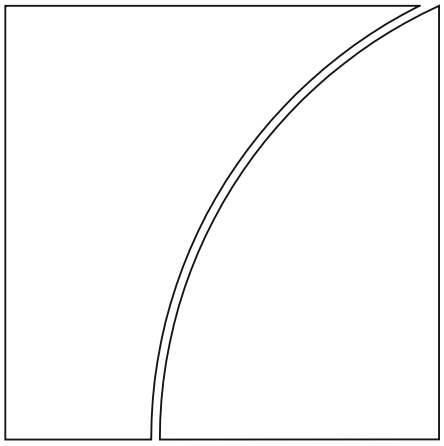

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JEL classification: E42, E43, G12, G23

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Stablecoins and safe asset prices*

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Abstract

This paper examines the impact of dollar-backed stablecoin flows on short-term US Treasury yields using daily data from January 2021 to March 2026. Using local projections and a granular instrumental variable exploiting idiosyncratic variation in stablecoin growth at the token-blockchain pair level, we find a $3.5 billion (2-standard deviation) inflow lowers 3-month Treasury bill yields by 0.71 basis points on impact, and up to 4 basis points within 10 days, with limited spillovers to longer tenors. Effects are state-dependent, increasing under Treasury market stress and with the scale of the stablecoin sector. Results carry implications for monetary policy transmission and financial stability.

JEL classification: E42, E43, G12, G23.

Keywords: stablecoins, Treasury securities, financial stability, safe assets.

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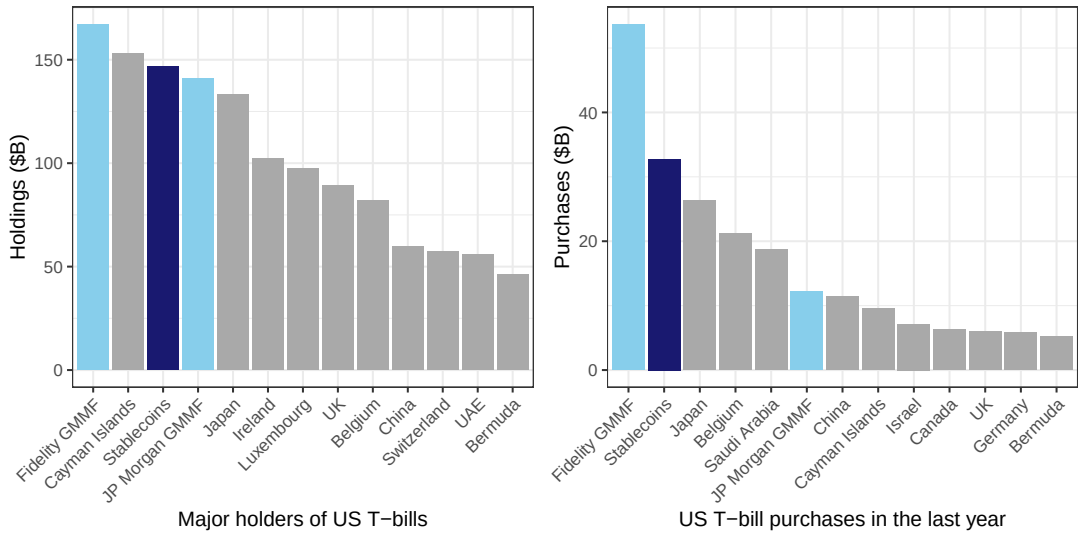
1 Introduction

Dollar-backed stablecoins have grown rapidly and are poised to reshape financial markets. As of December 2025, the combined assets under management of these cryptoassets exceeded $270 billion (B), with reserve positions in US Treasury bills (T-bills) of $153B, surpassing the holdings of some major foreign investors and domestic money funds (Figure 1, left-panel). Stablecoin issuers, notably Tether (USDT) and Circle (USDC), back their tokens mostly with US T-bills and money market instruments, positioning them as significant players in short-term debt markets.[1] Following roughly $35B of T-bill purchases in 2024, issuers of dollar-backed stablecoins purchased $33B worth of US T-bills in 2025, on par with the largest investors (Figure 1, right-panel). While prior research focuses on stablecoins' role in cryptoasset volatility (Griffin and Shams, 2020), their impact on commercial paper markets (Barthelemy et al., 2023) or their systemic risks (Bullmann et al., 2019), their interaction with traditional safe asset markets remains underexplored.

Figure 1: Holdings and purchases of US T-bills



Note: Foreign country holdings as of November 2025, government money market fund (GMMF) holdings as of December 2025. Stablecoin holdings is the sum of USDT T-bill positions as of December 2025 and USDC T-bill positions as of November 2025, and these positions include indirect T-bill exposures from MMF holdings. Data are from US Treasury TIC, OFR, and USDT and USDC reserve reports. Purchases are calculated as the change in T-bill positions over a 1 year period (i.e., December to December for GMMFs, November to November for countries, December to December for USDT and November to November for USDC.)

[1] According to their most recent reserve disclosures, Tether and Circle held about 63% and 32% of their reserves in US T-bills, respectively.

This paper investigates whether stablecoin flows exert measurable demand pressures on US Treasury yields.[2] Using local projections and an instrumental variable approach, we document two key findings. First, stablecoin flows compress short-term T-bill yields. In our preferred specification, a 5-day stablecoin inflow of $3.5B (approximately 2 standard deviations) lowers 3-month T-bill yields by about 0.71 basis points (bps) on impact, 4 bps within 10 days, with a trough of roughly 5 bps at 13 days and an effect sustained at 3 to 4 bps through horizons of 10 to 25 days. Second, we document substantial heterogeneity in these effects along two dimensions. Cyclically, the impact is amplified during periods of Treasury-market intermediary stress, in particular during aggressive Treasury General Account (TGA) rebuilds and during episodes of impaired secondary-market liquidity in Treasuries, as summarized by the Treasury Market Conditions Index (MCI) of Aldasoro et al. (2025).[3] Structurally, the channel has strengthened with the maturation and scale of the stablecoin sector, a state we capture with two complementary proxies: a continuous measure using the log of aggregate market capitalization and a discrete post-2024 indicator. Both proxies point to materially deeper price impact as the sector has grown larger and more institutionally embedded. These findings suggest that stablecoins' price impact operates not only through pure demand effects but also through intermediary-friction and scale channels.

Our empirical analysis is based on daily data from January 2021 to March 2026. To construct a measure of stablecoin flows, we collect market capitalization data for the seven largest dollar-backed stablecoins and aggregate them into a single series.[4] We then use 5-day changes in aggregate stablecoin market capitalization as our proxy for

[2]This topic has attracted significant public attention, as government officials have argued that stablecoins could generate trillions of dollars of new demand for US Treasury securities. US Treasury Secretary Bessent's official statement on the GENIUS Act and Federal Reserve governor Miran's speech titled 'A Global Stablecoin Glut' both explicitly allude to stablecoin demand for Treasuries as a key force likely to reshape financial markets.

[3]Input variables for the Treasury MCI include the MOVE index (a summary measure of US Treasury yield volatility), quoted bid–ask spreads of off-the-run Treasuries at various maturities, time-to-quote by dealers, a liquidity index computed as the average yield deviation relative to a fitted yield curve across US Treasuries with maturity beyond 1 year, the on-the-run premium, the absolute value of OIS-US Treasury spread at various maturities, and a measure of the absolute Treasury futures basis (the absolute value of the implied minus actual 5-year trade repo rate for US Treasuries).

[4]In addition to USDT and USDC, this includes TrueUSD (TUSD), Binance USD (BUSD), First Digital USD (FDUSD), PayPal USD (PYUSD), and Ripple's RLUSD.

inflows into stablecoins. We focus on the 3-month Treasury bill yield as our outcome variable of interest, as the largest stablecoin issuers have either disclosed or publicly stated this tenor as their preferred habitat.

We take a two-pronged approach to overcome endogeneity concerns.[5] First, we control for a broad set of confounders using the control set described in Section 2.2, which covers forward changes in Treasury yields across the curve, cryptoasset prices, money market fund and short-term Treasury ETF flows, T-bill supply, monetary policy surprises, and a battery of fiscal, Treasury-market and risk-sentiment indicators.

Second, we construct a granular instrumental variable (GIV) for stablecoin flows following Gabaix and Koijen (2024). The stablecoin market is highly concentrated at the stablecoin-blockchain level: a single stablecoin-chain pair accounts for roughly one third of aggregate market capitalization, the top three pairs together account for around 80%, and the top ten for around 95%. In such a market, idiosyncratic shocks to large units do not cancel under cross-sectional aggregation but instead propagate into aggregate flows. We construct the GIV as the share-weighted cross-section of unit-level idiosyncratic residuals, using an unbalanced daily panel of 226 stablecoin-chain pairs, with almost 90 active on a representative day. This GIV is, by construction, orthogonal to any common factor in stablecoin growth. We use data on market capitalization at the stablecoin-chain pair level from DeFiLlama, complemented with Token Terminal data for the pairs where the former is unreliable. In our baseline estimations, we compute the 5-day rolling sum of the GIV.

The instrument we use satisfies both standard IV conditions with substantial margin. On relevance: the first-stage HAC-robust F-statistic is 54, well above conventional weak-instrument thresholds (Stock and Yogo, 2005; Montiel Olea and Pflueger, 2013); a one-standard-deviation movement in the IV corresponds to a 5-day stablecoin flow of approximately $0.6 billion. On exclusion: (i) the IV is by construction orthog-

[5] A simple univariate local projection of changes in 3-month T-bill yields on 5-day stablecoin flows is subject to severe endogeneity bias. Estimates from such a 'naïve' projection are comparable in magnitude to a Federal Reserve policy rate cut (about 21 basis points over 30 days). These implausibly large estimates can be explained by the presence of endogeneity that biases them downward, due to both omitted-variable bias (as confounders are not controlled for) and simultaneity bias (as Treasury yields may affect flows into stablecoins).

onal to the size-weighted common factor in stablecoin-chain growth; (ii) a principal-components decomposition of the underlying growth-rate panel confirms that the dominant common factor accounts for only about 16% of cross-sectional variance, leaving the residual variation that the granular IV exploits; and (iii) direct correlation tests show negligible empirical correlation between the GIV and twelve potential confounders, including the VIX, the S&P 500, two financial conditions indices, the dollar NEER, the Bloomberg Galaxy Crypto Index, and MMF/ETF flows. No matched-frequency correlation exceeds 0.10 in absolute value at either daily or 5-day horizons. These properties make the granular IV well-suited to identify stablecoin-driven yield variation cleanly orthogonal to broader macro-financial co-movement.

Our baseline IV estimate points to a meaningful and statistically significant impact of stablecoin flows on T-bill yields. A $3.5B inflow into stablecoins lowers 3-month T-bill yields by 0.71 basis points on impact, about 4 basis points within 10 days, with the trough of roughly 5 basis points reached at 13 days and the effect remaining around 3 to 4 basis points through horizons of 10 to 25 days.

Our baseline results prove robust along several dimensions. First, to address the concern that the Treasury yields used as controls are highly correlated with the dependent variable, we confirm that the result persists when we use the 3-month to 6-month T-bill spread as the dependent variable and replace correlated yield controls with principal components extracted from the yield curve. Second, the result also holds when we employ 1-day rather than 5-day flow measures (controlling for lagged flows to address autocorrelation). Third, we re-estimate the baseline with alternative versions of the granular IV: the daily GIV_t in place of the 5-day rolling sum, and a granular IV constructed from DeFiLlama data alone, without the Token Terminal substitutions used in our baseline panel. We find effects of comparable sign and magnitude. Fourth, spillover tests reveal that effects are concentrated in stablecoins' preferred habitat: the 1-month tenor exhibits a meaningful impact, while the 6-month, 2-year, and 10-year tenors show limited to no response.[6]

[6]We also validate our stablecoin market-capitalization measure used to construct flows against outsanding stablecoin supply constructed from blockchain-level mint and burn data; the correlation between market capitalization and outstanding supply is above 0.99, so we do not report the resulting

Critically, we find that the baseline effect masks substantial heterogeneity along two dimensions. First, the channel is amplified under Treasury-market intermediary stress, proxied by aggressive TGA rebuilds (when the 60-day change in the TGA balance is positive) and by elevated readings of the Treasury MCI (a z-scored indicator capturing instances when the MCI is one standard deviation above the sample mean). In these states, the impact of a $3.5B inflow deepens to between 8 and 10 basis points, roughly double the baseline.[7] This pattern is consistent with theoretical predictions that demand shocks have larger price impacts when dealer balance sheets are constrained and the marginal arbitrageur is less price-elastic (He and Krishnamurthy, 2013; D'Avernas and Vandeweyer, 2024; Stein and Wallen, 2025).

Second, the channel has strengthened with the maturation and scale of the stablecoin sector, a state we capture with two complementary proxies. Continuously, the channel scales monotonically with the size of the sector: the impact strengthens further at higher levels of sector capitalization, consistent with preferred-habitat segmentation translating absolute demand shocks into proportionally larger price moves (Vayanos and Vila, 2021). Discretely, the channel is concentrated in the post-2024 period: pre-2024 the IRF traces out an impact of about 3.3 bps, whereas post-2024 it reaches the magnitudes of two to three times that. The two structural proxies trace the same underlying state: a larger, more institutionally embedded stablecoin and crypto-asset industry capturing post-2024 structural shifts such as the rapid growth of spot Bitcoin and Ether ETFs and the regulatory clarity culminating in the passing of the GENIUS Act.

Our findings have important implications for policy, not least if the stablecoin market continues to grow.[8] The state-dependent nature of our findings carries particular weight: stablecoins' footprint is most pronounced precisely when Treasury markets are under intermediary stress (which may coincide with broader financial

IRFs separately. Moreover, our results are robust to using an alternative instrument, constructed as the unforecastable component of cryptoasset returns that is orthogonal to financial market conditions.

[7] In unreported results, we find that effects are even larger under tail-binary cuts of both indicators, i.e. focusing on the upper versus lower quartiles and dropping the middle 50% of the distribution.

[8] A recent report by Citigroup for example estimates that the stablecoin market may grow to $1.6 ($3.7) trillion in a base (bull) case by 2030. The Treasury Borrowing Advisory Committee estimates a potential for $2 trillion market capitalization by 2028.

stress) and as the sector itself matures in scale and institutional integration. Regarding monetary policy, our yield-impact estimates suggest that if the stablecoin sector continues to grow rapidly, it may eventually affect the pass-through of monetary policy to Treasury yields. Stablecoins' growing footprint in Treasury markets may also contribute to safe-asset scarcity for non-bank financial institutions, potentially affecting the liquidity premium (D'Avernas and Vandeweyer, 2024). Regarding stablecoin regulation, the recently enacted GENIUS Act establishes a federal framework that places strong emphasis on Treasury securities of maturity up to three months for stablecoin issuers' reserves, institutionalizing the demand channel we document. Our results further highlight the importance of transparent reserve disclosures that allow for the effective monitoring of concentrated stablecoin reserve portfolios. Finally, our results can be interpreted as evidence of stablecoins creating a bridge through which shocks to the cryptoasset ecosystem transmit to traditional financial markets.

