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Unpacking repo haircuts and their implications for leverage

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Unpacking repo haircuts and their implications for leverage

Key takeaways

- *Haircuts vary with repo trading motives, notably whether market participants primarily seek to raise cash or gain access to a specific security.*
- *Haircuts tend to increase with repo maturity and are lower for less volatile collateral assets. Benchmark sovereign bonds are often associated with subdued haircuts.*
- *Zero-haircut borrowing is common in hedge fund repo activity, with the largest hedge funds benefiting from the lowest haircuts, enabling very high levels of leverage.*

Repurchase agreements (repos) are a crucial source of short-term funding and collateral for financial institutions. A key parameter in repo transactions is the "haircut" – the difference between the market value of the collateral and the cash lent. Haircuts play a pivotal role in determining the leverage that market participants can achieve through repo transactions. For instance, a low haircut of 0.5% enables a borrower to hold assets worth 200 times their equity. A notable example is the "cash-futures" basis trade employed by relative-value hedge funds. This strategy involves hedge funds using leverage from the repo market to purchase a cash security and profit from the small price difference between the security and its corresponding futures contract.[1]

The prevalence of zero or even negative haircuts (Hermes et al (2025); Lu and Wallen (2025)) has raised concerns because, conceptually, such financing terms could lead to infinite leverage. This, in turn, can exacerbate financial stress when positions are unwound (Aramonte et al (2023)). Understanding the factors influencing haircut settings and their implications for leverage is therefore critical for evaluating vulnerabilities in the financial system. We draw on a new, highly granular repo data set to explore the determinants of haircuts with an eye towards financial system vulnerabilities.

A central lesson from the findings of this Bulletin is that repo haircuts must be understood in the context of the underlying trading motive. Repos are typically driven by either a funding need or the desire to obtain a specific security. In funding-driven transactions, higher haircuts protect cash lenders against counterparty risk in case the collateral's value declines. Conversely, in collateral-driven trades, the primary concern is not the fall in the collateral's value but securing the return of the security, which may have scarcity value. In such cases, negative haircuts serve to protect collateral lenders (Hermes et al (2025)). To accurately assess trends in haircuts and their implications for leverage and market fragility, it is essential to disentangle variations in haircuts from the influence of collateral-sourcing motives. While this is challenging due to the frequent overlap of motives, this Bulletin provides classifications to help distinguish key practical cases.

[1] Deleveraging due to the unwinding of this trade was a significant pressure point contributing to the Covid-19 market turmoil (see eg Schrimpf et al (2020); Barth and Kahn (2025)).

Another central finding of our analysis is the significant role of trading relationships and market power in determining haircuts. Large hedge funds, for example, tend to secure lower haircuts when borrowing cash, enabling them to achieve substantially higher leverage than smaller or less connected funds. This underscores the importance of relationships and bargaining power in the repo market and their impact on the leverage accessible to major players.

Our findings have implications for policy discussions, such as proposals for uniform minimum haircut requirements. While such measures could limit leverage build-up, they risk favouring cash lenders at the expense of collateral lenders' ability to secure the return of their collateral assets. Thus a careful design of such tools that takes into account market practices across different segments seems warranted.

Drivers of repo haircuts: the critical role of cash vs collateral motives

Our analysis draws on the euro area's Securities Financing Transactions Data Store (SFTDS), mandated by EU regulation. The SFTDS is very comprehensive in scope, capturing not only the entirety of the euro repo market but also a substantial volume of repo activity in US dollars, owing to the significant presence of European banks in dollar repo markets. The SFTDS provides valuable insights into the typically opaque bilateral repo market that go beyond (potentially misleading) inferences based on simple haircut averages. For instance, the data allow us to trace transactions back to the underlying mechanisms that drive haircut determination.

One such mechanism is the trading motive, specifically whether the primary driver of a repo transaction is to source cash or to obtain specific collateral. While these motives are often intertwined and challenging to disentangle, we propose a framework to distinguish three relevant cases.

The first case is cash-driven trades, where the primary purpose of the transaction is for the cash borrower to obtain funding, which we identify based on general collateral baskets used in the transactions. The fact that no specific security underpins these transactions suggests that the primary purpose for the borrower is to obtain cash via a secured transaction.

The second case is specific collateral trades. In such trades, the cash lender requests a particular security instead of a general collateral basket, meaning that the specific collateral underpinning this trade is important. However, these trades can involve funding motives too, for example when relative-value hedge funds lever up basis trades using specific securities as collateral (Barth and Kahn (2025)).

