Treasury Financing by Hedge Funds: A Tale of Three Channels*

Sriya Anbil† Alyssa Anderson‡ Marco Macchiavelli§ Andy Xia¶

March 23, 2026

Abstract

Hedge funds have become critical players in Treasury markets. To finance large amounts of Treasuries, hedge funds borrow in the repo market from commercial banks and dealers. We identify three channels that affect hedge fund borrowing costs. First, repo supply is inelastic, with larger Treasury offerings leading to higher repo rates paid by hedge funds (fiscal channel). Second, commercial banks reduce repo supply when their reserves decline (monetary channel). Lastly, bank leverage constraints increase the costs of repo intermediation, which are passed on to hedge funds as higher repo funding costs (regulatory channel).

Keywords: repurchase agreements, Treasury, dealers, hedge funds.

JEL Classification: E43, E52, G10, G20.

*We thank Gabriele La Spada, Phil Monin, and Lubo Petrasek for their comments. The views expressed in this paper are solely the responsibility of the authors and should not be interpreted as reflecting the views of the Board of Governors or other members of its staff.

†Board of Governors of the Federal Reserve; E-mail: sriya.l.anbil@frb.gov

‡Board of Governors of the Federal Reserve; E-mail: alyssa.g.anderson@frb.gov

§Isenberg School of Management, UMass Amherst, E-mail: mmacchiavelli@isenberg.umass.edu

¶NYU Stern; E-mail: ax369@stern.nyu.edu

1 Introduction

As the post-2008 banking regulations increased the costs for bank-affiliated primary dealers to carry Treasury inventories and engage in related arbitrage activities, such as Treasury basis trades, less regulated investment companies filled the gap. Among them, hedge funds have become central players in Treasury markets. They are large buyers of Treasuries at auction as well as in secondary markets to implement several arbitrage strategies. As these strategies offer low returns, hedge funds boost profits with leverage, which they obtain by borrowing in repo markets. Despite the growing importance of hedge funds in Treasury markets and the central role of repo markets for the financing of Treasuries, little is known about the repo market frictions faced by hedge funds. These frictions impact the pricing of trillions of dollars in derivatives linked to the Secured Overnight Financing Rate (SOFR), as hedge funds represent a large share of the repo trades behind SOFR. In addition, as hedge funds are large buyers of Treasuries in both secondary markets and at auctions, repo frictions can lead to dislocations in secondary markets as well as higher funding costs for the U.S. Treasury, which are ultimately paid by taxpayers.

In this paper, we use confidential transaction-level data on triparty and cleared bilateral Treasury repos to shed light on how hedge funds interact with repo markets to finance Treasury purchases. We isolate three channels that affect the repo borrowing rates of hedge funds: monetary, fiscal, and regulatory. Commercial banks lend a significant amount of reserves in repo markets, especially when the repo rate is above the interest on reserve balances (IORB). While SOFR is often below IORB, hedge funds borrow at the higher end of the SOFR distribution, which is above IORB on most days. We find that when banks enter the day with more reserves, they lend more repo to hedge funds. We call this the monetary channel, since monetary policy determines the total supply of reserves in the system. This mechanism implies that as total reserves become more scarce, for instance during quantitative tightening, the supply of repo to hedge funds would decline, ultimately leading to higher repo rates. While commercial banks have reserve accounts and strategically decide to lend them

in repo markets, dealers do not have reserve accounts. In line with Regulation W limiting the ability of commercial banks to extend credit to affiliates, changes in bank reserves do not lead to more repo lending by the affiliated dealer.

We also find a separate channel that affects repo rates. Hedge funds finance the purchase of Treasuries at auction in large part by borrowing in repo markets. If repo supply is not perfectly elastic, we expect greater Treasury offerings to lead to higher repo funding costs. We indeed show that higher Treasuries offerings are associated with more repo borrowings by hedge funds, and at higher rates. We call this the fiscal channel, since increasing fiscal deficits end up putting upward pressure on repo rates.

Isolating the monetary and fiscal channels at the micro level is essential for understanding the transmission of monetary and fiscal policy. Indeed, aggregate correlations can be inconclusive. We often observe increases in SOFR around large Treasury auctions. One may be tempted to conclude that the fiscal channel is at work. However, large Treasury issuance also corresponds to an increase in the Treasury General Account (TGA) and a mechanical decline in aggregate reserves. It is therefore possible that it is the aggregate decline in reserves, not the larger amount of Treasuries being financed, that is leading to higher repo rates. As a result, the correlation between SOFR and Treasury issuance could be driven by either fiscal or monetary channels, or both. Our micro estimates allow us to conclude that both channels are actually at work. The importance of the monetary and fiscal channels is consistent with the findings that the SOFR spike of September 2019 was due to a concomitance of large Treasury issuance (fiscal channel) and corporate tax date which leads to a decline in reserves (monetary channel), as discussed in Anbil et al. (2020); Afonso et al. (2020).

While commercial banks often times lend reserves in repo markets to the ultimate borrowers, the majority of repo funding flows from the ultimate lenders to the ultimate borrowers via dealer intermediation. Their intermediation is necessary because lenders do not want to be directly exposed to the counterparty risk of hedge funds, but instead prefer to lend to large dealers. To intermediate repo funding, dealers expand their balance sheet which

is costly due to leverage constraints. To cope with unprecedented dislocations in Treasury markets during the COVID-19 liquidity crisis, U.S. regulators removed Treasuries and reserves from the calculation of the Supplementary Leverage Ratio (SLR) in April 2020. This exemption expired in March 2021. Using this exogenous easing of the SLR between April 2020 and March 2021, we show that repo borrowing costs faced by hedge funds declined. We call this the regulatory channel. Note that dealers can partially offset the balance sheet cost of repo intermediation by netting down the portion of their FICC-cleared bilateral repos where both the lender and the borrower are the same central counterparty, namely FICC. However, dealers can rarely net down their entire repo books and fully offset the effect of repo intermediation on their leverage ratio. As a result, a tightening of leverage constraints can lead to a reduction in repo intermediation and higher repo rates charged to hedge fund clients.

We contribute to several strands of the literature. First, the literature on dealer intermediation in repo and fixed income markets has mainly focused on the role of funding constraints, balance sheet costs, and internal risk limits in shaping dealers' market making activities (Fleming et al., 2024; Bräuning and Stein, 2025; Li et al., 2025; Duffie et al., 2023; Favara et al., 2022; Macchiavelli and Zhou, 2022).[1] Differently from this literature, we study the role of dealers in intermediating leverage to hedge funds which, in dollar terms, is much larger than the size of dealers' inventories, which are used in market making.

Second, we contribute to the recent literature on the role of post-2008 regulations and monetary policy implementation in shaping repo markets. Allahrakha et al. (2018); Macchiavelli and Pettit (2021) show the effects of leverage and liquidity regulations on repo borrowings by dealers. Regarding monetary policy implementation, Anderson and Kandrac (2018) show that the Fed's Overnight Reverse Repo (ON RRP) facility crowds out private repo lending by MMFs and Keating and Macchiavelli (2017); Anderson et al. (2025) study

[1]Other papers have shown how bank balance sheet costs lead to dislocations in basis trades (e.g., Du et al., 2018; Fleckenstein and Longstaff, 2020), and more generally how frictions in dealer intermediation have implications for asset pricing (e.g., He and Krishnamurthy, 2013; Adrian et al., 2014; He et al., 2017).

IORB arbitrage activities by banks. Additionally, Anbil et al. (2024); Copeland et al. (2025) debate the role of reserve scarcity and ONRRP take-up in affecting repo rates in aggregate. We provide granular bank-level evidence that commercial banks lend excess reserves in repo markets to hedge funds strategically.

Finally, we contribute to the recent literature on the role of hedge funds in Treasury markets. Kruttli et al. (2023); Barth and Kahn (2025); He et al. (2022) study dislocations in Treasury arbitrage spreads during the COVID-19 liquidity crisis. In particular, Kruttli et al. (2023) attribute some of the Treasury dislocations to hedge funds' value-at-risk constraints. On the other hand, we focus on the determinants of hedge funds' repo borrowing costs using micro-data on bilateral repo transactions.

2 Background on Repo Markets

A repo transaction is a short-term secured loan that involves the sale and future repurchase of a security between a borrower and lender. The cash borrower owns the security and seeks cash (repo), while the cash lender receives the security as collateral when lending the cash (reverse repo). On the maturity date, the borrower returns the cash with interest to the lender and the collateral is returned to the borrower.

