

MNI UST Issuance Deep Dive: Nov 2022

November 1, 2022 – By Tim Cooper, Tim Davis, Lucy Hager and Bill Sokolis

November Quarterly Refunding Preview

- Following 4 consecutive rounds of reductions, Treasury is widely expected to keep auction sizes basically unchanged in the upcoming quarter.
- There are risks that there are reductions to 20Y Bond sizes, and increases to TIPS sizes.
- The other main area of focus is on potential Treasury buybacks, but an announcement on this front is not widely expected until February at least.

Following 4 consecutive rounds of quarterly reductions, Treasury is widely expected to keep auction sizes basically unchanged in the upcoming quarter, when its plans for November / December / January are released at 0830ET on Wednesday Nov 2. That would imply \$231B of nominal coupon issuance in Nov, and \$222B in each of Dec and Jan ([see table](#)). That compares to peaks of \$336B for refunding months in 2021, reflecting a sharp drop in the fiscal deficit from pandemic highs. While analysts expect coupon sizes to grow again, that may not happen until well into 2023.

Estimated issuance schedule



	Oct	Nov*	Dec*	Jan*
2-Year Note	42	42	42	42
3-Year Note	40	40	40	40
5-Year Note	43	43	43	43
7-Year Note	35	35	35	35
10-Year Note	32	35	32	32
20-Year Bond	12	15	12	12
30-Year Bond	18	21	18	18
Total coupon	222	231	222	222

Source: MNI estimates

This outlook is largely consistent with the Treasury's suggestion in the August refunding that cuts to coupon issuance are complete for now. After carrying out issuance cuts to the then-current quarter, the August refunding TBAC report said "Auction sizes are expected to level out next quarter, though the group acknowledges Treasury may need to consider adjustments based on evolving fiscal needs."

Of course, at the May refunding they suggested a future "levelling out" was on the agenda the following quarter, but ended up cutting issuance further in August: "At the May meeting, members had expected that auction sizes would level out for the August

quarter. However, many near-term deficit estimates have fallen, the share of bills in outstanding debt is expected to remain near the lower end of TBAC's recommended range, and market demand for bills is very strong. Thus, the Committee recommends further reductions across the nominal coupon curve." But this time, fiscal conditions have not changed so much since the prior quarter that they need to make any major changes to net issuance.

That's also the consensus view, with most sell-side analysts looking for – at most – tweaks to issue sizes vs last quarter. And the latest Dealer Agenda questionnaire circulated in advance of the Refunding announcement gives a good indication: for August's refunding (and for prior ones) they asked specifically whether they should consider additional reductions going forward; for November's refunding they didn't ask this question.

Fewer 20s, More TIPS?

Beyond the broader question of net issuance, two areas are in focus: one is the 20Y segment, which remains the weakest segment on the Treasury curve, and the other is TIPS.

- **We (and consensus) expect no further cuts to 20Y issuance this time** though it would not be a huge surprise to see another small reduction.
- **TIPS issuance has been growing even as nominal sizes have been reduced, and while it is possible that they will be left on hold this quarter, there is scope to increase sizes.** We have pencilled in \$15B 10Y TIPS

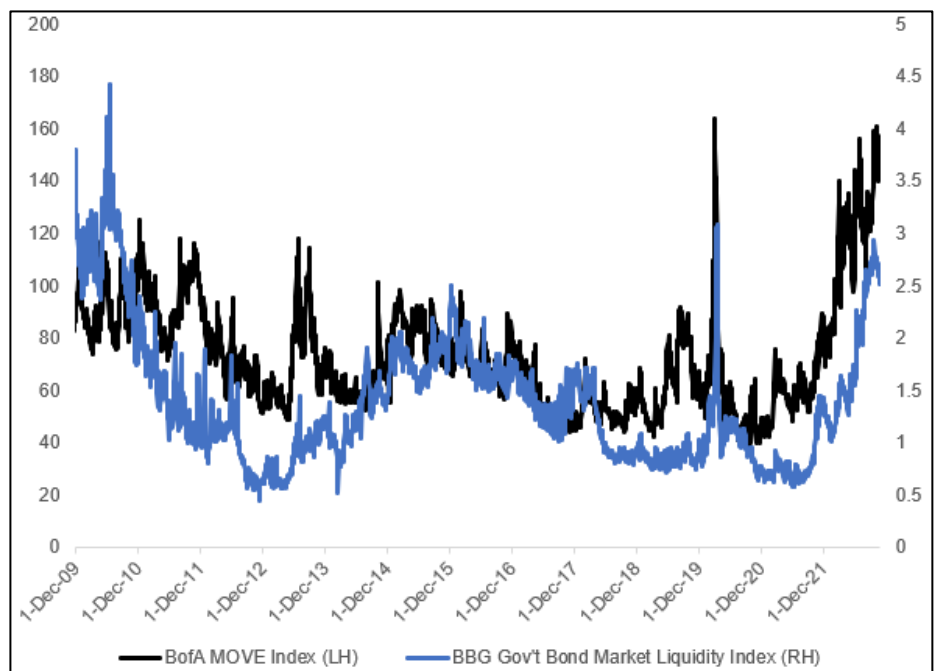
auktion in Nov, \$19B 5Y TIPS in Dec, and \$18B 10Y TIPS in Jan. (The next 30Y TIPS sale is seen in Feb). FRN issuance is seen unchanged: 2Y FRN sales are seen at \$22B in Nov and Dec, and \$24B in Jan.

