The Damped Spring Report

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

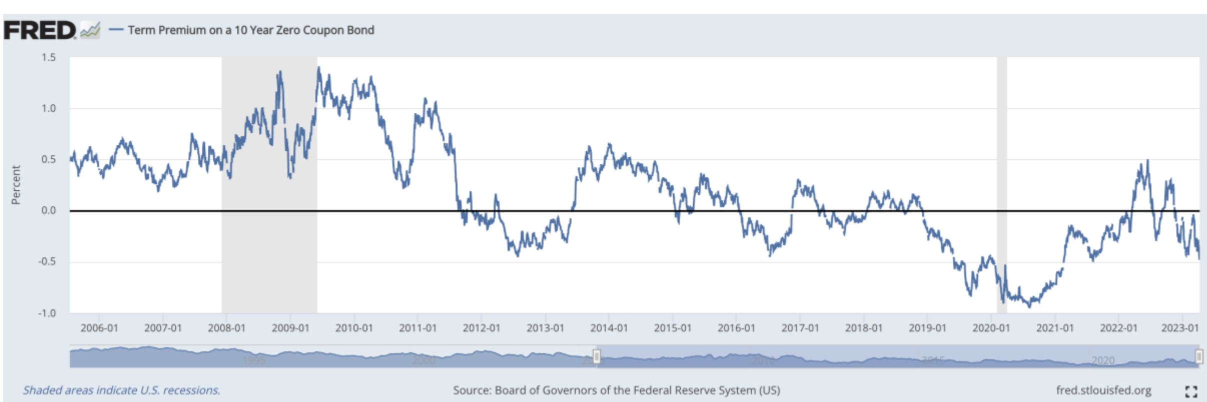
4/17/2022

Cash is King. Across the entire yield curve for bond and broad asset markets, cash represents the cheapest place to hold assets by far. We have been short two-year notes, ten-year notes and US equities since Feb 2nd. Cash has returned 90bp and all the assets we shorted are down. The case for holding cash has significantly strengthened over the last two and a half months.

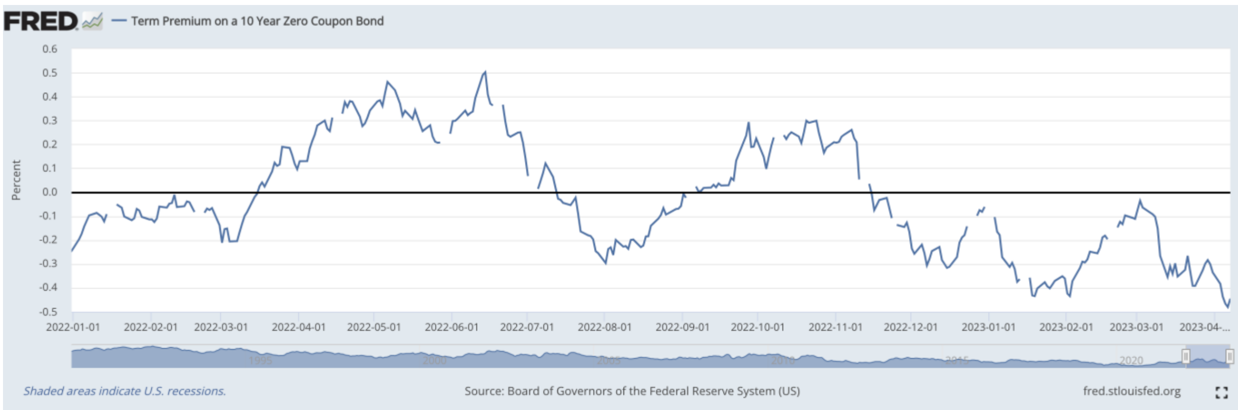
- **Cash is earning 5%.**
- **By many measures every bond on the curve from twos to thirties is extremely rich to cash.**
- **Since October the bid for all government bonds has been insatiable as those who believe the economy is heading toward a recession scramble to establish long or cover short treasuries positions.**
- **All assets including stocks that use bond yields for discounting future flows are up primarily due to this recession bid in bonds.**
- **Equities are likely to fall in an actual earnings recession but there is no sign that such a recession is impacting the earnings driver and thus the discount rate driver dominates prices.**
- **Demand for recession protection has exceed supply. We expect supply will quickly overwhelm demand for reasons we will describe below.**

First some pictures.

A widely followed measure of term premium (another word for risk premium) made new lows on Thursday and except for the low during Covid is at it all time low.



Zooming in since QT was announced, we can see that the QT announcement had a significant front running impact as bonds were aggressively sold. But then as the Fed decided to hike rates the recession bid flowed into the market driving risk premiums to a low right before the Quarterly Refunding announcement on August 1st and the Jackson hole speech. Once again events made assets unattractive and an expansion of QT in September pushed risk premiums higher. Since the weak CPI print in November risk premiums have once again collapsed making Cash King.



