. However, by limiting its scope to cash borrowing by non-banks and excluding sovereign collateral, the FSB framework does not capture the majority of transactions, particularly those involving hedge funds. These standards were subsequently incorporated into the Basel framework for counterparty risk; while transactions below the recommended thresholds are not prohibited, they are treated as unsecured exposures for prudential purposes. In Europe, the decision not to transpose these measures has so far been justified by the 2019 report from the European Banking Authority (EBA), which highlighted several potential side effects, including threshold effects, regulatory arbitrage, competitive distortions between financial sectors, and the risk of a shift towards less regulated segments. The debate remains open, however, with the CRR3 mandating the EBA to reassess the question by the end of 2026, to determine whether EU transposition is appropriate.

Recent work by Grill et al. (2025) strengthens the case for haircut floors.[134] Drawing on granular data from the euro area repo market, the authors highlight a significant discrepancy between market practices and the haircuts recommended by the FSB (excluding transactions involving sovereign collateral), suggesting a market failure in the pricing of systemic risk. The prevalence of low or even zero haircuts, particularly in the non-cleared bilateral segment, enables non-bank financial institutions, especially hedge funds, to build up significant leverage. According to the authors' analysis, application of the FSB's floors would reduce repo leverage by around 13% for the non-bank sector as a whole, and by up to 42% for entities accounting for the largest borrowing volumes, i.e. precisely the participants most likely to generate systemic stress.

At present, large, highly leveraged entities often enjoy the smallest haircuts, probably because of their bargaining power, and would be the most affected by the introduction of floors. Minimum haircuts would make it possible to build up safety buffers in normal times and lower the risk of fire sales during crises. However, they must be implemented with caution. Overly restrictive floors could make secured finance more expensive, reduce liquidity in some markets, particularly sovereign markets, and encourage participants to move their activities outside the regulated perimeter. For this reason, a purely prudential transposition that applies only to banks would probably be insufficient, as it could shift activity towards relationships between non-banks. Market regulation covering all relevant players appears more consistent with the objective of financial stability and a uniform regulatory framework. The challenge for the EBA is therefore to devise a framework that is sufficiently restrictive to curb excessive leverage, yet sufficiently nuanced to avoid an excessive deterioration in liquidity and arbitrage effects. Furthermore, market rules for haircuts should not be designed to replace banks' careful risk

[134] Grill (M.) et al. (2025), "Repo haircuts: Market practices and the impact of minimum requirements on leverage". *Finance Research Letters*, Vol. 71, 106484, January.

management vis-à-vis non-bank counterparties, particularly those that are leveraged. This is the aim of the Basel Committee's guidelines for counterparty credit risk management, published following the collapse of Archegos Capital Management in March 2021.[135]

Extending central clearing would help to structurally improve the resilience of the repo market

The episodes of market stress that occurred in 2019, 2020, 2022 and 2025 in sovereign debt markets showed that central clearing is a tried and tested mechanism for absorbing shocks.[136] Its use tends to increase during periods of financial strain, especially when participants seek to limit their bilateral exposures by transferring their counterparty risk to a highly regulated central entity.[137] This increased use of central clearing tends to continue after market conditions normalise, reflecting a structural preference for the centralised model, subject to certain limitations. Several recent episodes, notably during the March 2020 "dash for cash", revealed a shift in flows towards the cleared segment as participants prioritised operational security, transparency and netting capabilities.[138]

Use of central clearing subjects repo transactions to standardised risk management systems whose primary aim is to neutralise counterparty risk. By interposing themselves between buyers and sellers, CCPs ensure the successful completion of transactions and substitute themselves for the initial counterparties. The use of central clearing is therefore subject to strict access conditions, based mainly on the credit quality of members. Furthermore, by acting as buyer to the seller and as seller to the buyer, the CCP replaces a set of bilateral relationships with a single exposure to the clearing house, thereby limiting the risk of contagion in the event of a participant's default. Centralisation of exposures is accompanied by structured mechanisms for the mutualised management of defaults (notably through default funds and orderly liquidation procedures) designed to limit the spread of shocks throughout the financial system.