Buybacks In Focus

Outside of coupon sizes, the main focus of November's refunding is on growing speculation the Treasury will reintroduce a buyback program (for the first time in 20 years).

Both the pre-refunding TBAC questionnaire and Sec Yellen's recent comments have pointed to Treasury interest in launching a buyback program. Such a program would be aimed at both liquidity and cash management goals.

Judging by several metrics, Treasury liquidity is getting increasingly thin, with off-the-run issues trading rich to the curve and overall volatility rising (see chart of the BofA MOVE implied vol index and BBG's liquidity index which measures deviations of bonds from a fitted curve). While there are many reasons for these issues (many structural and macroprudential in nature), a buyback program would help improve market functioning. It would have other advantages for Treasury as well, including potentially lowering financing costs (buying back off-the-run Tsys financed by issuing new, richer, on-the-run securities).



The parameters of the program would determine its market impact. There's speculation it could take many forms:

- An "Operation Twist" that could see the proceeds raised from bill issuance used to buy back longer-dated instruments
- A duration-neutral approach, in which specific illiquid points on the curve are targeted for buybacks or swaps for more liquid on-the-runs
- A large, permanent program, or a smaller, temporary program
- A flexible program that adjusts as liquidity conditions change, or a more regular program that has the advantage of predictability but risks supporting parts of the curve that don't need as much support

The general expectation is that a buyback program would not be ready to be unveiled until the February refunding at the earliest, but the November refunding will be watched carefully for any announcement.

The Debt Ceiling Looms

The Treasury's [cash balance assumptions released on Oct 31 show an increase of \\$150B in borrowing estimates for the Oct-Dec quarter](#) (from \$400B assumed on Aug 1 to \$550B now assumed), with the Jan-Mar estimate clocking in at \$578B. The rise in marketable borrowing requirements was above most analyst expectations, which suggests that the overall outlook for no reduction in nominal coupon sizes was reinforced. Cash balance expectations were little changed though.

Cash Balance Assumptions	July - September Quarter			October - December Quarter		
	Prior	Current	Change	Prior	Current	Change
Opening Balance	\$782	\$782	\$0	\$650	\$636	-\$14
Closing Balance	\$650	\$636	-\$14	\$700	\$700	\$0
Impact on Borrowing	-\$132	-\$146	-\$14	\$50	\$64	\$14

Note that the Treasury assumes that: “The end-of-December and end-of-March cash balances assume enactment of a debt limit suspension or increase. While the debt limit is not currently binding, Treasury’s cash balance may be lower than assumed depending on several factors, including constraints related to the debt limit.”

That’s a key caveat. Sell-side analysts expect the debt limit could be reached as soon as the first half of December (it’s under \$200B away), after which the Treasury will face choices which include drawing down its cash pile or conducting various accounting manoeuvres. The end-quarter cash balances may wind up being much lower than currently projected. Ultimately, net bill issuance could be heavily negatively impacted in 2023.

Sell-Side Coupon Auction Refunding Expectations

BMO: Auction sizes unchanged. One unknown is TIPS “given the refunding questionnaire focused on the market’s ability to withstand further increases in the inflation adjusted sector.” If they increase TIPS sizes, it is likely to be in the 5Y tenor given relative auction strength.