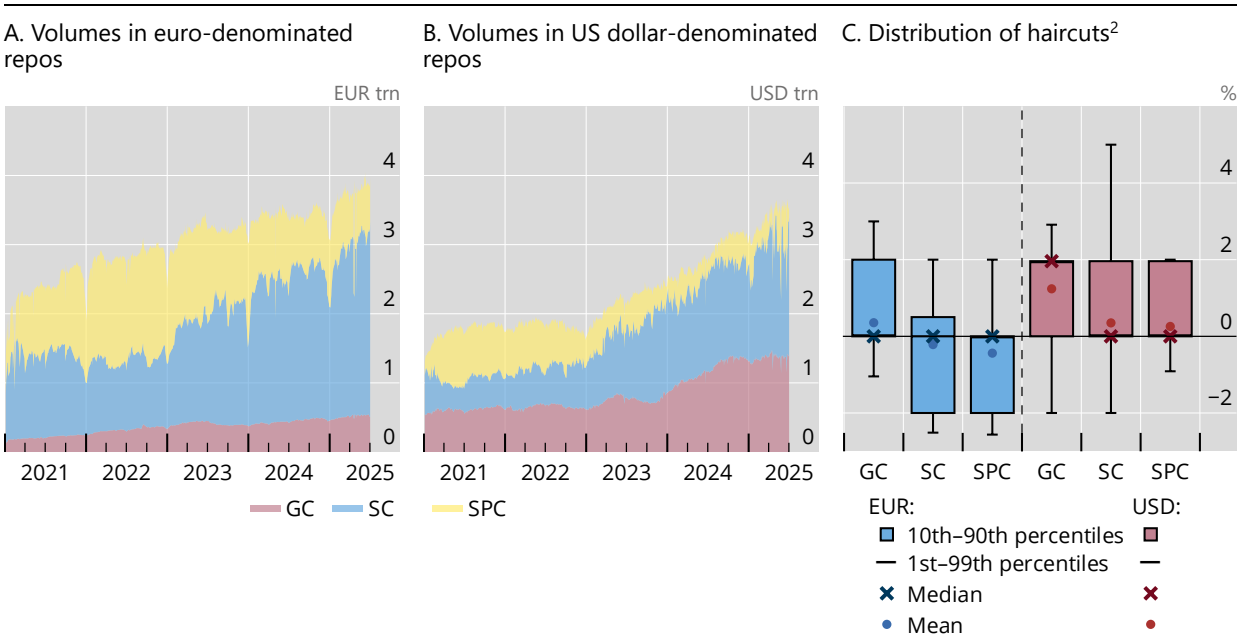
We therefore further distinguish a third case of "specials". Here a specific security underlies the transaction and pricing is notably below the policy rate benchmark. This combination indicates a clear desire to obtain a specific collateral asset, ie the collateral motive dominates the cash motive.

Differentiating between these cases in the data, we observe that both specific collateral repos and specials are more prevalent than funding-driven ones. The proportion of specials is particularly pronounced in the euro (Graph 1.A), likely due to collateral shortages stemming from large-scale asset purchase programmes. However, this trend has eased since the onset of the latest round of quantitative tightening. In US dollar transactions involving European entities, collateral motives are also significant (Graph 1.B), although funding-driven general collateral trades represent a relatively larger share of activity than they do in the euro market. One reason for this could be that collateral in the US Treasury market is more homogeneous than its euro area counterpart.

Haircuts vary significantly depending on the dominance of cash versus collateral motives (Graph 1.C). General collateral trades, which are primarily funding-driven, tend to have the highest haircuts, suggesting that cash lenders are able to impose some constraints on the leverage of repo borrowers in these transactions. In contrast, as the collateral motive becomes more dominant, haircuts decrease, with collateral lenders playing a greater role in shaping the terms of the transaction. In extreme cases, such as specials, average haircuts can even turn negative, reflecting the high demand for specific collateral.

These patterns underscore the importance of accounting for trading motives when interpreting haircut levels, especially in aggregate data. A lower haircut implies a lower risk buffer for the (cash) lender in funding-driven trades but a larger risk buffer for the (collateral) lender in collateral-driven trades.

Repo haircuts depend strongly on the underlying trading motive[1] Graph 1



[1] Based on outstanding data. GC = general collateral basket; SC = specific collateral; SPC = "specials", ie specific collateral where the repo rate is at least 10 basis points below the relevant policy rate (deposit facility rate for EUR, interest rate on reserve balances for USD). [2] Based on bilateral transactions. Categories are additionally restricted to only German (EUR) and US (USD) government securities.