These findings also carry financial stability implications. First, stablecoins' influence on Treasury markets creates a fire-sale risk: our estimates likely constitute a lower bound for outflow effects, as they are obtained over a period of secular market growth that affords issuers discretion over the timing of purchases. Under redemption stress, such timing discretion may not be available. Second, our state-dependent results are particularly concerning from a systemic perspective: stablecoin price impact is largest precisely when Treasury markets are under stress and as the sector matures in scale and institutional integration — conditions that may coincide with broader financial stress. Third, stablecoins' reverse repo positions collateralized by Treasury securities collateral may facilitate basis trade arbitrage, amplifying the interconnection between crypto markets and Treasury market functioning — a channel that warrants regulatory attention as the sector grows.[9] Equity and liquidity buffers may alleviate some of these financial stability risks (Goel et al., 2025; Liao et al., 2024).

[9]This could materialize, for example, through money market funds managing stablecoins' cash reserves. Money market funds' cash lending in sponsored repo mirrors the short positions on Treasury futures by hedge funds (Aldasoro and Doerr, 2023, 2025), a tell-tale sign of such arbitrage strategies.

Related literature. Our work relates to research on the demand for safe assets. Krishnamurthy and Vissing-Jorgensen (2012) show that safety and liquidity demand suppresses Treasury yields, which can undermine financial stability by incentivizing the issuance of risky short-term debt (Greenwood et al., 2015). Chaudhary et al. (2025) examine how investor heterogeneity shapes aggregate Treasury market pricing. Most directly related to our state-dependent findings, D'Avernas and Vandeweyer (2024) model how T-bill shortages amplify demand shocks to short-term safe asset prices, and Stein and Wallen (2025) show that bill scarcity displaces price-elastic MMF arbitrageurs, magnifying price impact — mechanisms we empirically test using stablecoin flows. Doerr et al. (2023) provide evidence that MMFs influence near-money asset pricing more broadly. Foreign investor demand has also been shown to affect Treasury yields (Ahmed and Rebucci, 2024). Stablecoins, whose balance sheets look very similar to those of MMFs, may contribute to such effects, but their marginal impact remains unquantified despite their growing role in the market.

Moreover, we contribute to a growing body of work on stablecoins. Much of this literature studies stablecoin stability (Arner et al., 2020; D'Avernas et al., 2023; Lyons and Viswanath-Natraj, 2023; Kosse et al., 2023), adoption (Bertsch, 2023), runs (Ahmed et al., 2025; Gorton et al., 2022) and market structure (Ma et al., 2023), among others. More recently, Azzimonti and Quadrini (2025) and Ferrari Minesso and Siena (2026) study the international implications of broader stablecoin adoption, whereas Altavilla et al. (2026) study the effects on monetary policy transmission. Closer to our paper, Barthelemy et al. (2023) and Kim (2025a) study the effect of stablecoin investments in the commercial paper market. Our paper focuses instead on the reserve asset that has come to dominate major stablecoins' reserves, namely Treasury securities. In a contemporaneous paper, Kim (2025b) presents evidence of the effect of Tether minting on Treasury exchange-traded funds and uses a macro-finance model to argue for a potential non-linear effect of stablecoins on the Treasury market if the former were to grow substantially.[10]

[10]Subsequent work by Cerutti et al. (2026) examines related effects on short-term Treasury yields using a narrative-plus-heteroskedasticity identification.

2 Data and methodology

2.1 Data sources

Our analysis draws on daily data from January 2021 to March 2026, sourced from several databases.[11] We collect market capitalization data from CoinMarketCap on seven USD-backed stablecoins: USDT, USDC, TUSD, BUSD, FDUSD, PYUSD, and RLUSD.[12] We aggregate these series into a single market capitalization measure; construction of the flow variable is described in Section 2.2 (Equation (1)).[13] For the chain-level decomposition that underpins our granular instrumental variable (Section 2.3), we construct a daily stablecoin-chain panel from DeFiLlama, with selected substitutions from Token Terminal where DeFiLlama data are incomplete or misstates levels relative to alternative sources.[14] We source daily prices for Bitcoin and Ether, the two largest cryptoassets, from Yahoo Finance.

We collect daily data on US market interest rates from FRED and intraday OIS data from LSEG Datascope. In addition to the federal funds rate (FFR), we consider the following Treasury maturities: 1-month, 3-month, 6-month, 1-year, 2-year, and 10-year. We use intraday data to construct our measure of high-frequency monetary policy surprises, computed as changes in 3-month OIS rates from 30 minutes before to 30 minutes after FOMC policy rate announcements.

We collect a broad set of confounders that may affect T-bill yields through channels unrelated to stablecoin demand. To capture sectoral demand for short-dated Treasuries, we obtain daily money market fund (MMF) flows from iMoneyNet and

[11] In addition to the daily series described in this section, we use Treasury International Capital (TIC) data on foreign holders and purchases of US T-bill securities, Office of Financial Research (OFR) data on US government money market funds, and public stablecoin reserve reports to construct Figure 1 in the Introduction.

[12] RLUSD launched in late 2024 and is included from its inception.

[13] We also report the five-day change separately for USDC and USDT, as we use them separately in parts of our analyses. Because stablecoin data are published seven days per week while traditional US market data are available only on trading days, we merge the dataset at the trading-day frequency; 5-day flow measures therefore refer to five trading days.

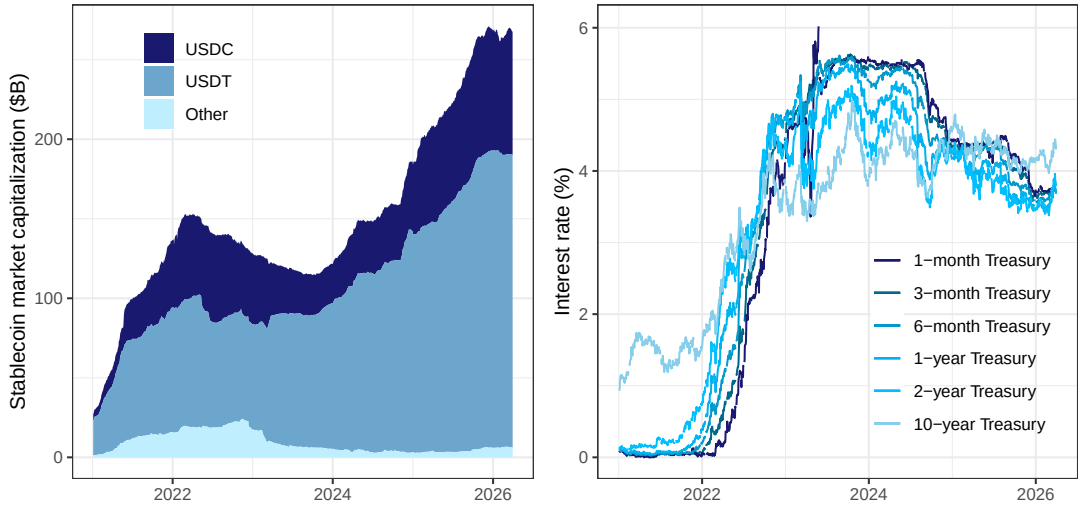
[14] Appendix C.1 details each of the twelve stablecoin-chain substitutions and provides the levels-side cross-validation between DeFiLlama and Token Terminal on the shared portion of the panel. DeFiLlama has broader coverage of stablecoin-chain pairs.

flows into the seven largest short-term Treasury ETFs from ETF.com.[15] T-bill supply is measured using US Treasury auction issuance from the US Department of the Treasury. To capture Treasury-specific fiscal and money-market frictions, we collect the Treasury General Account (TGA) balance and the Overnight Reverse Repurchase Facility (ON-RRP) balances from FRED; we also include the Treasury Market Conditions Index (MCI) of Aldasoro et al. (2025). The MCI is constructed as the first principal component of the following panel of Treasury-market liquidity and stress indicators: the MOVE index of implied Treasury volatility, bid–ask spreads, on/off-the-run spreads, deviations from a fitted yield curve, OIS spreads, and time-to-quote. As such, it summarizes in a single series the episodes of market illiquidity and no-arbitrage violations typically driven by binding intermediary balance-sheet constraints in the Treasury market. To capture risk sentiment and macro conditions, we collect data on the VIX index, the (log) S&P 500, the (log) gold price, the (log) Brent oil price, the (log) US dollar nominal effective exchange rate (NEER), and the Citigroup Economic Surprise Index (CESI), from FRED and Bloomberg.

Figure 2 shows USD-backed stablecoin market capitalization and US Treasury yields over the sample period. Stablecoin market capitalization has been on the rise since the second half of 2023, with notable increases in early and late 2024 and through 2025. The sector is highly concentrated: the two largest stablecoins (USDT and USDC) account for over 95% of outstanding amounts, with aggregate stablecoin market capitalization of roughly $270B as of March 2026.[16] Treasury yields in our sample capture the 2022 hiking cycle, the 2023 pause, and the easing period that began around mid-2024. The sample also covers an episode of pronounced yield-curve inversion in 2022–2024, with the 10-year Treasury yield trading below short-term rates before normalizing.

[15] The tickers for the ETFs are BIL, SGOV, SHV, SHY, VGSH, SCHO, and SPTS.
[16] USDT and USDC account for approximately $184B and $80B respectively.

Figure 2: Stablecoin market capitalization and US Treasury yields



Note: The left panel plots aggregate USD-backed stablecoin market capitalization, broken out by USDT, USDC, and 'Other' (TUSD, BUSD, FDUSD, PYUSD, and RLUSD); the right panel plots daily US Treasury yields for several maturities. Sample: January 2021–March 2026.

2.2 Variable construction

We seek to estimate the effect of stablecoin flows on Treasury bill yields. To this end, we use the market capitalization variable to compute a 5-day stablecoin flow measure as the difference in market capitalization, in order to capture weekly liquidity movements, although we also consider 1-day flows for robustness:

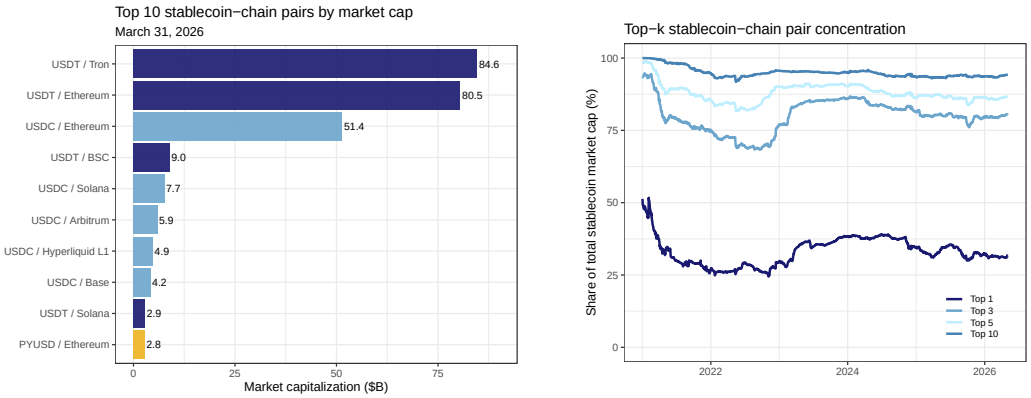
$$Flow(5d)_t = MC_t - MC_{t-5}, \tag{1}$$

where MC_t is stablecoin market capitalization on day t. MC_t can be expressed as the product of the stablecoin price and outstanding supply: $P_t \times S_t$, with flows inferred from changes in S_t. Equation (1) therefore makes the simplifying assumption that stablecoins maintain their peg of $P_t = \$1 \; \forall \; t$. Empirically, these USD-backed stablecoins have maintained relatively tight pegs, with exceptions that have typically been short-lived (most notably the depeg of USDC around the collapse of Silicon Valley Bank in March 2023).

Figure 3 characterizes the stablecoin sector at the stablecoin-chain level. The left

panel reports the top ten stablecoin-chain pairs by market capitalization at the end of our sample: three pairs — USDT on Tron, USDT on Ethereum, and USDC on Ethereum — together account for the bulk of aggregate market capitalization, while the remaining seven pairs each contribute single-digit billions of US dollars. Our sample comprises an unbalanced daily panel of 226 stablecoin-chain pairs, with 87 active on a representative day.[17] The right panel plots the cumulative market-capitalization share of the top-1, top-3, top-5, and top-10 stablecoin-chain pairs at daily frequency throughout the sample. The sector is highly concentrated at the stablecoin-chain level: a single pair accounts for roughly one third of aggregate market capitalization throughout the sample; the top three pairs together account for around 80%; and the top ten account for around 95%. This concentration motivates the granular identification strategy in Section 2.3. Aggregate 5-day stablecoin flows over the sample are positive on average ($0.88B) with a standard deviation of $1.74B, and USDT and USDC are the largest contributors (mean 5-day flows of $0.59B and $0.27B respectively). Table 1 presents summary statistics for the main variables.

Figure 3: Top stablecoin-chain pairs by market capitalization and chain-level concentration of the stablecoin sector



Note: The left panel reports the top 10 stablecoin-chain pairs by market capitalization in billions of US dollars at the end of the panel. Bars are colored by stablecoin issuer. The right panel plots the market capitalization share of the top-K stablecoin-chain pairs at daily frequency over time, for $K = 1, 3, 5, 10$. Sample: January 2021–March 2026.

[17] The median number of pairs active in the sample is 89, ranging from 12 in the early thin period to 143 at peak. That gives 166,019 unit-day observations across 1,913 trading days in our sample, with 7 stablecoins and 117 chains.

Table 1: Summary statistics

Variable	T	Mean	St. Dev.	Min	Max
5-day stablecoin flow ($B)	1362	0.88	1.74	-4.18	11.5
5-day USDT flow ($B)	1362	0.59	1.15	-8.68	5.31
5-day USDC flow ($B)	1362	0.27	1.16	-6.53	7.72
5-day MMF flow ($T)	1362	0.02	0.09	-1.36	1.40
5-day ETF flow ($B)	1362	0.58	1.59	-4.21	9.41
3-month T-bill auction ($B)	1367	14.4	29.4	0.00	96.1
Fed funds rate (%)	1314	3.24	2.07	0.05	5.33
3-month T-bill yield (%)	1310	3.37	2.10	0.01	5.63
10-year Treasury yield (%)	1310	3.41	1.14	0.93	4.98
Granular IV, 5-day sum (%)	1367	0.21	0.53	-1.90	2.48

Note: Stablecoin, ETF, and T-bill auction flows and quantities are in billions of US dollars ($B); MMF flows are in trillions of US dollars ($T), reflecting the scale of total taxable money market fund assets under management. Yields and the fed funds rate are in percent (%). The granular IV is the 5-day sum of GIV_t defined in equation (2), reported in percent. Sample: January 4, 2021 to March 31, 2026.