In the U.S., the repo market consists of three main segments: triparty, cleared bilateral, and uncleared bilateral. In the triparty repo market, cash and collateral move within the custodian bank but the trades are not cleared. Indeed, lenders are exposed to the default risk of their counterparty. Lenders are mostly MMFs and borrowers are mostly large dealers. Hedge funds do not borrow in triparty since MMFs deem them as too risky of a counterparty. In the cleared bilateral repo market, FICC acts as the counterparty to all trades, which significantly reduces counterparty risk. To become a FICC member, banks and dealers have to post capital to FICC's clearing fund and FICC's Capped Contingent Liquidity Facility (CCLF). The ultimate repo lenders and borrowers however are not FICC members. For

instance, MMFs cannot directly participate in loss-mutualization schemes such as FICC's CCLF, while hedge funds may pose too much of a counterparty risk to FICC. To solve this market segmentation and allow more participation, the sponsored repo program was established in 2005, but the SEC allowed dealers to be sponsors only in April 2019. The 2019 expansion was crucial as it allowed dealers to sponsor their hedge fund clients into FICC. Lastly, we only have limited visibility into the size of the uncleared bilateral repo market.

Dealers participate in repo markets for the most part as intermediaries between repo lenders and repo borrowers. In a so-called matched-book trade, a dealer raises repo funding to finance a collateralized loan (reverse repo) to a hedge fund client. However, such intermediation utilizes dealer balance sheet space, which is costly due to leverage constraints. Using sponsored repo, the dealer can novate the reverse repo trade with the hedge fund to FICC. In addition, if the dealer raises repo funding from FICC as well, for instance on the interdealer segment, the dealer now has a reverse repo as well as a repo with FICC. Standard netting agreements then allow the dealer to net the matched-book trade, since it borrows and lends against the same counterparty (FICC), provided that both trades have the same maturity and collateral type. See Appendix **??** for more information on the classification of sponsored repo accounts and Appendix **??** for more information on netting.

Sponsored repo provides benefits to all participants. For sponsored lenders such as MMFs, it provides higher repo rates than the alternative, namely the triparty repo segment. For dealers, the opportunity to net down the matched-book trades allows them more flexibility to expand intermediation activities without increasing leverage. The additional flexibility provided to the dealers also benefits their hedge fund clients, as they gain more funding availability through the sponsored repo program. In general, MMFs are sponsored by custodian banks while hedge funds are sponsored by banks and dealers.

In December 2023, the SEC adopted a new rule to require the central clearing of many U.S. Treasury repo transactions.[2] In particular, the new rule requires that all Treasury repo trades in which at least one counterparty is a FICC member will need to be cleared. While the repo clearing mandate does not go into effect until June 30, 2026, sponsored repo will likely grow substantially further as market participants prepare for implementation of the SEC's new rule. MMFs and other lenders will need to shift away from tri-party repo and hedge funds will need to shift away from uncleared bilateral repo, leading to an increase in both sponsored lending and sponsored borrowing.

3 Data and Summary Statistics

We obtain confidential daily data from the Office of Financial Research (OFR) of the U.S. Treasury and Bank of New York Mellon (BNYM) of overnight Treasury repo transactions across three segments: cleared repo transactions from the Fixed Income Clearing Corporation (FICC) interdealer segment, cleared repo transactions from FICC's sponsored repo segment, and tri-party repo transactions from BNYM. The combined dataset runs from January 2, 2020, the first day that we have both OFR and BNYM datasets available, to December 31, 2024. The daily data from the OFR are at the transaction level and include the rate, volume, settlement and maturity dates, CUSIP of the Treasury collateral, and borrower and lender identities. The daily data from BNYM on the tri-party segement are also at the transaction level and include the rate, volume, settlement and maturity dates, as well as borrower and lender identities. Because this segment is considered "general collateral" or GC, we do not observe the CUSIP of the Treasury collateral. We limit our sample to overnight transactions, which represent the vast majority of repo trades.

We collapse our daily transaction data to create a panel at the entity-day level. We identify entities based on the names provided in the dataset using the Legal Entity Identifier

[2]See the SEC's press release https://www.sec.gov/news/press-release/2023-247 for further information.

(LEI) mapping of Bostrom (2025). Entities include banks, custodian banks, dealers, private funds which include hedge funds, MMFs, and others (such as pension funds and mutual funds).[3] For each entity on each day, we compute total borrowing and lending volumes and their corresponding volume-weighted average borrowing and lending rate across three categories of overnight Treasury repo segments: sponsored repo, interdealer cleared repo, and tri-party repo. We also calculate the spread to the ON RRP offering rate to account for monetary policy changes or technical adjustments. We also exclude transactions that are 5 or more basis points (bps) under the ON RRP rate to exclude transactions that included collateral that could be considered "special".[4] Thus, our final dataset at the entity-day level includes volumes and interest rates across three Treasury repo segments, totaling 1,556,307 observations.

Table 1 displays summary statistics by entity type of average volumes traded and corresponding interest rates. See Appendix **??** for a full description of the variables used in the analysis.

4 Hypotheses Development

Despite the lack of data on the take-up of Treasuries at auction by hedge funds, the publicly available data shows that investment funds, which include hedge funds and other private funds, are the largest buyers of Treasuries at auction (Fleming et al., 2024). Figure 1 shows that the allocations at auction to investment funds has steadily grown over the last decade. Recently, allocations to investment funds reached 80% of the offerings of Treasury bonds and notes, and 60% of Treasury bills, up from around 30% in 2008. While we do not know how much of the allocations to investment companies go to hedge funds, the repo market data suggests that it is a large and growing fraction. Indeed, Figure 2 shows that a significant

[3] Bostrom (2025)'s mapping relies on Legal Entity Identifiers, a global code for participants in financial transactions. Hedge funds are classified as entities that file SEC Form PF.

[4] When a certain Treasury CUSIP is trading special, it is considered to be in high demand and borrowers are able to seek repo financing at a lower market rate than had they not had in-demand collateral.

share of the Treasuries taken up at auction by investment companies is financed specifically by hedge funds in the bilateral repo market. Since hedge funds could buy a fraction of the Treasuries with their own capital instead of with repo financing, and they could also use uncleared bilateral repo to do so, Figure 2 provides a lower bound to the share of Treasuries bought at auction by hedge funds.

As discussed in Fleming et al. (2024); Bräuning and Stein (2025), bank leverage constraints reduce the incentives of dealer banks to absorb Treasuries, leaving hedge funds and other investment firms the dominant buyers of Treasuries at auction. As a result, we hypothesize that larger Treasury offerings may lead hedge funds to increase their demand for repo funding and consequently bidding up repo rates. We call this the *fiscal channel*.

Large auctions may also lead to worse outcomes. Indeed, while the primary dealers, which are the largest dealers, are required to meaningfully participate at auction, hedge funds do not have to. Hence, they may decide to opportunistically participate if the yields are attractive enough. As larger offering at auction require more participation by hedge funds due to the balance sheet constraints faced by dealers, we also hypothesize that issuance amounts are associated with more hedge fund take-up and worse auction results.

Hypothesis 1 (Fiscal Channel) *Hedge funds purchase a large amount of Treasuries at auction using repo funding for leverage. Higher offering amounts at auction lead to higher repo demand by hedge funds, which results in hedge funds increasing repo borrowings and paying higher repo rates. Relatedly, larger offerings are absorbed in greater proportions by hedge funds and are associated with worse auction outcomes.*

Hedge funds purchase Treasuries from both primary and secondary markets and finance a large portion of them in bilateral repo markets. Lenders in bilateral repo markets are predominantly commercial banks and dealers. Dealers usually operate a matched book, borrowing from MMFs the exact amount they need to lend to hedged funds. Banks on the other hand lend in repo strategically when they have extra reserves and when they can earn more than the outside option, namely the interest on reserve balances, IORB. We hypothesize

that more abundant reserves may lead to an increase in the supply of repo funding and an associated decline in repo rates. We call this the *monetary channel*. The channels also works in the opposite direction, with fewer reserves leading to less repo supply and higher repo rates.

