Treasury Investment in Repo

Treasury Borrowing Advisory Committee

May 5, 2026

Charge Text:

Since 2009, Treasury has held all or nearly all of its cash in the Treasury General Account (TGA) at the Federal Reserve. Due to Treasury's cash balance policy (adopted in 2015), balances in the TGA have frequently exceeded $800 billion. Because a) Treasury's cash balance policy is formulated as a minimum, b) Treasury's week-ahead outflows vary significantly over time, especially in light of mid- and end-of-month security maturities, and c) Treasury changes bill auction sizes gradually, Treasury often holds balances in excess of its expected week-ahead outflows.

Should Treasury consider investing excess cash in the overnight Treasury repo market in order to generate investment returns while maintaining prudent risk management and avoiding market disruptions? Please discuss the potential benefits and costs of such investments. What returns would Treasury reasonably expect to earn on such investments? If the amounts Treasury offered to invest varied significantly day by day, what effects would there be on counterparty decisions about repo transactions with Treasury and the repo market more generally?

Executive Summary

- **Background on Treasury's cash balance policy**
- Treasury's current cash balance policy was established in 2015 as a risk management tool to help protect against a potential interruption in market access
- Treasury holds a level of cash generally sufficient to cover 1-week of outflows in the Treasury General Account (TGA), subject to a minimum balance of roughly $150B. The cash need is defined as the gross volume of maturing marketable debt plus the expected net fiscal outflow
  - A 2014 TBAC charge cited market disruptions during Hurricane Sandy (1.5d) and September 11th (2-3d) to highlight the importance of a cash buffer[1]
  - Variation in cash needs during the month results in periods of time in which the TGA can have excess cash
  - At times, the debt ceiling has caused Treasury to violate this risk management policy by using TGA cash as funding in lieu of issuing debt
- Prior to the GFC, when system reserves were scarce, Treasury divided its cash balance between a stable TGA balance at the Fed of ~$5B and the rest in Treasury Tax and Loan Note accounts (TT&L accounts) at banks, on which Treasury earned Fed Funds less 25bps[2]
  - As a result, this regime had minimal fiscal flow-induced reserves volatility
  - In late 2008, the Treasury began keeping all or nearly all of its cash at the Fed in the TGA, which pays no interest. After the Fed gained authority that year to pay IORB, placing Treasury cash in banks at a rate below IORB would have caused an overall taxpayer loss[3]

- **There is scope for Treasury to invest excess cash in repo markets if positive net returns can be generated without creating market disruption**
  - Smooth functioning of funding markets benefits Treasury by lowering term funding premium resulting in lower Treasury debt issuance cost
  - As such, investments into the repo market should be structured in line with Treasury's commitment to being regular and predictable
  - From a consolidated basis, Treasury can earn positive economic value if repo rates are above IORB
- **We examined two approaches for excess cash investment in overnight Treasury repo which are dependent on the definition of excess:**
  - Excess could be defined as cash greater than the 1-week ahead need (*we call this the Excess over 1w Repo Approach*)
  - Alternatively, if Treasury is comfortable that maturing repo investments can be used to satisfy outflows in the 1-week ahead period, 3d needs could be held in TGA with excess cash to cover days 4 and 5 invested in repo (*we call this the Excess over 3d Repo Approach*)
    - There are several ways to implement this approach which we review in *Section 1*
  - In assessing outcomes, we found that excess cash available to lend could be larger under the *Excess over 3d Repo Approach*, while design choices will influence how much volatility resides in the TGA and the repo investments
- We conclude that positive economic value exists if repo rates are above IORB. As such, repo investments do not have economic value in all market environments
- There are many operational considerations to resolve prior to implementation. Transitioning the cash management approach gradually would allow the market time to adapt

The deck is organized in sections:

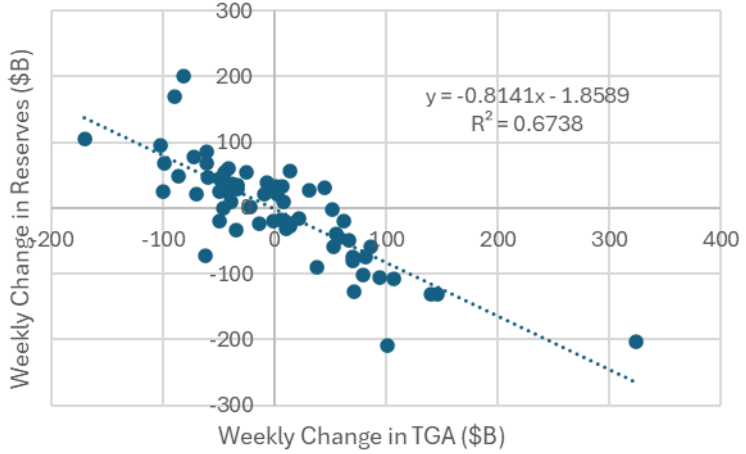
1) Objectives and comparison of excess cash investment approaches **2)** Consolidated impacts and potential returns
3) Implications of repo balance volatility and implementation considerations **4)** A summary of alternative approaches

1. https://home.treasury.gov/system/files/276/Treasury-and-TBAC-Presentation-for-Archives-2nd-Quarter.pdf
2. For a more detailed explanation of Treasury cash management prior to and after the GFC, please refer to https://www.newyorkfed.org/medialibrary/media/research/current_issues/ci18-3.pdf
3. The banks borrowing from Treasury below IORB would earn IORB by leaving reserves at the Fed