2.3 Instrumental variable

A simple regression of T-bill yields on stablecoin flows would conflate the channel of interest with confounding co-movement. Aggregate stablecoin flows correlate with broad financial conditions: risk-on episodes draw funds into both cryptoassets and stablecoins while simultaneously affecting safe-asset yields, and Treasury yields themselves feed back into the opportunity cost of holding stablecoins. We therefore need a flow shifter that lives inside the stablecoin sector and is plausibly uncorrelated with broader macro and risk conditions.

We construct such an instrument following the granular instrumental variable (GIV) approach of Gabaix and Koijen (2024). The stablecoin sector is highly concentrated at the stablecoin-chain level: as Figure 3 shows, a single stablecoin-chain pair accounts for roughly one third of aggregate market capitalization, and the top three pairs together account for around 80%. In a market with a few large units, idiosyncratic shocks to those units do not cancel under cross-sectional aggregation but instead propagate into aggregate flows. These shocks are, by construction, orthogo-

nal to common factors, including the risk-on co-movement and macro conditions that would violate the exclusion restriction. Therefore, the GIV approach is well suited to instrument aggregate flows.

For each unit i (a stablecoin-chain pair) on day t, let $g_{i,t}$ denote the growth rate of market capitalization, $s_{i,t-1}$ the lagged market-capitalization share, and N_t the number of active units. We define the size-weighted aggregate growth rate $\bar{g}_t = \sum_i s_{i,t-1}\, g_{i,t}$ and the unit-level idiosyncratic residual $\varepsilon_{i,t} = g_{i,t} - \bar{g}_t$. The granular IV is the share-weighted cross-section of these residuals,

$$GIV_t = \sum_i \left(s_{i,t-1} - \frac{1}{N_t} \right) \varepsilon_{i,t}, \tag{2}$$

computed daily on the baseline stablecoin-chain panel described in Section 2.1.[18] The instrument we use in our baseline specifications is the 5-day rolling sum, $GIV(5d)_t = \sum_{s=0}^{4} GIV_{t-s}$, which aligns with our 5-day flow measure; we also report results using the daily GIV_t as a robustness check. Figure 4 plots both versions of the granular IV over the sample. Both series fluctuate around zero, exhibit no persistent trend, and pass standard stationarity tests.[19]

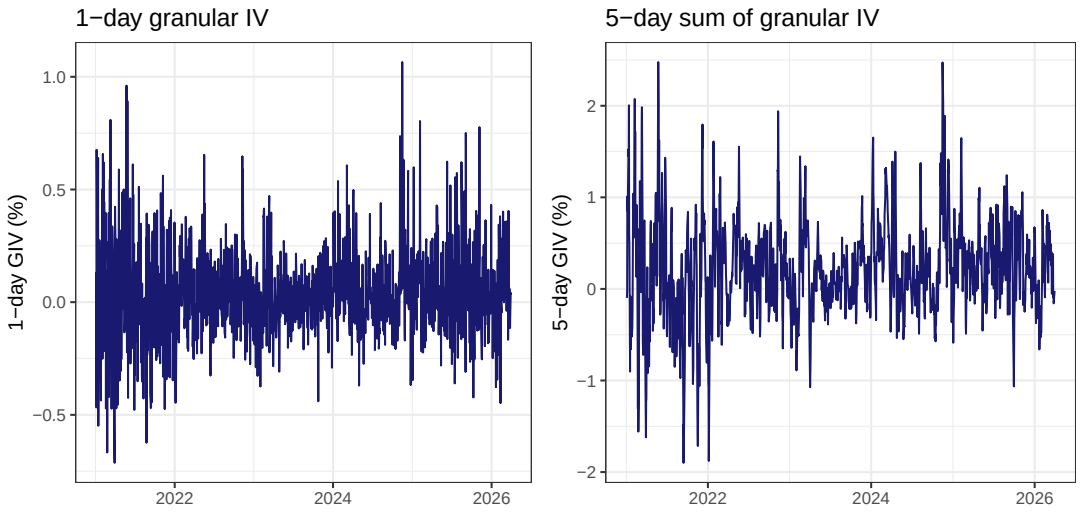
Relevance. Table 2 reports the first-stage relationship between 5-day stablecoin flows and the granular IV. Column 1 shows the baseline: $GIV(5d)_t$ is significantly and positively correlated with aggregate 5-day flows, with a HAC-robust F-statistic of 54, well above conventional weak-instrument thresholds.[20] A one-standard-deviation movement in $GIV(5d)_t$ corresponds to a 5-day stablecoin flow of approximately \$0.6 B. Column 2 reports the same regression using the daily granular IV, which is somewhat weaker (F = 30, flow per 1 SD = \$0.3 B) but is still comfortably above standard threshold levels. As a robustness check on the GIV construction, Column 3 uses a granular IV computed from DeFiLlama data alone, without the Token Terminal substitutions

[18] We classify a unit as active at t if its market capitalization exceeds \$1 million on both $t-1$ and t, and require $N_t \geq 5$ for GIV_t to be defined. Growth rates are robust-winsorized at $\pm 8 \times 1.4826 \times$ MAD to suppress occasional retroactive corrections in the raw chain-level data.

[19] Augmented Dickey-Fuller tests reject a unit root at the 1% level for both versions.

[20] See Stock and Yogo (2005) for the standard critical values and Montiel Olea and Pflueger (2013) for the equivalent thresholds in the presence of heteroskedastic and autocorrelated first-stage residuals.

Figure 4: Granular instrumental variable



Note: The left panel plots the daily granular IV, GIV_t, defined in Equation (2). The right panel plots the 5-day rolling sum, $GIV(5d)_t$, used as our baseline instrument. Sample: January 2021–March 2026.

discussed in Section 2.1 (F = 42).

Table 2: First-stage regressions: 5-day stablecoin flows on the granular IV

	(1)	(2)	(3)
	Baseline panel	Baseline panel	DeFiLlama-only panel
	$GIV(5d)_t$	GIV_t (daily)	$GIV(5d)_t$
GIV coefficient	1.14***	1.69***	1.04***
	(0.15)	(0.31)	(0.16)
Constant	0.64***	0.81***	0.68***
	(0.06)	(0.06)	(0.06)
Observations	1362	1362	1362
HAC-robust F-statistic	54.4	30.2	42.0
R^2	0.123	0.039	0.097
5-day flow per 1 SD of GIV ($B)	0.61	0.34	0.54

Note: Dependent variable is the 5-day stablecoin flow $Flow(5d)_t$ in $B. The granular IV is expressed in percentage-point units of (weighted) cross-sectional growth; the reported coefficient is therefore the $B 5-day flow associated with a 1% movement in the granular IV. Columns 1 and 2 use the granular IV constructed on the baseline DeFiLlama–Token Terminal panel (5-day rolling sum and daily, respectively). Column 3 uses the granular IV constructed only from DeFiLlama data. Newey-West standard errors with one lag, with *, **, *** denoting significance at the 10%, 5%, and 1% level, respectively.; HAC-robust F-statistic reported. Sample: January 2021 to March 2026.

Exclusion. The exclusion restriction is supported by both the construction of the granular IV and direct empirical tests of its correlation with potential confounders.

By construction, the granular IV is a share-weighted cross-section of unit-level idiosyncratic residuals after the size-weighted common factor has been removed. A principal-components decomposition of the underlying stablecoin-chain growth-rate panel confirms that the dominant common factor is modest: the first principal component explains only about 16% of cross-sectional variance, with the remaining variation supplying the cross-sectional dimension the granular IV exploits.

We complement this construction argument with a direct empirical correlation exercise. We compute the matched-frequency correlation of each version of the granular IV with twelve variables that span the principal channels through which broader risk sentiment, financial conditions, and sectoral demand could correlate with stablecoin growth: the VIX index, the Bloomberg US and Goldman financial conditions indices, the (log) S&P 500, the (log) gold and Brent prices, the (log) US dollar NEER, the (log) Bloomberg Galaxy Crypto Index, the (log) prices of Bitcoin and Ether, and sectoral demand from MMFs and short-term Treasury ETFs (the matched-frequency change in MMF assets under management and the matched-frequency sum of ETF flows, respectively). Frequency matching is essential: we correlate the 5-day-sum $GIV(5d)_t$ with 5-day changes in each confounder, and the daily GIV_t with 1-day changes. Several of these variables also enter our regression as controls; the low correlations reported here are therefore informative on top of that absorption, since they rule out the granular IV inheriting common-factor variation through a different channel. The maximum absolute correlation across the twelve confounders is 0.10 for the 5-day-sum IV and 0.06 for the daily IV; the granular IV is in particular essentially uncorrelated with the VIX, the S&P 500, the FCIs, and the dollar — the principal channels through which risk sentiment could transmit between cryptoasset markets and Treasury markets. Table 6 in Appendix C.3 reports the full correlation matrix.

Finally, we ask where in the stablecoin-chain panel the identifying variation lives. For each trading day we demean the panel (i.e. within-day) and fit $\widehat{g}_{i,t} = \alpha_{s(i),t} +$

$\beta_{c(i),t} + u_{i,t}$ by OLS with stablecoin and chain dummies, then accumulate sums of squares across days (Appendix C.4, Table 7). About 62% of cross-sectional dispersion in unit growth rates is common across stablecoins on a given chain on a given day, about 6% is common across chains of the same issuer, and the remaining 36% is genuinely pair-specific. The granular weights $w_{i,t} = s_{i,t-1} - 1/N_t$ load on units that depart from *both* the issuer mean and the chain mean, so the identifying variation in the granular IV is dominated by the within-pair residual $u_{i,t}$ rather than by either fitted dimension. This property, by construction, sharpens the IV's orthogonality to issuer- or chain-level common factors.

3 The effect of stablecoin flows on Treasury bill yields

3.1 Reserve allocation mechanics

The outstanding circulating supply of stablecoins increases when stablecoin issuers receive net inflows. Upon facing fiat dollar inflows, stablecoin issuers create USD stablecoin token liabilities through a process called minting. A select set of primary market participants are authorized to mint and redeem stablecoins at par directly with the issuer; these participants act as arbitrageurs between primary and secondary markets to maintain the peg (Lyons and Viswanath-Natraj, 2023; Ma et al., 2023).

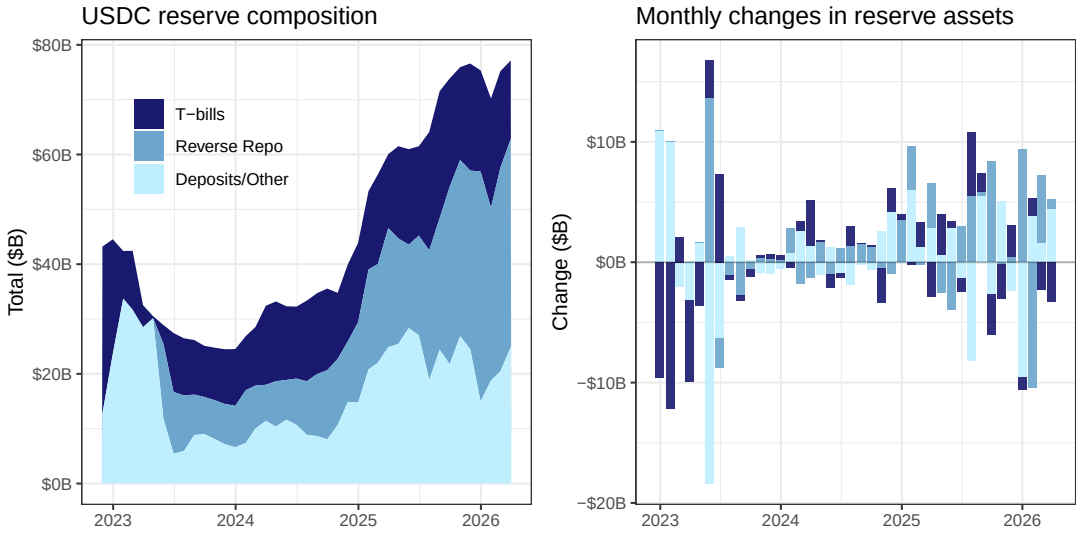
Stablecoin issuers then invest the dollars they receive in reserve assets through a sequence of management decisions that usually spans days.[21] Inflows are typically immediately allocated to deposits. Concurrently, issuers may also reallocate to other reserve assets, and continue to reallocate from deposits to T-bills, repos or other assets thereafter. In other words, stablecoin inflows need not translate fully into Treasury demand immediately, but could do so instead over some days. The delayed purchase of T-bills, in particular, could create persistence in the price impact of stablecoin flows

[21] Regulated stablecoins are restricted to qualified reserve assets, which can vary across jurisdictions. For example, in the US under the GENIUS Act, reserve assets include bank deposits, T-bills, reverse repos, and central bank reserves. European stablecoin regulation under the Markets in Crypto Assets Regulation (MiCA) mandates a similar set of reserve assets, but contrasts US regulation by requiring issuers to hold a large, specific fraction of reserves in bank deposits. Stablecoin issuers that operate outside regulatory perimeters invest across a wider range of safe and risky assets.

on T-bill yields.

We provide evidence consistent with this dynamic using public data on USDC's reserve portfolio. Figure 5 reports data starting in November 2022, when the Circle Reserve Fund (USDXX), a money market fund managed by BlackRock, began disclosing USDC's non-deposit reserve portfolio.

Figure 5: USDC outstanding supply and reserve portfolio composition



Note: Monthly data from November 2022 (the launch of the Circle Reserve Fund) through March 2026. The 'Deposits/Other' category is computed by subtracting T-bill and reverse repo positions from USDC's market capitalization, and so absorbs any residual reserve allocation not captured by the two named categories.