- **On buybacks:** With the debt ceiling likely to emerge as an early 2023 issue, the issuance distortions associated with borrowing constraints mean that the middle of next year would be the soonest we would anticipate any concrete clarity on the details of a buyback program.

Goldman Sachs: Auction sizes unchanged. TIPS the most likely area to see near-term adjustments, with gradual increases extending into next year. Some reversal of recent coupon auction size cuts may be necessary starting in 2H23, in part to keep the share of bills rising materially above the 15-20% band of debt outstanding.

- **On buybacks:** “amplified yield dispersion, poor overall liquidity conditions, and the recent breakdown in gilt market function” make such a program likely to be implemented, though we may not get specifics until the February refunding. Treasury would try to make any issuance-for-buyback operations as duration neutral as possible. While buybacks could be funded via bill issuance, thereby removing duration from the market, Goldman sees this approach is unlikely.

JPMorgan: Auction sizes unchanged. Some scope for TIPS auction sizes to increase modestly later in 2023. Risks are tilted toward larger auction sizes in 2023. The current issuance calendar is projected to leave Treasury underfunded in FY23 and beyond – though Treasury will likely fill that funding gap via T-bills.

- **On buybacks:** Treasury to make “further progress” on buybacks. While a buyback program “could achieve both its liquidity and cash management goals, the liquidity advantages appear to more clearly outweigh the costs and this seems to us to be the most important issue to address.”

RBC: Nominal coupon auction sizes unchanged, but increases to TIPS sizes. 5-/10-Y issues to be increased by \$1B each in Nov and Dec, with \$10B increase to 10Y new issue in January. And on 20s: “it may make sense for Treasury to at least take a pause for further evaluation before delivering any more 20-year reductions. However, on an outright basis 20s still trade extremely cheap across any metric and, while not our call, we would not be entirely surprised to see another \$1-\$2bn cut this quarter.”

- **On debt limit:** Expected to be reached in early December, resulting in extraordinary measures and/or depleting cash balances and eventually perhaps cutting bill supply. X-Date sometime in Oct/Nov 2023, “however that is highly speculative at this point”.

- **On buybacks:** Somewhat doubtful that any meaningful program is imminent. The questions in the dealer survey suggested “this is more of an exploratory exercise rather than preparation for a coming announcement”.

TD: Auction sizes unchanged. Treasury will want to maintain optionality to address potential for larger deficits in coming years amid expected economic growth slowdown. Also, Bill needs have increased significantly but Treasury may want to be cautious about relying so heavily on front-end financing in future years. Some risk of a modest further decrease to 20Y sizes (\$1B), though not base case.

- **On debt limit:** The debt ceiling “could get some airtime”. Treasury to reach the ceiling in early 2023 and potentially only run out of measures in Q3 2023. Treasury likely will wish to address plans for extraordinary measures and potential disruptions to bill supply.
- **On buybacks:** Significant discussion of a potential buyback program but no firm commitment; further guidance only at February’s refunding meeting.

SocGen: Nominal coupon auction sizes unchanged, but increases to TIPS sizes. Namely, December’s 5Y TIPS reopen to rise \$1B to \$19B, with January’s 10Y new issue by \$1B to \$17B.

UBS: Nominal coupon auction sizes unchanged, but increases to TIPS sizes. November’s 10Y TIPS reopen to rise to \$15B, December’s 5Y TIPS reopen to rise \$1B to \$19B, January’s 10Y new issue by \$2B to \$18B.

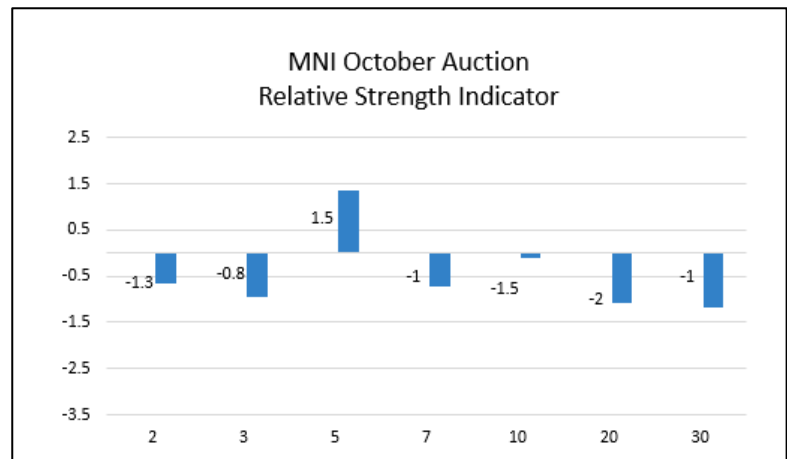
- **On debt limit:** Set to become binding in H1 2023, at which point the Treasury will implement so-called “extraordinary measures” including drawing down the TGA, and depressing net bill issuance. The “X Date” (when temporary measures run out) is estimated for Q3 2023.
- **On buybacks:** Possible start date as early as Q2 2023. That would be the “most useful timing for a start”, “as then buybacks could smooth some of the large swings in bill supply that happen around the April tax date. Those swings now have broader implications because they change bills outstanding, which can have a large spillover to the RRP and to bank reserves.”