Finally, central clearing makes the financial system more efficient by facilitating multilateral netting. By offsetting debit and credit positions among multiple parties, it drastically reduces settlement flows and participants' liquidity requirements, while limiting settlement fails. Central clearing also enables participants to optimise balance sheet management by reducing total recorded exposure, which is now calculated on a net rather than a gross basis. This aspect is especially significant at a time when banks' capacity to intermediate growing volumes of sovereign debt through repo transactions is being constrained by prudential requirements, notably the leverage ratio, which takes total exposures into account regardless of their risk level. Central clearing helps to limit banks' consumption of balance sheet capacity and support their intermediation capacity.

In practice, netting reduces exposure in the event of default and, consequently, risk-weighted assets, thereby lowering banks' capital requirements. CCP exposures also generally benefit from more favourable prudential weightings than traditional bilateral exposures, making clearing even more attractive to banking intermediaries. The reduction in apparent balance sheet size also helps to limit the increase in the metrics used to calculate G-SIB surcharges. Besides netting exposures, central clearing enables settlement netting, which reduces the physical flows of cash and securities to be settled on a daily basis. Instead of having to settle a large number of gross transactions, participants now settle only one net position per security and per date, which lowers operating cash requirements and the risk of settlement fails. By facilitating multilateral netting, central clearing thus helps to preserve banks' capacity to provide financing and circulate large volumes of liquidity.[139]

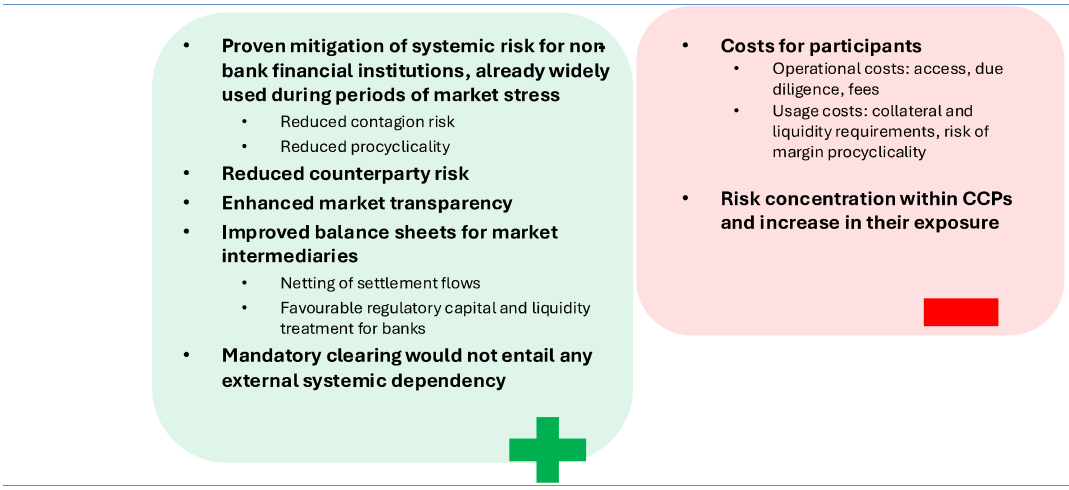
Experience with CCP interoperability on one of the main repo trading markets, MTS Repo, operated by Euronext, illustrates the potential benefits of greater integration of clearing infrastructures in Europe. Since

[135] Basel Committee (2024), Guidelines for counterparty credit risk management, December.
[136] ESRB (2024), A system-wide approach to macroprudential policy, November.
[137] Hüser (A.-C.) *et al.* (2024), How does the repo market behave under stress? Evidence from the Covid-19 crisis, *Staff Working Paper,* n° 910, Bank of England.
[138] FSB, 2026, *op. cit.*
[139] Chen (J. Z.) *et al.* (2022), Potential netting benefits from expanded central clearing in Canada's fixed-income market, *Staff analytical note,* 2022-8, Bank of Canada, June.