To quantify the dynamic allocation of USDC flows across reserve assets, we estimate three separate distributed-lag regressions of the form

$$\Delta A_{j,t} = \alpha_j + \sum_{k=0}^{3} \beta_{j,k} \, \Delta USDC_{t-k} + \varepsilon_{j,t}, \tag{3}$$

where $\Delta A_{j,t}$ denotes the monthly change in reserve asset category $j \in \{$T-bills, Reverse repo, Deposits/Other$\}$ and $\Delta USDC_t$ denotes the monthly change in USDC market capitalization, in billions. The coefficients $\beta_{j,k}$ measure how a \$1 change in USDC market capitalization is associated with reserve-asset growth contemporaneously ($k = 0$) and over a four-month horizon ($k = 0, 1, 2, 3$).[22] The distributed-lag

[22]This specification is useful because contemporaneous comovement is partly mechanical given the reserve identity, $\Delta USDC_t \equiv \Delta T\text{-}bills_t + \Delta Rev.Repo_t + \Delta Deposits_t$, which by construction holds with

specification therefore captures both the contemporaneous allocation and the dynamic timing of adjustment across reserve categories. We summarize the results by reporting $\beta_{j,0}$ together with the cumulative four-month response, $\sum_{k=0}^{3} \beta_{j,k}$.

Table 3 reports the estimates. A $1 increase in USDC market capitalization is associated with approximately $0.30 of contemporaneous T-bill purchases and an additional $0.45 of T-bill purchases cumulated over the following three months, for a four-month cumulative response of roughly $0.75. By contrast, reverse repo absorbs about $0.45 on impact but the allocation declines over the following months. The estimates for deposits display the sign pattern consistent with temporary buffering: positive on impact but trending toward zero over time. Taken together, these estimates suggest lagged reallocation from deposits and reverse repo toward T-bills in the months following the initial inflow, in addition to a sizable contemporaneous T-bill allocation.[23] Cross-correlations between monthly changes in USDC market capitalization and T-bills, and between changes in deposits and in T-bills confirm this dynamic – they are highest at the two-month window (0.45 and 0.39 respectively).[24]

Table 3: USDC reserve allocation estimates per $1

Estimate	T-bills	Rev. repo	Deposits
$\beta_{0,k}$	0.304**	0.445**	0.251
$\sum_{k=0}^{3} \beta_{j,k}$	0.755**	0.183	0.062

Note: This table reports contemporaneous and cumulative estimates defined in Equation (3). Newey-West standard errors with *, **, *** denoting significance at the 10%, 5%, and 1% level, respectively.

3.2 Event studies

We next present event study evidence that provides intuitive, reduced-form support for a causal effect of stablecoin flows on T-bill yields.

the 'Deposits/Other' category absorbing any residual. We use 'Deposits' as shorthand for the 'Deposits/Other' category throughout this subsection.

[23] Daily data are unfortunately not available. *Within* a month, the estimate on deposits is likely to be considerably larger on impact.

[24] These statistics describe the average behavior of reserve management over the sample period. Reserve management practices are unlikely to remain constant over time because the relative attractiveness of different reserve assets varies and could influence allocation decisions. A more detailed treatment of reserve management dynamics is beyond the scope of this paper.

We select four plausibly exogenous stablecoin flow-inducing events: the Terra-Luna crash (May 9, 2022), the FTX collapse (November 8, 2022), the US presidential election (November 6, 2024), and the launch of the TRUMP token (January 17, 2025).[25] The first two events were crypto-specific shocks to large institutions within the industry and generated outflows. The third and fourth generated inflows instead. The November 6 election brought to power a president who ran on an openly pro-crypto agenda. The January 17 launch of the 'TRUMP' token was a crypto-specific surprise, announced unexpectedly three days before the presidential inauguration.

We evaluate the behavior of stablecoin flows and T-bill spreads (computed as the 3-month minus the 6-month yield) around these events. Figure 6 traces the average change in stablecoin flows and the T-bill spread 15 days before and after these events. To make outcomes comparable across inflow (solid light blue lines) and outflow (dashed light blue lines) events, we normalize all flows to inflows. Solid dark blue lines capture the average across all four events. A stark change in the rate of stablecoin inflows in the days following these events is accompanied by a notable compression of the 3-month yield relative to the 6-month yield. In contrast, ahead of the events both stablecoin flows and the T-bill spread hover closely around zero.

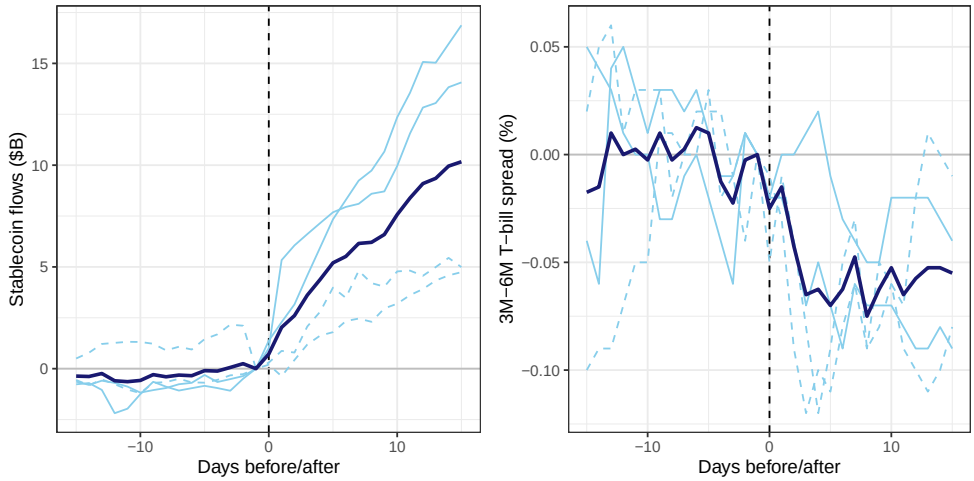
Taken together, these event studies offer reduced-form, descriptive evidence of the channel we estimate: large stablecoin flow shocks coincide with a compression of the front end of the Treasury yield curve relative to slightly longer tenors.

3.3 Regression specification

Our main analysis investigates the relationship between stablecoin flows and US T-bill yields. We focus on the 3-month T-bill yield as our benchmark outcome for two reasons. First, and most importantly, this is the tenor most representative of stablecoin issuers' preferred habitat, as confirmed by USDC's reserve disclosures and Tether's

[25] We do not include the passage of the GENIUS Act in mid-2025 in this set. Although the Act is plausibly the most consequential regulatory event in our sample, it's buildup was a gradual and partly anticipated process, and it occurred against a backdrop of rising short-term yields, thereby producing only modest stablecoin inflows. Accordingly, it is not well suited to the type of idiosyncratic, near-exogenous event we are after.

Figure 6: Change in stablecoin flows (left) and T-bill spreads (right) around flow-inducing events (all events normalized to inflows)



Note: the four events refer to (i) May 9, 2022 Terra-Luna crash, (ii) Nov 8, 2022 FTX collapse, (iii) Nov 6, 2024 US presidential election, (iv) Jan 17, 2025 Trump launches memecoin. The thin dashed lines refer to outflow-inducing events (i) and (ii), and the thin solid lines refer to inflow-inducing events (iii) and (iv). The dark thick line is the average over the four events. All series are indexed 0 on day prior to the event day (time $t - 1$=0).

publicly stated investment horizon.[26] The 3-month tenor is also the most liquid and widely quoted among short-term Treasuries, making it the most likely to reflect demand pressures promptly.

Our empirical strategy uses local projections to obtain estimates of the effect of interest.[27] Simple univariate linear projections that regress 3-month T-bill yields on our measure of stablecoin flows are likely subject to endogeneity bias arising from both omitted variables (as many confounder variables may simultaneously affect T-bill yields) and reverse causality (because T-bill yields themselves may also affect stablecoin flows). In Appendix A we present evidence that such biases can be quite large.

[26] USDC reserve disclosures provide securities positions at the CUSIP level and rarely report holdings with maturities beyond three months. While USDT's reserve disclosures are less transparent, Tether's CEO has publicly stated that the issuer focuses on T-bill investments maturing no later than 90 days; see for example the interview in the Odd Lots podcast.

[27] In our setting, local projections are advantageous over standard regression models because they allow for asynchronous effects of flows on yields, which matters in light of the discussion in Section 3.1. Moreover, such asynchronous effects could arise due to stablecoin issuers minting coins in advance before circulating them. Tether has publicly disclosed its practice of advanced minting. One instance occurred in July 2025 when it minted $1 billion on both Ethereum and Tron. The CEO clarified that these coins were minted in advance but were not yet circulating, because they anticipated increased demand.

We start with the following specification:

$$y^{3M}_{t+h} - y^{3M}_{t-1} = \alpha_h + \phi_h[y^{3M}_{t-1} - y^{3M}_{t-5}] + \beta_h Flow(5d)_t + \sum_{k \in K} \gamma^k_h [y^k_{t+h} - y^k_{t-1}] + \theta_{1h} Q^{3M}_t + \theta_{2h} \mathbf{1}_{t[Q^{3M}_t > 0]} + \theta_{3h} MPS_t + \mathbf{\Lambda}'_h \mathbf{X}_t + e_{t+h}, \quad (4)$$

where β_h provides a sequence of estimates that trace the impulse response function (IRF) of 5-day stablecoin flows, $Flow(5d)_t$, on h-day changes in 3-month T-bill yields, $y^{3M}_{t+h} - y^{3M}_{t-1}$, conditional on a number of controls.

Equation (4) conditions the estimate of β_h on several sets of control variables. The first, $y^k_{t+h} - y^k_{t-1}$ with $k = \{FFR, 6M, 1Y\}$, controls for the forward evolution of short-term yields aside from the 3-month yield. Specifically, we control for proximate, but potentially *untreated* tenors: the FFR, 6-month and 1-year bill yield. These maturities are close to the 3-month tenor, but they likely fall outside the preferred habitat of stablecoin issuers.[28] Conditional on these controls, estimates of β_h can be interpreted as the effect of stablecoin flows on 3-month T-bill yields in excess of changes to yields of proximate maturities.

Second, we control for 3-month T-bill issuance. T-bills are auctioned roughly once a week or every two weeks, so the daily-frequency issuance data has many zeros. To account for the high density of zeroes in the daily data, we control for both the quantity of issuance, Q_t, and issuance days with an indicator variable, $\mathbf{1}_{t[Q^{3M}_t > 0]}$.

Third, we control for high-frequency monetary policy shocks, MPS_t. As standard in the literature, we compute this shock series using changes in 3-month OIS rates in a 30-minute window around FOMC announcements (30 minutes before to 30 minutes after).

Finally, $\mathbf{\Lambda}'_h \mathbf{X}_t$ collects a broader set of contemporaneous controls. The vector $\mathbf{X}_t$ comprises (i) 5-day changes in the FFR and Treasury yields across the curve (1M, 3M, 6M, 1Y, 2Y, 10Y), in the (log) prices of Bitcoin and Ether, in MMF assets under manage-

[28] The GENIUS Act restricts reserve positions in Treasury securities to those maturing in 93 days or less, while the FFR is an interbank overnight rate.

ment, and in short-term Treasury ETF flows; and (ii) both levels and 5-day changes of variables capturing macro-financial conditions and Treasury-market frictions: the VIX, the (log) S&P 500, the (log) gold and Brent prices, the (log) broad dollar NEER, the Citigroup Economic Surprise Index, the TGA balance, the ON-RRP balances, and the Treasury MCI. These controls ensure that β_h captures the effect of stablecoin flows on T-bill yields orthogonal to concurrent movements in macro-financial conditions, cryptoasset markets, and Treasury-specific frictions. Summary statistics for the full set of controls are reported in Table 5 in Appendix C.2.

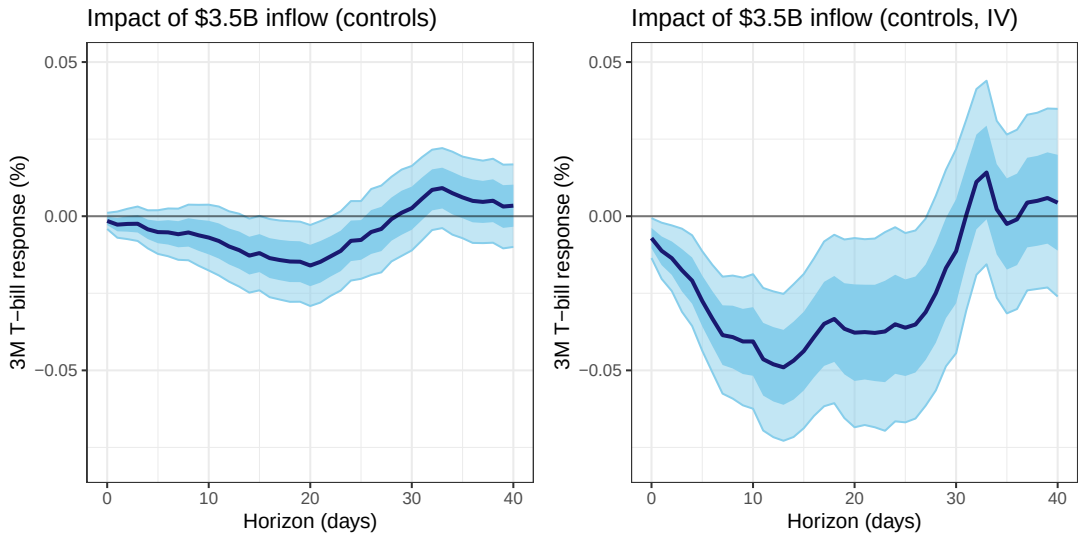
While carefully selected controls may help reduce endogeneity bias in β_h, they may not fully eliminate it. Therefore, in addition to introducing controls, we consider an instrumental variable for $Flow(5d)_t$ in Equation (4) using the granular IV discussed in Section 2.3, which captures plausibly exogenous variation in stablecoin flows orthogonal to common factors.

3.4 Main results

The local projection estimates confirm and sharpen the event study evidence, revealing a statistically significant and economically meaningful compression of 3-month T-bill yields following stablecoin inflows. Figure 7 presents the IRFs after including controls (left panel) and after additionally instrumenting flows with the granular IV (right panel). With controls only, we estimate that a $3.5B aggregate stablecoin inflow (roughly two standard deviations in our sample) compresses 3-month T-bill yields by less than 1 bp within 10 days, with a trough of about 1.5 bps at 20 days; this controls-only estimate is not statistically distinguishable from zero at conventional levels (except briefly at around 20 days). When we additionally instrument stablecoin flows with the granular IV, we find a statistically significant contemporaneous effect of 0.71 basis points, an effect of about 4 bps within 10 days, deepening to a trough of about 5 bps at 13 days, with the IRF remaining around 3 to 4 bps over horizons of 10 to 25 days before reverting to zero. We refer to this finding as our baseline effect.