Sources: SFTDS; authors' calculations.

The role of the clearing mechanism, tenor and collateral characteristics

The clearing mechanism is another key determinant of haircut levels and closely related to the trading motives discussed above.

In centrally cleared repos, the trade is fully novated to a central clearing counterparty (CCP) which manages risks through portfolio-level margins. In euro-denominated repos, initial margins amount to 2–4% (Graph 2.A). The absence of transaction-level haircuts simply reflects the CCP's portfolio-based approach. For US dollar-denominated repos, the Fixed Income Clearing Corporation (FICC) likewise applies portfolio-based margining and does not set transaction-level haircuts. However, since FICC itself is not a reporting agent in our data set, we cannot consistently observe these margins. Instead, we observe some positive transaction-level haircuts in centrally cleared US dollar repos (Graph 2.B.). This arises from the fact that the definition of "centrally cleared" also encompasses sponsored services, a segment in which margins can be charged at the individual-trade level (TMPG (2025)).

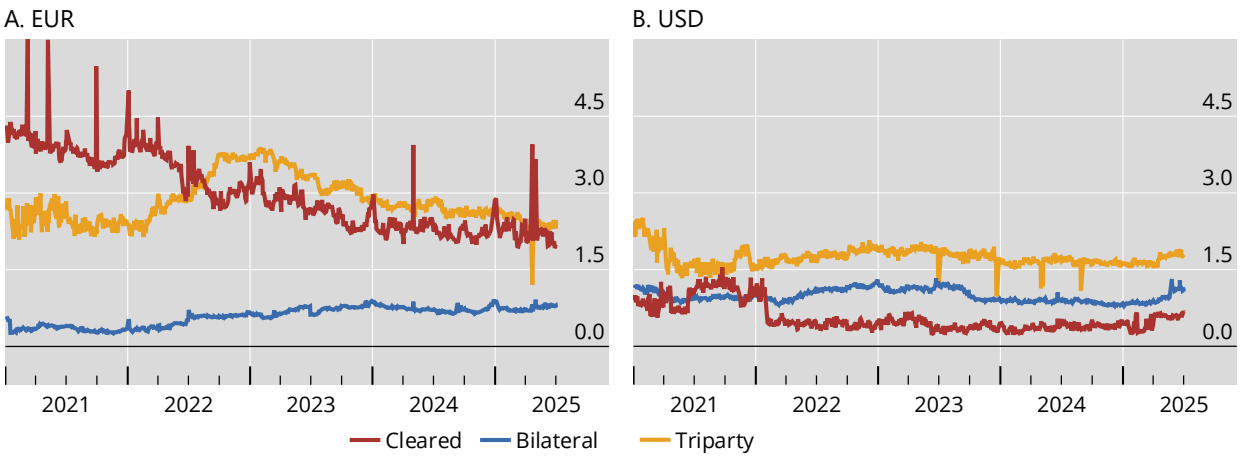
Haircuts in the bilateral segment are generally low, but with significant variation that reflects the diversity of this segment and the importance of market power and established trading relationships. For example, intragroup transactions, which are reported under the bilateral category, do not involve counterparty or collateral risk, as they take place within the same banking group. Moreover, the presence of both funding- and collateral-driven transactions partly offset each other's effects on haircuts, even within a given transaction, as both motives can be present simultaneously. Lastly, the bilateral segment

captures a more diverse set of non-bank participants, from insurance corporations and pension funds to hedge funds and proprietary trading firms, each with very different risk profiles.

Triparty repos display higher haircuts than bilateral repos, reflecting that this segment is almost exclusively used for funding-driven transactions.

Haircuts differ substantially by clearing arrangement[1]

Volume-weighted average haircuts by clearing mechanism; in per cent — Graph 2



[1] Based on outstanding data. The euro centrally cleared segment is based on portfolio-level initial margins. All other segments are based on transaction-level haircuts.

Sources: SFTDS; authors' calculations.

Haircuts vary across several important contract dimensions, particularly the maturity of the contract and the riskiness of the collateral. Focusing on the bilateral segment, which is most comparable across currencies, Graph 3 highlights systematic differences in haircuts across three key factors: (i) repo contract maturity; (ii) collateral type; and (iii) the maturity of the underlying security.