What is important to understand about bond yields is they are composed of expectations of real growth, inflation expectations and risk premium. Bond yields have indeed fallen by 60bp since the first weak CPI number was announced.

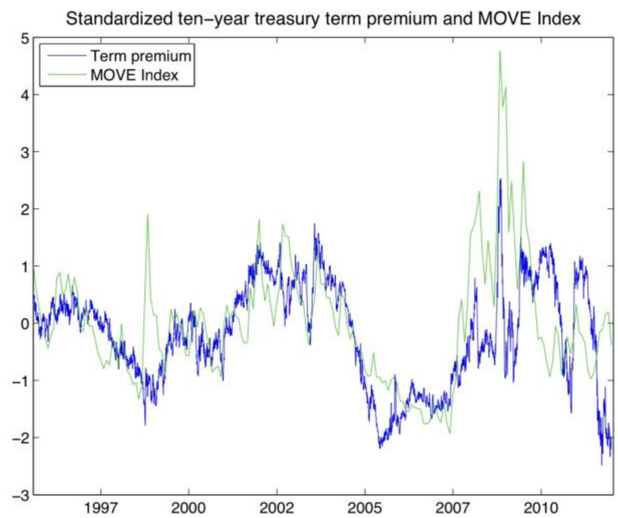
But using risk premium estimates over 100% of that drop in yield was risk premium contraction. Said another way expectations for future NGDP haven't changed at all. The driver has been entirely risk premium related.

A reminder of our risk premium framework.

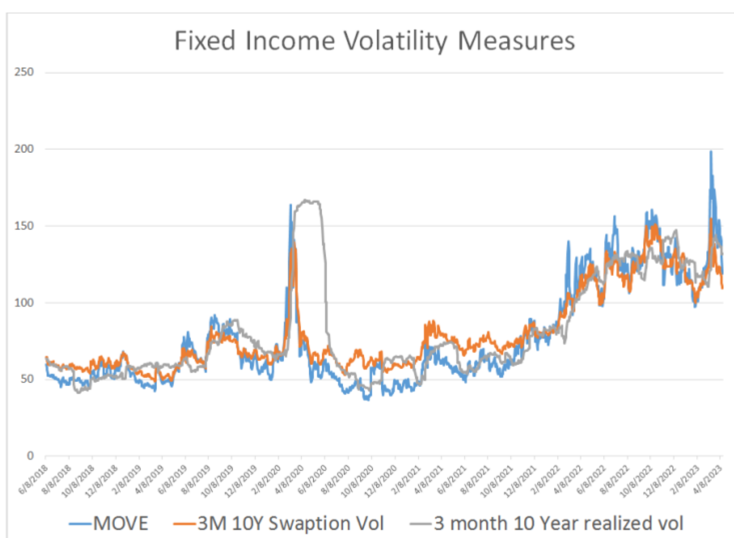
At Damped Spring we believe that risk premiums depend on

- The availability of money and credit to buy financial assets vs the supply of financial assets seeking money and credit.
- The expected future risk of market portfolios.

The 2nd driver of risk premium was clearly demonstrated in the original ACM Term Premium model. We are using ACM term premium models for this work as it is the gold standard for modeling the unknowable. The mechanism is that bonds are undesirable when risk is high.



Expectations of increased risk for the same return suggest a lower expected risk adjusted return for an asset or a portfolio vs cash and thus a selling pressure to return assets to an acceptable risk adjusted return. However, rates risk measurements remain quite elevated and have been extremely elevated in the period when risk premiums have collapsed.



Perhaps bond investors are front running implied volatility measures and expect negative risk premiums today to be acceptable due to much lower realized portfolio risk in the months to come, but, if so a short Swaption straddle seems much better. If volatility remains in line with what is priced by options market the negative risk premium on bonds is almost certain to prove attractive vs cash.

