

The Damped Spring Report

“Shifts in growth, inflation, risk premium and positioning all lead to opportunities in markets”

4/26/2024

Like the Somali Pirate in “Captain Phillips,” Janet Yellen may as well declare “I’m the Captain now.” Treasury once again will decide to aid or counteract the Fed’s Monetary Policy by maintaining or reducing 3Q24 Coupon issuance amounts. We hope she will maintain Coupon issuance and help the Fed with the last mile of the inflation fight instead of further loosening financial conditions that threaten to reverse the Fed’s work. If Treasury maintains Coupon issuance, we think the Fed will achieve its goals. If not, then, as happened last Halloween, the markets will rally, conditions will ease, and inflation and the economy will heat up. In that scenario, the Fed will likely have to hike much more to achieve its objectives. We expect Treasury to stay the course and for asset prices to fall.

On Monday at 3:00 PM, Treasury will announce the Estimate of Financing Needs for 2Q24 (the “Financing Estimate”). On Wednesday at 8:30 AM, Treasury will announce the composition of the issuance (“Issuance Composition”). We think the TBAC will advise Treasury to maintain the existing size of auctions and potentially modestly increase auction sizes to accommodate the financing of the Coupon Buyback program. We also believe Treasury will maintain the TGA at \$750BN to ensure 5 days of resources to meet its obligations in case a market disruption event prevents issuance.

One thing is certain: Over the next few years, the refinancing of Covid era Bills issuance and sizable ongoing budget deficits will force the private sector to buy more duration than they can swallow at current prices. We are confident that, over time, term premiums on Bonds will rise by 100bp, putting a 15% headwind on long-term assets. Despite the attention now placed on the upcoming QRA, markets are not priced for our expected outcome. Until term premiums rise to a sufficient level, we see no reason to expect demand to offset future supply.

Our expectations for the QRA and FOMC are:

QRA

- Financing needs for 3Q24 of at least \$575BN.
- TGA Target for end of 3Q24 at \$750BN.
- Auction sizes for 3Q24 will remain at current levels.

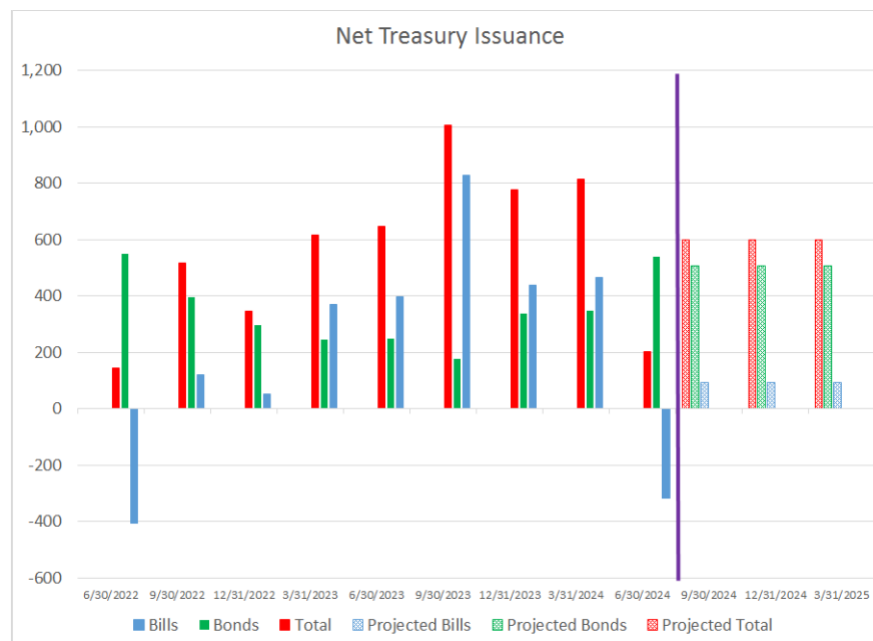
- Treasury will implement both cash management Buybacks (which will have no impact on markets) and Coupon Buybacks of \$30BN per quarter, which may result in some upside to auction sizes.

FOMC

- Will continue to discuss when QT Tapering would be appropriate.
- Powell will use language like “not likely,” which takes June cuts off the table.
- Broadly data dependent and willing to do what it takes, i.e., hawkish.