Objectives of an excess cash investment framework

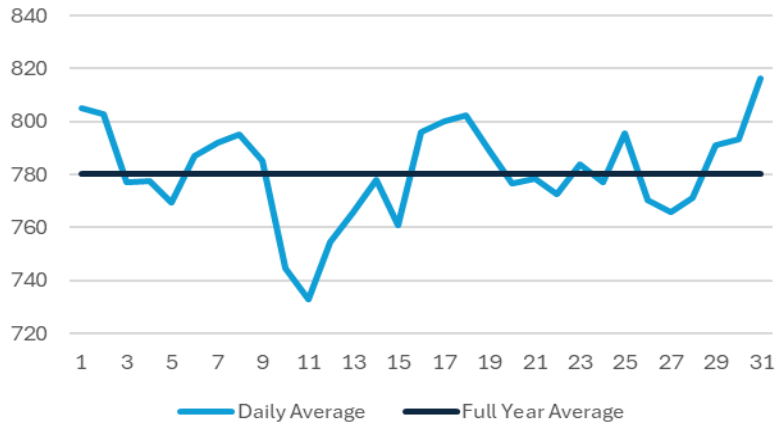
- **Treasury's cash outflows are driven by maturing debt and the timing of fiscal flows**
  - Treasury bill maturities occur on Tuesdays and Thursdays, while Treasury coupons mature either mid-month or end-of-month, with outflows more concentrated in months where a Tuesday or Thursday coincides with mid-month or end-of-month
  - Fiscal payments are higher around the turn of the month[1]
  - We note that the introduction of cash management buybacks has been helpful for smoothing T-Bill issuance throughout the year and has allowed Treasury to reduce concentrated debt maturity peaks, thereby reducing some volatility in intramonth needs
- **The volatility of Treasury's cash needs has implications**
  - TGA is often larger than the 1-week ahead need because Treasury cannot raise just-in-time funding to manage peak cash needs
  - Fluctuations in the TGA impact bank reserves which are negatively correlated to TGA (*lower left*)
  - As such, banks are sensitive to TGA volatility (deviation from trend, *lower right*)
- An important consideration for Treasury's cash management framework is that the **related volatility must reside somewhere**: variable sizing in T-Bills, repo investments or system reserves volatility as a by-product
- **This dynamic highlights potential objectives for TGA excess cash investments into the Treasury repo market:**
  - Generate economic value on a consolidated basis (Treasury + Fed)
  - Continue to achieve Treasury's risk management goal to protect against loss of market access while being able to satisfy payment needs
  - Consider the impacts to reserves and repo market stability

Weekly Change in TGA vs. Weekly Change in Reserves ($B, 1/15/25 – 4/1/2026)



Source: Federal Reserve, Daily Treasury Statement, Author's Calculations

Avg Daily TGA Balance (2024, excluding April, $B)



Source: Daily Treasury Statement, Author's Calculations

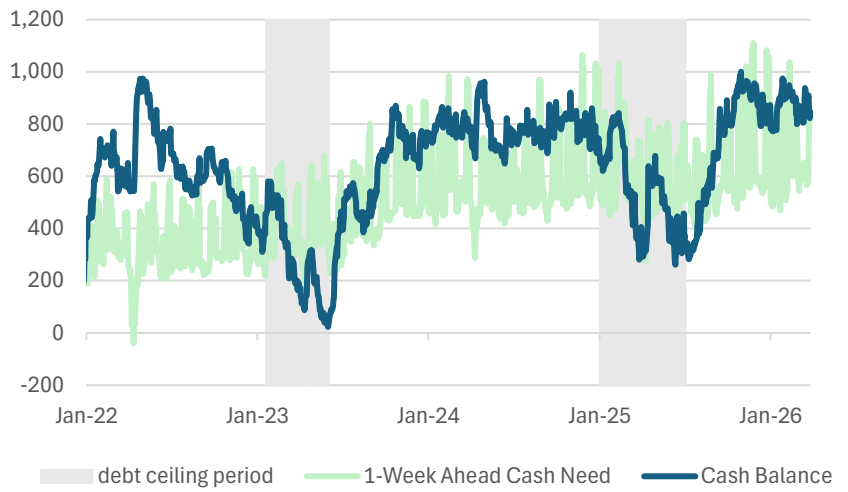
Note: We exclude April because April has unique flows related to tax season which are different from the typical monthly patterns

1. Driven by Medicare, Department of Veteran Affairs benefits, Supplemental Security Income and a portion of Social Security payments. See for example https://home.treasury.gov/news/press-releases/sb0267 for a discussion on intramonth payment dynamics

Defining excess as cash over 1wk-ahead needs

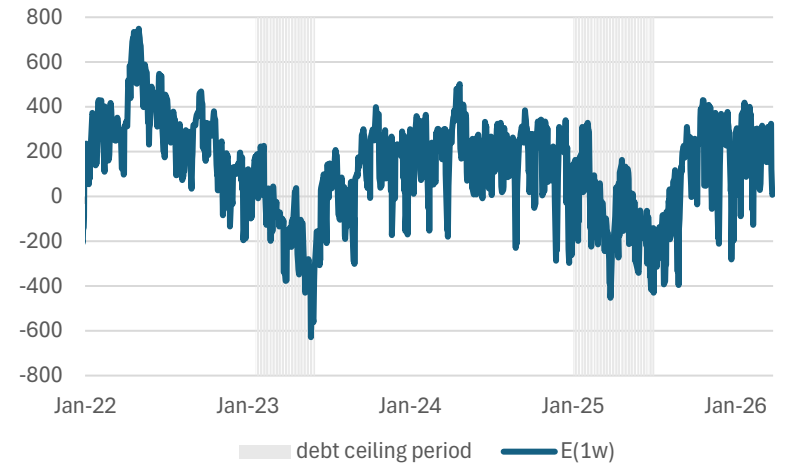
- **Below we show the TGA cash balance compared to the 1-week ahead cash need** (*lower left*)
  - The 1-week ahead cash need is *realized* cash flows from the Daily Treasury Statement (DTS) which includes net fiscal outflows and gross debt maturities
  - The difference between the two is *realized* "excess" TGA cash (*lower right*)
  - However, we note that true excess is likely lower given that some Treasury cash flow projections are subject to uncertainty on timing and/or size and therefore require an additional buffer
- **For this discussion, we define E(X) as TGA balances in excess of X period of cash needs**
  - Thus, **E(1w) = cash in excess of the 1-week ahead cash need**
- **2024 provides an opportunity to study intramonth TGA dynamics** because the TGA was not impacted by debt ceiling dynamics
  - On average in 2024, realized excess TGA cash was concentrated in the first and middle part of the month but falls towards zero at the end of the month
  - On the next page we discuss the pros and cons of investing E(1w) as an approach

TGA Balance vs. 1-week ahead cash need ($B)



Source: Daily Treasury Statement (DTS)

Realized E(1w) ($B)