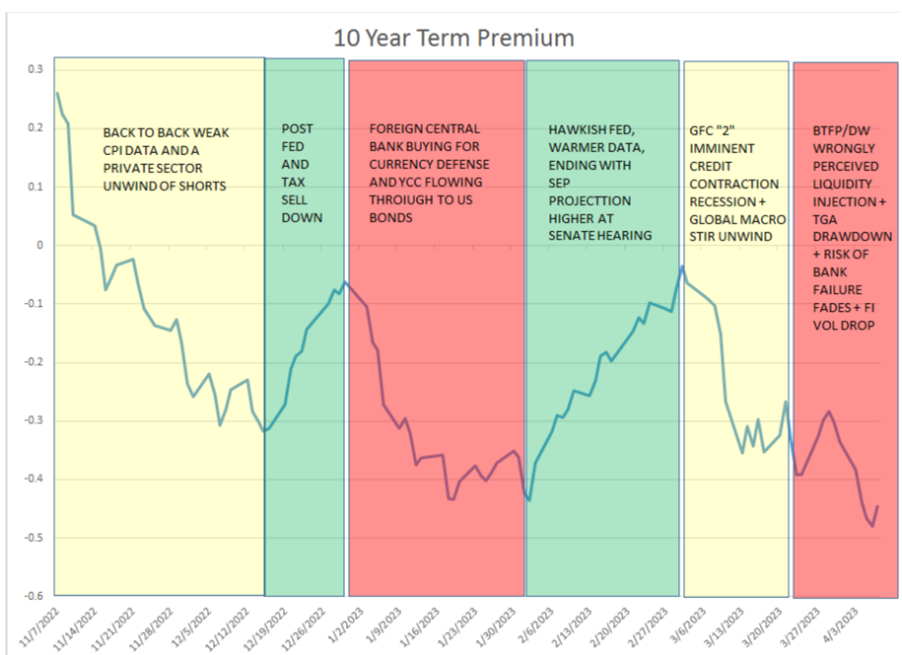
Let's be generous and say that portfolio volatility has had no impact on risk premiums. That leaves our primary framework driver. Supply and Demand of Assets.

Demand for assets

Demand for assets starts with the availability of money and credit. It takes money either borrowed or swapped from cash to buy assets. Money and credit demand is generated from three basic sources.

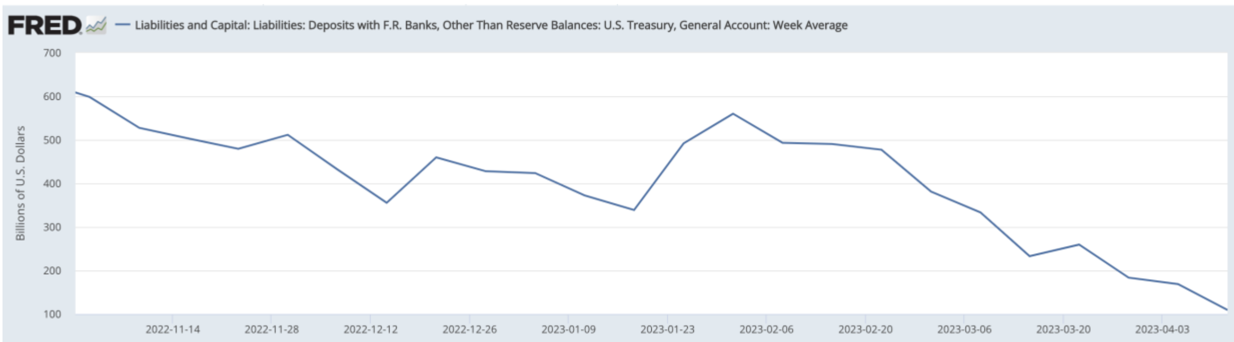
- A private sector investor who is in cash or outright short assets can have animal spirits which are relatively inelastic and force asset owners into cash. Asset owners of this sort tend to be elastic, and a price concession is required to force them into cash. Prices rise.
- A bank either foreign or domestic can create money out of thin air to buy assets.
- A central bank either foreign or domestic can pursue stimulative asset buying policies which forces the private sector into cash (QE). In addition, Central Banks that need to counteract their currency appreciation can sell their local currency and now have USD which needs to buy USD assets.

Each of these forces was clearly in place since last October. Yellow shaded areas are "animal spirits" driven, Green shaded areas are Fed hawkishness driven, Red shaded areas are Global liquidity driven.