Overall, the results point to substantially smaller effects when endogeneity con-

Figure 7: IRF of $3.5B stablecoin inflow on 3-month T-bill yields



Note: IRF estimate produced from local projection specified in Equation (4). A $3.5B inflow is approximately a 2-standard deviation flow. Darker and lighter shaded regions correspond to 68% and 95% Newey-West confidence bands, respectively. The right panel instruments 5-day stablecoin flows in the local projection with the granular IV defined in Section 2.3.

cerns are addressed. Compared to Figure 15 in Appendix A, both estimates are sharply attenuated, consistent with omitted-variable and simultaneity biases pushing the naive estimate deep into negative territory. The instrumented estimate is somewhat larger in absolute value than the controls-only estimate and is statistically significant across the trough region. This pattern is consistent with controls absorbing both confounding co-movement and some of the causal exogenous flow variation that the granular IV restores: the IV isolates a within-stablecoin idiosyncratic shifter that the broad set of controls alone cannot recover.

Recast as a price multiplier, our estimates are moderate by the standards of the literature on Treasury demand pressure. The price multiplier (i.e the price appreciation, as a fraction of the underlying market, generated by a flow equal to one percent of that market) is the standard cross-asset metric, because basis points per dollar of purchases are not directly comparable across maturities.[29] Over our sample, T-bills outstanding average approximately $5 trillion, so a $3.5 B inflow corresponds to an

[29] A basis point translates into very different price movements across the curve, and the bill market is larger and more liquid than the long-term Treasury market typically targeted by quantitative easing.

upper bound of about 0.07% of the market, assuming a 100% allocation of flows to T-bills. With modified duration of about 0.25 at the 3-month tenor, the trough yield response of roughly 5 basis points implies about 0.013% price appreciation, or a price multiplier of approximately 0.18. This is considerably below the multipliers implied by canonical QE estimates,[30] and broadly in line with recent evidence at similarly short maturities: Alquist et al. (2025) find repo-market spreads of 2 to 6 basis points for a $3 billion drawdown in foreign central bank Treasury balances, while Doerr et al. (2023) report that a one-standard-deviation increase in the MMF allocation to T-bills lowers T-bill yields by at least 10 basis points relative to the RRP rate. The smaller multiplier reflects the higher liquidity of the bill market and the absorption of bill-level effects by our controls for nearby tenors.

Additional analyses. We probe the baseline result with three sets of robustness checks: alternative specifications of the dependent variable and the flow frequency, alternative constructions of the granular IV, and the propagation of stablecoin flows across other Treasury tenors.[31] In addition, in Appendix B we present consistent results using an entirely different instrument, constructed as the unforecastable component of a summary measure of crypto prices that is orthogonal to traditional financial market conditions.

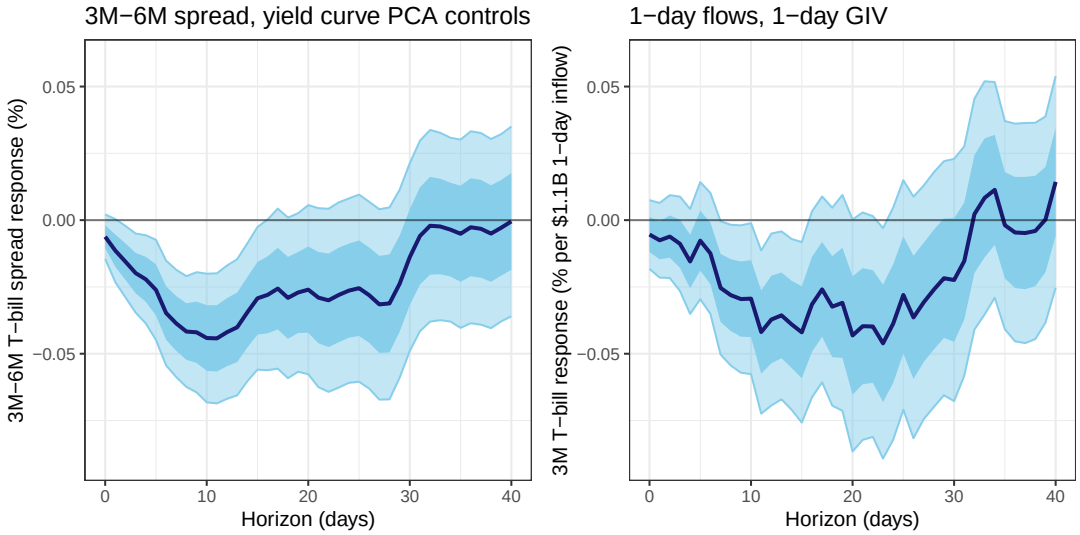
We first address two concerns about the specification. The first is that several Treasury yields used as controls in Equation (4) are highly correlated with the dependent variable. We re-estimate the baseline using the 3-month to 6-month T-bill spread as dependent variable while removing the forward changes in the FFR, 6-month, and 1-year yields from the lead-h control set, and replacing the 5-day yield changes in $\mathbf{X}_t$ with the first two principal-component factors of the yield curve. The second is that our 5-day flow measure mechanically generates autocorrelation. While our HAC

[30] A separate literature (e.g., Mian et al., 2025) estimates long-run aggregate-supply elasticities of government debt; those magnitudes are not directly comparable to our short-horizon partial-equilibrium price impact.

[31] We also validate our market-capitalization-based flow measure against blockchain transaction data. Using mint and burn data for USDT (Ethereum, Tron, Omni), USDC (Ethereum), TUSD (Ethereum), BUSD (Ethereum), and PYUSD (Ethereum), we construct an alternative stablecoin-supply series as the cumulative net mints. The correlation between this alternative measure and our baseline market-capitalization measure is above 0.99, so we do not report the IRF results separately.

standard errors account for this in inference, we also re-estimate the local projection with 1-day stablecoin flows, $Flow(1d)_t$ (instrumented with the daily granular IV), controlling for 1-day changes across $\mathbf{X}_t$ and adding lagged 1-day flows as an additional control. Figure 8 reports the IRFs from these two exercises. Both deliver IRFs that are qualitatively similar to the baseline; the spread-and-PCA specification produces slightly larger point estimates.[32]

Figure 8: Robustness: spread & PCA specification (left) and 1-day flows (right)

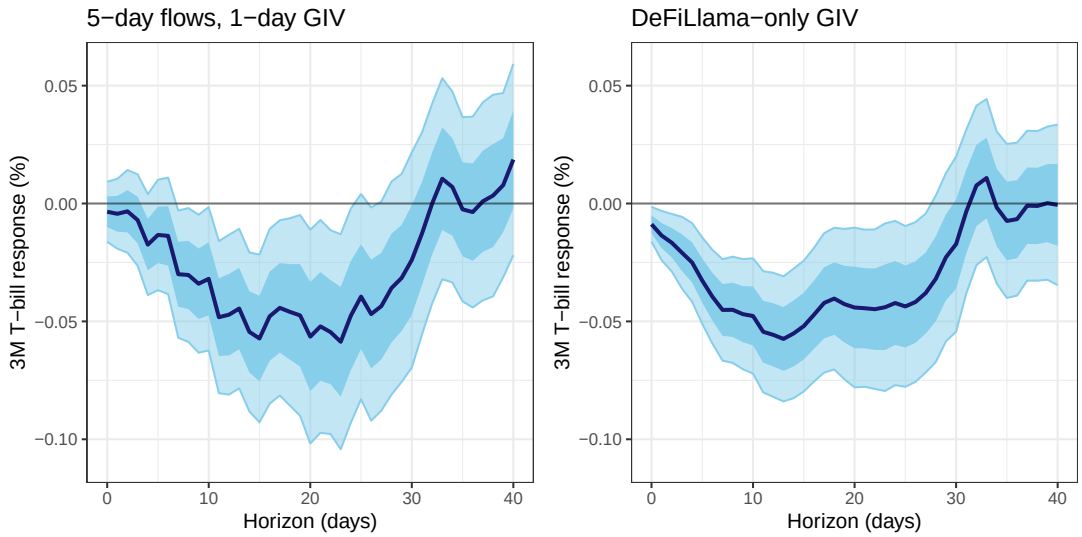


Note: The left panel reports the IRF of an instrumented $3.5B stablecoin inflow on the 3-month to 6-month T-bill spread, with yield-curve principal components replacing the 5-day yield changes in $\mathbf{X}_t$. The right panel reports the IRF of an instrumented 1-day stablecoin inflow (approximately $1.1B for a 2-standard-deviation flow) on the 3-month T-bill yield, with $X(1d)_{p,t}$ replacing $X(5d)_{p,t}$ and $Flow(1d)_{t-1}$ added as a lagged control. Darker and lighter shaded regions correspond to 68% and 95% Newey–West confidence bands, respectively.

We next present robustness checks with respect to the construction of the granular IV. We re-estimate the baseline specification using two alternative versions of the instrument: the daily GIV_t in place of the 5-day rolling sum $GIV(5d)_t$ (keeping 5-day flows on the right-hand side), and a granular IV constructed from the DeFiLlama-only panel without the Token Terminal substitutions discussed in Section 2.1. Figure 9 reports the two IRFs. The baseline finding is robust across these alternatives.

[32] We also estimated the local projection at non-overlapping weekly frequency and obtained a qualitatively unchanged IRF, with the same sign, comparable trough magnitude, and wider bands consistent with the reduction in effective sample size; we do not report it separately and the results are available upon request.

Figure 9: Robustness: alternative granular-IV constructions

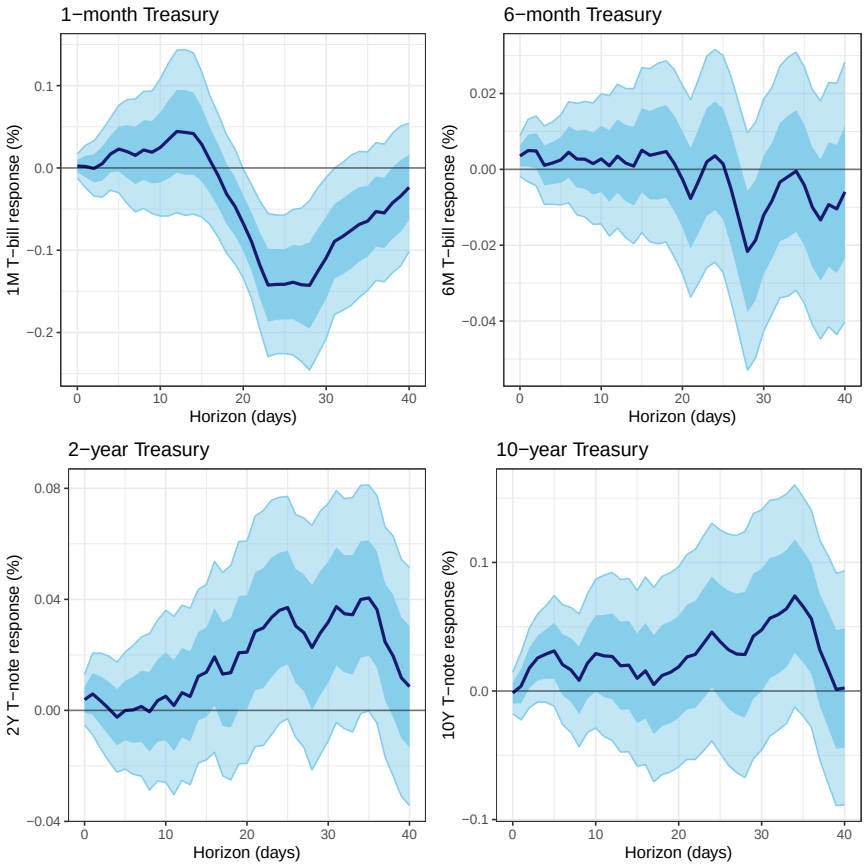


Note: The left panel reports the IRF of a \$3.5B stablecoin inflow on the 3-month T-bill yield, instrumented with the daily granular IV GIV_t instead of the 5-day rolling sum. The right panel uses a granular IV constructed from the DeFiLlama-only panel, without the Token Terminal substitutions of Section 2.1. Darker and lighter shaded regions correspond to 68% and 95% Newey–West confidence bands, respectively.

Finally, we examine whether the effect on yields is concentrated at the tenor associated with stablecoin issuers' preferred habitat. We replace the 3-month yield as the dependent variable in Equation (4) with four alternative tenors: the 1-month and 6-month T-bills, which are proximate neighbors; and the 2-year and 10-year Treasury yields, which are the most widely quoted reference rates beyond our benchmark.[33] Figure 10 reports the four IRFs. The 1-month yield, which falls squarely within stablecoin issuers' investment universe, declines significantly. The 6-month, 2-year, and 10-year yields show a statistically insignificant response, consistent with the impact of stablecoin flows being concentrated within the preferred-habitat segment.

[33]For each spillover regression, we remove from the lead-h control set K the tenor that coincides with the dependent variable, when applicable.

Figure 10: Instrumented IRF of $3.5B stablecoin inflow on yields other than the 3-month tenor



Note: IRF estimates produced from the local projection in Equation (4) instrumenting 5-day stablecoin flows with the baseline granular IV $GIV(5d)_t$, with the 1-month, 6-month, 2-year, and 10-year Treasury yields, respectively, as dependent variables. A $3.5B inflow is approximately a 2-standard-deviation flow. Darker and lighter shaded regions correspond to 68% and 95% Newey–West confidence bands, respectively.

3.5 Liquidity conditions, scale, and state-dependent price impact

We next test for state dependence along two dimensions. The first is cyclical Treasury-market liquidity: when dealers and arbitrageurs face binding balance-sheet constraints, demand shocks have larger price impact because the marginal absorber is less elastic (He and Krishnamurthy, 2013; Stein and Wallen, 2025; D'Avernas and Vandeweyer, 2024). The second is the maturation and scale of the stablecoin sector, which we capture with two complementary proxies. Under preferred-habitat segmentation (Vayanos and Vila, 2021), demand shocks within the bill segment have disproportionate effects

on bill yields, and the absolute volume of such shocks grows mechanically with sector size. Over the same period, regulatory clarity culminating in the GENIUS Act, broader institutional adoption, and the rapid growth of financialized crypto vehicles such as spot Bitcoin and Ether ETFs and exchange-listed crypto derivatives further integrated stablecoins with Treasury markets. We therefore use the continuous log market capitalization of the sector and a discrete post-2024 indicator as two complementary tests of the same underlying state: a larger, more mature stablecoin and crypto-asset industry.