Hypothesis 2 (Monetary Channel) *Banks can lend their reserves in repo markets, especially when repo rates are above IORB. When a bank experiences a decline in reserves, it supplies less repo funding and charges higher repo rates. Thus, the scarcity of reserves affects the pricing that hedge funds receive to finance Treasury securities in the repo market.*

Notice that both fiscal and monetary channels may be at play simultaneously. Indeed, the September 2019 repo spike episode likely saw both channels at play on the same day. As discussed in Anbil et al. (2020); Afonso et al. (2020), repo supply declined on September 17 as reserves moved to the TGA on corporate tax date, while repo demand increased on the same day due to a large Treasury coupon issuance.

The vast majority of dealers' repo activity consists of intermediating repo, namely raising repo funding from the ultimate lenders and lending it to the ultimate borrowers, mostly hedge funds. This intermediation process is often called matched-book repo. Under the joint hypothesis that dealers are perfectly competitive and unconstrained by leverage requirements, dealers could accommodate any repo intermediation at a constant intermediation spread or mark-up, namely the difference between the dealers' lending rate (reverse repo rate) and their funding rate (repo rate). However, if the leverage constraint is binding or close-to-binding, expanding repo intermediation is costly as it requires the bank to raise additional equity capital.

Dealers can mitigate only a fraction of the effect of an increase in repo intermediation on leverage constraints by netting repo and reverse repo trades against a central counterparty, FICC. Indeed, dealers raise a significant part of their repo borrowings in triparty, which cannot be netted down against their repo lending to hedge funds which occurs on FICC.

Hypothesis 3 (Regulatory Channel) *When Treasuries are reintroduced in the calculation of bank leverage requirements, the leverage constraint becomes tighter. As a result, greater demand for repo intermediation by dealers becomes more expensive, leading to higher repo intermediation spreads. Dealers may try to net down more of the intermediation. Also, dealers reduce Treasury allocations at auction, resulting in a larger share of Treasury issuance being allocated to hedge funds and possibly worse auction outcomes.*

5 Empirical Strategy and Results

5.1 Fiscal Channel

We start by testing for the fiscal channel of Hypothesis 1, namely whether larger Treasury offerings lead to higher repo rates and increased repo borrowings by hedge funds. Since the Treasury has to roll over large amounts of maturing bonds by issuing new ones, the settlement date of new bonds corresponds with the maturity date of old ones. Therefore, to measure the net amount of Treasuries that added or removed from circulation, we use net issuance instead of issuance amounts. Specifically, we estimate the following entity-day level panel regressions across borrowers:

$$Y_{b,t} = \beta \times HF_b \times NetIssuance_t + \mu_b + \mu_t + \varepsilon_{b,t} \tag{1}$$

where $Y_{b,t}$ is either the volume-weighted repo rate that borrower b pays on day t or the amount of repo borrowed by borrower b on day t. HF_b is an indicator variable equal to one for hedge funds, $NetIssuance_t$ equals the amount of Treasury securities sold minus the amount maturing on day t. This number can be negative if maturing securities exceed newly-issued securities, and is zero on non-settlement days. We also include borrower and time fixed effects, μ_b and μ_t, respectively. The control group consists of ultimate borrowers in the cleared bilateral repo market other than hedge funds, namely small dealers. Notice

that the time fixed effects capture any aggregate time-varying factor, such as changes in aggregate reserves, the level of short-term interest rates, and net issuance itself. Standard errors are clustered at the borrower level. Under the fiscal channel hypothesis, we expect $\widehat{\beta}$ to be positive.

As shown in Figure 2, a significant fraction of newly issued Treasuries are bought by hedge funds and financed in repo markets. Given limited ability of dealer banks to expand their balance sheets to absorb larger Treasury issuance, hedge funds are the marginal buyers of Treasuries at auction. The fiscal channel then posits that larger Treasury offerings lead to higher repo borrowing amounts and costs paid by hedge funds. We test the fiscal channel hypothesis in Table 2.

We start by showing in column 1 that repo rates increase on Treasury settlement days. For every $10 billion of net issuance, the volume-weighted average borrowing rate increases by 0.28 basis points. This size is meaningful because, on average, net issuance is around $40 billion, meaning that repo rates increase 1 basis point on these predictable high pressure days. Next, shown in Columns 2 and 4, for every $10 billion of positive net issuance, hedge funds pay 0.06 bps higher repo rates relative to other borrowers on Treasury settlement days. Their repo financing demand also increases shown in Columns 3 and 5. For every $10 billion of net issuance, hedge funds increase their borrowing by around 1%. Since the average hedge fund borrowing amount shown in Table 1 is $2.1 billion, the average hedge fund borrows about $20 million more. The findings are consistent with a fiscal channel, whereby large Treasury issuance puts upward pressure on the repo funding rates and borrowing amounts by hedge funds.

Who provides the extra funding to hedge funds on large Treasury settlement days? Tables 3 and 4 investigate the entities that lend to hedge funds on settlement days, the rate they charge, and the amounts they lend. Dealers are the main financial intermediaries in the sponsored repo segment of the FICC-cleared repo market, lending to hedge funds and simultaneously borrowing from other dealers and money market funds. Banks also sometimes

step in to lend if the rates offered are higher than IORB, their outside option. Table 3 shows the spreads earned by banks and dealers when lending to hedge funds on average and on Treasury settlement days. In column 1, we focus on banks with the dependent variable being the volume-weighted average repo lending rate minus IORB, since the latter is the banks' outside option. Columns 2 and 3 consider two measures of dealer spreads. The dependent variable of column 2 is the volume-weighted average lending rate minus the volume-weighted average borrowing rate within the FICC-cleared segment, where dealers can net down all their repo transactions, whereas the dependent variable in column 3 is the volume-weighted average lending rate in FICC-cleared minus the volume-weighted average borrowing rate on the triparty segment. This latter spread captures the cost of expanding their balance sheet to accommodate lending to hedge funds, since the triparty segment is not centrally cleared and cannot be net down against repo lending in FICC.

In Table 3 we estimate whether the repo lending spreads charged to hedge funds are sensitive to the higher repo borrowing demand on days of larger Treasury net issuance. The coefficients in the first row show that both banks and dealers charge hedge funds higher repo rates relative to other borrowers on average. Instead, on days of larger net issuance when hedge funds have greater funding needs, banks do no charge higher repo rates to hedge funds. Dealers likewise do not charge hedge funds higher repo spreads relative to their repo funding costs within FICC on days of larger net issuance. Conversely, column 3 shows that dealers charge hedge funds higher repo spreads relative to their triparty funding costs on days of large Treasury net issuance. In other words, it appears that dealers charge stable repo spreads to hedge funds when they can net down the expansion in repo intermediation within FICC, but charge higher repo spreads to hedge funds when such intermediation cannot be netted down. For instance, borrowing in triparty and lending in FICC increases the size of the balance sheet and takes up leverage space. Specifically, this type of "non-nettable" balance sheet expansion is penalized by the SLR.

Consistent with the previous results, Table 4 shows that both banks and dealers expand repo lending to hedge funds on days of large Treasury net issuance (columns 1 and 2). Columns 3 and 4 show the amount of net lending provided by dealers to hedge funds. The lack of any significant expansion of net lending to hedge funds on large net issuance days is in line with dealers acting as intermediaries, expanding both repo and reverse repo in a matched-book fashion, leaving net lending largely unchanged.

5.2 Monetary Channel

Next, we test for the monetary channel of Hypothesis 2, namely whether a bank that enters the day with more reserve balances is more likely to lend more and at what price. Commercial banks hold reserve accounts at the Federal Reserve, while dealers do not. However, a dealer could indirectly benefit from an expansion in reserve balances at its affiliated commercial bank through affiliate trading, albeit under the limits imposed by Regulation W. Thus, we focus on the lending rates of commercial banks and dealers with associated bank-holding companies. Specifically, we estimate the following lender-day level panel regression:

$$\begin{aligned} Rate_{l,t} = \beta_1 \times \mathbb{1}(LendstoHF)_{l,t} \times \Delta Reserves_{l,t} + \beta_2 \times \mathbb{1}(LendstoHF)_{l,t} \\ + \beta_3 \times \Delta Reserves_{l,t} + \mu_l + \mu_t + \varepsilon_{l,t} \end{aligned} \tag{2}$$

where $Rate_{l,t}$ is either the lending rate charged by commercial bank i minus IORB on day t, the volume-weighted average lending rate minus the volume-weighted average borrowing rate in FICC for dealer or custodian bank l, or the volume-weighted average lending rate in FICC minus the volume-weighted average borrowing rate in the triparty segment for dealer or custodian bank l. $\Delta Reserves_{l,t}$ is the change in log reserves of bank l between day $t-1$ and t. Since dealers do not have reserve accounts, we use the reserves of their affiliated commercial bank. We also include lender and time fixed effects, μ_l and μ_t, respectively. Standard errors are clustered at the entity level. Under the monetary channel hypothesis, we expect $\widehat{\beta}_1$ to be positive for commercial banks but not for dealers with associated bank-

holding companies. This is because dealers need to rely on affiliate trading to obtain reserves from their bank-holding company which can be costly and subject to Regulation W limits. We also use lending volumes and net lending volumes as dependent variables in the place of repo rates.