2003, this arrangement has allowed members of two CCPs, LCH SA and Euronext Clearing (formerly CC&G), to trade with each other as if they were operating within a single virtual CCP, without having to be members of both infrastructures simultaneously. This architecture facilitates cross-border flows between international banks, many of which are members of LCH SA, and Italian domestic institutions, which account for nearly 80% of Euronext Clearing's members, and thereby contributing to recycle liquidity in the Italian sovereign bond market. According to several estimates, transactions carried out through this link accounted for approximately half of the volumes cleared on MTS Repo at the end of 2023.[140] The arrangement proved its worth during several episodes of market stress by maintaining Italian banks' access to international funding and facilitating the circulation of sovereign collateral within the cleared repo market.

Finally, the use of CCPs promotes more standardised market practices, particularly in terms of contractual documentation, collateral valuation, haircuts, collateral eligibility rules and margin calls. Harmonisation reduces some of the operational and legal risks associated with non-uniform bilateral practices and improves the market's overall transparency. It also facilitates the prudential monitoring of participants' exposures and liquidity needs, particularly during periods of stress, by limiting discretionary trading and information asymmetries between counterparties. For hedge funds, whose repo market activity has increased significantly (see Section 2.1), central clearing through sponsored access models (sponsored or guaranteed sponsored)[141] can provide access to deeper and more stable liquidity pools, while reducing reliance on bilateral relationships, whose capacity may be limited or volatile.

Figure 2.4: Recap of the benefits and drawbacks of central clearing



Source: Banque de France

Some limitations need to be overcome to ensure that central clearing can deliver the expected benefits

Following the episodes of stress that began in 2019, the United States introduced in late 2023 mandatory central clearing for transactions backed by US Treasuries, to be implemented by 2027. Even as it is being phased in, this rule is already bringing structural changes to the US market (see Box 2.4). By contrast, owing to the fragmentation of their sovereign markets and infrastructures, European and UK authorities are currently ruling out such a legal mandate, instead favouring an incentive-based approach to encourage voluntary use of central clearing.

[140] Di Luigi (C.) *et al.* (2024), The fundamental role of the repo market and central clearing, *Occasional Paper*, n° 48, Banca d'Italia.
[141] These models are aimed at buy-side financial institutions, such as hedge funds and pension funds, which gain access to central clearing, along with the operational support and financial guarantees of a direct clearing member, usually a bank, acting as a sponsor.

The efficiency gains associated with clearing are accompanied by costs for participants, including fixed costs relating to membership requirements, such as the costs of adapting operational processes and carrying out due diligence, as well as recurring costs associated with posting margins and contributing to the default fund. However, these costs do not necessarily translate into a structural increase in costs over the medium term. This is because the economic benefits of central clearing depend closely on participants' business profiles. In this regard, the benefits of multilateral netting are especially significant for market participants clearing diversified, low-directionality, high-volume portfolios. These benefits also depend on further on how costs are shared between banks and their clients, a factor that is especially crucial to the development of sponsored models.

The ability of central clearing to fully deliver on the expected resilience gains remains contingent on resolving several structural issues specific to the European market. On the one hand, the European repo market differs from the US market in that both the underlying assets and market infrastructure are significantly more fragmented. It features a plurality of sovereign debts, presenting varying levels of liquidity and depth, which makes it harder to the determine the scope of any potential central clearing mandate. A requirement covering all sovereign debt does not necessarily seem justified from an economic perspective, particularly for illiquid issues that are mainly held or traded by local market participants, for which the expected benefits of central clearing in terms of reducing systemic risk would be limited. Conversely, restricting such a mandate to the most liquid debt (Italian, German and French) might raise political acceptability challenges. Furthermore, European market is characterised by a more fragmented market infrastructure, which could lessen the efficiency of multilateral netting and limit the creation of fully pan-European liquidity pools. Since local interests continue to dominate the European market, both in terms of clearing and settling transactions, introducing mandatory central clearing without making significant progress in infrastructure interoperability might not lead to greater market integration and could instead reinforce existing silos.