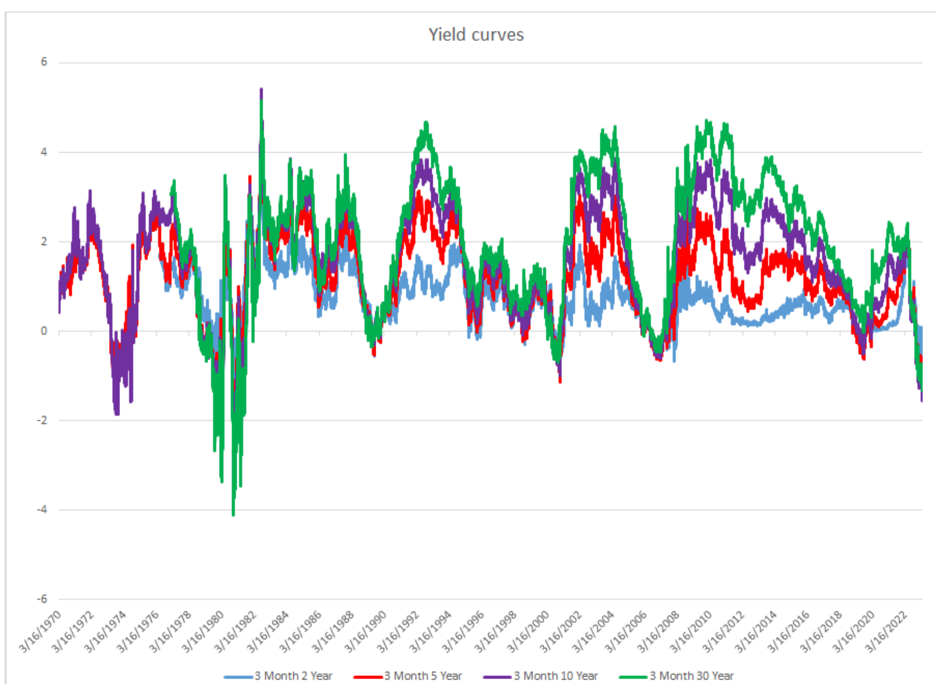
Supply of Assets

The Treasury continued to fund the government and issue sizable duration during the last two quarters. However other new asset creation including private sector loans fell. Private sector corporate bond issuance was mixed, and Equity issuance was almost non-existent particularly in December and January. Other public issuance was also light this whole period. Treasury General Account fell as the debt ceiling was reached, extraordinary measures were used, and tax refunds were sent, it's possible that this flow which is usually slow moving did ignite some animal spirits. It is clear that the TGA drawdown and debt ceiling resulted in less bills issuance.

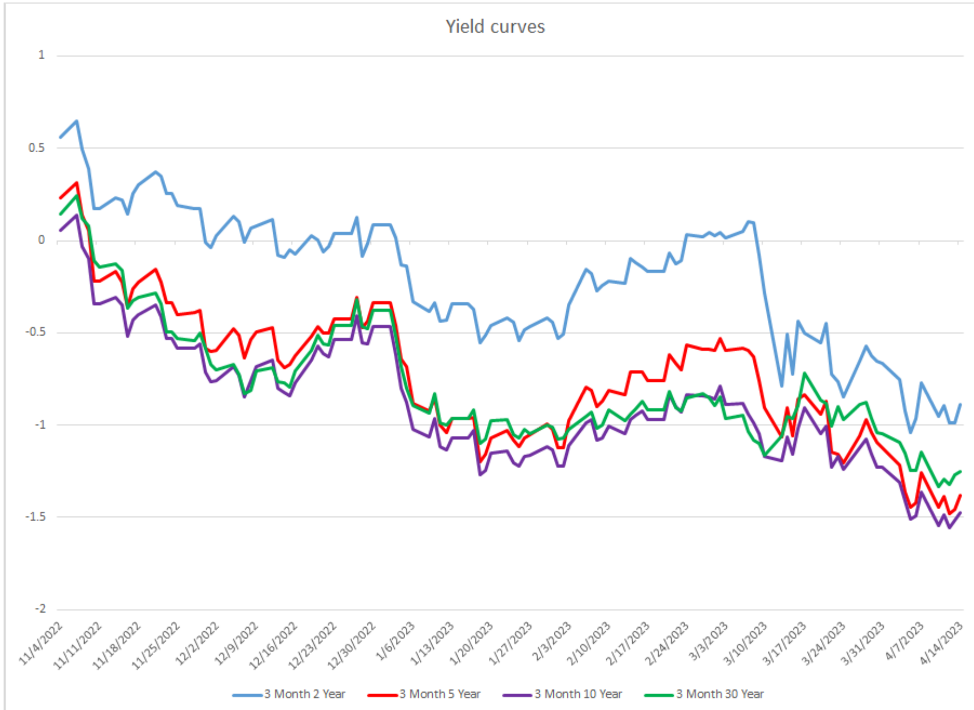


Are bonds rich by other measures?