Table 5 reports the results. Columns 1 and 2 focus on banks; columns 3 and 4 focus on dealers with associated bank-holding companies in FICC cleared repo; and columns 5 and 6 focus on dealers who lend in FICC and borrow in triparty and thereby expand their balance sheet. The variable of interest is the interaction of lending to hedge funds and the change in reserves in teh first row. Columns 1 and 2 show when banks enter the day with more abundant reserves, they tend to lend more repo to hedge funds and at a higher rate. While the expansion in repo lending is perfectly in line with the monetary channel hypothesis, the increase in the lending rate may be puzzling at first, but could be reconciled with the fact that banks are only willing to lend in repo if they can obtain a rate above IORB. When focusing on dealers, columns 3 to 6 show no expansion of lending amounts to hedge funds on days in which their affiliated commercial bank experiences an increase in reserve balances. These results suggest that the behavior of commercial banks in how they lend to hedge funds is very different to how dealers behave, unlike Copeland et al. (2025), where the reserve balances of dealer banks matter.

5.3 Regulatory Channel

Figure 1 shows that investment companies, chiefly among them hedge funds, are the main buyers of Treasuries at auction. This was not always the case. In 2010, dealers were the main primary market buyers. However, the Basel III SLR made it more costly for dealers to carry inventories of safe assets, resulting in them ceding ground to the less regulated hedge funds. The SLR was passed into law in 2013 and became effective in 2014. Starting in 2013 we indeed see an increase in Treasury allocations going to hedge funds, especially in notes

and bonds. Currently, allocations to investment companies (which include hedge funds) in notes and bonds surpassed 80% while those in bills are a little lower at around 60%.

Another piece of evidence pointing to leverage constraints hindering the ability of dealers to buy Treasuries at auction comes from the reintroduction of Treasuries in the calculation of the SLR in March 2021. After being exempted from the SLR in March 2020 during the COVID liquidity crisis, the Fed let the exemption expire one year later on March 31, 2021. Thus, starting from April 1, 2021, the purchase of Treasuries would be penalized as it pushes the leverage ratio toward the regulatory constraint. The main advantage of focusing on the reintroduction of Treasuries in the SLR is that it happens after the FICC-cleared repo data are available. If we were to observe that borrowing rates by hedge funds declined during the SLR exemption, this would provide evidence that the regulatory channel is in effect. When dealers have more balance sheet capacity, that cost savings is passed onto hedge funds.

Table 6 uses a variation of Equation 1 where the main regressor is the interaction of the indicator variable for hedge funds and a SLR exemption indicator equal to one between April 14, 2020 and March 31, 2021, the period where Treasury securities were exempted from the SLR calculation. In particular, we test whether the exemption of Treasury securities from the SLR led to changes in the pricing and volume of repo borrowings by hedge funds. The dependent variables in columns 1 and 3 are the hedge funds' repo borrowing rates minus the ONRRP rate and in columns 2 and 4 the repo borrowing amounts. Columns 1 and 3 indicate that that hedge funds were able to borrow at nearly 1 basis point lower rates relative to the period when Treasury securities were not exempted, showing that dealers were willing to pass on the cost savings of reduced balance sheet costs onto their hedge funds clients. The reduction in repo borrowing rates is not an artifact of lower repo borrowing demand during the SLR exemption period, as the effect on borrowing amounts in columns 2 and 4 is insignificant. Controlling for the effect of net issuance does not alter the results that the SLR imposes intermediation costs that are passed on to hedge funds, and yet again confirms the presence of the fiscal channel.

6 Collateral Pledged and Hedge Fund Activity

The collateral mix that hedge funds pledge in the repo market can tell us something about the prevalence of certain strategies and positions they take. Indeed, many strategies involve a mix of long and short positions. Often times, the long position is in a security with is financed in the repo market to obtain leverage and magnify the returns, while the associated short position is in a derivative.

Specials. If a financial institution wants to take a short position in a bond, they could borrow a bond, sell it, and buy it back later. When a bond is highly sought after, it may be expensive to borrow, which results in the associated repo (obtaining a bond against the delivery of cash) offering a low interest rate. These repos are called specials, since interest is in a specific bond and not in maximizing the rate of return from lending cash. Hedge funds could raise cash against the delivery of a special bond. However, figure 3 shows that hedge funds' repo borrowings associated with specials activity is quite small.

Cash-Future Basis Trade. Certain banks and asset managers prefer to take positions in Treasuries via futures, as they provide embedded leverage and tend to be very liquid. As a result of the high demand, Treasury futures are generally more expensive than the underlying cash instruments, which generates a cash-future basis that represents an arbitrage opportunity. Hedge funds can buy the bond with leverage and short the associated future, profiting from the ultimate convergence in the price of the two instruments over time.

A hedge fund taking a short position on the future contract has to deliver one of several eligible bonds at maturity (Johnson et al., 2017). There are several futures contracts depending on the tenor of the security (2-, 5-, 10-, Ultra 10-Year Notes, classic bond, and Ultra T-bond) and delivery can occur on any day of the contract month (March, June, September, December). Given that many bonds can be delivered for each contract, a formula adjusts the price of each bond to make it comparable to other eligible securities. The futures contract

allows the short to deliver any of the eligible securities. When a short delivers an eligible security, the long pays a specified invoice price to the short. Since Treasuries with higher coupon rates are more valuable than others, the invoice price must reflect how valuable each security is. To do so, the invoice price equals the price of the futures contract multiplied by a conversion factor. High coupon securities tend to have a high conversion factor while low coupon ones have a low conversion factor. However, the conversion factor is in practice mispriced (Johnson et al., 2017), giving rise to one specific eligible security to be the cheapest to deliver (CTD). Hence, a hedge fund has an incentive to buy the CTD using repo funding and delivering it in the short when the futures contract matures. Given that Treasuries with similar maturities tend to have similar coupon rates, there are often a few Treasuries that are near CTD, which we refer to as CTD2 and CTD3 to distinguish them from CTD1, the cheapest to deliver.

Figure 4 shows that only a small fraction of hedge funds' collateral pledged in repo markets consists of CTD1, CTD2, and CTD3. Since Treasuries are fungible, it is possible that hedge funds engage much more in the basis trade than suggested by Figure 4 and pledge any Treasury that they may have acquired for other trades as collateral to obtain leverage for the cash-futures basis trade.

Nevertheless, if they deliver the CTD Treasuries in the short, those bonds should be removed from the pool of collateral pledged in repo markets when the contract matures. Delivery can be made any day of the contract month (March, June, September, and December).

On-The-Run/Off-The-Run. Given the large volume of trading in newly issued securities as they find their home in the portfolios of long-term investors, liquidity tends to be concentrated in the newly issued securities for each tenor. These securities are called on the run (OTR). As soon as a new security of the same tenor is issued, the initial security becomes first off the run (OFR1), and what used to be OFR1 now becomes second off the

run (OFR2). Traders that prefer to maintain a portfolio of liquid securities conduct a "roll" transaction, buying the newly issued OTR and sell the now OFR1 security. This life-cycle results in OTR securities being more liquid and expensive than their OFR counterparts.

Hedge funds can gain from the on-the-run/off-the-run (OTR/OFR) yield spread through relative value trades by going long the cheaper security and short the more expensive one. In practice, a hedge funds takes a long position in a OFR Treasury, which is financed in the repo market, and a short position in a OTR Treasury of similar maturity, which is sourced through a reverse repo.