Our QRA base case

We don't think there is much value in accurately predicting the QRA outcome. We plan to interpret the outcome based on what happens and react accordingly. We will provide that interpretation in real-time notes to clients. Regardless of the announcement details, the trend will be obvious:



Our prediction, which we will compare to the outcome, is no change in auction sizes and flat net issuance. We expect \$1.1TN of gross Coupon issuance and \$500BN of net Coupon issuance for many quarters to come. We further expect Treasury will also announce and begin the Treasury Buyback in 2Q24, which will not change net issuance but will increase gross issuance by \$10BN per month.

In this DSR we will:

- Assess the likely range of the Financing Estimate and Issuance Composition.
- Examine the supply and demand for Bonds.
- Share our expectations for the FOMC and QT.

4/29 Financing Estimate.

The factors that determine the net new financing needs of the US Government are:

- Size of the fiscal deficit.
- Runoff of Fed balance sheet (which may include an adjustment for Taper).
- Change in the Treasury General Account
- The Buyback

The Fiscal Deficit

The fiscal deficit has some potentially significant volatility due to tax receipts and interest expense; the budgetary portion is in gridlock, but, as seen this week, issuance will grow by 6.5% this year due to the Ukraine, Taiwan and Israel aid package. We start with a baseline assumption for the 2024 Fiscal deficit of \$1.6TN. In aggregate, we estimate the deficit funding need at \$390BN for 2Q24. We see very little chance of a lower need and a fair amount of upside to the number.

Runoff

QT is fixed at \$180BN per quarter. However, September Runoff is unusual and, as in June, Runoff will be less than target at \$150BN. While Taper is being discussed as a concept, it will not be settled, and is unlikely to be a factor, in this report. However, we have assumed Treasury will take Taper into account and, if the Fed decides to delay Taper, Treasury will adjust by issuing more Bills.

TGA

Treasury policy states that the TGA is designed to fund the US government for all expenditures and debt maturities for a week to ensure the government can honor its obligations in the event of an issuance market disruption. Projecting weekly expenditures and debt maturities for the next year sets the minimum TGA at \$750BN. We expect a stable TGA target.

Treasury Buyback Program

We expect the Treasury Buyback program to be implemented in June. The program will result in no change in net issuance of either Bills or Coupons, although gross issuance of Coupons should rise. We don't expect Coupon auctions to increase, but, based on Treasury guidance, the Coupon Buyback is intended to be duration neutral so as not to interfere with Fed monetary policy. If so, the auction sizes must be increased. We don't know if this is a big deal and so assume the auction sizes will stay fixed. That provides some logical upside to gross issuance.

Range of Financing Estimates:

The above factors add up to a minimum case of \$475BN in 3Q24 financing. The variable is the budget deficit. **Our range for the 3Q24 financing needs is \$475BN – \$675BN.**

Potential implications for markets on Monday, 4/29/24

Because the Financing Estimate will be released before the Issuance Composition and the Coupon issuance in the latter is the key piece of data, it is possible that the market may extrapolate the number of Coupons from the quantity headline. Our estimated range of Bills to the total Financing Estimate is 10% to 25% Bills. Applying the high Bill percentage to the low financing need generates our lowest Bond issuance estimate. Of course, we could be wrong and so we have a table to quickly look at the Financing Estimate and imply a Bond issuance amount. Assuming the Financing Estimate is within the range in which composition is relevant, the proportion of Coupons to Bills issuance released on 5/1/24 will determine the impact on markets.

Remember, the first step before applying this headline is to confirm a stable TGA target. A substantial drop in the TGA target would temporarily support assets and the economy due to reduced issuance. We have studied the future weekly flows and think, if anything, the TGA target gets revised upward, requiring more not less financing. Assuming no change (and using the headline for 2Q24), the implication for asset prices can be determined. Substantially fewer Coupons than 3Q24 would be bullish assets. Coupons modestly below 2Q24 will be neutral assets and Coupons above \$500BN bearish.

Q3 Financing Estimate - 4/29 3:00 PM				
Headline	Net Coupons (BN) with 10%	Net Coupons (BN) with 17.5%	Net Coupons (BN) with 25%	Probability
	Bills Issuance	Bills Issuance	Bills Issuance	
475	428	392	356	Low
525	473	433	394	Medium
575	518	474	431	Central Case
625	563	516	469	Medium
675	608	557	506	Low

Our central case of \$575BN is likely bearish assets as leaving Coupon auction sizes the same would generate \$518BN of net issuance. However, if the headline comes in line with our estimate, we will wait for the 8:30 Composition data on Wednesday.