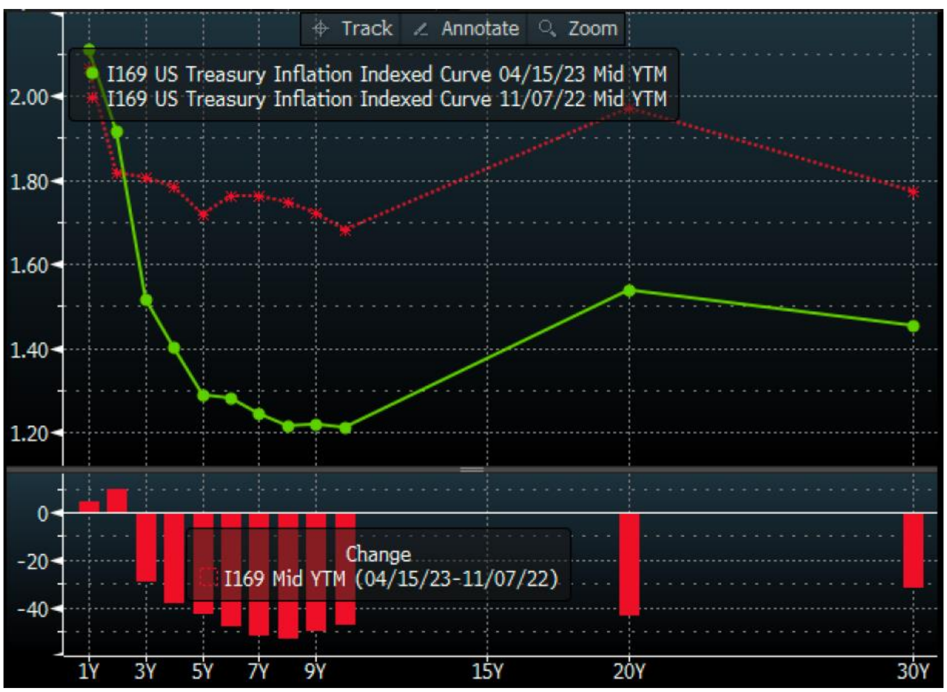
Risk premium is a theoretical construct. Many factors indicate that risk premiums on bonds are low or negative. But plenty of other metrics can be shown indicating bonds are rich to cash. Yield curve inversion vs every point in the curve vs cash is at 40 years low.



And since the weak CPI in November the curve has inverted massively



Real interest rates have collapsed across the curve.