First, haircuts tend to increase with repo maturity, reflecting the higher risk associated with longer contracts (Julliard et al (2022)).[2] This aligns with a funding-driven perspective, as the likelihood of default or significant shifts in collateral value grows with the contract horizon. Second, while government securities dominate as collateral in repo markets (approximately 84% in euro and 70% in dollar transactions with specific collateral), haircuts vary notably with the riskiness of the collateral type. For instance, equities and securitised products typically carry higher haircuts than bonds due to their greater price volatility (Graph 3.B). Third, the maturity of the underlying security also plays a role. Haircuts generally rise with collateral maturity; however, in the euro area, the 10-year maturity segment exhibits noticeably lower haircuts than adjacent maturities. This reflects the benchmark status of 10-year sovereign bonds, which are highly sought after. In contrast, this feature is less pronounced in US dollar repos, where benchmark status is distributed across various points on the yield curve.

Haircuts faced by hedge funds and implied attainable leverage

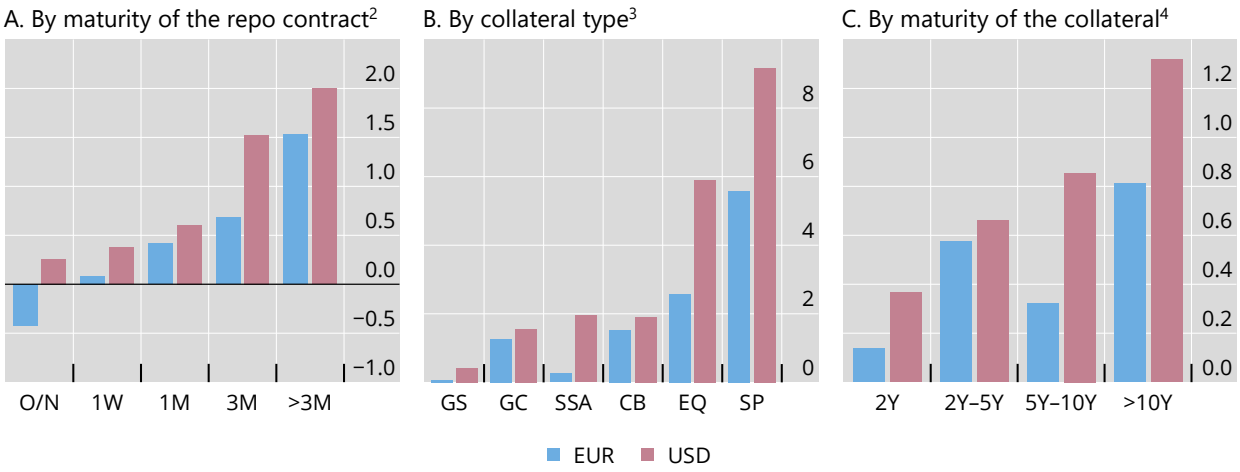
A key concern regarding hedge fund leverage is that haircuts on this borrowing are often very low, directly increasing the amount of funding that can be obtained per unit of equity capital. A common interpretation

[2] Collateral-driven repos are concentrated at short tenors, whereas the funding-driven motive dominates at longer tenors.

is that such low haircuts reflect portfolio margining, where collateral is posted against the net exposure of a portfolio rather than against the individual repo. In this case, the haircut level of an individual transaction may be hard to interpret since it depends on the counterparties' overall exposure (ICMA (2025)). The SFTDS data reveal that such net exposure trades represent around 40% of all bilateral transactions.

Haircuts differ by collateral characteristics[1]

Volume-weighted average haircuts; in per cent — Graph 3



[1] Based on outstanding data. Only bilateral transactions are considered. [2] O/N = overnight (defined as one-day maturity); 1W = one week; 1M = one month; 3M = three months; >3M = greater than three months. [3] GS = government security; GC = general collateral; SSA = supranational security; CB = corporate bond; EQ = equity, SP = securitised product. [4] 2Y = collateral with maturities up to and including two years; 2Y–5Y = collateral with maturities greater than two and up to five years; 10Y = collateral with maturities greater than five and up to 10 years; >10 = collateral with maturities greater than 10 years.

Sources: SFTDS; authors' calculations.