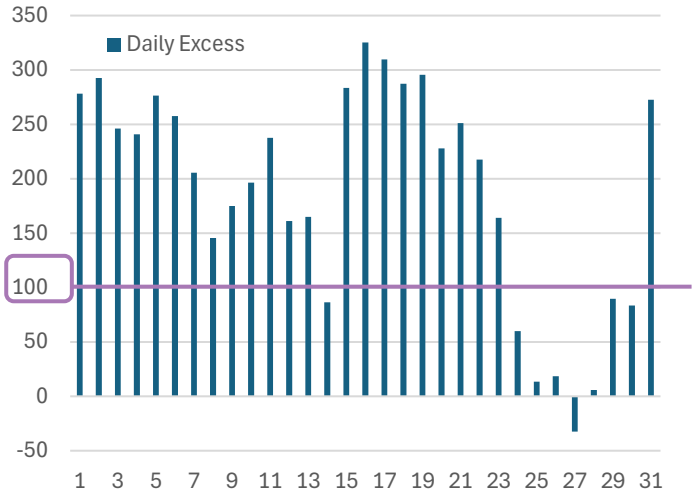


Source: Author's calculations

Excess over 1w Repo Approach

- **Below we consider the impact of investing E(1w) into overnight Treasury repo**
  - In 2024 average realized E(1w) is concentrated at the start of the month and in the middle of the month before declining to zero towards the end of the month (*top right*)
- **A full deployment of the E(1w) is not practical**
  - Would require daily investments averaging $200B with large swings in daily sizing
  - Repo investments decline substantially in the days approaching mid-month and month-end
  - TGA volatility increases significantly, resulting in more volatility in reserves as well
- **Instead, we consider investing E(1w) up to a $100B cap**[1] which leads to better outcomes
  - Less volatility in daily repo sizing better suited to a regular repo operation schedule
  - Enables repo investing without creating substantially more TGA volatility
  - Repo investments decline in the days approaching mid-month and month-end and the capping approach limits repo investments in the April tax season
- In both backtests, we assume that the entire amount of eligible excess cash is invested; in reality, operation fills could vary due to changes in market demand impacting results
- **On the next page we introduce an alternative approach to defining excess**

Avg "Realized" E(1w) by Day of Month in 2024 ($B)

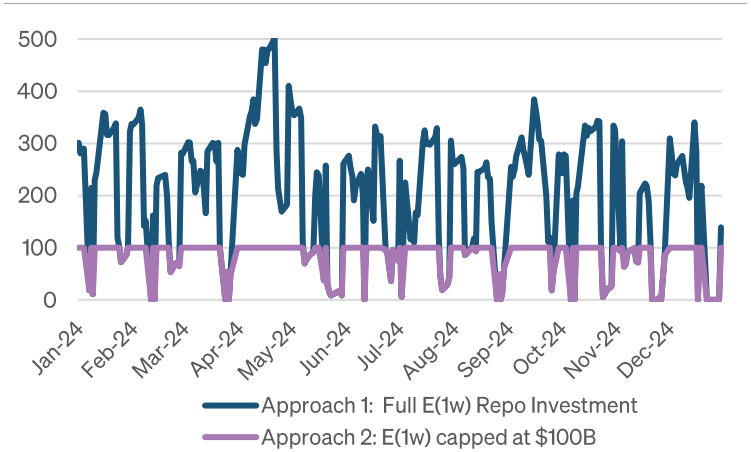


Source: DTS, Author's calculations

Backtested E(1w) Investments (2024)

	Approach Summary		Backtest Results 2024 ($B)			
			Average		Std. Dev. of daily chg	
	TGA	Repo	TGA	Repo	TGA	Repo
Approach 1	1wk need	E(1w)	585	200	102	104
Approach 2	>= 1wk need	E(1w) capped at $100B	702	83	47	35
		Actual 2024 -->	*785*		*35*	

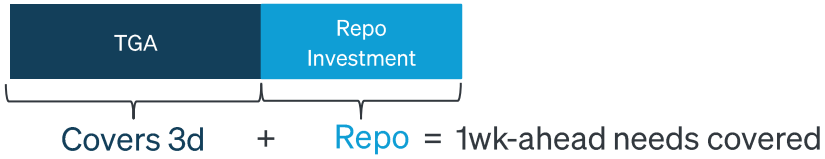
Daily Repo Investment ($B)



1. The $100B cap was informed by observing that on most days the available excess to deploy is >= $100B which would allow for a regular and predictable investment without introducing excessive volatility to broader repo market volumes. For context, the standard deviation of daily changes in SOFR volumes has been $85B during 2024-2026, see Appendix page 16

Alternative Approach: Defining excess as day 4 and 5 needs that can be invested in Repo

- Instead of investing E(1w), Treasury could evolve its framework to use a **liquidity portfolio** of cash ***and*** overnight Treasury repo to continue to protect against a 1-week interruption in market access
- With this liquidity portfolio, Treasury would expect to cover days 1-3 with the TGA if there is an operational disruption in the market, while **days 4-5 are covered by inflows from the maturity of overnight repo investments**. This approach remains aligned with Treasury's risk management objective
  - We call this the **Excess over 3d Repo Approach**



- **There are several ways that Treasury could size the TGA and excess cash available for repo investments under this approach**
  - **We consider three and apply to 2024.** In the backtest, we assume that the entire amount of eligible excess cash is invested; in reality, operation fills could vary due to changes in market demand impacting results

  - ***Approach 1 :*** Invest full amount of excess cash over 3d needs
  - ***Approach 2:*** Invest excess over 3d needs up to a cap of $200B
  - ***Approach 3:*** Reserve the month's maximum expected 3d needs in TGA and invest excess above this monthly target into Repo

Similar to prior page, but considers 3d needs and E(3d)

Approach Summary

	TGA	+	Repo	= 1-wk ahead
Approach 1	3d need		E(3d)	
Approach 2	>= 3d need		E(3d) capped at $200B	
Approach 3	Max 3d need for the month		E(Max 3d)	

Backtest Results 2024 ($B)

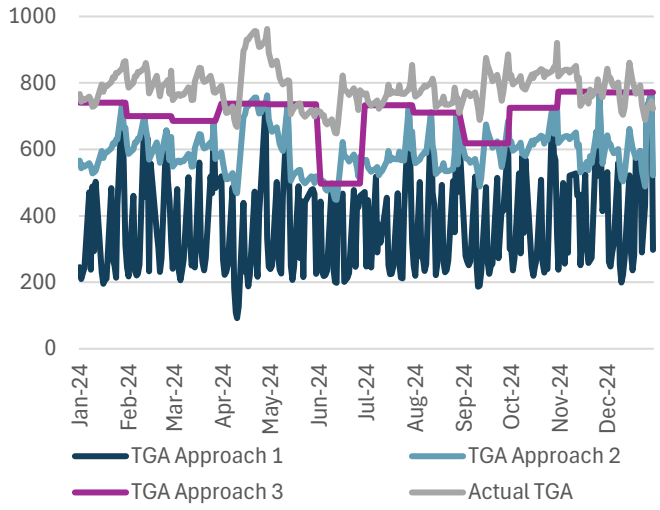
	Average		Std. Dev. of daily chg		*Total Liquidity Portfolio*
	TGA	Repo	TGA	Repo	
Approach 1	357	429	188	183	*785*
Approach 2	592	193	53	42	*785*
Approach 3	704	85	24	40	*790*
Actual 2024 -->	*785*		*35*		

- **We see the following tradeoffs and explore the results in more detail on the next slide:**
  - *Approach 1* creates enormous volatility in both the TGA and repo balances and is not practical
  - *In Approach 2,* capping the repo investment results in a fairly stable repo investment most of the month. The average repo is *~$100B higher* than the capped E(1w) approach on the prior page driven by lower average 3d needs (*see appendix page 14*)
  - *Approach 3* has a smaller, variable repo deployment with a stable intramonth TGA and a slightly larger overall liquidity portfolio versusthe 2024 actual TGA since the Max 3d need is higher than the actual TGA some of the time (*see appendix page 15*)