Wrightson ICAP: Auction sizes unchanged. Though “as always, the 20-year bond could be a special case”, but “the Treasury may be reluctant to perform major surgery on its auction schedule without more advance warning.”

- **On debt limit:** “Treasury is on track to bump into the ceiling in the first half of December... our working assumption is that the Treasury will maintain a normal cash balance trajectory this quarter and will activate the extraordinary-measures playbook as soon as the public debt approaches the ceiling.”
- **On buybacks:** Treasury to confirm that buybacks are under active consideration but not to go much beyond that, remaining in the exploratory phase at least until February. Treasury “would ultimately cite two factors as motivations for buybacks in 2023. Short-term cash and debt management efficiency ahead of the debt ceiling deadline would be the primary objective, but the fact that the reverse auctions would do double-duty as a liquidity backstop for off-the-run coupon securities would be an important secondary benefit.” Coupon buybacks would give more room to issue bills.

October Auction Review:

- 2Y Note tail, 4.460% vs. 4.447% WI
- 2Y FRN, 0.14% vs. 0.092% previous
- 3Y Note tail, 4.318% vs. 4.310% WI
- 5Y TIPS, 1.732% high yield vs. 1.725% WI
- 5Y Note trade-through, 4.192% vs. 4.207% WI
- 7Y Note tail, 4.027% vs. 4.017% WI
- 10Y Note tail, 3.930% vs. 3.915% WI
- 20Y Bond tail, 4.395% vs. 4.375% WI
- 30Y Bond tail, 3.930% vs. 3.920% WI



Numbers indicate auction stop-through (+)/tail (-) in basis points. Source: MNI

If September's Treasury coupon auctions were mixed, October's can be described as (almost) uniformly poor. Of the 7 nominal coupon auctions, 6 tailed vs their when-issued yields, with only one trading through.

- The lone issue to trade through was the 5Y (by 1.5bp), making it the strongest auction of the month per MNI's Auction Relative Strength Indicator.

While there were few dramatic tails in the rest of the month's auctions, weakness was consistent.

- The weakest for yet another month was the 20Y, whose re-open on Oct 19 saw a 2bp tail amid both poor bid-to-cover versus recent averages as well as higher dealer take-up.
- The remainder of October's auction tails were between 0.8bp and 1.5bp.

Chronological auction review:

October 11: \$40B 3Y Note (91282CFP1), 4.318% vs. 4.310% WI

- Treasury futures pared gains slightly after \$40B 3Y note auction (91282CFP1) tailed: 4.318% high yield vs. 4.310% WI; 2.57x bid-to-cover vs. 2.49x in September.
- Indirect take-up 53.40% vs. 54.55% prior.
- Direct take-up 19.55 vs. 21.85% prior.
- Primary dealer take-up 27.05% vs. 23.60% prior.
- The next 3Y auction is tentatively scheduled for November 8.

October 12: \$32B 10Y Note (91282CFF3), 3.930% vs. 3.915% WI

- Treasury futures pared gains after \$32B 10Y note auction re-open (91282CFF3) tailed yet again: 3.930% high yield vs. 3.915% WI; 2.34x bid-to-cover vs. 2.37x in September.
- Indirect take-up 56.79% vs. 62.30% prior.
- Direct take-up 23.51% from 17.89% prior.
- Primary dealer take-up 19.70% vs. 19.81% prior.
- The next 10Y auction is tentatively scheduled for November 9.

October 13: \$18B 30Y Bond (912810TJ7), 3.930% vs. 3.920% WI

- Treasury futures held a weaker level after \$18B 30Y auction re-open (912810TJ7) tailed: 3.930% high yield vs. 3.920% WI; 2.39x bid-to-cover vs. 2.42x in September.
- Indirect take-up slipped to 69.13% vs. 72.09% prior.
- Direct take-up 18.65% vs. 17.06% prior.
- Primary dealer take-up 12.22% vs. 10.85% prior.
- The next 30Y auction (re-open) is tentatively scheduled for November 9.