We implement state-dependence by extending Equation (4) with a state-by-flow interaction and a state main effect:

$$y_{t+h}^{3M} - y_{t-1}^{3M} = \alpha_h + \phi_h[y_{t-1}^{3M} - y_{t-5}^{3M}] + \beta_{0h} Flow(5d)_t + \beta_{1h} Flow(5d)_t \cdot S_t + \theta_h S_t + \sum_{k \in K} \gamma_h^k [y_{t+h}^k - y_{t-1}^k] + \theta_{1h} Q_t^{3M} + \theta_{2h} \mathbf{1}_{t[Q_t^{3M} > 0]} + \theta_{3h} MPS_t + \mathbf{\Lambda}_h' \mathbf{X}_t + e_{t+h}, \quad (5)$$

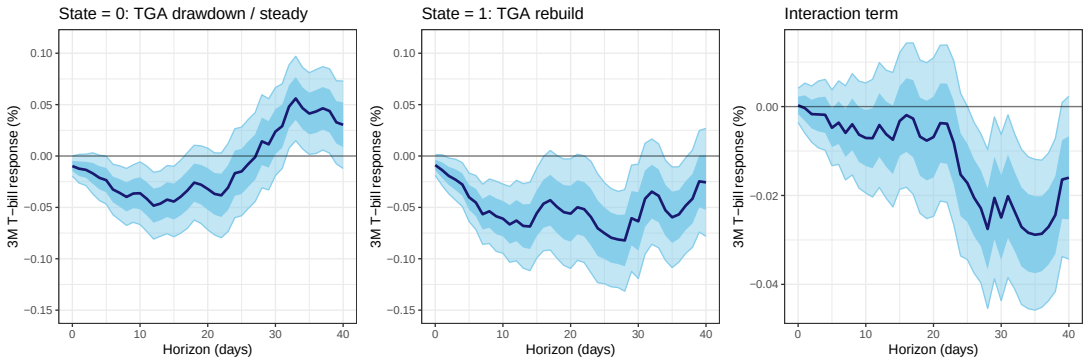
where S_t is the state variable. The coefficient β_{0h} traces the IRF in the reference state ($S_t = 0$), the sum $\beta_{0h} + \beta_{1h}$ traces it in the alternative state ($S_t = 1$), and the differential β_{1h} summarizes the additional impact attributable to the state. When S_t is the level of a variable that already enters $\mathbf{X}_t$, we drop that variable from $\mathbf{X}_t$ to avoid mechanical conflation.

Treasury-market liquidity conditions. We use two complementary proxies. The first is built from the Treasury General Account (TGA): we define $S_t = \mathbf{1}_{t[\Delta_{60}\text{TGA} > 0]}$, an indicator for periods in which the 60-day change in the TGA balance is positive, that is, periods of presistent Treasury cash buildup. When the TGA balance rises, reserves drain from the banking sector by an offsetting amount, tightening intermediary funding conditions and creating potentially stressful liquidity conditions for the dealers and arbitrageurs that absorb Treasury supply. The second is the Treasury MCI, which by construction captures market illiquidity and indicators of impaired arbitrage. We build the state indicator based on a z-score whereby $state = 0$ corresponds to the one standard deviation below the sample mean ($z = -1SD$) and

$state = 1$ to one standard deviation above ($z = +1SD$).

Figure 11 shows the TGA evidence. In the reference state (TGA flat or drawing down), the effect is both smaller and less clearly distinguishable from zero. In the rebuild state, the IRF deepens to about -8 bps and is highly significant. The differential is significant at the 1% level at horizons beyond 20 days in both specifications, with a trough around -3 bps.

Figure 11: State-dependent IRF: Treasury General Account (TGA) rebuild

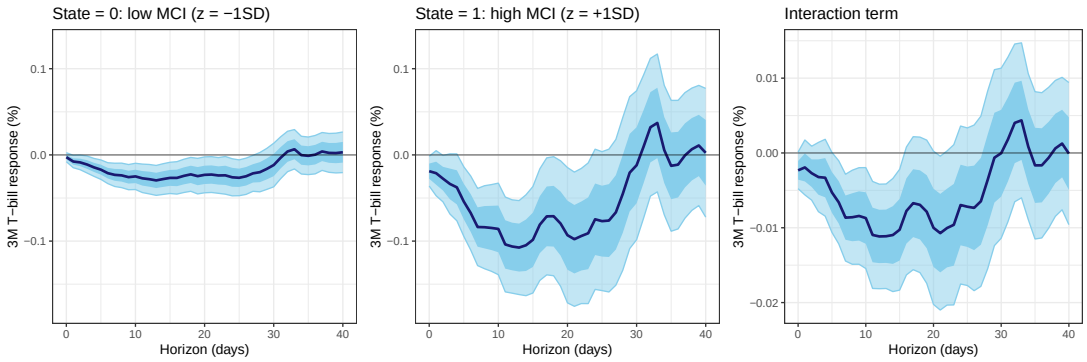


Note: State-dependent IRF of a $3.5B stablecoin inflow on 3-month T-bill yields, with the state defined by the sign of the 60-day change in the Treasury General Account balance. We classify any positive 60-day change as the rebuild state. Darker and lighter shaded regions correspond to 68% and 95% Newey–West confidence bands, respectively.

Figure 12 shows the MCI evidence. Incremental MCI stress produces incremental amplification of the channel: a one-standard-deviation increase in the MCI deepens the trough IRF to about -9.0 bps. The differential is also statistically significantly different from zero, especially at short horizons. The qualitative agreement of the TGA and MCI results — both pointing to amplification under intermediary stress — supports the intermediary-frictions interpretation.

For both indicators we also explored tail-binary cuts that compare upper and lower quartiles (with the middle 50% of the distribution dropped). Results, available upon request, point to even starker differences by state and the potential for non-linearities: not only is the channel switched on during TGA rebuilds or under strained Treasury market conditions as measured by the MCI, but the more aggressive the rebuild (or the higher the MCI), the larger the price impact, consistent with a non-linear dependence of price impact on dealer balance-sheet stress.

Figure 12: State-dependent IRF: Treasury Market Conditions Index (MCI)



Note: State-dependent IRF of a $3.5B stablecoin inflow on 3-month T-bill yields, with the state defined by the MCI of Aldasoro et al. (2025). The state S_t is the MCI z-scored: state=0 corresponds to one standard deviation below the sample mean ($z = -1$) and state=1 to one standard deviation above ($z = +1$). Darker and lighter shaded regions correspond to 68% and 95% Newey–West confidence bands, respectively.

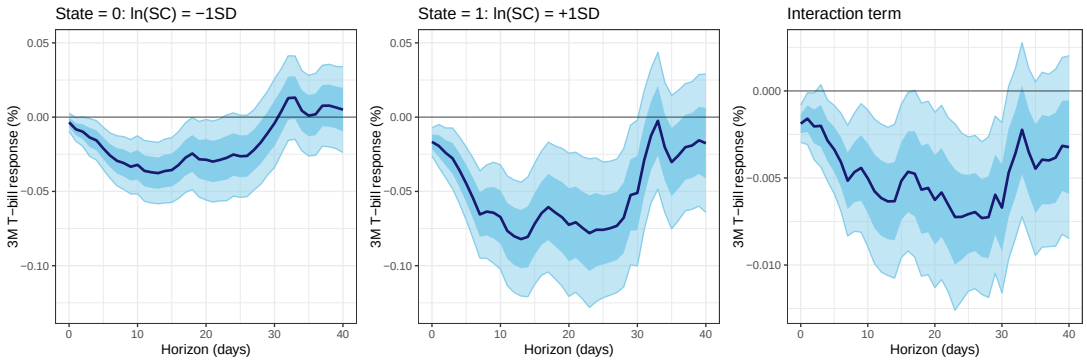
Sector scale and maturation. Here again we present two proxies. The first one is continuous and interacts flows with the z-scored log of aggregate stablecoin market capitalization. The economic rationale is preferred-habitat segmentation: as the sector has grown, a 2-standard-deviation flow corresponds to a larger absolute volume of T-bill demand, and under segmentation (Vayanos and Vila, 2021; Krishnamurthy and Vissing-Jorgensen, 2012; Greenwood and Vayanos, 2014) larger within-habitat shocks should command larger price impact.[34]

Figure 13 reports the result. The reference-state IRF (-1 standard deviation below the mean of $\log(SC)$) is already significantly negative, with a trough of about -3.7 bps. The high-state IRF (at $+1$ standard deviation above the mean) is deeper, with a trough of about -8.2 bps. The differential is also statistically significant.

The second indicator we explore is discrete and aims to proxy for the maturation of the sector. Along with sector scaling (Figure 13), structural changes accumulated: rapid progress on US stablecoin legislation culminating in the GENIUS Act in mid-2025, broader institutional adoption, increased disclosure standards, and the launch and rapid growth of spot cryptoasset ETFs in January 2024 that further integrated the crypto ecosystem with traditional financial markets. To capture this regime shift, we

[34]This logic is closely related to D'Avernas and Vandeweyer (2024)'s argument that T-bill scarcity creates inelastic-supply conditions in which demand-side shocks magnify.

Figure 13: State-dependent IRF: stablecoin sector scale



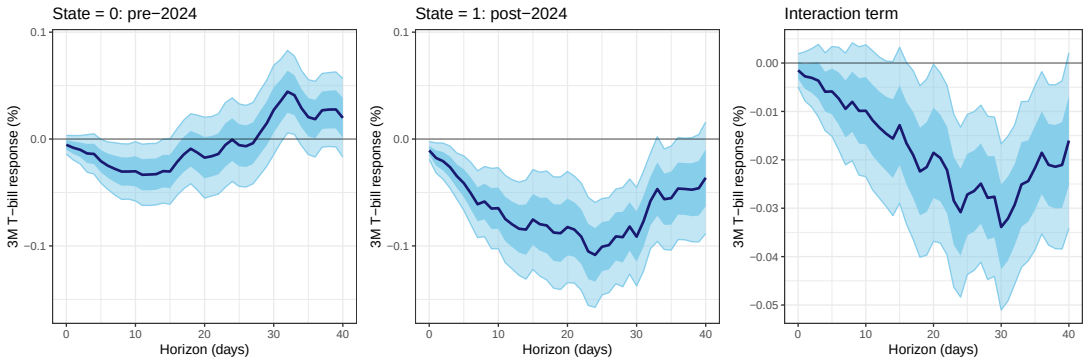
Note: State-dependent IRF of a $3.5B stablecoin inflow on 3-month T-bill yields, interacting flows with the z-scored log of aggregate stablecoin market capitalization. State=0 corresponds to one standard deviation below the sample mean of $\log(SC)$ ($z = -1$); state=1 to one standard deviation above ($z = +1$). Darker and lighter shaded regions correspond to 68% and 95% Newey–West confidence bands, respectively.

use a binary indicator for the post-2024 period.

Figure 14 shows that the channel is present but weaker before 2024 with an impact of about 3.3 bps. After 2024, the trough of the impact increases to about -10 bps. The differential is large (around -3.5 bps at the trough) and significant at the 1% level. This result is the discrete-state companion to the continuous log-scale finding: both isolate the same underlying maturation trajectory. The post-2024 indicator additionally absorbs structural shifts in stablecoin issuer participation in Treasury markets — regulatory clarity on reserve composition, broader institutional uptake of stablecoin balances, and the deeper integration of crypto-asset markets with traditional finance over 2024–2025 — which helps explain why the differential is larger than the scale-based amplification alone would imply.

Taken together, the state-dependent findings paint a consistent picture along two dimensions. Cyclically, the channel is amplified during episodes of Treasury-market stress; whether proxied by TGA rebuilds or by the broader MCI measure of impaired Treasury-market liquidity. Structurally, the channel scales with the maturation of the stablecoin sector, whether measured continuously through log market capitalization or discretely through a post-2024 indicator that additionally captures regulatory and crypto-market integration over 2024–2025. The cyclical and structural channels

Figure 14: State-dependent IRF: post-2024 regime



Note: State-dependent IRF of a $3.5B stablecoin inflow on 3-month T-bill yields, with the state defined as an indicator for dates from January 2024 onward. Darker and lighter shaded regions correspond to 68% and 95% Newey–West confidence bands, respectively.

are supported by distinct economic mechanisms. First, intermediary frictions amplify within-habitat demand shocks when dealer balance sheets are constrained. Second, preferred-habitat segmentation translates larger absolute flows into larger price moves and structural integration plausibly altered the marginal demand schedule for T-bills from stablecoin issuers. Taken together, the price impact of stablecoin flows is a function of both cyclical market conditions and the maturation of the sector.

4 Discussion and policy implications

Sizing up the implications of potential future growth. If the stablecoin sector continues to grow, its footprint in Treasury markets will likely expand commensurately. Our baseline estimates can be used to assess the potential implications of stablecoin growth scenarios for Treasury yields. Suppose the stablecoin sector grows to $2 trillion by 2028, as suggested by the Treasury Borrowing Advisory Committee.[35] This would entail roughly a 7-fold expansion relative to the end of our sample. If we assume that this growth represents new net demand for T-bills[36], and that flow variance

[35] As of end-2025, the market capitalization of the universe of stablecoins we consider was around $270 billion.

[36] In other words: assuming that growth does not come at the expense of other entities that are already invested in T-bills, such as MMFs — an upper-bound assumption, as some stablecoin growth may substitute for e.g. existing MMF demand.

scales proportionately with market size,[37] then a 2-standard-deviation flow would amount to roughly $9.5 billion, with an estimated impact of -9.5 to -12 bps on T-bill yields.[38] These estimates suggest that a growing stablecoin sector may eventually suppress short-term yields to an extent that meaningfully influences the transmission of Fed monetary policy to market-based yields.

Mechanisms. There are at least three channels through which stablecoin flows can impact Treasury market pricing. The first is a direct demand channel: stablecoin inflows translate into T-bill purchases, compressing yields to the extent that the marginal dollar flowing into stablecoins would not otherwise have been invested in T-bills (or would have eventually, but by a more elastic investor). The second channel is indirect, as demand for Treasuries from stablecoins could relieve dealer balance sheet constraints. By absorbing Treasury supply directly, stablecoin issuer purchases reduce the inventory that dealers must finance and thereby could compress the liquidity premium embedded in T-bill yields. Another indirect channel could arise through stablecoins' reverse repo positions collateralized by Treasury securities, which at least theoretically could impact the supply of Treasuries available to the market. The third channel is through signaling effects, as large inflows or outflows may serve as a public signal for institutional risk appetite. The state-dependent amplification we document, in particular the larger impact during periods of intermediary stress proxied by TGA rebuilds and by the MCI, is most naturally rationalized through the combination of the direct demand channel and the indirect channel of binding dealer constraints, consistent with He and Krishnamurthy (2013), D'Avernas and Vandeweyer (2024) and Stein and Wallen (2025). The strengthening of the channel as the sector matures and scales, whether captured continuously through $\log(SC)$ or discretely through the

[37] The sample variance of 5-day stablecoin flows is about ($1.74 billion USD)^2 $\approx$ 3.04. Multiplied by 7.4 (the implied scale-up from $270B to $2T), this gives a standard deviation of flows of about $4.7 billion, or a 2-standard-deviation flow of roughly $9.5 billion. A similar calculation using Citigroup's prediction of $1.6 trillion by 2030 (a 5.9-fold scale-up) implies a 2-standard-deviation flow of roughly $8.5 billion and a yield impact of -8 to -11 bps.