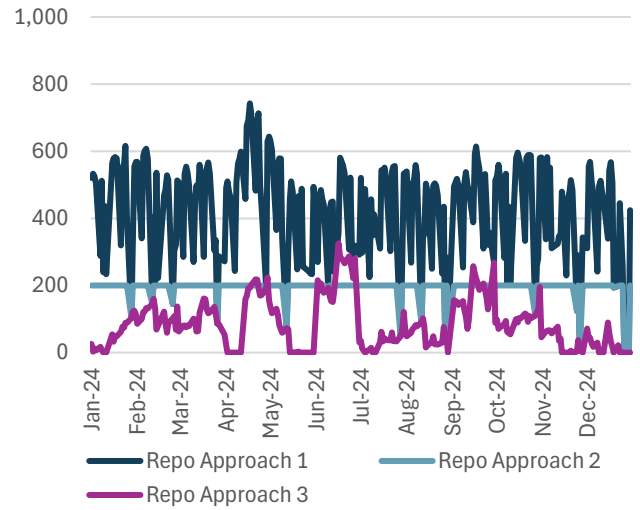
Excess over 3d Repo Approach

- For each Excess over 3d Repo Approach, below **we show the daily TGA balance** (*lower left*) **with the daily repo investment** (*middle*)
- As noted earlier, an important consideration for Treasury's cash management framework is that the **related volatility must reside somewhere**
- The three approaches demonstrate this
  - **Approach 1** generates considerable day-to-day **volatility in both** TGA and the repo investment
  - Approach 2 mitigates this by providing **stability to the daily repo investment on *most* days**
    - Repo investments decline in the days approaching mid-month and month-end as 3d needs increase; this effect is larger into month-end (*lower right*)
    - Treasury could consider larger repo investments during peak TGA inflows in the April tax season (*see appendix page 15*)
  - **Approach 3 stabilizes TGA on an intramonth basis** but results in a **smaller repo investment that varies in size day-to-day** (*lower right*)
- Approach 2 and **Approach 3 represent a more practical implementation** of a repo investment framework for Treasury to consider while highlighting that **design choices will have implications as to whether volatility sits in reserves, as it already does today, or in variable repo sizing**
  - There could be pros and cons to each: stability in reserves could result in benefits to the banking system if reserves buffers decline; however, intermediation challenges that the repo market has faced in the past could also support an approach in which Treasury's daily repo investment size is stable
- **There is also uncertainty with how these approaches might operate in practice**
  - The quarterly refunding provides an opportunity to provide regular guidance to the market on anticipated repo operation sizes for the upcoming quarter
  - Our 2024 backtest assumes that Treasury can fill its full investment capacity, while in practice a competitive repo operation subject to a minimum bid rate could be partially filled; demand might be most consistent in a scarce reserve regime (*we review consolidated economic impacts next*)

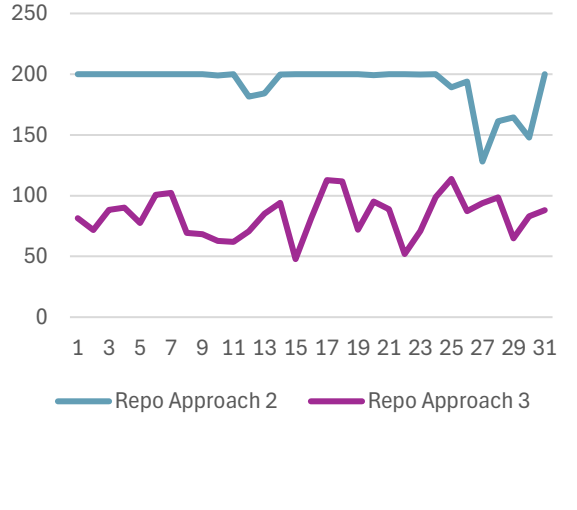
TGA Balance ($B, 2024 Backtest)



Daily Repo Investment ($B, 2024 Backtest)



Avg Daily Repo Investment by Day ($B, 2024 Backtest excluding April)



Consolidated economic impacts

- **TGA balances are typically negatively correlated with reserves (TGA down / Reserves up) which creates impacts at a consolidated system level**
  - Investing TGA cash into the repo market will increase reserves that the Fed will pay IORB on
  - The marginal trade will result in the Treasury earning a repo rate but the Fed paying IORB
  - The consolidated flows exist because of the Fed's practice to remit profits to Treasury, whereby an increase in interest expense at the Fed reduces net income that would otherwise be received by Treasury
- **Below we illustrate the consolidated impacts and assume that Treasury earns the tri-party rate TGCR on repo investments**

1. From a consolidated perspective, funding the TGA is near-costless since Treasury issues a T-Bill, holds the proceeds in the TGA which drains reserves and commensurately reduces Fed IORB payments [1]
2. An investment of TGA cash into the repo market would earn TGCR and result in an increase in the quantity of reserves that the Fed will pay IORB on
   - Therefore, from a consolidated standpoint, Treasury investing excess cash into repo results in **positive economic value if TGCR is above IORB net of transaction costs**

- Separate to the economic impacts, when the Fed has a deferred asset, as is the case currently, the accounting impacts are more complex, a concept we explore more on *slide 10*

Consolidated Impacts of Treasury Repo Investment

		Treasury		+ Fed		= Consolidated	
		Action	Interest Rate	Effect	Interest Rate	Effect	Interest Rate
1 *Impact of funding the TGA*	**Funding TGA**	Issues T-Bill to fund TGA	Pay T-Bill Yield	TGA increase drains Reserves	Reduces IORB payment (i.e. Recv IORB)	TGA up / Reserves down	Pay T-Bill / Receive IORB Implicitly
2 ***Impact of NEW Marginal Repo Investment***	**Excess cash TGA Repo Investment**	Lends reserves into Repo Market	Receive TGCR	System Reserves increase	Creates a new IORB payment (i.e. Pay IORB)	TGA down / Reserves up	Receive TGCR / Pay IORB