Figure 5 shows that on the run Treasuries represent a small fraction of the overall collateral pledged in repo and that first- and second- off the run represent even a smaller fraction. Thus, the majority of Treasuries pledged in the FICC- cleared repo market by hedge funds is deep off the run Treasuries.

Other Trades. A significant part of the Treasuries pledged by hedge funds cannot be explained by the previous trades. Indeed, hedge funds could engage in several other trades that involve the purchase of Treasuries with leverage. For instance, a popular trade is the Treasury-swap spread, a relative value trade that exploits the difference between the yield on a Treasury bond and the fixed rate of an interest rate swap (IRS) with the same maturity. As an example, an investor could buy the 5-year Treasury yielding 4.5% and enter a swap of similar maturity where the investor pays 4.2% fixed and receives SOFR, a floating rate. Lastly, the investor funds the Treasury long position in the repo market paying approximately the SOFR rate. On net, the investor pockets the swap spread of 30 basis points, but the use of large amounts of leverage amplifies the returns. Such trades are typically conducted with on-the-run Treasuries due to their superior liquidity and their use as benchmarks since market quotes on swaps generally reference on-the-run Treasury yields.

7 Conclusion

Leverage constraints led banks to retreat from low risk activities that require balance sheet space, such as intermediating Treasuries. The less regulated hedge fund sector stepped in and has now become a critical player in Treasury markets, not only buys Treasuries to implement arbitrage strategies but also purchasing a large part of Treasury issuance. To finance these Treasury securities, hedge funds borrow from commercial banks and dealers in bilateral repo markets. We identify three channels that affect hedge funds' repo borrowing costs. Repo supply is quite inelastic, with larger Treasury offerings at auction leading to larger borrowing amounts and higher repo rates paid by hedge funds. We call this the fiscal channel as larger fiscal deficits put upward pressure on repo rates. Second, commercial banks reduce repo supply when their reserves decline (monetary channel). Lastly, bank leverage constraints increase the cost of repo intermediation and are passed on to hedge funds as higher repo funding costs (regulatory channel).

Since hedge funds are the major ultimate borrowers in repo, studying the determinants of hedge fund repo borrowing costs is paramount to understanding the dynamics of SOFR, the leading reference rate following the demise of LIBOR. Our results also shed light on the two separate channels that put upward pressure on repo rates during quantitative tightening by the Fed. First, quantitative tightening eventually leads to a reduction in total reserves. At first, it may lead to a reduction in ONRRP take-up, but once that goes to zero, any further shrinking of the Fed balance sheet will be absorbed by a fall in total reserves. As banks have less reserves to lend in repo, hedge funds will experience a lower supply of funds. That is the monetary channel. Additionally, quantitative tightening means that the Fed buys less Treasuries and therefore more of them need to be absorbed by the market, including hedge funds. The fiscal channel then posits that such larger Treasury offering will push repo rates and borrowing amounts up. In sum, quantitative tightening leads to a deterioration in the repo market conditions faced by hedge funds through two separate channels, fiscal and monetary.

References

Adrian, T., E. Etula, and T. Muir (2014): "Financial Intermediaries and the Cross-Section of Asset Returns," *The Journal of Finance*, 69, 2557–2596.

Afonso, G., M. Cipriani, A. Copeland, A. Kovner, G. La Spada, and A. Martin (2020): "The Market Events of Mid-September 2019," Staff report, Federal Reserve Bank of New York.

Allahrakha, M., J. Cetina, and B. Munyan (2018): "Do higher capital standards always reduce bank risk? The impact of the Basel leverage ratio on the U.S. triparty repo market," *Journal of Financial Intermediation*, 34, 3–16.

Anbil, S., A. Anderson, and Z. Senyuz (2020): "What happened in money markets in September 2019?" FEDS Notes.

Anbil, S., A. G. Anderson, R. Ruprecht, and E. Cohen (2024): "Stop Believing in Reserves," *Available at SSRN 4834559*.

Anderson, A., W. Du, and B. Schlusche (2025): "Arbitrage capital of global banks," *The Journal of Finance*, 80, 2591–2638.

Anderson, A. and J. Kandrac (2018): "Monetary Policy Implementation and Financial Vulnerability: Evidence from the Overnight Reverse Repurchase Facility," *The Review of Financial Studies*, 31, 3643–3686.

Barth, D. and R. J. Kahn (2025): "Hedge funds and the treasury cash-futures basis trade," *Journal of Monetary Economics*, 103823.

Bostrom, E. (2025): "Insights from MMF Portfolio Allocations amid Balance Sheet Normalization," FEDS Notes.

Bräuning, F. and H. Stein (2025): "The effect of primary dealer constraints on intermediation in the Treasury market," *Available at SSRN 4862212*.

Copeland, A., D. Duffie, and Y. Yang (2025): "Reserves were not so ample after all," *The Quarterly Journal of Economics*, 140, 239–281.

Du, W., A. Tepper, and A. Verdelhan (2018): "Deviations from covered interest rate parity," *The Journal of Finance*, 73, 915–957.

Duffie, D., M. J. Fleming, F. M. Keane, C. Nelson, O. Shachar, and P. Van Tassel (2023): "Dealer capacity and US Treasury market functionality," *FRB of New York Staff Report*.

Favara, G., S. Infante, and M. Rezende (2022): "Leverage regulations and treasury market participation: Evidence from credit line drawdowns," *Available at SSRN*, 4175429.

Fleckenstein, M. and F. A. Longstaff (2020): "Renting balance sheet space: Intermediary balance sheet rental costs and the valuation of derivatives," *The Review of Financial Studies*, 33, 5051–5091.

Fleming, M., G. Nguyen, and J. Rosenberg (2024): "How do Treasury dealers manage their positions?" *Journal of Financial Economics*, 158, 103885.

He, Z., B. Kelly, and A. Manela (2017): "Intermediary asset pricing: New evidence from many asset classes," *Journal of Financial Economics*, 126, 1–35.

He, Z. and A. Krishnamurthy (2013): "Intermediary asset pricing," *American Economic Review*, 103, 732–70.

He, Z., S. Nagel, and Z. Song (2022): "Treasury inconvenience yields during the COVID-19 crisis," *Journal of Financial Economics*, 143, 57–79.

Johnson, N., H. Kerpel, and J. Kronstein (2017): "Understanding Treasury Futures," CME Group.

Keating, T. and M. Macchiavelli (2017): "Interest on reserves and arbitrage in post-crisis money markets," FEDS Working Paper.

Kruttli, M. S., P. Monin, L. Petrasek, and S. W. Watugala (2023): "LTCM redux? Hedge fund Treasury trading and funding fragility," *Available at SSRN 3817978*.

Li, D., L. Petrasek, and M. H. Tian (2025): "Risk-averse Dealers in a Risk-free Market-The Role of Trading Desk Risk Limits," FEDS Working Paper.

Macchiavelli, M. and L. Pettit (2021): "Liquidity regulation and financial intermediaries," *Journal of Financial and Quantitative Analysis*, 56, 2237–2271.

Macchiavelli, M. and X. Zhou (2022): "Funding liquidity and market liquidity: the broker-dealer perspective," *Management Science*, 68, 3175–3973.

Figures and Tables

Figure 1: **Primary market allocations to investment companies over time.** The figure shows the evolution of the share of offering amounts allocated to investment funds over time, broken down by security type, with bills in blue, notes in red, and bonds in green. Source: Treasury Direct