October 19: \$12B 20Y Bond (912810TK4), 4.395% vs. 4.375% WI

- Treasury futures were back to recent session lows after \$12B 20Y bond auction re-open (912810TK4) tailed: 4.395% high yield vs. 4.375% WI; 2.5x bid-to-cover vs. prior month's 2.65x.
- Indirect take-up fell to 63.70% vs. 75.32% prior.
- Direct take-up 19.86% vs. 16.62% prior.
- Primary dealer take-up 16.43% vs. 8.06% prior.
- The next 20Y auction (re-open) is tentatively scheduled for November 16.

October 20: \$21B 5Y TIPS (91282CFR7), 1.732% high yield vs. 1.725% WI

- 5Y TIPS auction saw 1.732% high yield vs. 0.362% prior and vs 1.725% WI (highest 5Y TIPS auction stop since 2008); allotment 58.07%; bid-to-cover 2.38x vs previous 2.61x.
- Indirect take-up 75.3% vs 83.9% prior.
- Direct take-up 17.0% vs 9.3% prior.
- Primary dealer take-up 7.7% vs 6.8% prior.

October 25: \$42B 2Y Note (91282CFQ9), 4.460% vs. 4.447% WI

- Treasury futures held gains, little reaction after \$42B 2Y note auction (91282CFQ9) tailed: 4.460% high yield vs. 4.447% WI; 2.59x bid-to-cover vs. 2.51x prior.
- Indirect take-up receded to 50.51% vs. 52.95% prior.
- Direct take-up 24.21% vs. 22.20% prior.
- Primary dealer take-up 25.28% vs. 24.84% prior.
- The next 2Y auction is tentatively scheduled for November 21.

October 26: \$24B 2Y FRN (91282CF55), 0.14% vs. 0.092% previous

- October's FRN auction saw the widest discount margin since March 2020. Bid-to-cover 2.65x vs. previous 2.84x; high discount margin 0.14% vs. 0.092% previous.
- Indirect take-up 72.6% vs 64.2% prior.
- Direct take-up 1.5% vs 1.7% prior.
- Primary dealer take-up 25.9% vs 34.1% prior.

October 26: \$43B 5Y Note (91282CFU0), 4.192% vs. 4.207% WI

- Treasury futures climbed back near session highs after \$43B 5Y note auction (91282CFU0) traded through: 4.192% high yield vs. 4.207% WI; 2.48x bid-to-cover vs. 2.27x the prior month.
- Indirect take-up climbed to 67.98% vs. 59.58% prior.
- Direct take-up 15.56% vs. 18.70% prior.
- Primary dealer take-up 16.46% vs. 21.72% prior.
- The next 5Y auction is tentatively scheduled for November 21.

October 27: \$35B 7Y Note (91282CFT3), 4.027% vs. 4.017% WI

- Treasury futures dipped/pared gains slightly after \$35B 7Y note auction (91282CFT3) tailed: 4.027% high yield vs. 4.017% WI; 2.43x bid-to-cover vs. 2.57x in September.
- Indirect take-up climbed to 63.17% vs. 62.49% prior.
- Direct take-up 22.72% vs. 24.66% prior.
- Primary dealer take-up 14.11% vs. 12.85% prior.
- The next 7Y auction is tentatively scheduled for November 22.

Links:

[August 2022 Quarterly Refunding Statement](#)

[Treasury 4Q 2022 Financing Estimates \(Published Oct 31\)](#)

Definitions

Auction participants

Direct bidders are individuals or organizations that purchase Treasuries during an auction for themselves or their house account. Indirect bidders place competitive bids at Treasury auctions through primary dealers and can include foreign central banks and domestic money managers. Primary Dealers round out auction participants. In general, a high primary dealer take-up indicates a weaker auction as primary dealers have effectively had to backstop the auction.

Auction performance:

Auction performance is deemed average when the auction high yield meets or closely approximates the When-Issue (WI) rate going into the auction. Weak auctions have a high yield greater than the WI rate, strong auctions a high yield lower than the WI rate.