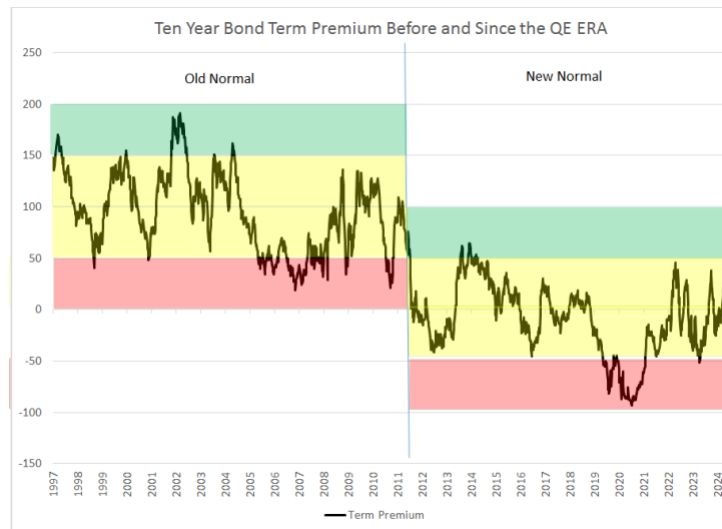
TBAC Recommended Issuance Composition

Once the Financing Estimate needs are known, the next piece of data – Issuance Composition - will be released Wednesday morning. The change in gross Coupon issuance is key. The amount of Bills used to raise the needed financing is the lever Treasury can use to limit Bond issuance. We believe Treasury will keep Bond issuance at last quarter's auction sizes and perhaps increase Buyback amounts. We base this position on the following:

- Term premiums have risen but remain low by historical standards.
- Bills outstanding are high and Bills yields have risen since last quarter.
- Choosing Bills delays the inevitable and requires higher TGA balances.
- Treasury is not going to start muting QT and face hikes by the Fed.

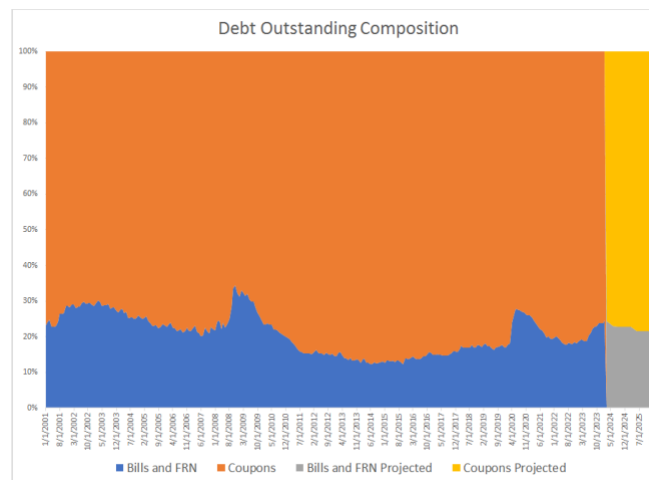
Term premium levels suggest Coupons over Bills.

Since the February QRA, term premiums have gone from negative to modestly positive. Clearly, the term premium is well below pre-QE era levels. As term premium is the price that Treasury pays to compensate investors for taking on price volatility when purchasing Coupons over Bills, we believe current levels of term premium are a good deal for the US taxpayer. Treasury uses a term premium model for issuance and are conscious of the highly attractive financing levels currently afforded by low term premiums.



Bills outstanding are rising and will likely rise further before slowly declining.

Given the high fiscal deficit, the slow and predictable increase in Coupon issuance, and the continued Fed Runoff, it is simply impossible for Treasury to make much progress in reducing Bills outstanding percentages in 2024. However, that results in a larger overhang of Coupons in 2025 as a move in quarterly Bills share to less than 20% of issuance would be required to make a dent on current outstanding debt levels.



Choosing Bills delays the inevitable extension of the debt.

By late 2024, Bills issuance will likely drop each quarter to below 20% per quarter but, with significant deficits and the destination of QT, net Coupon issuance will likely settle at a level even higher than current levels. Perhaps this quarter the full implications of the duration issuance will begin to be front run. However, frontrunning \$1.0TN of QT and the necessary duration extension is simply too large. Eventually, the supply will come to market and term premiums will rise.

Treasury will not fight the Fed.