Accounting for haircuts set at the portfolio level rather than for individual repo transactions does not alter conclusions on the prevalence of zero repo haircuts. While net exposure trades account for some zero-haircut observations (Graph 4.A), these trades are also associated with generally higher haircuts than those margined at the individual-trade level. To isolate haircuts that reflect the terms of the individual transaction, Graph 4.B focuses solely on specific collateral – single-trade margined repos. It shows that zero-haircut transactions are still the dominant category in hedge funds' bilateral borrowing, in both euros and dollars. In other words, even after removing all net exposure transactions, hedge funds borrow predominantly at zero haircuts, implying that haircuts by themselves do not limit attainable leverage.

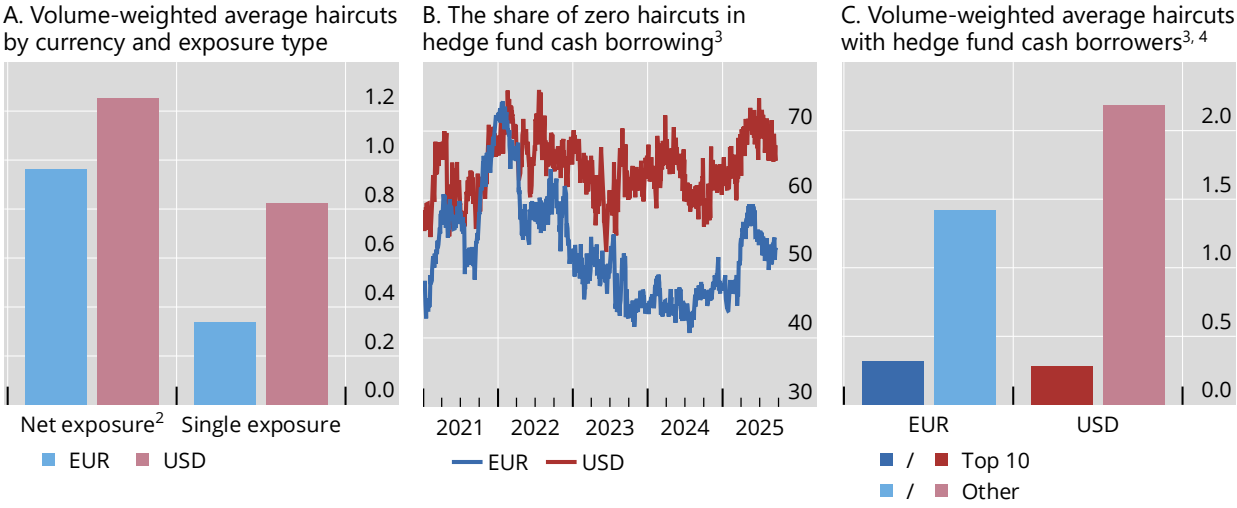
The prevalence of zero haircuts in bilateral repo borrowing raises the question of who benefits from such attractive terms. Examining the haircuts faced by hedge funds and differentiating by their size suggests that larger hedge funds can attain very high levels of leverage relative to their smaller peers (Graph 4.C). This can likely be traced to their higher market power in their relationships with dealers.[3] In the bilateral repo segment, trading relationships matter greatly and differences in bargaining power can influence the terms faced by different players. Indeed, as shown by Hermes et al (2025), market power often lies with dealer banks who tend to be the beneficiaries of lower haircuts when borrowing cash. We extend this work and show that large and interconnected hedge funds, who are the typical players engaging in fixed income relative-value trades, also seem able to extract very favourable haircut terms (Graph 4.C) compared with smaller hedge funds. These large hedge funds are key clients of major dealers, giving rise to strong trading relationships that dealers appear to reward with more attractive haircut terms.

[3] Hempel et al (2023) conjecture that netted packages account for most zero haircuts. Our findings indicate that the patterns shown in Graph 4.C remain unchanged even if accounting for transactions that could be netted.

Low haircuts are concentrated among large hedge funds[1]

In per cent

Graph 4



[1] Based on outstanding data. Only bilateral transactions are considered. [2] Transactions in which margin is posted for a collection of transactions. [3] Only transactions with investment funds as cash borrowers, with specific collateral and no net exposure and in a bilateral segment only. [4] The top 10 hedge funds are identified as those with the highest average daily outstanding volumes over the sample period.

Sources: SFTDS; authors' calculations.

Overall, haircuts reflect a mix of factors, such as trading motives, clearing mechanisms and collateral riskiness. In bilateral markets, trading relationships and market power are key additional factors. This means that average haircut levels must be interpreted with care and in the broader context of these underlying forces. From a policy and financial stability perspective, our findings show that larger hedge funds in particular have access to very low haircut funding and, consequently, high attainable leverage.

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