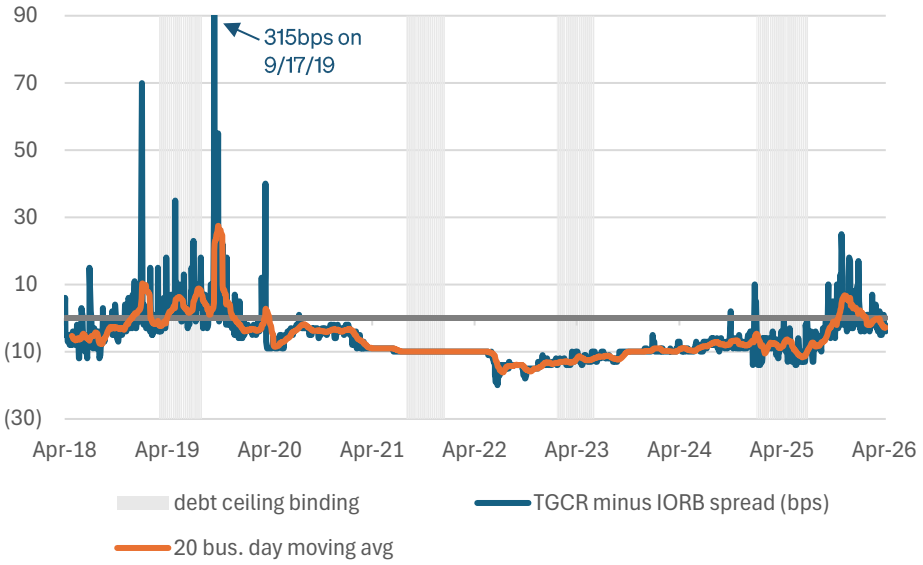
Marginal cash investment is sensitive to TGCR / IORB spread

1. The same conclusion on the consolidated system dynamics of funding the TGA was reached in the 2Q14 TBAC charge, see page 57
https://home.treasury.gov/system/files/276/Treasury-and-TBAC-Presentation-for-Archives-2nd-Quarter.pdf

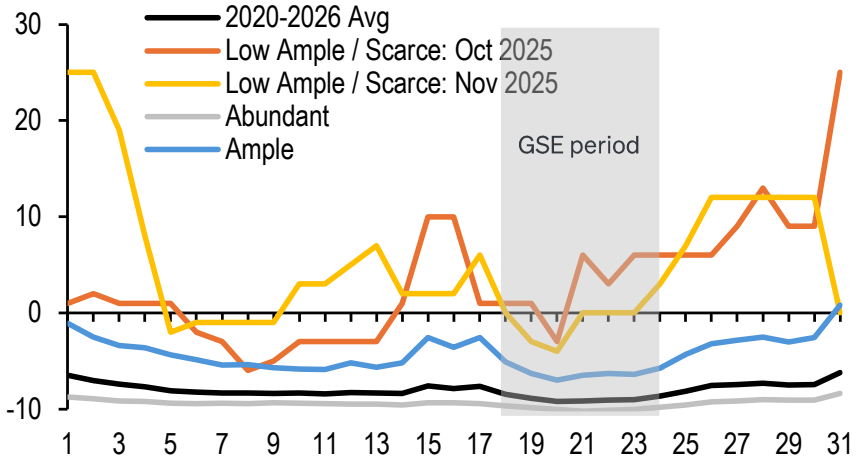
Market impacts on TGCR/IORB

- We review the evolution of the TGCR/IORB spread given that the consolidated economics of Treasury repo deployment are sensitive to it
  - In general, this spread is negative during periods of abundant reserves, slightly below or above zero when reserves are ample and positive when reserves are scarce. **This implies that Treasury repo deployment would *not* have positive economic value in all market environments**
- The return that Treasury can earn on a repo investment will be sensitive to the size of the investment and the reserves regime (abundant, ample or scarce)
  - The period of the month in which $80-$100B of GSE cash temporarily enters the repo market provides a gauge of price elasticity for the impact that Treasury investments could have
- Looking at the GSE period, we estimate that $100B of new money entering the repo market reduces TGCR by ~1bps if reserves are abundant, ~4bps if reserves are ample and ~5bps when reserves are low ample/scarce (although there is more limited data for a low ample/scarce reserves regime)
- **We conclude that if reserves are ample the TGCR/IORB spread that Treasury would capture is likely to be quite low (0-2bps).**
  - **On the other hand, if reserves are scarce then the spread and associated market impact could be higher (5-10bps)**
  - **If reserves are abundant, the economic value would be negative (-10bps)**
- On the following page we consider the spread and investment sizes to estimate potential returns

TGCR minus IORB spread (bps, 2018-2026)



Intramonth TGCR-IORB spread (bps, 2020-2026)



Potential Returns

- Below **we approximate consolidated spread income impacts per year** by combining average investment sizes with a TGCR/IORB spread (*see table 1*)
  - While the various approaches we backtested implied theoretical repo investments ranging from $80B towards $200B per year on average, Treasury's actual investment sizing could be sensitive to market rates and the reserves regime
  - For illustration we show how a $100B average investment over a year could result in -$100mm/yr in consolidated economic loss if reserves are abundant, roughly flat if reserves are ample and $60-$100mm/yr if reserves are scarce
- Due to the Fed's deferred asset position, Treasury will not be receiving remittances from the Fed until early 2030 [1]
  - The Fed cannot pass on interest income to the Treasury while it has a deferred asset. As such, an increase to Fed interest expense simply reduces *forward* income remittances to Treasury one-for-one in 2030, while Treasury will earn interest income upfront from the repo investment
  - We show the one-sided annual interest income that Treasury could earn upfront in table (*see table 2*)
- Given this unique circumstance, we approximate the NPV of the timing mismatch in table 3. This is shown *illustratively* for 1-year of spread income on a $100B repo investment
  - While the Fed is in a deferred asset position, we estimate positive NPV across reserves regimes
  - Once the deferred asset is paid down, the NPV would equal the spot spread economics (TGCR –IORB) on the investment size (as shown on page 8)
  - Notwithstanding this accounting, if Treasury were to lend excess cash in repo at rates below IORB this could signal to the market that their motivation is not economic value which is the TGCR/IORB spread

1 Annual Consolidated Spread Income ($mm)

Reserves Regime -->		Abundant		Ample		Scarce	
TGCR-IORB Spread (bps) -->		**-10**	**-6**	**-2**	**2**	**6**	**10**
Repo Investment ($B)	**50**	-50	-30	-10	10	30	50
	100	-100	-60	-20	20	60	100
	150	-150	-90	-30	30	90	150
	200	-200	-120	-40	40	120	200

2 Annual Treasury Income ($B)

TGCR Assumption (%) -->		**1%**	**2%**	**3%**	**4%**	**5%**
Repo Investment ($B)	**50**	0.5	1.0	1.5	2.0	2.5
	100	1.0	2.0	3.0	4.0	5.0
	150	1.5	3.0	4.5	6.0	7.5
	200	2.0	4.0	6.0	8.0	10.0

3 Illustrative NPV Impacts

	Treasury Repo Interest Income ($mm)			Impact to Remittance from Fed ($mm)
	a	**b**	**c**	**d**
	Scarce TGCR 3.25	Ample TGCR 3.16	Abundant TGCR 3.05	IORB 3.15
2026				
2027	3,250	3,160	3,050	
2028				
2029				
2030				(3,150)
NPV:	3,081	3,000	2,901	(2,726)
	a+d	*b+d*	*c+d*	
Consolidated NPV:	356	275	175	