Last Halloween, Treasury decided to delay the step-up in Coupon issuance to 2024. That same day, Chairman Powell began the dovish pivot by declaring that real Fed funds rates were restrictive, and that path of inflation was encouraging. Governor Waller and the FOMC reiterated that dovishness in December as inflation data came in cold. Treasury and the FOMC were aligned. Going into this QRA/FOMC cycle based on warm data and Fed communications, it is clear that the Fed is, or should be, concerned about inflation. **We do not think a reduction in Coupons would be aligned with the Fed's inflation objectives.**

What to look for on the 5/1 TBAC Tables

It is likely that Monday's Financing Estimate will lack adequate clarity and the TBAC table will be necessary to evaluate the size of Coupon issuance. Below we prepare you for the release in more detail and provide guidance on the Buyback. Assuming no communication changes or complications, our base case is:

- We expect gross Bond issuance for 3Q24 to be **\$1088TN**.
- We expect net issuance for 3Q24 to be **\$500BN**.

The simple thing to do this quarter is to look at the gross issuance and compare to this table:

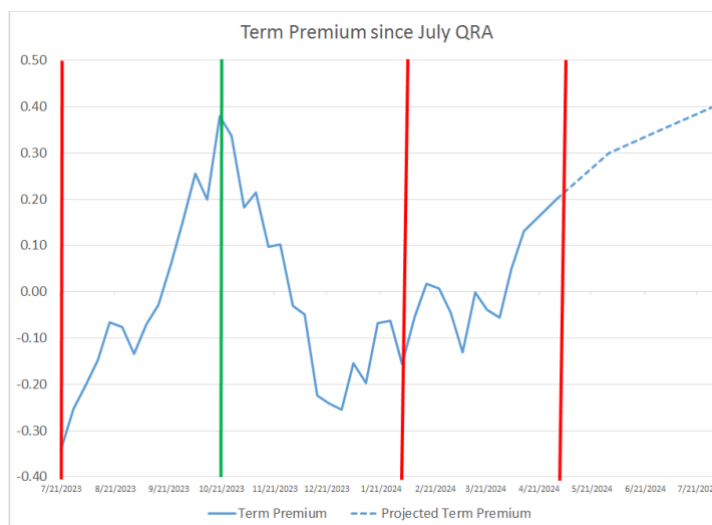
Q3 Offered Amount TBAC Table - 5/1 8:30 AM		
Headline	Probability	Action
950	No Chance	Aggressive Buy
1000	Low	Buy Assets
1075	High	Neutral
1118	Medium	Sell Assets
1150	No Chance	Aggressive Sell

What does this mean for markets?

Given steady and sizable gross and net issuance, we expect risk premiums to expand. Our February QRA estimate of 35bp of risk premium expansion was accurate. We expect another 20bp of risk premium expansion over the next quarter. **We expect SPX to fall to 4500 and 30Y yields to rise to 5% over the next quarter.**

Sensitivity analysis

The July and October QRAs have had major impacts on asset prices and term premiums. A \$160BN net Coupon increase led to a risk premium expansion of over 60bp. On Halloween, a pause in the increase in net Coupon issuance catalyzed a 50bp risk premium contraction. As seen below, term premium has been highly sensitive to QRA data. **The reaction to the February QRA was 35bp and we think the reaction to this QRA will be an additional 20bp.**



The July and October QRAs caught the market in very vulnerable positions. Last July, asset prices were bid up and term premiums were at lows and in October the setup was reversed. Today, Bond yields have risen but are nowhere near October highs. Equities, commodities and gold have rallied and completely offsetting Bond weakness. Portfolios as a whole are elevated and vulnerable to weakness if our expectations for QRA are realized. However, we deem the situation less vulnerable to a rapid repricing than in July or October. We consider Treasury Coupon issuance to be an overwhelming and steady headwind on asset prices that will take months to play out but with high certainty.



New Format and Buyback announcement

Last quarter, Treasury changed its format for the reporting of the Auction Schedules. To further confuse this release, it is certain that Treasury announces the details of the Buyback. Key to understanding this new format is to assess the gross issuance of Bonds and determine how Treasury is financing the Buyback amount. Where can you find that?