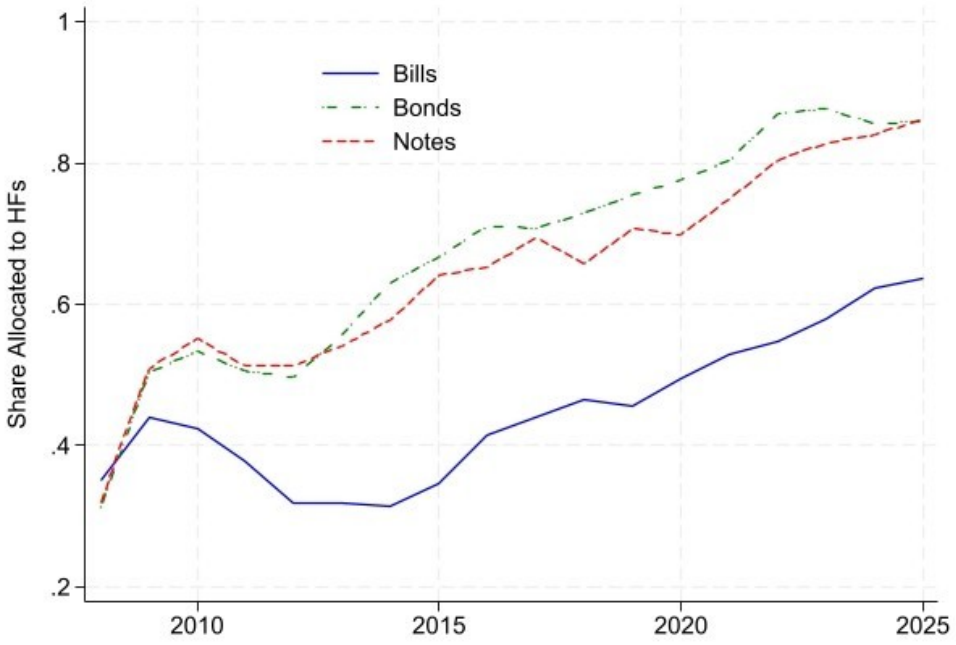


Figure 2: **Allocations to investment companies and repo financing by hedge funds.** The figure shows the amount of newly issued Treasuries allocated to investment companies (predominantly hedge funds) in red and the amount of newly issued Treasuries pledged by hedge funds as collateral in repo borrowings in blue. Data are at the monthly frequency. Source: Treasury Direct, Office of Financial Research

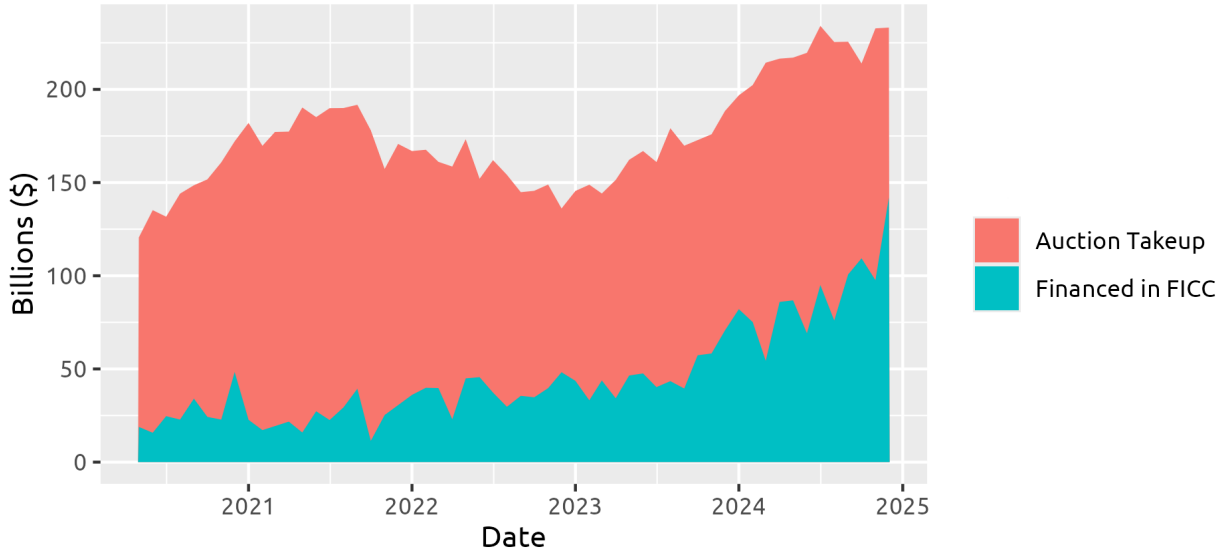


Figure 3: **Repo Specials.** The figure shows the evolution of Treasury repo collateral pledged by hedge funds by specialness status. Specials, defined as transactions with rates below the ONRRP rate minus 10 bps, are in red and other repo transactions are in green. Source: Office of Financial Research

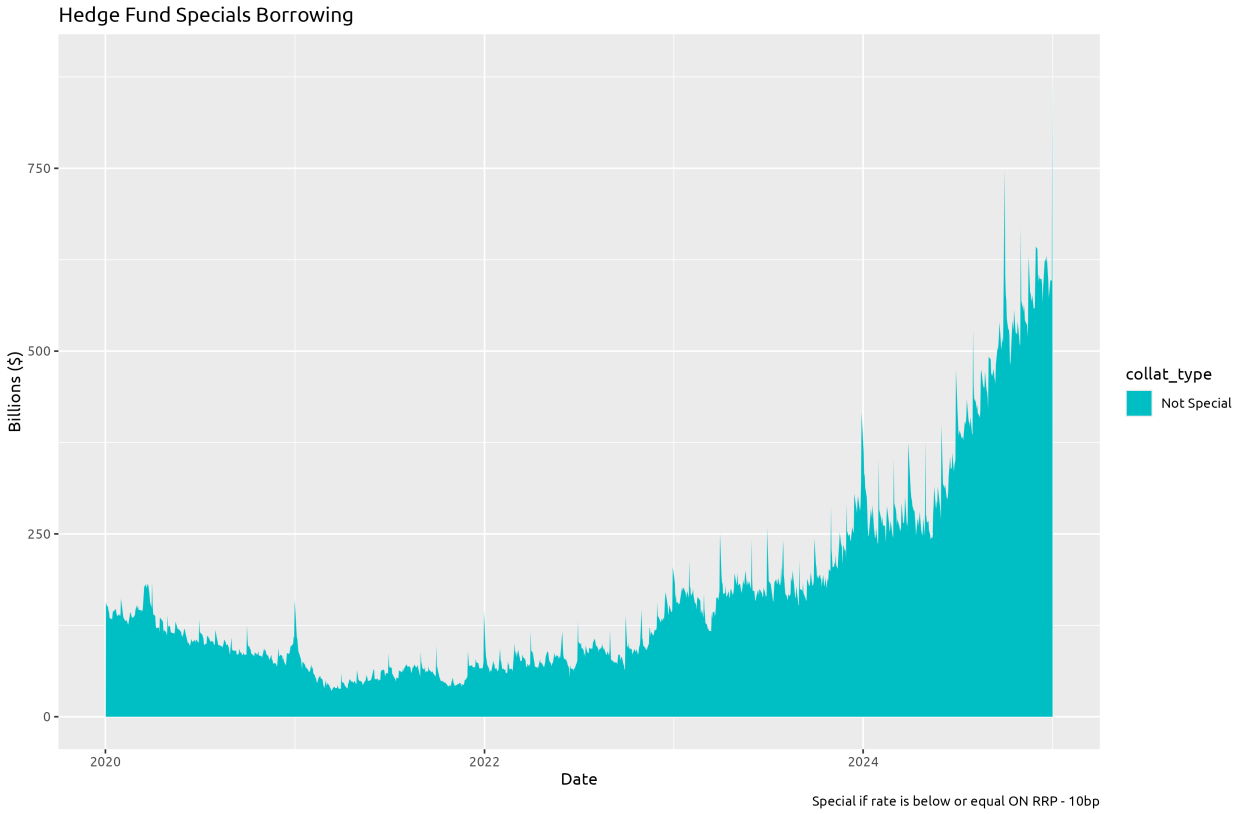


Figure 4: **Cheapest to Deliver.** The figure shows the evolution of Treasury repo collateral pledged by hedge funds by cheapest to deliver status. The cheapest Treasury to deliver in futures contracts is in purple, while the second and third cheapest are light blue and green. Other Treasuries are in red. Source: Office of Financial Research