Notes:
1. We use flat forwards of IORB at 3.15 and adjust TGCR depending on the reserves regime. These rates are generally similar to those used in the FRBNY OMO Annual Report
2. Columns *a,b,c* represents 1-year's worth of repo interest earned by Treasury on a $100B investment in 2027
3. Column *d* represents the reduction to Fed Remittances in 2030 from higher IORB expense incurred in 2027
4. Treasury cash flows are discounted at TGCR and the Fed's at IORB

1. Estimate from NY Fed OMO Annual Report 2025, See page 38
https://www.newyorkfed.org/medialibrary/media/markets/omo/omo2025-pdf.pdf

Implications of balance volatility on repo counterparts and additional considerations

- **It could be more difficult for the market to adapt to a new large lender of cash if the daily investment size varies significantly**
  - Treasury operating with a **regular operation schedule** would allow the market to plan for consistent absorption of Treasury investments
- Repo investment sizes under a program launch should consider the repo market size and behavior
  - The SOFR market is currently ~$3T with ~$1.2T in TGCR. The standard deviation of daily changes in SOFR volumes is ~$85B (*see appendix page 16*)
  - In our backtest examples, capping repo sizes or sizing the TGA to a peak monthly need resulted in average repo sizes of $80B to $200B with a standard deviation of daily changes near $40B. These seem to be workable end-state goals, but a transition period would allow for the market to adapt
- **There are many considerations for further study:**
  - **Clearing:** Would help provide balance sheet netting, but could introduce additional clearing costs or membership to a CCP
  - **Execution Format:** A competitive format would allow Treasury investments to have a distinct role compared to the Fed's SRP and potentially allow for trades to be included in the TGCR and SOFR calculations
  - **Counterparty Selection and Documentation:** It would make sense to begin with primary dealers and bank participants (those eligible for the Fed's SRP) as counterparts given their intermediation role in repo and exposure to system reserves impacts. Documentation needs includesigning MRAs.
  - **Operation Timing:** The majority of repo volumes trade in the morning between 7am and 9am, but this is also when the Fed's SRP operates
  - **Tri-Party Format:** Treasury could consider if there are benefits to "Early Morning Maturity" tri-party in an operational outage scenario
- When the debt ceiling is binding, as part of extraordinary measures Treasury uses the TGA cash as funding in lieu of issuing debt and 'spends down' the balance which is subsequently rebuilt post resolution
  - **Debt ceiling dynamics could create complications** if the market has grown accustomed to Treasury repo investments that suddenly stop, although this is mitigated by an increase in system reserves as TGA declines
  - The Fed could consider potential action to support smooth market functioning in these periods
- Below we compare the details of various Fed and Treasury programs with a hypothetical Treasury Repo Investment program

	Fed ON RRP (Sep 2013 onwards)	Fed SRP (July 2021 onwards)	Fed TOMO (Sep 2019 - July 2021)	Treasury Cash Management Buybacks	Treasury Hypothetical Repo Investment
Type	Reverse Repo Tri-party	Repo Tri-party	Repo Tri-party		Reverse Repo Tri-party
Clearing and Settlement Bank	BNY	BNY	BNY		BNY
Trading Platform	FedTrade Plus	FedTrade Plus	FedTrade Plus	FedTrade Plus	FedTrade Plus
Counterparty / Proposition Limit	$160bn	$40bn / eligible security type No aggregate limit	Two propositions per eligible collateral type, subject to a $20bn maximum per proposition $500bn aggregate limit	Based on schedule	$Xbn per counterparty $Xbn aggregate limit
Bid / Offering Rate	ON RRP Rate	SRP Rate	IORB + spread, multi-price auctions	Competitive, multi-price auctions	Competitive, multi-price auctions
Eligible Counterparties	Primary dealers + eligible RRP counterparties	Primary dealers + eligible SRP counterparties	Primary dealers	Primary dealers + entities approved by Treasury to participate directly in buyback operations	Primary dealers + eligible SRP counterparties
Schedule	Every business day	Every business day	Every business day	Seasonally, predominantly during weeks immediately surrounding major tax payment dates	Every business day, based on schedule
Time	12:45pm - 1:15pm	8:15am-8:30am 1:30pm-1:45pm	1:30pm-1:45pm	1:40pm-2:00pm	Ahead of SRP operation

Implementation details for further study

Shown here as illustrative structure

Alternative Approaches

There are several alternatives to highlight :

1. **Should Treasury invest in TT&L accounts instead of repo ?**
   - TT&L accounts would consume balance sheet capacity while cleared Treasury repo investments would be eligible for netting; however, exemption from leverage calculations could be considered for either
   - LCR would assign either a 25% or 40% outflow factor requiring a partial HQLA investment, possibly in reserves[1]. As such, the deposit is likely to price lower than IORB and repo rates unless reserves are scarce
   - Selecting bank deposit counterparts instead could be challenging and Treasury could be perceived to be "picking winners"

2. **Should Treasury be able to earn an interest rate from the Fed ?**
   - The consolidated economic and reserves impact is neutral, but the timing would allow Treasury to earn an upfront yield with a cost of adding to the Fed's deferred asset
   - Since the TGA is not remunerated, the cost of running a larger Fed balance sheet is moderately suppressed by virtue of it functioning as a large non-interest bearing Fed liability
   - Creating an interest payment between the Fed and Treasury on the TGA would allow for a more accurate reflection as an asset and liability with a yield and cost in the separate balance sheets
   - Earning an interest rate on the cash balance from the Fed provides a direct and clear incentive to Treasury to invest excess cash when repo rates are above the rate earned from the Fed
   - This might require congressional approval[2]

3. **Should Treasury seek new legal authority for the Fed to lend to Treasury during exigent circumstances (i.e., for operational outages) as an overdraft facility?**
   - This could allow for Treasury to consider a smaller TGA balance
   - The market might interpret such an authority as the ability for the Fed to monetize debt; therefore, the facts and circumstances under which Treasury could use it would need to be clear
   - There is historical precedent for such Fed authority: until 1935, Federal Reserve Banks occasionally purchased short-term securities directly from Treasury to facilitate cash management operations. Congress prohibited direct purchases in 1935, but then in 1942 provided a limited wartime exemption, which was renewed following the war but ultimately was allowed to expire in 1981[3]

1. LCR prescribes an outflow factor of 25% to uninsured non-financial operating deposits and 40% to non-financial non-operating or operating excess deposits
2. See: https://www.federalreserve.gov/newsevents/speech/miran20251119a.htm#fn3
3. For a detailed discussion, please refer to https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr684.pdf