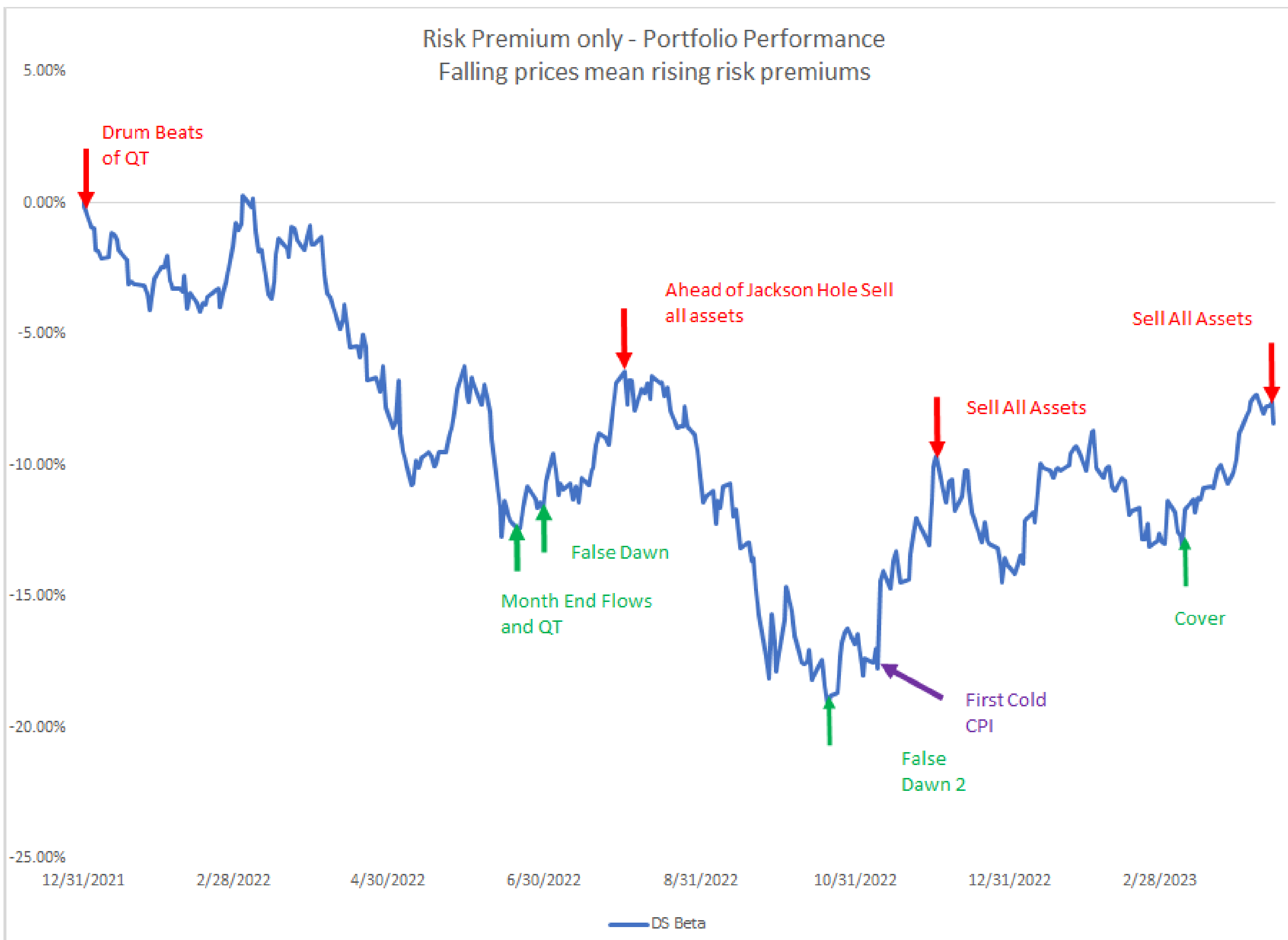


By most any measure, bonds, of any duration, are not worth holding vs cash. Obviously If a deflationary recession does occur bonds will still rally but the incredible contraction in risk premium and the existing inversion and level of real rates does not provide much potential for a rally.

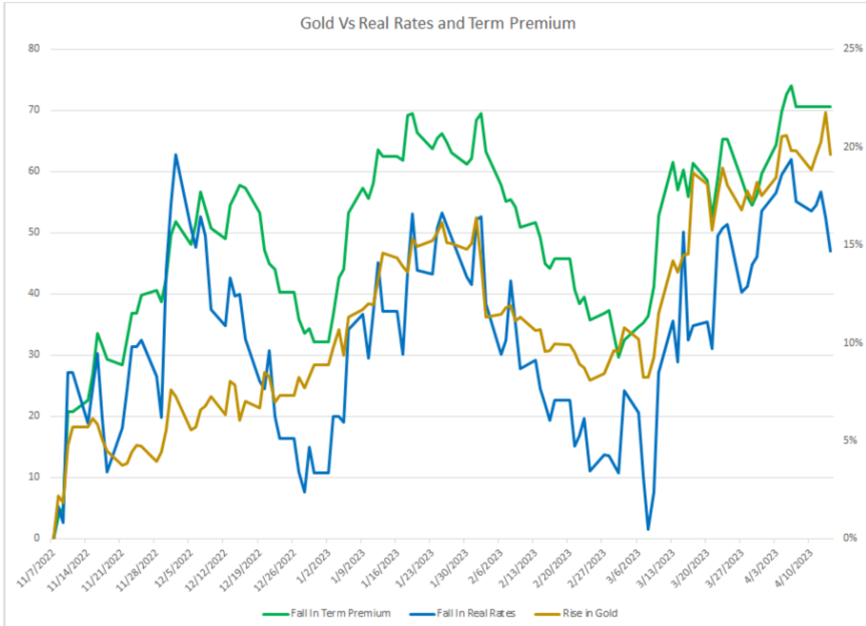
How does this impact other assets?

The Damped Spring Macro framework assumes that assets with unattractive risk adjusted returns will be sold for ones that have attractive risk adjusted returns leading to all assets having the same risk adjusted return over time. All assets with risk have a risk premium and a collapse in one risk premium is likely to result in arbitrage pressure impacting all assets. We believe the combinations of factors impacting the bond market since November have driven up all asset prices.

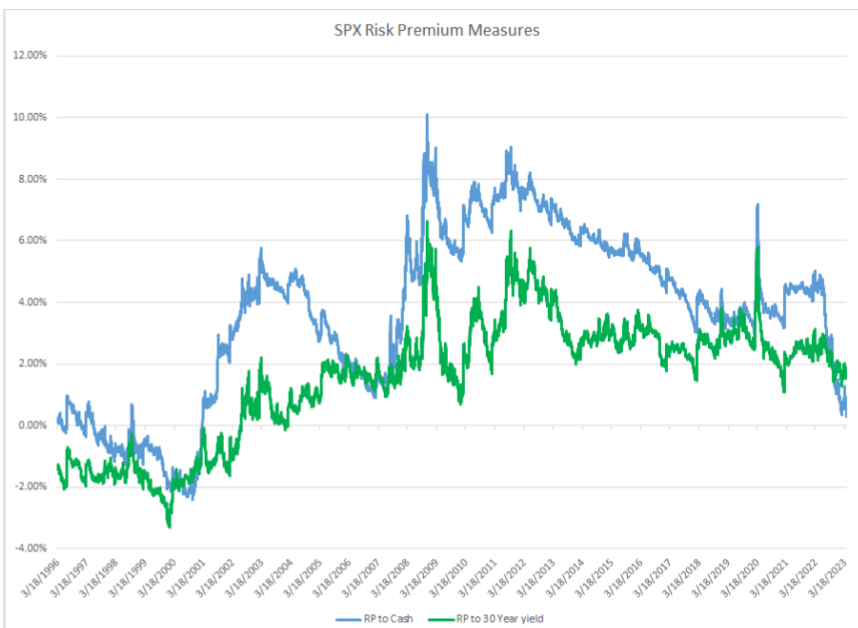
Our DS Beta portfolio is designed to track risk premium expansion and contraction and be balanced in a way that is insensitive to changes in inflation and growth expectations. It has skyrocketed lately. We shorted DS Beta in our DS alpha portfolio on Thursday afternoon and intend to add to that short if markets continue to stay elevated. As you can see by past calls shown in green and red arrows with corresponding Damped Spring Reports, we consider this topic our highest differentiated alpha. **Negative Risk Premiums on Bonds and the impact that has on all other assets will not persist.**