The new format is:

TBAC RECOMMENDED US TREASURY FINANCING SCHEDULE FOR FEBRUARY 2024-APRIL 2024 QUARTER
* BILLIONS OF DOLLARS

	Auction Month	Notes					Bonds		TIPS			FRN
		2-Year	3-Year	5-Year	7-Year	10-Year	20-Year	30-Year	5-Year	10-Year	30-Year	2-Year
Historical Reference	Aug-23	45	42	46	36	38	16	23			8	24
	Sep-23	48	44	49	37	35	13	20		15		24
	Oct-23	51	46	52	38	35	13	20	22			26
	Nov-23	54	48	55	39	40	16	24		15		26
	Dec-23	57	50	58	40	37	13	21	20			26
	Jan-24	60	52	61	41	37	13	21		18		28
Recommendations for this Refunding	Feb-24	63	54	64	42	42	16	25			10	28
	Apr-24	69	58	70	44	39	13	22	23			30
Provisional Indications for Next Refunding	May-24	69	58	70	44	42	16	25		16		28
	Jun-24	69	58	70	44	39	13	22	21			28
	Jul-24	69	58	70	44	39	13	22		18		30

Notice in this format there is an extra month, which is nice. However, everything else useful is missing. No gross issuance totals, no changes, no maturities, no net issuance or totals, no Bills, and, importantly, no place for Buyback data. It is a mess. We will add up the relevant rows (in green) for the gross issuance total and compare it to our chart above. We will calculate the net issuance from the maturities we source from other data. When announced, we will look for any Buyback quantities (estimates are \$10BN per month). With those numbers, we will determine the net issuance and infer the Bills amount from the Financing Estimate needs from 4/29. We are ready, but the market may not be.

Buyback.

The Treasury Buyback will be announced in this report. We are highly confident that the Buyback will be duration-neutral at the level of the forest and almost certainly not at the level of the trees. Each Buyback will be a particular cusip and will be financed with Treasury's overall financing. Net net, we are quite certain that the duration of issuance outstanding will remain unimpacted by the Buyback program but will look for details in the announcement. However, the odds are that markets will perceive a QE-like impact of the start of the Buyback, despite it not being that at all.

Regardless of the outcome, markets are living on borrowed time.

The combination of continued QT, which, even after Taper will require the private sector to absorb \$50BN of duration per month (\$20BN MBS and \$30BN Treasuries) and the duration extension that will happen over the next year or two as Treasury reduces Bills, is an extremely strong headwind for Bonds and thus assets.

The budget is another matter. The deficit has grown partly due to interest payment increases, which would likely decline if growth fell. However, any progress on rates

may be offset by countercyclical fiscal spending or falling tax receipts. It's not a pretty picture. Duration supply will weigh on the markets for years. While we think this will take time to manifest in term premiums, it is a massive headwind for assets. The supply picture is bearish Bonds based on expanding term premiums to compensate new buyers.

Politics, Front-running, and PTSD

Presumably, market participants see what we see. We suspect politics, and PTSD from frontrunning experiences that have caused wild whipsaws in pricing and losses are limiting what is priced in.

Politics: Perhaps there is a set of participants that believe QT will end sooner and/or that Treasury will continue to finance the deficit and QT with more Bills and fewer Coupons. The rationale for those with a view differing from ours is mostly built on political calculations. Of course, politics is relevant. If the levers that Treasury could pull would clearly and reliably result in a Biden victory with no adverse or unexpected consequences that would torpedo the victory, those levers would get pulled. However, unlike last October, the stock market is only 4% from all-time highs and up 20% from the October lows, GDP is strong, the unemployment rate is 3.8%, Bond yields are below 5%, and inflation is going in the opposite direction. The Fed is actively walking back rate cut expectations. The need for any politically oriented maneuver seems small and its negative consequences seem high. We do not believe Treasury has a lever to pull that can increase the odds in November today. We also know that the levers are no longer available after the next QRA on July 31. For that reason and others, we think the 7/31 QRA is a bigger deal than next week's QRA. Nonetheless, we will follow our discipline and, instead of trying to predict the QRA outcome, will simply react.

Front-running: When market participants know of a large sell order they immediately react and short the market. Depending on how much capital is deployed in the front-running activity versus the size of the sell order, the market can undershoot, overshoot, or be just right and when the order actually comes to market it may have no impact at all or, if the front-runners have overshot, the order can actually happen at more favorable prices. Because of front-running, our expectation is that every previously announced order is always priced into markets and little or no alpha exists from preannounced supply. This dynamic is seen every day in markets. In particular Treasury Coupon auctions in huge size occur with very limited price impact. Some are bad, some are good, and some are average. However, while sizeable auctions occur with little impact, the sheer magnitude of Coupon issuance over time has to be front run in such large size to price in the flow that it would require more capital today dedicated to front-running than is available and willing. The assessment necessary to determine the impact of this flow is both based on size of flow versus size of front-running capital AND willingness.

The announcement of QT occurred in December 2021. The actual flow didn't start until the summer of 2022. Front-runners were willing and able to sell first. The impact on asset prices was obvious. Today we assess front-running flows as available but largely unwilling due to PTSD.