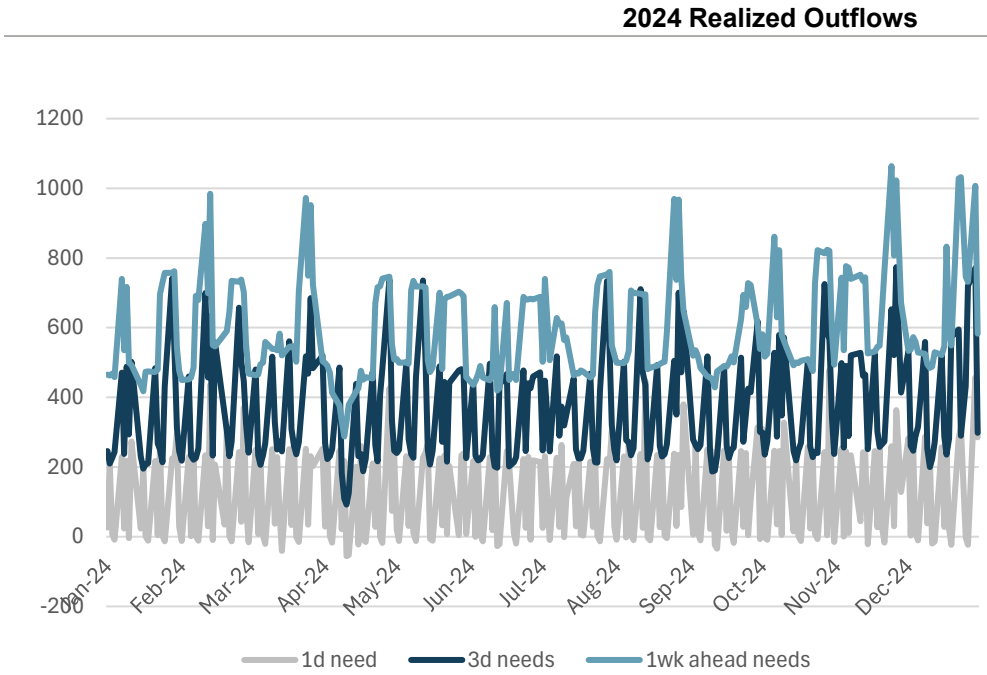
Conclusion

- **In the current framework, volatility in Treasury's cash needs generates intramonth excesses in Treasury's TGA.** While TGA itself is not a cost to the taxpayer, there are benefits from enhancing Treasury's cash balance policy approach. Opportunities and considerations include:
  - ✓ Treasury can earn positive economic value by investing excess cash when repo rates are higher than IORB
  - ✓ The size and economic viability of these investments could be dependent on the market environment and reserves regime
  - ✓ There are different approaches Treasury could take; if Treasury is comfortable holding cash for 3-days of needs and covering days 4 and 5 with inflows from maturing repo investments, the excess cash available to lend could be larger
  - ✓ Implementation approaches can have different impacts on the volatility of the TGA size and repo size to consider
  - ✓ Larger repo investments in the April tax season, when TGA has inflows, could be considered if the repo market demand is there
  - ✓ If Treasury chooses to begin investing excess cash into Treasury repo, transitioning its approach gradually would allow the market time to adapt

- **There are operational and implementation considerations for further study**
  - Clearing, counterparty selection, execution format, and timing
  - A regular and predictable operation schedule released as part of the Quarterly Refunding would allow for the market to plan

Alternatives	Repo Implications	Reserve Implications	Economic Value Spread	Other Considerations
Investing Excess TGA above a 3d need, various approaches to size 3d	Largest potential capacity Can be designed to offer stable operation sizes	Modest impacts, could be slightly lower or higher depending on design and market demand for repo	TGCR / IORB	Diversification benefit to Tri-Party Repo Market (new lender) Dealer leverage constraints could be mitigated by clearing or an exemption
Investing Excess TGA above a 1w need subject to a cap	Smaller potential capacity Variable repo sizing that declines in the days approaching month-end	Slightly higher reserve volatility	TGCR / IORB	
Investing in Bank Deposits	N/A	Same as repo, depends on the framework	Bank Deposit rate / IORB	Consumes bank leverage capacity unless exempted Bank bid unlikely to be above IORB unless reserves are scarce
Treasury earning a yield on TGA from Fed	N/A	No impact	N/A	Does not generate economic value

Appendix – 2024 Realized Outflows



Source: DTS

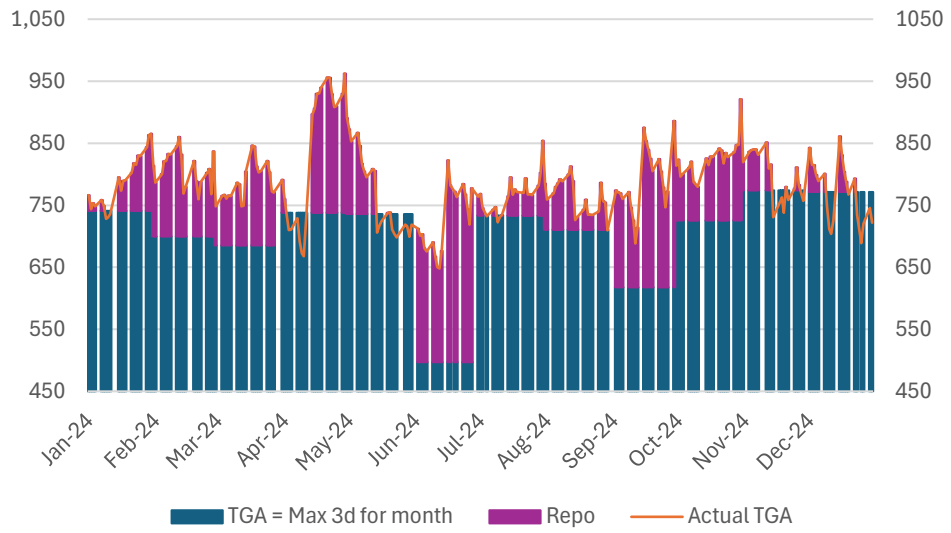
1-wk outflows
Avg: $595B
Std. Deviation of Daily Change: $129B

3d outflows
Avg: $357B
Std. Deviation of Daily Change : $189B

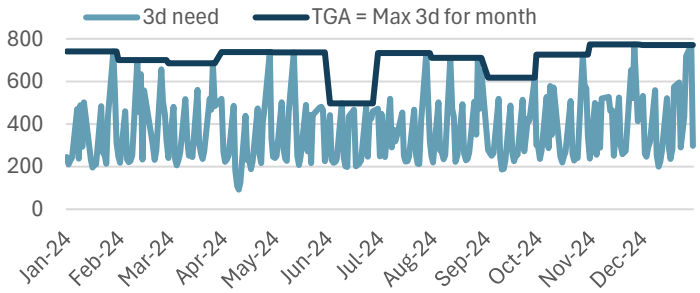
1d outflows
Avg: $119B
Std. Deviation of Daily Change : $223B