While the functioning of the repo market relies on a balance between liquidity borrowers and providers, such as money market funds (see Section 2.1), the latter are structurally less developed in Europe than in the United States (ratio of approximately 1:8 in terms of total assets under management).[142] This private liquidity-providing segment's shallow depth constrains supply to the European repo market, placing a greater burden on central banks to provide liquidity. European CCPs have therefore developed specific access models, notably through "special member" status, to encourage central banks and national treasuries to participate in the cleared repo market, for example through reduced margin requirements. However, these mechanisms are still only partially utilised by the relevant participants in Europe.

The expected benefits of multilateral netting may also be reduced by maturity mismatches, as liquidity providers often favour very short maturities, whereas borrowers seek longer-term funding. In practice, netting mechanisms allow only flows with identical characteristics, including the same settlement and maturity dates, to be offset against one another. An overnight loan cannot be directly offset against a longer-term funding requirement, which limits netting gains and maintains the maturity transformation needs of banking intermediaries. Similarly, certain prudential rules, particularly under the standardised approach to counterparty credit risk (SA-CCR), may limit the benefits of netting across different product classes, even where the positions are legally eligible for netting.

Finally, the European regulatory framework still lacks clarity regarding sponsored access models and their prudential treatment, which is hindering the development of these models in Europe. Unlike in the US market, where the use of sponsored clearing is based on harmonised standards (see Box 2.3), the coexistence of several active CCPs (including LCH SA, Eurex and Euronext) in Europe's repo market does not facilitate the emergence of a single standard in this area,[143] as the applicable regulations are not highly prescriptive regarding the required operational framework (e.g. in terms of the prefunded resources that may be mobilised and monitoring of sponsored members' exposures). Uncertainties also persist over the prudential treatment of sponsored models. The impact of sponsored clearing on the clearing member depends on the terms of the sponsorship contract and

[142] Cipriani (M.) *et al.* (2024), Monetary Policy and Money Market Funds in Europe, *Liberty Street Economics*, 11 April.

[143] LCH SA commands a 76% market share, followed by Eurex Clearing and Euronext Clearing, which each accounted for nearly 12% of volumes in 2025.

the risks to which it remains exposed as sponsor. If the clearing member guarantees fulfilment of the sponsored client's obligations to the CCP, it is exposed to that client. The member is therefore required by the rules to include its exposure to the client in the denominator of its ratio, as if it were dealing directly with the client. Conversely, if the clearing member does not guarantee fulfilment of the sponsored client's obligations to the CCP, it does not need to include that exposure in the denominator. This treatment reflects the clearing member's reduced exposure to the client. In practice, however, this distinction remains tenuous, owing to the risk of implicit support, which means that, should the sponsored client run into difficulties, the clearing member might be inclined – for business, reputational or financial stability reasons – to intervene beyond the scope of its contractual obligations.[144]

Beyond these structural and regulatory constraints, academic studies have also highlighted that the benefits of central clearing for financial stability depend closely on the degree of market centralisation and CCP design characteristics. While central clearing helps to mitigate counterparty risk and improve multilateral netting, without structural changes, its expansion could shift certain bilateral credit risks towards more centralised liquidity requirements and increase risk concentration among a small number of infrastructures.[145]