[38] To put these magnitudes in dollar terms, the price of a 3-month T-bill is approximately linear in its yield with a slope of about $0.25 per $100 face value per basis point: a 1 bp move in the 3-month yield translates into roughly a quarter cent per $100 of face value. A 4–5 bp trough thus corresponds to about $1–1.25 per $100 face value, and the -10 bp magnitude obtained under the $2 trillion scenario corresponds to roughly $2.5 per $100 face value — modest in price terms but meaningful as a sustained, demand-driven movement at the front end of the curve.

post-2024 indicator, is consistent with preferred-habitat segmentation (Vayanos and Vila, 2021): larger absolute demand shocks within the bill segment translate more forcefully into bill-yield movements as the within-habitat volume grows, and this size effect is reinforced as crypto markets become more institutionally integrated with traditional finance.

Policy implications. Our results carry direct implications for the design of stablecoin reserve regulation. The GENIUS Act, enacted in mid-2025, establishes a dual state-federal framework that requires US-issued payment stablecoin to be backed with short-term Treasury securities, repurchase agreements, deposits, and central bank reserves. This is a composition that, by construction, directly amplifies the demand channel we document. The Act's reserve-composition mandate makes the empirical relationship we estimate increasingly structural rather than incidental: stablecoin growth now translates almost mechanically into T-bill demand (again, conditionally on net new demand being generated), and the magnitudes we estimate could scale with sector size along the scenarios outlined above.

Beyond reserve composition, the asymmetry in reserve disclosure across major issuers carries its own implications. USDC's CUSIP-level reserve disclosures allow market participants to anticipate Treasury demand, whereas USDT's comparatively opaque reporting impedes both market monitoring and empirical analysis. Mandates for standardized reporting could mitigate risks arising from concentrated ownership of Treasury securities by making some of these flows more transparent and predictable. The fact that we measure significant yield effects already at the sector's current scale — before the full effects of the GENIUS Act and the projected market growth have materialized — suggests that these regulatory considerations are not merely prospective but already empirically relevant.

Monetary policy is also set to interact with the role of stablecoins as Treasury investors. For example, in a scenario where stablecoins become very large, stablecoin-driven yield compression may weaken the Fed's control over short-term rates, potentially necessitating coordination among regulators for monetary policy to effectively

influence financial conditions. This idea is not merely theoretical. 'Greenspan's Conundrum' of the early 2000's, for example, rose out of the observation that the Fed's monetary policy was not transmitting as expected to long-term Treasury yields. At the time, it was largely attributed to outsized foreign investor demand for Treasury securities affecting Treasury market pricing. Moreover, demand from a large and growing stablecoin sector may push short-term rates below the floor set by the Fed under an 'ample reserves' regime. The Fed's overnight reverse repo facility ameliorated similar issues with MMFs. Unlike MMFs, stablecoin issuers currently lack access to liquidity facilities, so that demand-side pressures from stablecoins cannot, under current arrangements, be offset through the same policy tools used to manage MMF behavior.

Finally, our findings carry important financial stability implications that are likely to grow in significance if the stablecoin sector grows further. First, stablecoin inflows into Treasury markets create fire sale risk: our estimates likely constitute a lower bound for outflow effects, as they are identified from a period of secular market growth that affords issuers discretion over the timing of purchases. Under redemption stress, that discretion largely disappears, and fire sale dynamics may generate non-linear price impacts well in excess of our baseline estimates. Second, our state-dependent results are particularly concerning from a systemic perspective: stablecoin price impact is largest precisely when Treasury markets are under intermediary stress and as the sector itself matures in scale and institutional integration — conditions that may coincide with broader financial stress. It is not unreasonable to foresee scenarios in which runs on stablecoins occur within a context of adverse liquidity conditions, making the amplified estimates from these states the empirically relevant ones under stress.[39] Third, stablecoin reverse repo positions collateralized by Treasury securities may facilitate basis trade arbitrage, amplifying the interconnection between crypto markets and Treasury market functioning. The financial stability impact of these mechanisms may be contained while the stablecoin sector remains relatively small,

[39]This could exacerbate existing concerns about the stability of the Treasury market and spillovers from the crypto ecosystem. See e.g. Financial Times: How the Treasury market got hooked on hedge fund leverage.

but this assessment could change rapidly given projected growth trajectories, and in the absence of discount window or lender-of-last-resort access that would provide a backstop under stress (Aldasoro et al., 2023).

Limitations. Our analysis is the first to provide evidence of stablecoins' emerging footprint in Treasury markets. However, our results should be interpreted with caution. First, we face data constraints, as the history of stablecoin market data is relatively short and the maturity disclosures of large stablecoins' reserve portfolios, particularly USDT, are incomplete. As a result, we must make assumptions about which T-bill tenor is most likely to be affected by stablecoin flows.

Second, there is always a residual risk of not fully addressing endogeneity. We control for a very broad set of confounders through the control set described in Section 2.2, including risk-sentiment and macro-financial variables, Treasury-market frictions, sectoral demand from MMFs and Treasury ETFs, T-bill issuance, and monetary policy shocks. We further sharpen identification using the granular instrumental variable described in Section 2.3, which exploits idiosyncratic within-stablecoin cross-sectional variation that is orthogonal to common factors by construction. We test robustness along several dimensions, including by complementing the analysis with an additional instrument in Appendix B. While these strategies materially reduce endogeneity concerns, residual mis-specification of the local projection model cannot be ruled out.[40]

5 Conclusion

Stablecoins have established themselves as significant players in short-term Treasury markets. We find that a $3.5 billion inflow lowers 3-month T-bill yields by approximately 0.71 basis points on impact and 4 basis points within 10 days, with a trough

[40] For example, our baseline local projection specification assumes a constant and linear relationship between stablecoin flows and horizon-h T-bill yields, which need not hold. If structural breaks arise as the stablecoin market matures, our estimates are likely conservative; the post-2024 state-dependent finding in Section 3.5 is consistent with such breaks. An additional potential concern is T-bill convexity, which we do not view as material at the short maturity we focus on: the relationship between T-bill price and yield is nearly linear there.

of close to 5 basis points around 13 days and an effect sustained between 3 and 4 basis points through horizons of 10 to 25 days. The impact is amplified along two dimensions. Cyclically, the channel intensifies in periods of Treasury-market stress. Structurally, the channel strengthens with the maturation of the sector. These effects are concentrated within stablecoin issuers' preferred habitat and are absent at longer maturities, consistent with a demand channel operating through direct T-bill purchases. The granular instrumental variable, which exploits the granular nature of stablecoin-chain pair data, isolates exogenous variation in flows that the broad set of controls alone does not capture and that ultimately drives the baseline estimate.

The state-dependent nature of our findings carries particular weight. Stablecoins' price impact is largest precisely when Treasury markets are under intermediary stress and as the sector matures in scale and institutional integration — conditions that may coincide with broader financial stress and that render our baseline estimates a likely lower bound under severe redemption scenarios. It is not unreasonable to foresee stress situations in which runs on stablecoins occur within a context of adverse liquidity conditions, making the amplified estimates from these states the empirically relevant ones. Taken together, our results point to a growing and consequential interconnection between cryptoasset markets and traditional fixed income markets that demands regulatory attention — to reserve transparency, to the absence of lender-of-last-resort access for stablecoin issuers, and to the potential for stablecoin-driven yield compression to complicate monetary policy transmission if the sector grows.

Our work points to several interesting avenues for further research as more granular data becomes available. Future work could explore cross-border spillovers of stablecoin flows to Treasury markets through foreign holders, the strategic interaction between stablecoin issuers and money market funds as competing investors in the T-bill market, the potential for non-linear fire sale dynamics during stablecoin runs, and the longer-run implications of the GENIUS Act's reserve-composition mandate for the demand channel we document. These questions are likely to grow in policy relevance alongside the sector itself.

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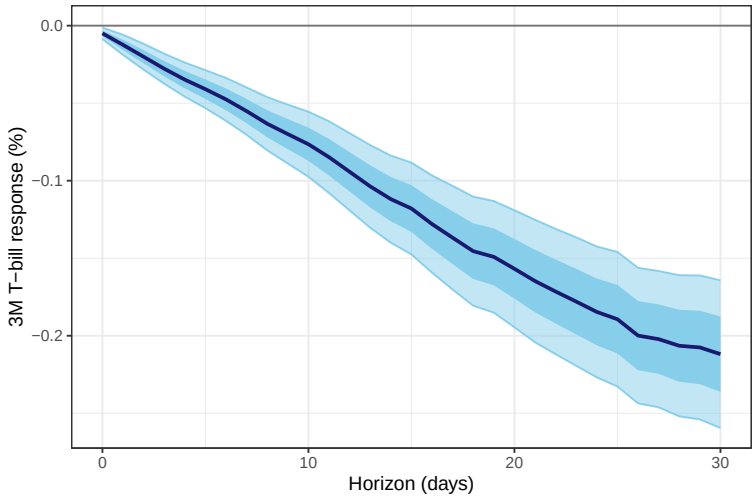
A Stablecoin flows, T-bill yields and endogeneity

In this appendix we present results from local projections that neither control for potential confounders nor use an instrument for stablecoin flows. This helps us illustrate the estimation biases that need to be considered. The estimation equation is given by:

$$y^{3M}_{t+h} - y^{3M}_{t-1} = \alpha_h + \beta_h Flow(5d)_t + e_{t+h}, \qquad h = \{0, ..., 30\}, \tag{6}$$

where as before β_h are a sequence of estimates that trace the raw impulse response function of 5-day stablecoin flows, $Flow(5d)_t$, on h-day changes in 3-month T-bill yields, $y^{3M}_{t+h} - y^{3M}_{t-1}$, absent any controls. Figure 15 reports the IRF, with estimates scaled to a $3.5B stablecoin inflow (approximately 2 standard deviations).

Figure 15: IRF of $3.5B stablecoin inflow on 3-month T-bill yields (no controls)



Note: IRF estimate produced from local projection specified in Equation (6). A $3.5B inflow is approximately a 2-standard deviation flow. Darker and lighter shaded regions correspond to 68% and 95% Newey-West confidence bands, respectively.

The local projection estimates suggest that a $3.5B inflow into stablecoins is associated with 3-month T-bills compressing by about 21 bps over the following 30 days. These estimates are implausibly large, as they imply an impact on short-term yields similar to that of a Federal Reserve interest rate cut.

The large estimates are likely explained by the presence of endogeneity. Endo-

geneity from simultaneity, for example, may be at play. Because stablecoins pay zero interest, the opportunity cost of holding them increases with interest rates.[41] As a result, it is possible for high interest rates to negatively impact stablecoin flows and for large stablecoin flows to negatively impact interest rates at the same time. Left unaddressed (as in Figure 15) and under simple but plausible assumptions, such simultaneity biases the IRF estimates downward, making them larger and more negative than the true effect of flows on yields.[42] The lag structure of the local projection specification in Equation (6) may alleviate some simultaneity concerns, but it cannot eliminate it on its own because of the forward-looking nature of financial markets. Moreover, because stablecoin flows do not occur in a vacuum, it is possible that the IRF estimates in Figure 15 are also subject to endogeneity from omitted variable bias. For example, macroeconomic conditions can jointly impact the demand for cryptoassets and stablecoins while also impacting Treasury yields.[43]

B Robustness: cryptoasset-shock instrument

As a robustness check, we re-estimate our headline specification using a daily version of the cryptoasset shock series of Aldasoro et al. (2025) as the instrument for stablecoin flows, in place of the granular IV of Section 2.3. The two strategies identify different margins of variation — the unforecastable, financial-conditions-orthogonal component of aggregate cryptoasset returns in this appendix, versus the stablecoin-chain pair granularity in the baseline — so agreement between them is informative.

[41] While stablecoins generally do not pay interest natively, holders can earn interest indirectly by placing balances on third parties such as exchanges or DeFi platforms offering interest or rewards. While it is difficult to recover the precise quantity of stablecoins earning interest indirectly with third parties, it is unlikely that the majority of dollar-backed stablecoins are earning indirect interest. As of Q3 2025, an average of $15 billion, or 20%, of USDC in circulation was held on Coinbase earning indirect interest, according to Coinbase's quarterly letter to shareholders. According to DefiLlama data, under $5 billion in USDC and USDT were locked into the largest DeFi lending protocol, Aave. For comparison, the outstanding supply of USDC and USDT was near $270 billion.

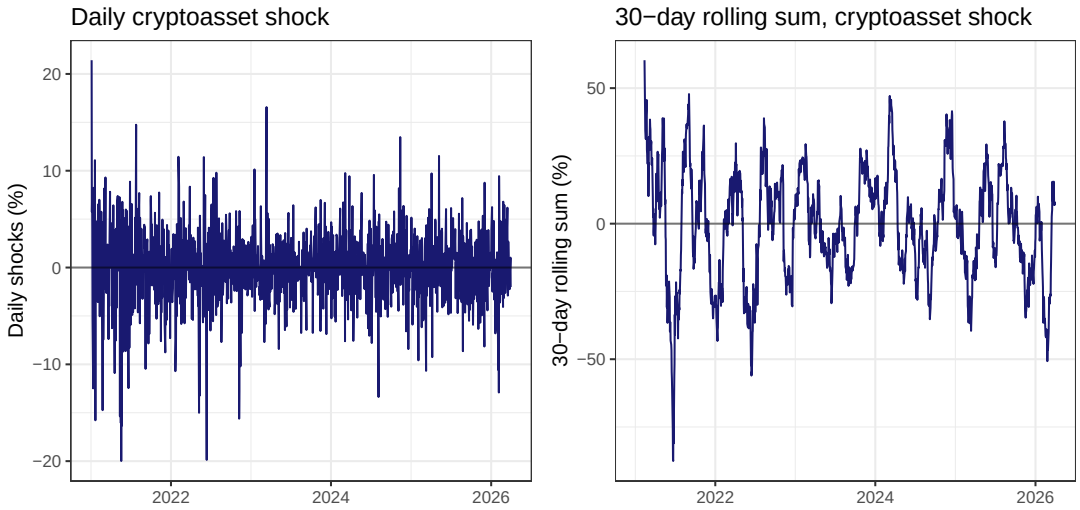
[42] See Ahmed and Rebucci (2024) for an in-depth analysis of how to sign the bias when estimating the flow effect on Treasury yields.

[43] E.g., inflation reduces the real return to holding stablecoins and typically pushes nominal Treasury yields higher. For evidence of how stablecoins react to monetary policy shocks, see Aldasoro et al. (2025). On the macroeconomic drivers of of cryptoasset adoption, see Ahmed et al. (2024). For a discussion of how adoption of crypto and stablecoins depends on Bitcoin prices (and how retail investors chase past returns), see Auer et al. (2025).