Appendix – Additional Excess over 3d Repo Approach details

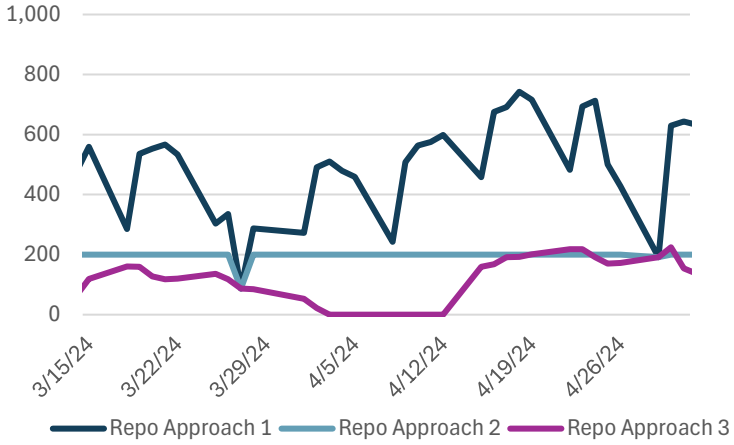
E(3d) Approach 3 vs. Actual TGA in 2024



- Reserving against the peak 3d results in a slightly larger liquidity portfolio on average ($790B) compared to the 2024 actual TGA average ($785B)
- Total Liquidity Portfolio in Approach 3 is TGA sized each month to the maximum 3d needs in the month (blue) plus the variable repo deployment (pink) vs. Actual TGA in 2024 (orange)
- Below we show the max 3d by month (blue) vs. the realized 3d outflows:



Daily Repo Investment in April Tax Season ($B, 2024 Backtest)



Approach Summary

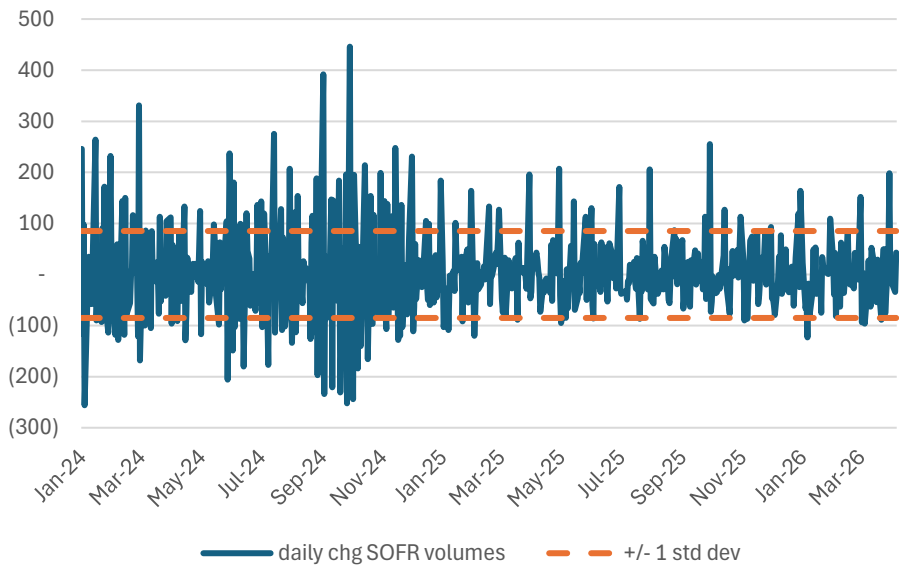
	TGA	+	Repo	= 1-wk ahead
Approach 1	3d need		E(3d)	
Approach 2	>= 3d need		E(3d) capped at $200B	
Approach 3	Max 3d need for the month		E(Max 3d)	

- Approach 1: Increases repo investments through tax season driven by growth in the actual TGA above 3d needs due to tax receipt inflows
- Approach 2: Caps the eligible deployment at $200B despite growth in TGA above the 3d need
- Approach 3: Actual TGA < peak need at April month-end until mid-month when tax receipts increase TGA enough to have excess to invest in repo

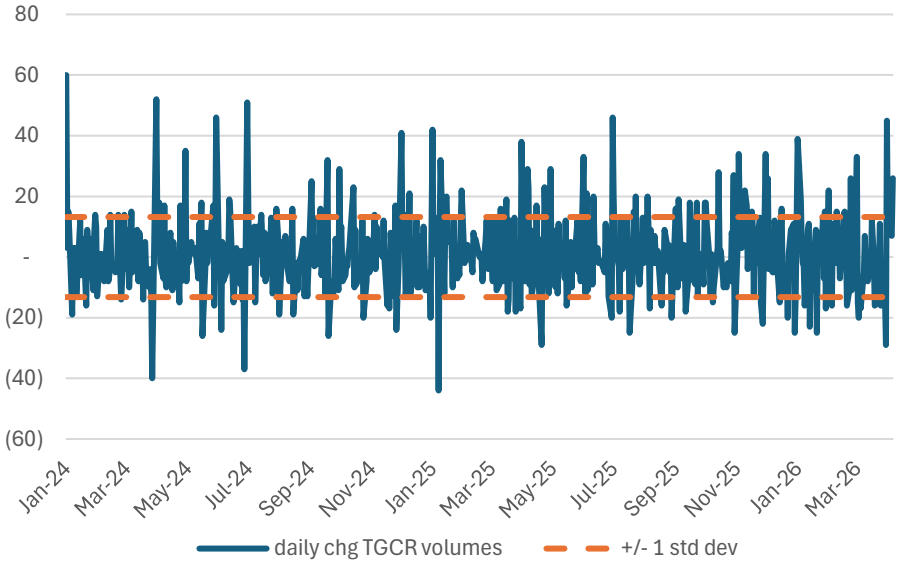
Source: Author's calculations

Appendix – Daily Change in SOFR and TGCR Volumes

Daily Change in SOFR Volumes ($B, 2024 – 2026)



Daily Change in TGCR Volumes ($B, 2024 – 2026)



2024-2026	Daily Change in SOFR Volumes ($B)	Weekly Change in SOFR Volumes ($B)
Standard Deviation	85	119
Average	2	11
Max	446	364
Min	-256	-342

2024-2026	Daily Change in TGCR Volumes ($B)	Weekly Change in TGCR Volumes ($B)
Standard Deviation	13	24
Average	1	5
Max	60	99
Min	-44	-74

Source: FRBNY, Author's calculations