PTSD: Sizeable Bond issuance is Kryptonite for assets. We said this in "The Drumbeats of QT" in December 2021. Markets proceeded to sell off harshly with

long term Bonds falling 35%, most of which happened before the actual flow. Front-runners radically overshot and the lows of October 2022 were put in not due to the flow but due to the front-running. 4Q22 was a huge margin call from all the lopsided front-running positions as two forces conspired to cause a reversal. Inflation data surprised on the downside (due largely in part to the tightening of financial conditions on the long end and in equities and credit.) Then, perhaps unseen by some at the time, the debt ceiling muted the transmission mechanism of QT for the first half of 2023. We think that experience reduced the willingness of capital to front-run issuance flows and set the market up for a sizeable negative reaction to the 7/31/23 QRA. Immediately after that announcement, Bonds sold off. Front-running came back and once again overshot, driving term premiums up. Once again, the tightening of financial conditions did its work and the economy slowed. However, Treasury kept issuance at low levels on Halloween, the Fed "Early Pivoted" and front-runners were again destroyed. In February, the QRA was pretty huge, but no front-running occurred. Only recently, with the economy warming up and the Fed turning hawkish have assets started to struggle. Our assessment is that there has been limited capital deployed to front running the \$1.5TN of net Coupons coming over the course of the next 3 quarters in part due to PTSD. The fear of a political maneuver is keeping participants on the sideline. This may change and a more volatile move higher in term premiums may occur, but it may just be a slow grind with actual flow doing the work versus front-running.

Who will buy all these Bonds?

Once QT ends, our framework of the "circle of life" - public sector spending leads to private sector savings leads to public sector funding leads to public sector spending and so on - will continue. However, the composition matters and the compensation for risk-taking matters as this circle turns. QT, which we expect will continue longer than most market participants assume, breaks that circle and places higher upward pressure on term premiums. The important potential buyers are not the unlevered real money investors; the amount of risk that needs to be taken on rapidly over the next couple of years swamps even their steady demand. It is players that can lever or print money that will have to assume this risk. Those are:

- Foreign central banks who manage their currency.
- Commercial banks buying with money they print out of thin air.
- Hedge funds.

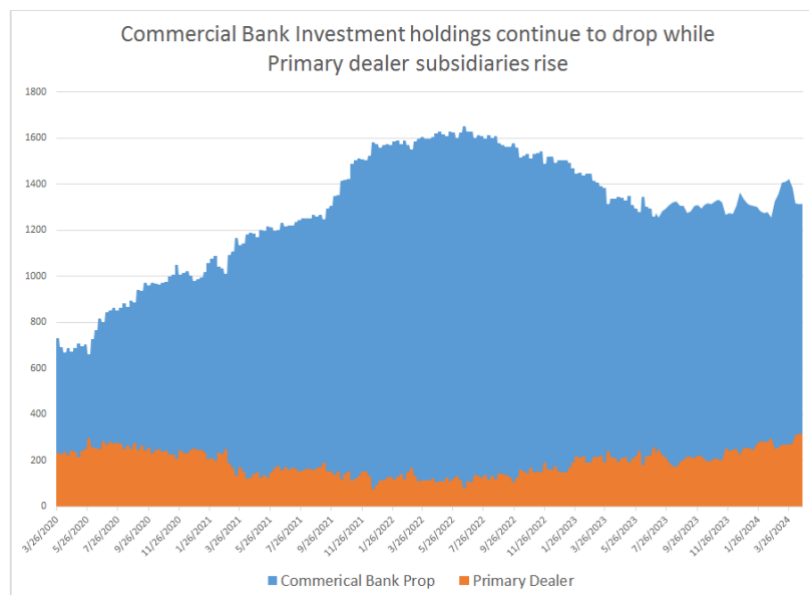
Foreign Central Banks

Foreign central banks continue to slowly let their US Treasury holdings run off. However, significant currency weakness in the Yen and the Yuan, with both currencies struggling to hold the weak end of their respective bands, suggest that foreign central banks may have to actively support their currencies and sell UST. Central banks are highly unlikely to be buyers.