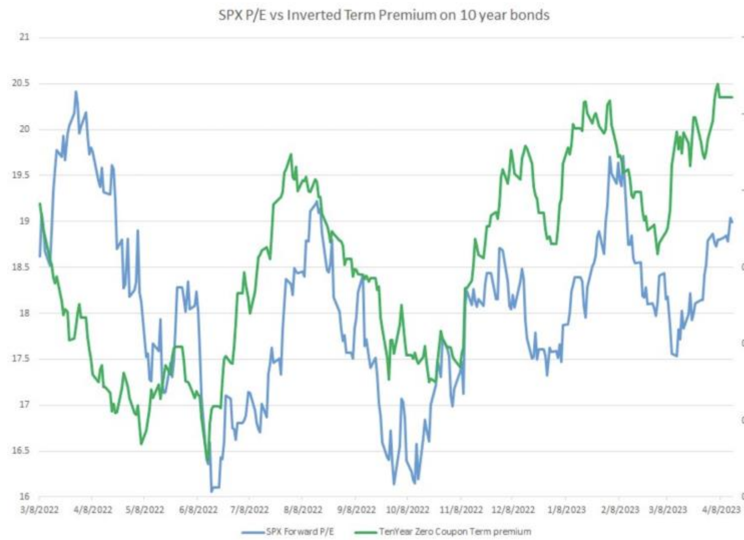
Our framework for gold considers gold to be a zero-interest currency and is thus largely driven by long term real interest rates. Real interest rates have fallen sharply. But gold is also a speculative asset. It is driven by risk premium expansion and contraction. Both of those factors have resulted in a significant move for gold.



Equity Risk Premiums have also collapsed. Typically, the outcome of that collapse it that Equities look rich to Bonds. But that isn't quite right. Bonds now carry a negative risk premium. Equities still carry a positive risk premium to cash though it is ever so slight. The right synthesis is bonds are really rich to cash and equities are slightly less rich to cash and nowhere near cheap.



The ten-year bond term premium also explains a lot of the expansion in P/E. This chart excludes the level of yields which is itself a driver and compares just the term premium. An expansion from deeply negative to zero on bond term premiums will result in as much as an 8% hit to P/E and prices.



<u>What will drive risk premiums to expand?</u>

- Negative risk premiums are by nature unsustainable as investors compare cash returns to assets.
- If the Economy simply slows gradually instead of craters risk premiums will slowly expand as the imminent recession bid fades.
- Private sector banks will begin to delever their long duration asset portfolio.
- QT will continue to place pressure on term premiums. We believe QT needs to be increased as it no longer is achieving its literal goal of expanding risk premiums. (More below)
- Continued reduction in BTTP/DW and FDIC lending will withdraw the perceived liquidity injection.
- The FDIC bank portfolio will be sold.
- Short term, tax payments will build the TGA in April
- Post Debt Ceiling crisis TGA will be rebuilt through issuance.
- The next Quarterly Refunding Announcement will show continued duration for sale.
- The Fed will hike 25BP in May.