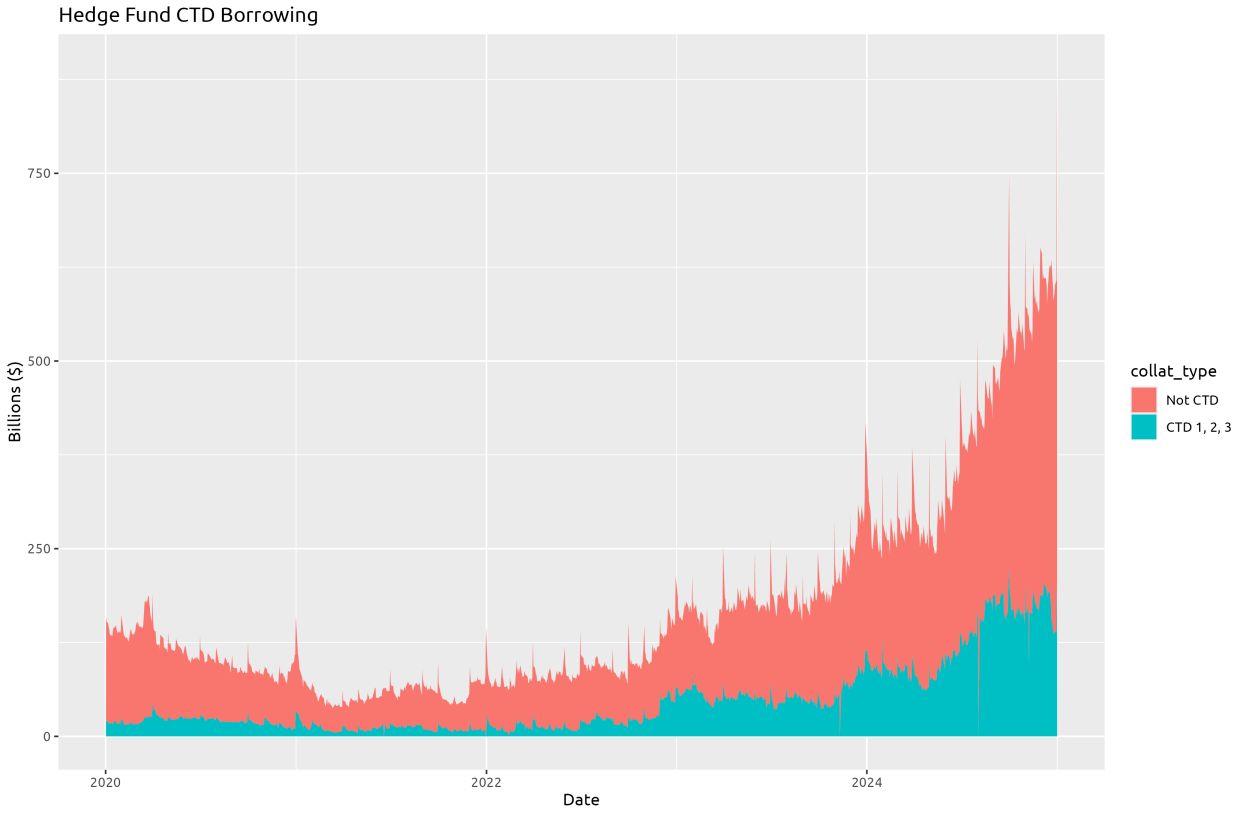
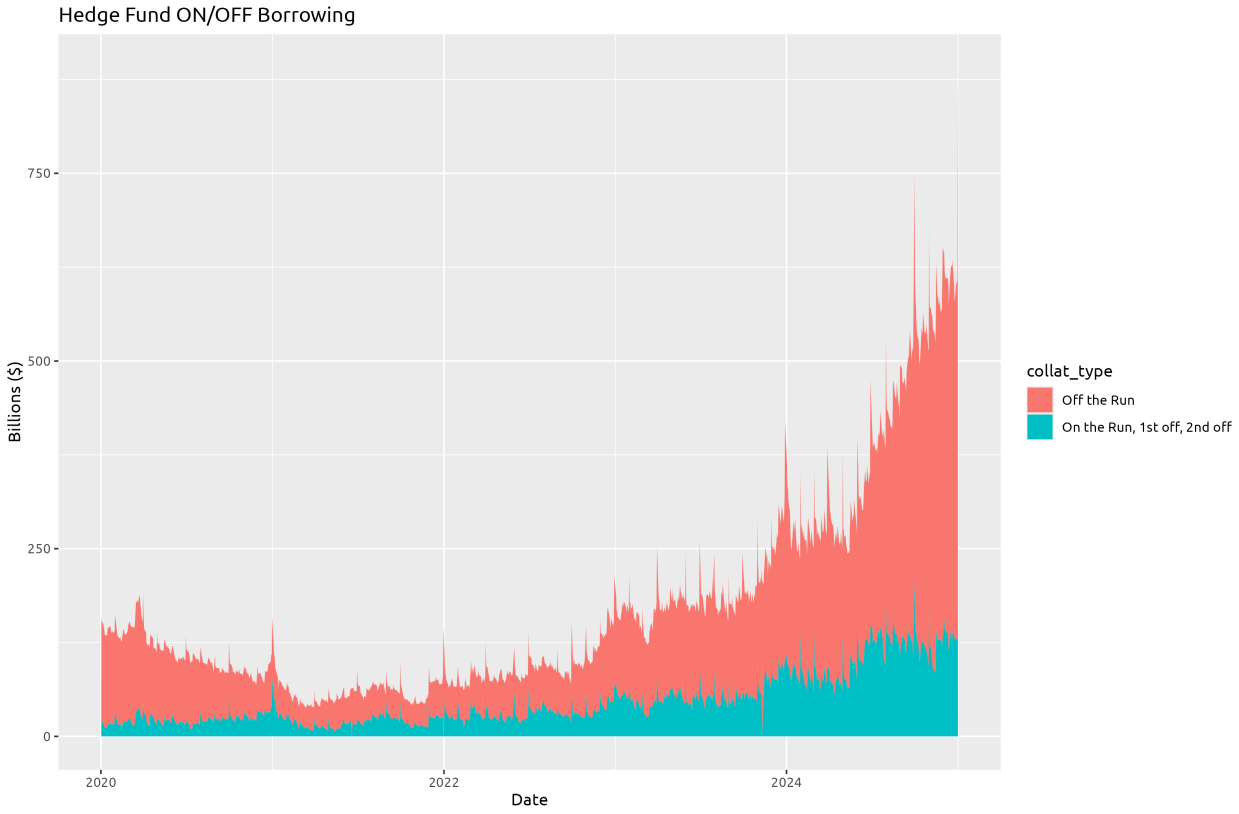


Figure 5: **On the run vs off the run.** The figure shows the evolution of Treasury repo collateral pledged by hedge funds by type. On the run Treasuries are in purple, the first off the run ones are in light blue, the second off the run in green, and the other securities in red. Source: Treasury Direct, Office of Financial Research



Variable	No. Entities	Mean	Median	Std. Dev.
Banks				
Borrowing Rate	39	2.44	1.90	2.31
Lending Rate	39	2.53	2.22	2.34
Borrowing Amount	39	9.21	4.37	12.1
Lending Amount	39	7.43	3.29	12.2
Dealers				
Borrowing Rate	69	2.62	2.29	2.34
Lending Rate	69	2.62	2.30	2.34
Borrowing Amount	69	12.7	5.0	21.8
Lending Amount	69	12.6	4.02	23.7
Borrowing Rate in Tri-party	69	2.62	2.29	2.33
Hedge Funds				
Borrowing Rate	264	3.13	4.54	2.32
Borrowing Amount	264	2.1	0.11	5.86
Money Market Mutual Funds				
Lending Rate	180	2.62	2.26	2.32
Lending Amount	180	2.11	0.45	4.16

Table 1: Summary Statistics.
This table presents summary statistics about counterparties trading in the FICC and triparty segments: banks, dealers (includes custodian banks), hedge funds, and money market mutual funds. Rates are in basis points. Amounts refer to trading amounts within the interdealer and sponsored repo segment of FICC (in $ billion) or in the tri-party segment (in $billions). Source: Office of Financial Research, Bank of New York Mellon

Table 2: Treasury Financing by Hedge Funds: The Fiscal Channel

	(1) Borrowing Spread	(2) Borrowing Spread	(3) Borrowing Amount	(4) Borrowing Spread	(5) Borrowing Amount
$NetIssuance$	0.281***				
	(35.59)				
$HF_b \times NetIssuance_t$		0.061***	0.008***	0.054***	0.010***
		(4.10)	(3.82)	(4.03)	(5.19)
Type FE	No	Yes	Yes	Yes	Yes
Borrower FE	No	No	No	Yes	Yes
Daily Time FE	No	Yes	Yes	Yes	Yes
Observations	182,305	182,305	184,078	182,287	184,060
Adjusted R^2	0.0064	0.5272	0.2485	0.6429	0.8554