Commercial Banks/Primary Dealers

Commercial banks have continued to sell Treasuries while their primary dealer subsidiaries are adding. Dealer buying is almost certainly basis trading and not real demand. We don't think commercial banks have much appetite to buy Treasuries aggressively with the curve inverted. Regulatory pressure may also prevent some

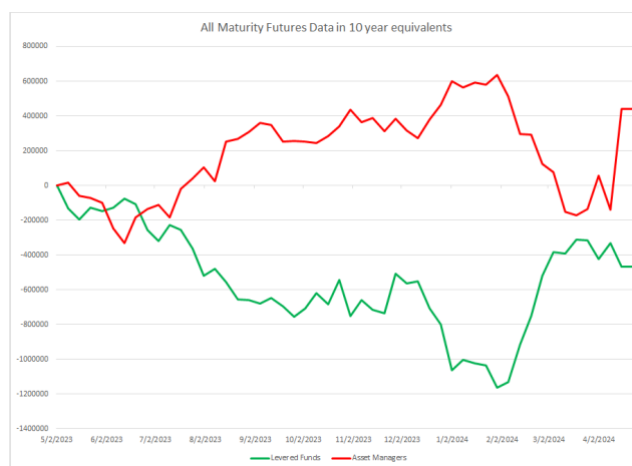
banks from leveraging up on Treasuries if the curve evolves and term premiums are attractive, even if the commercial bank are willing and able. This regulatory pressure is overhang from the “Bank Crisis”.



Hedge Funds

Levered players able to take risk with borrowed money (repo) have been very active in the basis trade. They have sold futures to real money investors, who prefer the convenience of futures versus holding physical Bonds, and have bought physical Bonds. The positioning data confirms their holdings.

Hedge funds have aggressively offloaded shorts in Bond futures (basis trades) to the primary dealers as unlevered real money continues to have large longs.



Pricing

As we have noted, term premiums have moved up somewhat and while still unattractive are less so. Holding Treasury price risk versus holding cash is still less attractive today than it was last fall. Other metrics of Treasury demand are based on the curve. Levered players must fund their purchases with short-term borrowing. A steep curve encourages the carry trade. An inverted curve encourages

holding Bills and cash. As compared to the highly vulnerable period last July, levered buyers are more likely to be able to absorb Bond supply based on less unattractive negative carry.

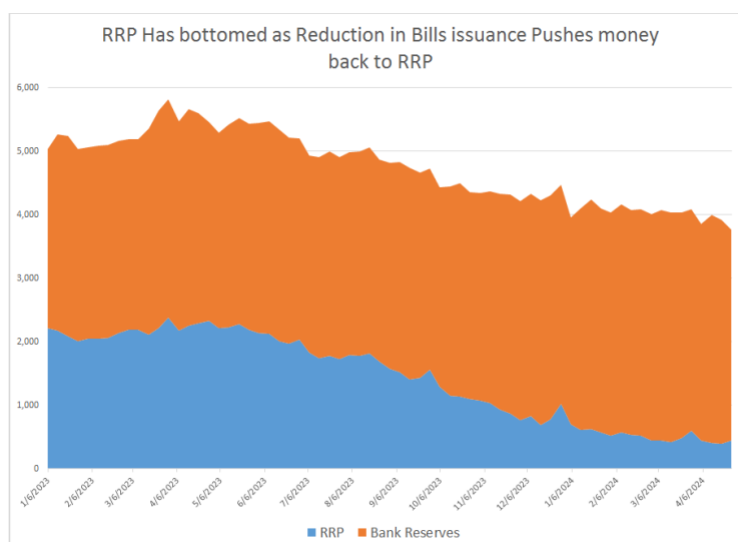


In aggregate, the picture on the demand side looks less fragile than it did last July, which is part of the reason we are both more confident that next week’s QRA will maintain Coupons and that the market impact will be milder initially. However, this does not auger well for an extended supply of duration.

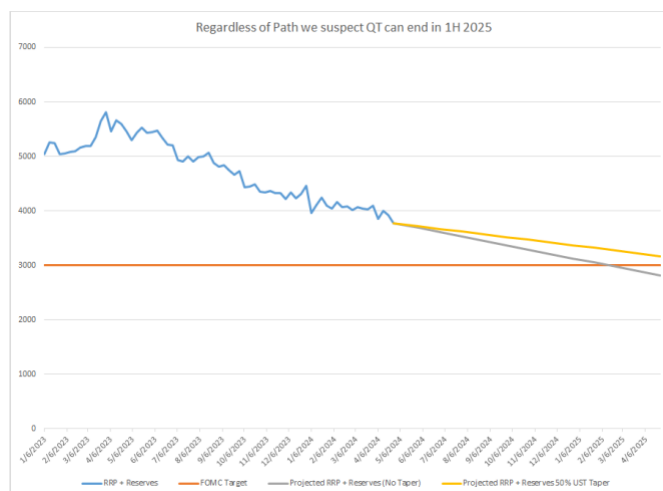
FOMC

We think the Fed will NOT announce the beginning of QT Taper and will add modestly hawkish language in the statement. We think Powell will push back on imminent Tapering and certainly push back on ending QT. In terms of rate guidance, the data is no longer supportive of the cuts baked into the March SEP. Powell is usually more dovish than conditions mandate but given the evolving FOMC sentiment and the data it is possible Powell will signal that a June cut is “Unlikely”. We expect a mildly hawkish Fed, but not a game changer.