NY Fed explains "secondary market transactions in outstanding Treasury securities typically settle on the business day after the trade date, when sellers deliver securities to buyers and receive payment. When-issued transactions, by contrast, settle on the issue date of the new security (which can be as much as a week or more after a trade is negotiated) because the security is not available for delivery at any earlier date."

UST June 2022 to January 2023 Calendar

Supply (\$ bln)

Date	Issue	CUSIP	Amount	High Yield	When Issued Yield	Trade through (Tail)	Bid-to-cover	Primary Dealer	Indirect	Direct
Jun-07	3-Year Note	91282CEU1	44	2.927%	2.915%	(1.2)	2.45	24.9%	51.5%	23.6%
Jun-08	10-Year Note	91282CEP2	33	3.030%	3.017%	(1.3)	2.41	17.0%	63.6%	19.4%
Jun-09	30-Year Bond	912810TG3	19	3.185%	3.200%	1.5	2.35	14.1%	69.0%	16.9%
Jun-22	20-Year Bond	912810TH1	14	3.488%	3.488%	0.0	2.60	12.4%	67.4%	20.2%
Jun-22	2-Year FRN	91282CEL1	22				3.49	25.9%	67.2%	6.9%
Jun-23	5-Year TIPS	91282CEJ6	18	0.362%	0.392%	3.0	2.61	6.8%	83.9%	9.3%
Jun-27	2-Year Note	91282CEX5	46	3.084%	3.077%	(0.7)	2.51	23.2%	51.5%	25.3%
Jun-27	5-Year Note	91282CEW7	47	3.271%	3.237%	(3.4)	2.28	23.8%	56.5%	19.7%
Jun-28	7-Year Note	91282CEV9	40	3.280%	3.260%	(2.0)	2.48	17.7%	61.9%	20.4%
Jul-11	3-Year Note	91282CEY3	43	3.093%	3.095%	0.2	2.43	20.3%	60.4%	19.4%
Jul-12	10-Year Note	91282CEP2	33	2.960%	2.937%	(2.3)	2.34	20.7%	61.3%	18.0%
Jul-13	30-Year Bond	912810TG3	19	3.115%	3.135%	2.0	2.44	10.5%	73.2%	16.3%
Jul-20	20-Year Bond	912810TH1	14	3.420%	3.447%	2.7	2.65	7.9%	78.0%	14.1%
Jul-21	10-Year TIPS	91282CEZ0	17	0.630%			2.18	15.8%	67.1%	17.1%
Jul-25	2-Year Note	91282CFA4	45	3.015%	3.021%	0.6	2.58	17.9%	62.0%	20.0%
Jul-26	5-Year Note	91282CFB2	46	2.860%	2.870%	1.0	2.46	16.8%	66.4%	16.8%
Jul-27	2-Year FRN	91282CFD8	24				3.13	29.5%	69.4%	1.1%
Jul-28	7-Year Note	91282CFC0	38	2.730%	2.735%	0.5	2.60	10.6%	70.9%	18.4%
Aug-09	3-Year Note	91282CFE6	42	3.202%	3.205%	0.3	2.50	19.6%	63.1%	17.3%
Aug-10	10-Year Note	91282CFF3	35	2.755%	2.762%	0.7	2.53	9.9%	74.5%	15.6%
Aug-11	30-Year Bond	912810TJ7	21	3.106%	3.092%	(1.4)	2.31	10.8%	70.6%	18.5%
Aug-17	20-Year Bond	912810TK4	15	3.380%	3.355%	(2.5)	2.30	14.7%	67.0%	18.3%
Aug-18	30-Year TIPS	912810TE8	8	0.920%	0.960%	4.0	2.69	11.1%	76.9%	12.0%
Aug-23	2-Year Note	91282CFG1	44	3.307%	3.290%	(1.7)	2.49	23.0%	59.7%	17.3%
Aug-24	5-Year Note	91282CFH9	45	3.230%	3.217%	(1.3)	2.30	20.6%	61.2%	18.2%