Construction. We compute the cryptoasset shock series following Aldasoro et al. (2025). We obtain daily log returns on the Bloomberg Galaxy Crypto Index (BGCI), an index spanning the largest cryptoassets by market capitalization that excludes stablecoins. We purge these returns of common-factor variation by estimating an elastic-net regression of BGCI returns on contemporaneous and lagged financial-market controls: the 5-day change in the 3-month Treasury yield, the (log) gold price, the (log) VIX, the (log) Brent price, the (log) US dollar NEER, the (log) S&P 500, the term spread, the Citigroup Economic Surprise Index, the Goldman Sachs financial conditions index, and the lagged BGCI return.[44] The residual R_t is, by construction, orthogonal to the included controls and captures idiosyncratic cryptoasset-market variation.

The daily residual R_t is volatile and largely serially uncorrelated. To capture the persistent cryptoasset booms and busts that drive stablecoin demand while preserving stationarity, we use the 30-day rolling sum, $R_t^{30d} = \sum_{r=0}^{29} R_{t-r}$, as our instrument.[45] Figure 16 plots both series.

Figure 16: Daily cryptoasset shock and 30-day rolling sum



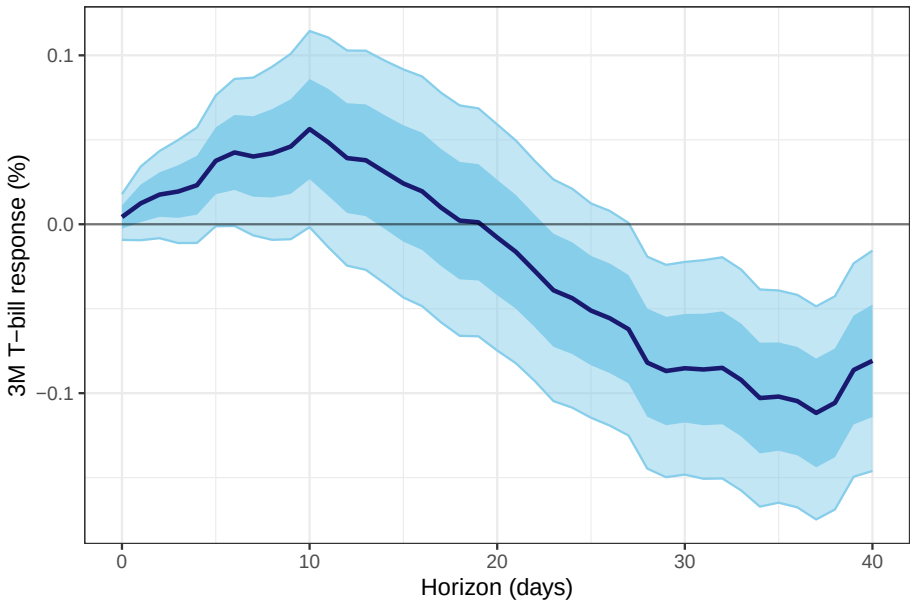
Note: The left panel plots the raw daily cryptoasset shock series R_t, the elastic-net residual of BGCI returns on financial-market controls, following Aldasoro et al. (2025). The right panel plots the 30-day rolling sum $R_t^{30d} = \sum_{r=0}^{29} R_{t-r}$, used as the instrument. Both series are in percentage points. Sample: January 2021 to March 2026.

[44] See Aldasoro et al. (2025) for estimation details.

[45] Augmented Dickey–Fuller tests reject a unit root in R_t^{30d} at the 1% level.

First stage and headline IRF. In the first stage, R_t^{30d} is positively and significantly correlated with 5-day stablecoin flows, with a HAC-robust F-statistic of 23.5 under the baseline controls — well above conventional weak-instrument thresholds, though somewhat weaker than the baseline granular IV ($F = 54$, Table 2). Figure 17 reports the IRF of 3-month T-bill yields to a \$3.5B stablecoin inflow, instrumented by R_t^{30d}. The point estimate troughs at -10 bps at horizon $h = 37$ days ($z = -3.5$), consistent in sign with the granular-IV result of Section 3 and somewhat larger in magnitude.[46]

Figure 17: IRF of \$3.5B stablecoin inflow on 3-month T-bill yields, cryptoasset-shock IV



Note: IRF estimate produced from the local projection in Equation (4), instrumenting 5-day stablecoin flows with the 30-day rolling-sum cryptoasset shock R_t^{30d}. A \$3.5B inflow is approximately a 2-standard-deviation flow. Darker and lighter shaded regions correspond to 68% and 95% Newey–West confidence bands, respectively. Sample: January 2021 to March 2026.

C Supplementary tables

This appendix collects four tables referenced in the main text: the stablecoin-chain substitutions that define the baseline panel, summary statistics for the full control

[46] The longer-horizon trough is consistent with the cryptoasset-shock IV capturing cross-asset persistence in cryptoasset valuations that translates into stablecoin demand with a longer lag than the within-stablecoin idiosyncratic shocks underlying the granular IV.

set, the correlations of the granular IV with potential confounders, and the two-way variance decomposition of the stablecoin-chain panel.

C.1 Baseline stablecoin-chain panel: substitutions from Token Terminal

The baseline stablecoin-chain panel introduced in Section 2.1 uses DeFiLlama as the source for every pair except the twelve listed in Table 4, for which we use Token Terminal. The twelve substitutions fall into three categories: pairs on which DeFiLlama levels are inconsistent with external benchmarks (e.g., Visa Onchain Analytics); pairs on which Token Terminal extends the series back to earlier dates than DeFiLlama, with the two sources coinciding on shared dates; and pairs on which the DeFiLlama series is corrupted or spurious. For every other stablecoin-chain pair in the panel we use DeFiLlama without modification, given broader stablecoin-chain coverage.

Table 4: Stablecoin-chain substitutions from Token Terminal in the baseline panel

Stablecoin	Chain	Category	Reason for substitution
USDC	Arbitrum	L	DL level inconsistent with external benchmarks.
USDC	Polygon	L	DL level inconsistent with external benchmarks.
USDC	Solana	E	TT covers earlier dates; levels coincide on shared dates.
USDC	Stellar	E	TT covers earlier dates; levels coincide on shared dates.
USDT	Solana	E	TT covers earlier dates; levels coincide on shared dates.
TUSD	Ethereum	C	DL series contains negative and erratic values.
TUSD	Tron	E	TT covers earlier dates; levels coincide on shared dates.
USDC	Linea	E	TT covers earlier dates; levels coincide on shared dates.
USDC	Tron	E	TT covers earlier dates; levels coincide on shared dates.
USDC	Sui	E	TT covers earlier dates; levels coincide on shared dates.
USDC	World Chain	E	TT covers earlier dates; levels coincide on shared dates.
USDC	Cardano	C	USDC was not deployed natively on Cardano in 2024–2025.

Note: For each (stablecoin, chain) pair listed, we use Token Terminal data in place of DeFiLlama in the baseline panel. Category labels: **L** = DeFiLlama level is inconsistent with external benchmarks; **E** = Token Terminal extends the series earlier (DeFiLlama and Token Terminal coincide on the shared portion of the panel); **C** = DeFiLlama series is corrupted or spurious. Across the 33 stablecoin-chain pairs on which DeFiLlama and Token Terminal both have meaningful coverage, the median pairwise level correlation is 0.98 and the median absolute relative level difference is 2.1%. Daily growth-rate correlations are substantially lower, reflecting heterogeneous snapshot-timing conventions across the two providers; we use Token Terminal only for the twelve pairs listed above. For all other pairs we use DeFiLlama.

C.2 Summary statistics: full control set

Table 5 reports summary statistics for the main variables: the 5-day stablecoin flows that enter the local projections, the auction quantity and monetary policy surprise that enter as controls, the granular IV (5-day-sum baseline and daily) used as instrument, and the additional macro-financial and Treasury-market variables that enter the control vector $\mathbf{X}_t$ in Equation (4).

Table 5: Summary statistics: full control set

Variable	T	Mean	St. Dev.	Min	Max
5-day stablecoin flow ($B)	1362	0.88	1.74	-4.18	11.5
5-day USDT flow ($B)	1362	0.59	1.15	-8.68	5.31
5-day USDC flow ($B)	1362	0.27	1.16	-6.53	7.72
5-day MMF flow ($T)	1362	0.02	0.09	-1.36	1.40
5-day ETF flow ($B)	1362	0.58	1.59	-4.21	9.41
3-month T-bill auction ($B)	1367	14.4	29.4	0.00	96.1
Fed funds rate (%)	1314	3.24	2.07	0.05	5.33
3-month T-bill yield (%)	1310	3.37	2.10	0.01	5.63
10-year Treasury yield (%)	1310	3.41	1.14	0.93	4.98
Granular IV, 5-day sum (%)	1367	0.21	0.53	-1.90	2.48
1-month T-bill yield (%)	1310	3.30	2.14	0.00	6.02
6-month T-bill yield (%)	1310	3.40	2.01	0.02	5.61
1-year Treasury yield (%)	1310	3.33	1.87	0.04	5.49
2-year Treasury yield (%)	1310	3.22	1.64	0.09	5.19
3m OIS monetary policy surprise (bps)	1367	0.002	0.40	-11.2	4.00
Treasury General Account ($B)	1365	652	294	44.8	1,669
ON-RRP take-up ($B)	1308	945	844	0.00	2,554
Treasury Market Conditions Index	1367	0.26	0.74	-1.41	2.37
VIX	1367	19.3	5.25	11.9	52.3
log S&P 500	1367	8.49	0.19	8.18	8.85
log gold price	1367	7.73	0.30	7.40	8.58
log Brent price	1367	4.37	0.16	3.93	4.85
log broad dollar NEER	1367	4.79	0.04	4.71	4.87
Citigroup Economic Surprise Index	1367	15.8	23.5	-28.6	90.3
Granular IV, daily (%)	1367	0.04	0.20	-0.71	1.07

Note: Summary statistics for the principal variables used in the empirical analysis: the 5-day stablecoin flows that enter the local projections, the auction quantity and monetary policy surprise that enter as controls, the granular IV (5-day-sum baseline and daily) used as instrument, and the additional macro-financial and Treasury-market variables that enter the control vector $\mathbf{X}_t$ in equation (4). Flows and stocks are in billions of US dollars ($B), except the 5-day MMF flow which is in trillions of US dollars ($T), reflecting the scale of total taxable MMF assets under management. Yields and rates are in percent (%); the 3-month OIS monetary policy surprise is in basis points (bps), computed as the change in the 3-month OIS rate from 30 minutes before to 30 minutes after FOMC policy announcements and equal to zero on non-FOMC days (hence the low full-sample standard deviation; among the 41 FOMC days the surprise has a standard deviation of 2.3 bps). The S&P 500, gold, Brent, and the broad dollar NEER are in logs. The Bloomberg US and Goldman financial conditions indices are not included in $\mathbf{X}_t$, they are reported in Table 6 as placebo confounders against which the granular IV is shown to be uncorrelated, but they are excluded from the control set because they are by construction highly correlated with the macro-financial sub-vector already included (VIX, log S&P 500, log dollar NEER) and would risk absorbing the variation that identifies β_h. Sample: January 4, 2021 to March 31, 2026.

C.3 Correlation of the granular IV with potential confounders

Table 6 reports the matched-frequency HAC-robust correlation of each version of the granular IV (the daily GIV_t and the 5-day-sum $GIV(5d)_t$) with twelve potential confounders. The matched horizon for each IV is 1 day for the daily IV and 5 days for the 5-day-sum IV. See Section 2.3 for the interpretation.

Table 6: Correlation of the granular IV with potential confounders, matched-frequency

	$GIV(5d)_t$ vs. 5d Δ	GIV_t (daily) vs. 1d Δ
VIX	-0.055*	+0.006
Bloomberg US FCI	-0.036	+0.006
Goldman FCI	-0.039	+0.003
log S&P 500	+0.017	-0.021
log gold price	+0.035	+0.047*
log Brent price	-0.033	-0.011
log broad dollar NEER	-0.044	-0.038
log BGCI	-0.070	-0.007
log Bitcoin price	+0.006	+0.003
log Ether price	-0.087**	-0.024
MMF flow	+0.082**	+0.018
ETF flow	+0.097**	+0.056*
Max $\|\rho\|$ across confounders	0.097	0.056

Note: Each cell reports the matched-frequency correlation of the granular IV with the listed confounder. The first column reports the correlation of the 5-day-sum granular IV $GIV(5d)_t$ with the 5-day change of the confounder; the second column reports the correlation of the daily granular IV GIV_t with the 1-day change of the confounder. Changes are log-differences for price-type series (S&P 500, gold, Brent, NEER, BGCI, Bitcoin, Ether, VIX) and arithmetic differences for index- and level-type series (Bloomberg US FCI, Goldman FCI, MMF AUM). ETF flows are already in daily-flow form, so we use the 5-day sum for the 5-day column and the daily flow for the 1-day column. Significance is computed from Newey–West HAC standard errors with one lag, with *, **, *** denoting significance at the 10, 5 and 1% level, respectively. Sample: January 2021 to March 2026.

C.4 Two-way variance decomposition of the stablecoin-chain panel

Table 7 reports the two-way variance decomposition discussed at the end of Section 2.3. For each trading day in the working sample we within-day demean the panel

and fit $\widehat{g}_{i,t} = \alpha_{s(i),t} + \beta_{c(i),t} + u_{i,t}$ by OLS with stablecoin and chain dummies; sums of squares are accumulated across days and normalized by total within-day variance.

Table 7: Two-way variance decomposition of the *stablecoin-chain* panel

Component	Share of within-day variance
Stablecoin-side Var$(\alpha_{s,t})$	6.3%
Chain-side Var$(\beta_{c,t})$	61.7%
Joint $2\,\mathrm{Cov}(\alpha, \beta)$	-3.6%
Pair-specific residual Var$(u_{i,t})$	35.5%
Unit-day observations	166,019
Trading days	1,913

Note: For each trading day t in the working sample (January 2021 to March 2026), we within-day demean the winsorized growth-rate panel $g_{i,t}$ and fit $\widehat{g}_{i,t} = \alpha_{s(i),t} + \beta_{c(i),t} + u_{i,t}$ by OLS with stablecoin and chain dummies. Sums of squares are accumulated across days and normalised by total within-day variance. The decomposition is invariant to subtracting the size-weighted common factor $\bar{g}_t$ from $g_{i,t}$, because $\bar{g}_t$ is a function of t alone and is absorbed by the within-day demean step; reporting the same decomposition on the GIV idiosyncratic residual $\varepsilon_{i,t} = g_{i,t} - \bar{g}_t$ would therefore yield identical shares. The four rows sum to 100%; the small negative joint share indicates that fitted issuer and chain effects co-vary mildly negatively across the sample.

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