Our reasoning on QT is that, as we predicted months ago, the RRP would have a low of about \$350BN and stabilize after tax season above \$400BN and only drift lower for the balance of 2024. We see no rush to Taper. The Fed may Taper but we do not think that will impact term premium as the duration extension at Treasury will be the principal driver NOT reserve balances.



While QT Taper doesn't make sense to us for this meeting, some form of Taper later in the year and an end to QT in 1H25 is our central case. With RRP levels stable, SRF and Discount Window available, and despite uneven distribution of reserves in the banking system, we think a Taper once financial conditions become restrictive is the safer policy stance.



Market outlook

Short term

We expect the reaction to a QRA that matches our expectations will be a modest negative to asset markets. While a boisterous crowd of newbies to the QRA are expecting a Yellen Pump for political reasons, we think they are more bark than bite and, when disappointed, will not have significant exposure to liquidate. On the other hand, given the PTSD it is possible that frontrunners given the green light will be more willing to sell Bonds.

Medium Term

During next week, assuming we are correct on QRA and the Fed, we plan on building a medium-term "Act 3" portfolio. In Act 3 of our Script, long-term assets fall and tighten financial conditions. Stocks perform the worst relative to cash, but Bonds and gold also weaken. The move in stocks is a catch-down move relative to Bonds. As economic data is released that continues to show a strong economy and keeps the Fed on hold, we expect two-year notes to trade at as high as 5.15%. If so, we will be adding those as longs against our short Bond and short stock portfolio in large size.

If Janet substantially cuts Coupons

If we are wrong and Treasury substantially cuts Coupons, Janet will cause a rewind to the "Script" just like on Halloween. Act 1 is higher for longer where equities, commodities and gold massively outperform cash and the curve inverts. The Fed will be forced to hike aggressively. 2Y Notes will be a huge short, nominal Bonds will rally initially on lack of supply but then pause as the curve inverts. If we are wrong, we will go long calls on equities, gold, and oil, and short twos.

Synthesis

Next week will either mark the beginning of the end of the fight to kill inflation or put Janet in the Captain's chair as she runs the economy and markets blazing hot and completely disregards inflation. The Fed will not be able to counteract the Captain. We expect Act 3 will play out, but we will position after we see the news. Lastly, if a political pump is deemed necessary when equities are at 4500 and FCI is tight, and the economy has weakened, the 7/31 QRA will be the last shot and frankly the more sensible time for Janet to take the helm.

Current Portfolio and Performance

Damped Spring Alpha has had a great month in April. We are now up 17.23% YTD, well ahead of our 10% annual target. We are lightly positioned but intend to make sizeable bets next week whichever way the Captain steers the ship.

Assumed Portfolio size	\$	100,000,000						
LTD P/L	\$	76,106,130						
Total Return		76.11%			YTD Return in excess of cash		17.23%	
Today's Date		4/26/2024			Portfolio Created		4/15/2019	
Date	Position	Entry Price	Amount	DVO1 or Delta	Worst case loss	MTM	P/L	Open/Closed
4/4/2024	SFRZ5 Consolidated Positions	96.02	5500	137,500		95.63	\$ (5,362,500)	Open
4/10/2024	ZNM4 5/24/24 108 Put	0.70	3000	(69,300)	\$ 2,109,375	1.00	\$ 890,625	Open
4/15/2024	ZNM4 5/24/24 106 Put	0.38	-3000		\$ (1,125,000)	0.28	\$ 281,250	Open
4/10/2024	ZBM4 5/24/2024 115/112 Put Spread	1.00	2000	(95,200)	\$ 2,000,000	1.30	\$ 593,750	Open
4/25/2024	SPX May 17th 4900 Put (added 4/26)	20.55	486		\$ 998,730	16	\$ (221,130)	Open
4/22/2024	GCM4 5/28/2024 2300/2200 Put Spread	18.5	270		\$ 500,000	19	\$ 13,514	Open
				Risk			4.483%	0.7%