Aug-24	2-Year FRN	91282CFD8	22				2.57	42.1%	57.1%	0.9%
Aug-25	7-Year Note	91282CFJ5	37	3.130%	3.159%	2.9	2.65	8.6%	75.7%	15.7%
Sep-12	3Y Note	91282CFK2	41	3.564%	3.545%	(1.9)	2.49	23.6%	54.5%	21.9%
Sep-12	10Y Note R/O	91282CFF3	32	3.330%	3.302%	(2.8)	2.37	19.8%	62.3%	17.9%
Sep-13	30Y Bond R/O	912810TJ7	18	3.511%	3.530%	1.9	2.42	10.9%	72.1%	17.1%
Sep-20	20Y Bond R/O	912810TK4	12	3.820%	3.835%	1.5	2.65	8.1%	75.3%	16.6%
Sep-22	10Y TIPS R/O	91282CEZ0	15	1.248%			2.54	7.9%	70.8%	21.3%
Sep-26	2Y Note	91282CFN6	43	4.290%	4.275%	(1.5)	2.51	22.2%	53.0%	24.8%
Sep-27	5Y Note	91282CFM8	44	4.228%	4.202%	(2.6)	2.27	21.7%	59.6%	18.7%
Sep-28	2Y FRN R/O	91282CFD8	22				2.84	34.1%	64.2%	1.7%
Sep-28	7Y Note	91282CFL0	36	3.898%	3.905%	0.7	2.57	12.8%	62.5%	24.7%
Oct-11	3Y Note	91282CFP1	40	4.318%	4.310%	(0.8)	2.57	27.0%	53.4%	19.6%
Oct-12	10Y Note R/O	91282CFF3	32	3.930%	3.915%	(1.5)	2.34	19.7%	56.8%	23.5%
Oct-13	30Y Bond R/O	912810TJ7	18	3.930%	3.920%	(1.0)	2.39	12.2%	69.1%	18.7%
Oct-19	20Y Bond R/O	912810TK4	12	4.395%	4.375%	(2.0)	2.50	16.4%	63.7%	19.9%
Oct-20	5Y TIPS	91282CFR7	21	1.732%	1.725%	(0.7)	2.38	7.7%	75.3%	17.0%
Oct-25	2Y Note	91282CFQ9	42	4.460%	4.447%	(1.3)	2.59	24.2%	50.5%	25.3%
Oct-26	2Y FRN	91282CFS5	24				2.65	25.9%	72.6%	1.5%
Oct-26	5Y Note	91282CFU0	43	4.192%	4.207%	1.5	2.48	16.5%	68.0%	15.6%
Oct-27	7Y Note	91282CFT3	35	4.027%	4.017%	(1.0)	2.43	14.1%	63.2%	22.7%
Nov-08	3Y Note	Nov-02	40*							
Nov-09	10Y Note	Nov-02	35*							
Nov-10	30Y Bond	Nov-02	21*							
Nov-16	20Y Bond	Nov-10	15*							
Nov-17	10Y TIPS Re-open	91282CEZ0	15*							
Nov-21	2Y Note	Nov-17	42*							
Nov-21	5Y Note	Nov-17	43*							
Nov-22	2Y Note FRN R/O	91282CFS5	22*							
Nov-22	7Y Note	Nov-17	35*							
Dec-12	3Y Note	Dec-08	40*							
Dec-12	10Y Note Reopen	Dec-08	32*							
Dec-13	30Y Bond Reopen	Dec-08	18*							
Dec-21	5Y TIPS Reopen	91282CFR7	19*							
Dec-22	20Y Bond Reopen	Dec-15	12*							
Dec-27	2Y Note	Dec-22	42*							
Dec-28	2Y Note FRN R/O	91282CFS5	22*							
Dec-28	5Y Note	Dec-22	43*							
Dec-29	7Y Note	Dec-22	35*							
Jan-10	3Y Note	Jan-05	40*							
Jan-11	10Y Note Reopen	Jan-05	32*							
Jan-12	30Y Bond Reopen	Jan-05	18*							
Jan-18	20Y Bond Reopen	Jan-12	12*							
Jan-19	10Y TIPS	Jan-12	18*							
Jan-24	2Y Note	Jan-19	42*							
Jan-25	2Y Note FRN	Jan-19	24*							
Jan-25	5Y Note	Jan-19	43*							
Jan-26	7Y Note	Jan-19	35*							