Furthermore, although margin calls are intended to cover exposures on an ongoing basis and to absorb potential losses arising from market movements, their automated and synchronised application across all participants may amplify stress in times of crisis. Several studies have highlighted the potentially procyclical nature of margin models.[146] During periods of heightened volatility, simultaneous increases in margin calls can trigger significant liquidity requirements and force some participants to carry out forced asset sales to meet these needs, in turn causing asset values to fall and fuelling liquidation spirals. However, the procyclicality of margin models depends on CCP design characteristics, which include, in accordance with the regulatory requirements set out in the European Market Infrastructure Regulation (EMIR), limiting mechanisms such as floors, buffers and smoothing procedures to limit the scale of adjustments.[147] These mechanisms are subject to regular review by the competent authorities as part of their supervisory remit and are also taken into account at international level.[148]

Box 2.4: Repo clearing: the US experience

By Raphaël Vives, Xavier Denis and Enda Palazzeschi

US authorities introduced a structural reform in response to **several episodes of major stress in the US repo market**, notably in 2008, 2019 and 2020. On **13 December 2023**, the Securities and Exchange Commission (SEC), the US financial markets regulator, adopted a rule introducing **mandatory central clearing** for:

- UST purchase and sale transactions (to be implemented by end-2026);
- **Repos** collateralised by USTs (to be implemented by end-2027).

The reform is extremely broad in scope, **and would cover around 80% of the US repo market.**[149] It applies to all participants, including asset managers and hedge funds, with a **few targeted exemptions** (notably transactions with the public sector, between entities from the same group, with another clearing house, and open repos).

From a technical point of view, this reform also imposes:

[144] Banque de France (2018), "Does the leverage ratio have an adverse impact on client clearing?", *Bulletin de la Banque de France*, 218/1, July-August.
[145] Bardoscia, M., F. Caccioli, and H. Gao (2022), Efficiency of central clearing under liquidity stress, Working Papers 1002, Bank of England.
[146] ESRB (2020), Mitigating the procyclicality of margins and haircuts in derivatives markets and securities financing transactions, January.
[147] FSB (2026), *op. cit.*
[148] See for example the review by CPMI-IOSCO in 2022, Review of margining practices
[149] Cenicola (A.) et al. (2026), « How will central clearing impact the repo market? », The OFR Blog, 29 janvier.

- **Easier access to clearing** for participants who are not **direct members** of the CCP. Given the systemic role played by CCPs, access to them is deliberately selective, and only large financial institutions may be direct members or participants. These firms typically offer clearing services to clients (**agent clearing**), acting as intermediaries and taking on all requirements and responsibilities. In this situation, clients are not members of the CCP. **Alternative models** have also been developed, including the **sponsored member** model. Here, a direct member gives a non-member access to the CCP by acting as its sponsor, i.e. by guaranteeing its obligations towards the CCP and handling some of the operational requirements. The sponsored member becomes a limited direct member;
- **Strict segregation of margins** (amounts collected by the CCP to cover potential losses arising from repo transactions) used to cover the proprietary activities of direct members from those collected on behalf of their clients (in the agent clearing model).

Entry into force of this far-reaching reform has already been **pushed back by a year** to take account of operational constraints and concerns raised by the industry. Two issues in particular prompted the SEC to reopen a **public consultation period**: (i) the scope of intra-group transactions and (ii) extraterritorial application of the rule. In both cases, the SEC adopted broad definitions for the entities subject to the rule, to prevent it from being circumvented. But the current wording poses operational problems because it requires transactions involving entities located outside the time zones covered by CCP business hours to be cleared as well.