This table examines differences in borrowing behavior between hedge funds and other repo market participants over the period January 1, 2020 to December 31, 2024. HF_{it} equals one if borrower i is a hedge fund. Net Issuance is the sum of newly issued Treasury coupons and Treasury bills minus maturing Treasury coupons and Treasury bills, measured in tens of billions of dollars. The dependent variable Borrowing Spread is the volume-weighted average rate paid by borrower i minus the ON RRP rate on day t, and Borrowing Amount is the log of total borrowing by borrower i on day t. Borrower types include banks, dealers, and hedge funds. Borrower fixed effects are at the LEI level. Standard errors are clustered at the borrower level. t statistics are shown in parentheses. Statistical significance: *** p $\leq$ .01, ** p $\leq$ .05, * p $\leq$ .10. Source: Office of Financial Research

Table 3: Spreads Earned Upon Lending to Hedge Funds

	(1) Bank	(2) Dealer within-FICC	(3) Dealer FICC-triparty
$LendstoHF_{it}$	0.039***	4.433***	3.513***
	(8.23)	(8.58)	(13.85)
$LendstoHF_{it} \times NetIssuance_t$	-0.000	0.023	0.078**
	(-0.72)	(0.38)	(2.44)
Lender FE	Yes	Yes	Yes
Daily Time FE	Yes	Yes	Yes
Observations	26827	72234	32525
Adjusted R^2	0.3258	0.1546	0.3098

This table reports the spreads earned by banks and dealers when lending to hedge funds. $LendstoHF_{it}$ equals one if lender i lends to a hedge fund on day t *Net Issuance* is the sum of newly issued Treasury securities minus maturing Treasury securities, measured in tens of billions of dollars. The dependent variable in Column 1 (Banks) is the volume-weighted average lending rate on interdealer and sponsored repo transactions minus the interest on reserve balances (IORB). The dependent variable in Column 2 (Dealer within-FICC) is the spread on dealers' matched books, defined as dealers' volume-weighted average lending rate minus their volume-weighted average borrowing rate in the FICC interdealer and sponsored repo segment on day t. The dependent variable in Column 3 (Dealer FICC–triparty) is the spread associated with balance-sheet expansion, defined as the volume-weighted average lending rate in the FICC interdealer and sponsored repo segments minus dealers' volume-weighted average borrowing rate in the triparty segment. Standard errors are clustered at the lender level. Statistical significance: *** p $\leq$ .01, ** p $\leq$ .05, * p $\leq$ .10. Source: Office of Financial Research, Bank of New York Mellon

Table 4: Amounts When Lending to Hedge Funds

	(1) Bank Lending	(2) Dealer Lending	(3) Dealer Net Lending within-FICC	(4) Dealer Net Lending FICC-triparty
$LendstoHF_{it}$	0.552***	0.203***	2.568***	4.634***
	(39.92)	(19.77)	(16.13)	(16.44)
$LendstoHF_{it} \times NetIssuance_t$	0.004**	0.008***	-0.033*	0.052
	(2.26)	(7.11)	(-1.83)	(1.50)
Lender FE	Yes	Yes	Yes	Yes
Daily Time FE	Yes	Yes	Yes	Yes
Observations	31989	82677	82634	32757
Adjusted R^2	0.8328	0.8936	0.6446	0.7321

This table reports the amounts lent by banks and dealers when lending to hedge funds. $LendstoHF_{it}$ equals one if lender i lends to a hedge fund on day t *Net Issuance* is the sum of newly issued Treasury securities minus maturing Treasury securities, measured in tens of billions of dollars. The dependent variable in Column 1 (Banks) is the logged total lending amount by banks in interdealer and sponsored repo. The dependent variable in Column 2 (Dealers) is the logged total lending amount by dealers in interdealer and sponsored repo. The dependent variable in Column 3 (Dealer Net Lending within-FICC) is the spread on dealers' matched books, defined as dealers' volume-weighted average lending rate minus their volume-weighted average borrowing rate in the FICC interdealer and sponsored repo segment on day t. The dependent variable in Column 4 (Dealer Net Lending FICC–triparty) is the amount associated with balance-sheet expansion, defined as the total lending amount in the FICC interdealer and sponsored repo segments minus total borrowing amount in the triparty segment. Standard errors are clustered at the lender level. t statistics are shown in parentheses. Statistical significance: *** p $\leq$ .01, ** p $\leq$ .05, * p $\leq$ .10. Source: Office of Financial Research, Bank of New York Mellon

Table 5: Lending Reserves to Hedge Funds

	(1) Bank Lending Rate	(2) Bank Lending Amt.	(3) Dealer Rate Spread within-FICC	(4) Dealer Net Lend Amt. within-FICC	(5) Dealer Rate Spread FICC-triparty	(6) Dealer Net Lend Amt. FICC-triparty
$LendstoHF_{it} \times \Delta Reserves_{it}$	0.002***	0.005***	-0.056	-0.054***	0.004	-0.016
	(5.46)	(4.98)	(-1.43)	(-3.72)	(0.19)	(-0.54)
$LendstoHF_{it}$	0.037***	0.571***	4.519***	2.282***	3.189***	0.447
	(9.02)	(41.36)	(6.09)	(8.34)	(9.19)	(0.98)
$\Delta Reserves_{it}$	-0.000	-0.007***	0.029	-0.022*	0.001	-0.032
	(-1.04)	(-9.69)	(0.93)	(-1.94)	(0.05)	(-1.22)
Lender FE	Yes	Yes	Yes	Yes	Yes	Yes
Daiy Time FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	24117	27721	30682	32737	18941	18966
Adjusted R^2	0.3812	0.8290	0.1123	0.6737	0.2788	0.5256

Columns 1 and 2 report results for banks, while Columns 3 to 6 report results for dealers with affiliated bank holding companies that can access reserves through affiliate trading. The dependent variable in Column 1 is the volume-weighted average lending rate by bank i in the FICC-cleared segment, and the dependent variable in Column 2 is total lending by bank i in FICC. The dependent variable in Column 3 is the volume-weighted average lending rate minus the volume-weighted average borrowing rate in FICC for dealer or custodian bank i, and the dependent variable in Column 4 is total borrowing minus total lending in FICC for dealer or custodian bank i. The dependent variable in Column 5 is the volume-weighted average lending rate in FICC minus the volume-weighted average borrowing rate in the triparty segment for dealer or custodian bank i, and the dependent variable in Column 6 is total lending in FICC minus total borrowing in the triparty segment for dealer or custodian bank i. $\Delta Reserves_{it}$ is the daily change in reserves at the bank or its affiliated bank holding company between day $t-1$ and day t. The indicator *Lends to HF* equals one if, on day t, entity i lends to a hedge fund in FICC-sponsored repo.t statistics are shown in parentheses. Statistical significance: *** p $\leq$ .01, ** p $\leq$ .05, * p $\leq$ .10. Source: Office of Financial Research, Bank of New York Mellon, Internal Board of Governors dataset

Table 6: Treasury Financing by Hedge Funds During the SLR Exemption

	(1) Borrowing Spread	(2) Borrowing Amount	(3) Borrowing Spread	(4) Borrowing Amount
$HF_i \times SLRExemption_t$	-0.859**	-0.065	-0.895**	-0.071
	(-2.05)	(-0.76)	(-2.13)	(-0.83)
$HF_i \times NetIssuance_t$			0.061***	0.010***
			(4.57)	(5.54)
Borrower FE	Yes	Yes	Yes	Yes
Daily Time FE	Yes	Yes	Yes	Yes
Observations	182287	184060	182287	184060
Adjusted R^2	0.6430	0.8554	0.6431	0.8555

This table examines differences in borrowing behavior between hedge funds and other repo market participants over the period January 1, 2020 to December 31, 2024 during the SLR exemption. HF_{it} equals one if borrower i is a hedge fund. *SLR Exemption* equals 1 between April 14, 2020 and March 31, 2021. *Net Issuance* is the sum of newly issued Treasury coupons and Treasury bills minus maturing Treasury coupons and Treasury bills, measured in tens of billions of dollars. The dependent variable Borrowing Spread is the volume-weighted average rate paid by borrower i minus the ON RRP rate on day t, and Borrowing Amount is the log of total borrowing by borrower i on day t. Borrower types include banks, dealers, and hedge funds. All specifications include borrower fixed effects at the LEI level. Standard errors are clustered at the borrower level. t statistics are shown in parentheses. Statistical significance: *** p $\leq$ .01, ** p $\leq$ .05, * p $\leq$ .10. Source: Office of Financial Research