US Issuance Profile

2022 Issuance: Nominal (ex SOMA reinvestments)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov*	Dec*	Total
Conventional	2-Year Note	54	52	50	48	47	46	45	44	43	42	42	555
	3-Year Note	52	50	48	46	45	44	43	42	41	40	40	531
	5-Year Note	55	53	51	49	48	47	46	45	44	43	43	567
	7-Year Note	53	50	47	44	42	40	38	37	36	35	35	492
	10-Year Note	36	37	34	34	36	33	33	35	32	32	35	409
	20-Year Bond	20	19	16	16	17	14	14	15	12	12	15	182
	30-Year Bond	22	23	20	20	22	19	19	21	18	18	21	241
	Total coupon	292	284	266	257	257	243	238	239	226	222	231	2977
Linker	5-Year TIPS	-	-	-	20	-	18	-	-	21	-	19	78
	10-Year TIPS	16	-	14	-	14	-	17	-	15	-	15	91
	30-Year TIPS	-	9	-	-	-	-	8	-	-	-	-	17
	Total linker	16	9	14	20	14	18	17	8	15	21	15	186
Floating Rate Notes		26	22	22	24	22	22	24	22	22	24	22	274
Total		334	315	302	301	293	283	279	269	263	267	268	3437

* Denotes MNI expectation

2021 Issuance: Nominal (ex SOMA reinvestments)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Conventional	2-Year Note	60	60	60	60	60	60	60	60	60	58	56	714
	3-Year Note	58	58	58	58	58	58	58	58	58	56	54	690
	5-Year Note	61	61	61	61	61	61	61	61	61	59	57	726
	7-Year Note	62	62	62	62	62	62	62	62	62	59	56	735
	10-Year Note	38	41	38	38	41	38	38	41	38	39	36	464
	20-Year Bond	24	27	24	24	27	24	24	27	24	23	20	292
	30-Year Bond	24	27	24	24	27	24	24	27	24	25	22	296
	Total coupon	327	336	327	327	336	327	336	327	327	319	301	3917
Linker	5-Year TIPS	-	-	-	18	-	16	-	-	19	-	17	70
	10-Year TIPS	15	-	13	-	13	-	16	-	14	-	14	85
	30-Year TIPS	-	9	-	-	-	-	8	-	-	-	-	17
	Total linker	15	9	13	18	13	16	8	14	19	14	17	172
Floating Rate Notes		28	26	26	28	26	26	28	26	28	24	24	316
Total		370	371	366	373	375	369	371	370	374	357	342	4405

2020 Issuance: Nominal (ex SOMA reinvestments)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Conventional	2-Year Note	40	40	40	42	44	46	48	50	52	54	58	570
	3-Year Note	38	38	38	40	42	44	46	48	50	52	56	546
	5-Year Note	41	41	41	43	45	47	49	51	53	55	59	582
	7-Year Note	32	32	32	35	38	41	44	47	50	53	59	519
	10-Year Note	24	27	24	25	32	29	29	38	35	41	38	377
	20-Year Bond	-	-	-	-	20	17	17	25	22	27	24	174
	30-Year Bond	16	19	16	17	22	19	19	26	23	27	24	251
	Total coupon	191	197	191	202	243	243	252	285	285	294	318	3019
Linker	5-Year TIPS	-	-	-	17	-	15	0	-	17	-	15	64
	10-Year TIPS	14	-	12	-	12	-	14	-	12	-	-	76
	30-Year TIPS	-	8	-	-	-	-	7	-	-	-	-	15
	Total linker	14	8	12	17	12	15	14	7	12	17	15	155
Floating Rate Notes		20	18	18	22	20	20	24	22	22	24	24	260
Total		225	223	221	241	275	278	290	314	319	337	354	3434

2019 Issuance: Nominal (ex SOMA reinvestments)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Conventional	2-Year Note	40	40	40	40	40	40	40	40	40	40	40	480
	3-Year Note	38	38	38	38	38	38	38	38	38	38	38	456
	5-Year Note	41	41	41	41	41	41	41	41	41	41	41	492
	7-Year Note	32	32	32	32	32	32	32	32	32	32	32	384
	10-Year Note	24	27	24	24	27	24	24	27	24	27	24	300
	20-Year Bond	-	-	-	-	-	-	-	-	-	-	-	-
	30-Year Bond	16	19	16	16	19	16	19	16	16	19	16	204
	Total coupon	191	197	191	191	197	191	197	191	191	197	191	2316
Linker	5-Year TIPS	-	-	-	17	-	15	-	-	17	-	15	64
	10-Year TIPS	13	-	11	-	11	-	14	-	12	-	-	73
	30-Year TIPS	-	8	-	-	-	-	7	-	-	-	-	15
	Total linker	13	8	11	17	11	15	14	7	12	17	15	152
Floating Rate Notes		20	18	18	20	18	18	20	18	18	18	18	224
Total		224	223	220	228	226	224	225	222	221	228	224	2692