The effects of the reform are already evident in the market. Although the requirement will not come into full effect until mid-2027, the repo market is **already undergoing structural changes**:

- **Volumes cleared by the Fixed Income Clearing Corporation (FICC)**, until now the only active clearing house in the US market, are on the rise. The scale of the forthcoming shift could be significant: according to OFR estimates, if this rule had been in force during the first eight months of 2025 (and assuming that the outstanding amounts of underlying assets remained unchanged), the proportion of centrally cleared repo transactions in the United States would have risen from 45% (the currently observed level) to 77%.
- **Two new CCPs** have been authorised to operate in the US market (CME Securities Clearing in late 2025 and ICE Clear Credit in early 2026), which was previously dominated by the FICC alone.
- Clearing access models are evolving rapidly: sponsored clearing enables new players, such as asset managers, to access the CCP without becoming direct members.
- There is growing debate between two trade execution methods: "**done-with**" – standard practice whereby execution and clearing are bundled and performed by the same counterparty (a direct member of the CCP); and "**done-away**" – which allows execution and clearing to be carried out by different intermediaries, in order to promote competition between counterparties in execution and to secure the best rates. In the short term, done-with, which is already used in practice, dominates, but many market participants expect use of the done-away model to increase gradually to ensure best execution.

Research suggests that the **additional cost of central clearing should be limited**, at around **± 2 bps**, and is likely to be offset by gains in financial stability and market efficiency, particularly through reduced overall liquidity requirements.

Mandatory central clearing of US repos will profoundly change the UST market, which is a cornerstone of the global financial system. Although it reduces some of the flexibility inherent in bilateral contracts, mandatory

clearing enhances the market's resilience, transparency and ability to absorb shocks. In the long term, this reform also takes place against the backdrop of a major trend: the steady rise in US government debt issuance, volumes of which could **almost double by 2035**, further expanding the role of dollar-denominated assets, whose repo market is a central component of the global economy.

Enhanced risk monitoring

In addition to the above measures, steps are needed to substantially strengthen macroprudential oversight capabilities in order to better detect the build-up of leverage and liquidity vulnerabilities within the non-bank financial system. The FSB, the European Systemic Risk Board (ESRB) and the Bank of England notably point out that recent episodes of stress have revealed significant data gaps, hampering supervisors' ability to identify interconnections between banks, hedge funds and other non-bank financial institutions in real time. Within the European Union, real progress has been made thanks to the Securities Financing Transactions Regulation (SFTR), which requires European participants to report their repo transactions in detail. However, this reporting framework does not cover transactions between two counterparties outside the European Union, and a large proportion of the business carried out by hedge funds, which are often domiciled in offshore centres, is channelled through non-European intermediaries. As a result, these offshore structures largely escape the scrutiny of the European authorities, which fragments the analysis and complicates the real-time detection of contagion risks.

In addition to addressing data gaps, the authorities will also need to adapt their supervisory systems to keep pace with technological developments in the financial markets. Still in their infancy, tokenised repos,[150] based on distributed ledger technology (DLT) and smart contracts, aim to automate transactions and support near-instant settlement. This innovation has the potential to improve operational efficiency and mitigate some settlement risks. But it could also alter participants' liquidity requirements by limiting netting benefits and increasing the need for cash that can be mobilised in real time. Although adoption of the technique remains minimal at present, this trend illustrates the need for the authorities to maintain forward-looking oversight of structural changes in the repo market.

In this environment, the FSB and the ESRB recommend developing harmonised macroprudential indicators to monitor movements in leverage, maturity mismatches, haircuts and risk concentrations between counterparties. The aim is to transform transactional data into genuine early warning signals, in order to anticipate unwinding dynamics and the risks of forced asset sales. This approach will also involve improving macroprudential authorities' access to granular data collected by national supervisors, along with greater harmonisation of reporting standards. Standardisation initiatives, such as the Common Domain Model (CDM), are regularly cited as tools that could improve the automated use of transactional data.

Supplementary data should support the development of ad hoc monitoring tools. The aggregation of individual institutions' (micro-level) regulatory data, which offer a macro-level view of exposures, together with market data, is necessary to identify vulnerabilities linked to the leverage of non-bank financial institutions at an earlier stage. This approach also addresses the observation that banks often have only a fragmented view of their clients' positions: today, a hedge fund may deal simultaneously with multiple intermediaries, each of which sees only a fraction of its total exposure, which masks the actual build-up of leverage at the systemic level.

Finally, a number of institutional and professional players advocate a complementary approach based on strengthening prudential oversight of the internal models used by banks to set haircuts and margin calls. This guidance is intended to ensure that internal models remain sufficiently sensitive to extreme stress scenarios. Supervisors would therefore be responsible for ensuring that haircuts remain appropriate relative to counterparty risk and do not structurally underestimate volatility when financial stress is low. Such an approach would see margin practices become a genuine focus of macroprudential supervision.

[150] Tokenised repo appears to be gaining particular prominence in the United States, with nearly USD 400 billion outstanding at the start of 2026.

Conclusion

The central role of the repo market and increasing vulnerabilities call for heightened macroprudential vigilance. The market's gradual transition towards central clearing represents a major structural advance in mitigating counterparty and contagion risks, enhancing transparency and limiting the leverage of non-bank participants. Beyond central clearing, a comprehensive approach, combining close monitoring of the leverage of non-bank participants, addressing the fragmentation of European infrastructure, and coordinated exploration of safeguards, such as minimum haircuts, will ensure the long-term resilience of this ecosystem in the face of future shocks.

Glossary

Term	Definition
Agent clearing	Model providing indirect access to central clearing in which a direct member acts as an intermediary and assumes all responsibilities and obligations (including margin calls) on behalf of its clients, which are not members of the central counterparty (CCP).
Basis trade	Highly leveraged arbitrage strategy widely used by hedge funds, which involves anticipating and exploiting valuation gaps between the price of a sovereign bond on the spot market and the associated futures contract.
Buy-side / Sell-side	The buy side comprises market participants (investment funds, money market funds and insurance companies) that use the repo market for investment, funding or collateral sourcing purposes. The sell side refers to the intermediaries (commercial banks and prime brokers) that facilitate market activity by connecting these participants, balancing flows and providing them with access to clearing.
Cash-driven market	Market configuration in which participants are primarily seeking funding (liquidity) rather than a specific security, thus favouring the general collateral segment.
Central Clearing / CCP	Mechanism whereby a clearing house interposes itself between the buyer and the seller, guaranteeing the successful completion of the transaction and substituting its own risk for that of the initial counterparties. In particular, this allows banks to optimise their balance sheets through multilateral netting.
Collateral-driven market	Market configuration often linked to quantitative easing policies, in which participants agree to lend liquidity at very low rates, potentially even below key rates, in order to acquire scarce securities.
Default fund	Shared financial reserve within a clearing house, funded by its members, designed to absorb and limit the spread of losses in the event of a participant's default.
Deposit Facility Rate (DFR)	The Eurosystem's deposit facility rate serves as a benchmark around which repo market conditions fluctuate during periods of ample liquidity.
Done-with / Done-away	Trade execution procedures. "Done-with" is the standard practice of having execution and clearing performed by the same counterparty (CCP member). In the "done-away" approach, execution and clearing are unbundled to encourage competition and secure better rates.
Euro Short-Term Rate (€STR) / Secured Overnight Financing Rate (SOFR)	Benchmark short-term interest rates. The US SOFR is derived directly from repo transactions backed by US Treasuries. Although based on unsecured transactions, Europe's €STR is closely linked to repo market conditions.
Gap risk	Residual risk to which the liquidity provider is exposed in the event of a counterparty default between two margin calls, which would force the provider to liquidate the collateral to recover its funds while bearing any price fluctuations that may have occurred in the meantime.
General Collateral (GC)	Repo transactions in which the securities provided as collateral are treated as interchangeable within a standard class (e.g. German government debt). Such transactions are primarily intended to meet a funding requirement.
Haircut	Safety margin applied to the value of securities provided as collateral to protect the liquidity provider against credit risk or asset impairment.
Liability-Driven Investment (LDI)	Investment strategy primarily used by pension funds and aimed at aligning the return on assets with very long-term financial obligations (liabilities). These funds rely heavily on borrowing cash via the repo market to finance highly leveraged long-term bond positions.
Main Refinancing Operation (MRO) / Long-Term Refinancing Operation (LTRO)	Eurosystem refinancing operations that enable banks to borrow cash against collateral at one-week (MRO) or three-month (LTRO) maturities.
Margin call	Counterparty risk management mechanism designed to realign the estimated market value of collateral with the value of the loaned cash.

Matched book	Configuration in which an intermediary interposes itself in two trades, simultaneously taking repo and reverse repo positions with two different end clients. The aim is to balance exposures by matching repo and reverse repo positions with clients and CCPs in order to transform liquidity requirements and potentially reduce balance sheet costs.
Netting	Mechanism that helps reduce gross exposures. By offsetting debit and credit positions, it drastically reduces actual settlement flows, cash requirements and the total exposure recognised on intermediaries' balance sheets.
Open repo	Type of repo transaction that does not have a fixed maturity date when it is entered into.
Primary Dealers	Banks that are required to participate in sovereign debt auctions in the primary market and play a balance sheet intermediation role by temporarily absorbing these securities through repo market financing.
Prime broker	Major investment bank acting as a central intermediary to provide financing, execution and custody services to other segments, notably hedge funds. These are referred to as prime brokerage activities.
Quantitative Easing (QE) / Quantitative Tightening (QT)	Quantitative easing (QE) refers to central banks' asset purchase programmes, which have reduced the supply of sovereign collateral. Quantitative tightening (QT) refers to the phase in which central bank balance sheets are normalised and reduced, with securities being returned to the market and excess liquidity being removed.
Rehypothecation/ collateral reuse	Practice whereby the liquidity provider, which has temporarily become the owner of the security, reuses it in a new transaction with a third party. Although this helps to make the market more fluid, it also increases interdependencies.
Rollover risk	Risk linked to the predominance of very short-term (overnight) maturities, exposing borrowers to the possibility of being unable to roll over their transactions should financing conditions deteriorate, which could lead to forced deleveraging.
SFTR / SFTDS	The Securities Financing Transactions Regulation (SFTR) requires European market participants to report their repo transactions in great detail. These data feed into the Securities Financing Transactions Data Store (SFTDS), which contains, on a daily basis and at the transaction level, all securities financing transactions.
Specialness / Specific Collateral (SC)	Trades carried out with a view to acquiring a specific security (for hedging or settlement purposes). Due to the security's scarcity, the repo is traded on "special" terms, i.e. significantly below the GC rate (participants agree to lend cash on very favourable terms in order to acquire this security).
Sponsored clearing	Model enabling non-bank entities such as investment funds and asset managers to gain access to the clearing house by becoming direct participants for margin calls, while benefiting from the operational support and guarantees provided by a bank acting as sponsor. In its guaranteed variant (guaranteed sponsored clearing), which is particularly suited to hedge funds, the sponsoring bank does not merely assume operational responsibilities: it also assumes full financial responsibility for losses arising from any default by its client vis-à-vis the central counterparty, in some cases extending even beyond its contribution to the default fund.
Swap spread strategy	Leveraged arbitrage strategy based on taking a position on the spread between the yield of a sovereign bond (UST) and a swap rate. Heavily dependent on financing conditions in the repo market.
Tokenised repo	Emerging sector based on distributed ledger technology (DLT) and smart contracts. Aims to automate transactions and support near-instant settlement, changing liquidity requirements in real time.
Triparty agent	Third party (usually a central securities depository) that is appointed to carry out operational functions relating to the collateral in a repo transaction (selection, daily valuation, application of haircuts and margin calls, settlement), but that does not bear counterparty risk.
Window dressing	Practice used by banks to temporarily shrink their balance sheets (and therefore their repo transactions) in the run-up to quarter-end regulatory reporting dates in order to optimise their prudential indicators. Responsible for seasonal liquidity pressures.

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