<u>What are the implications for asset prices?</u>

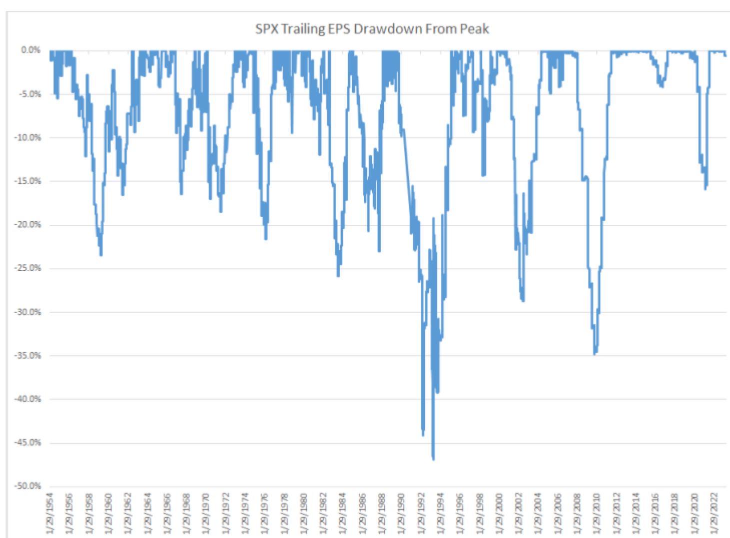
Our conservative case is an expansion of risk premiums on bonds to zero or roughly 40bp higher. Risk premium expansion will cause.

- Ten year note prices to fall by 3%
- SPX to fall by 6-8%.
- Gold to fall by roughly the same as bonds.
- The TIP ETF which is part of the DS Beta short trade to fall 2% due to its shorter duration.
- Mixed Commodities behavior. Short those for balance.

The special case of equities.

As we have mentioned above equities are indeed rich to cash. They have essentially rallied on the bid for bond term premium which has flowed through to equity multiples. Since November, P/E on the SPX has risen from 17 to 19 or roughly 10%. While earnings estimates for the next 12 months have fallen 3.5%. All the rally has been multiple expansion and then some. What is particularly striking is the consensus estimates for 2024 and 2025 suggest back-to-back 10% earnings growth.

Equity P/E does typically expand as recession trough earnings occur. There is simply no basis to believe earnings have troughed. In 2020 earnings troughed that's for sure and P/E expanded soon after the Covid bottom. Today earnings estimates are optimistic. 2022 earnings have shown no sign of weakness.



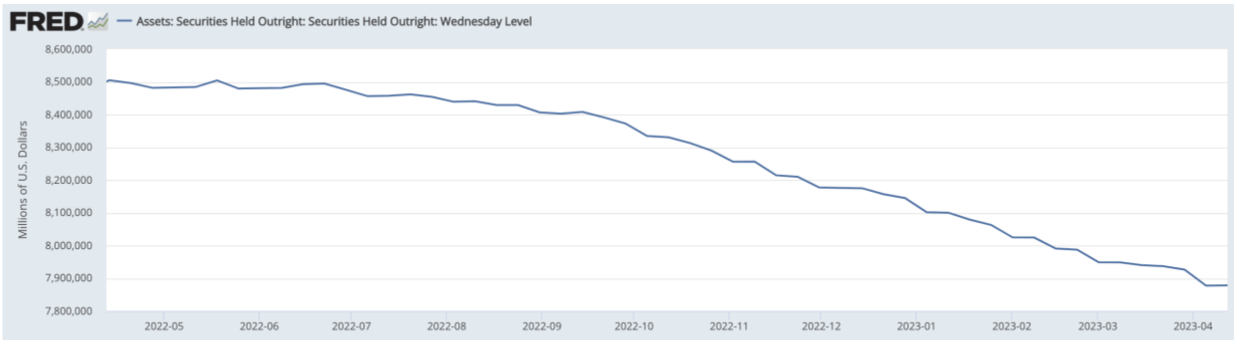
Perhaps that means there will be no recession. If so, bonds are rich from both the risk premium metric we have been discussing in this report and the growth and inflation expectations driver. A combination of higher nominal rates and risk premium expansion would place significant pressure on equity valuations too even if the optimistic earnings path proves accurate. If a recession does occur earnings drawdown will be substantial and even if equity multiple remains high equities will still fall.

The Fed needs to do more QT.

The purpose of quantitative easing and tightening is to impact risk premiums. By removing risk from the private sector (QE) all assets are pushed higher due to falling risk premiums. The positive impact of asset rising on economic activity can be traced to wealth effects. QT has the opposite goal by forcing the private sector to accept the risk from Treasury bonds issued by the Government to repay the Fed balance sheet rundown. QT works by expanding the risk premium and causing assets to fall. The selloff in assets has a reverse wealth effect which is weakly deflationary.

The signaling impact of QT on term premiums and asset markets was significant. In fact, the front running of asset selling went so far as to surpass our long term "fair" range for bond term premium (we pencil that range out based on the return necessary to deliver a .25 Sharpe ratio in excess of cash). This resulted in short term bottom in assets which we called the "False Dawn". Various events including a surprising large quantity in the August quarterly refunding announcement, Jay Powell's "Gettysburg Address" at Jackson Hole, and the actual ramp up of the QT cap in September contributed to another risk premium expansion. This expansion was less extreme. Since November of 2022 QT is simply not achieving its goal.

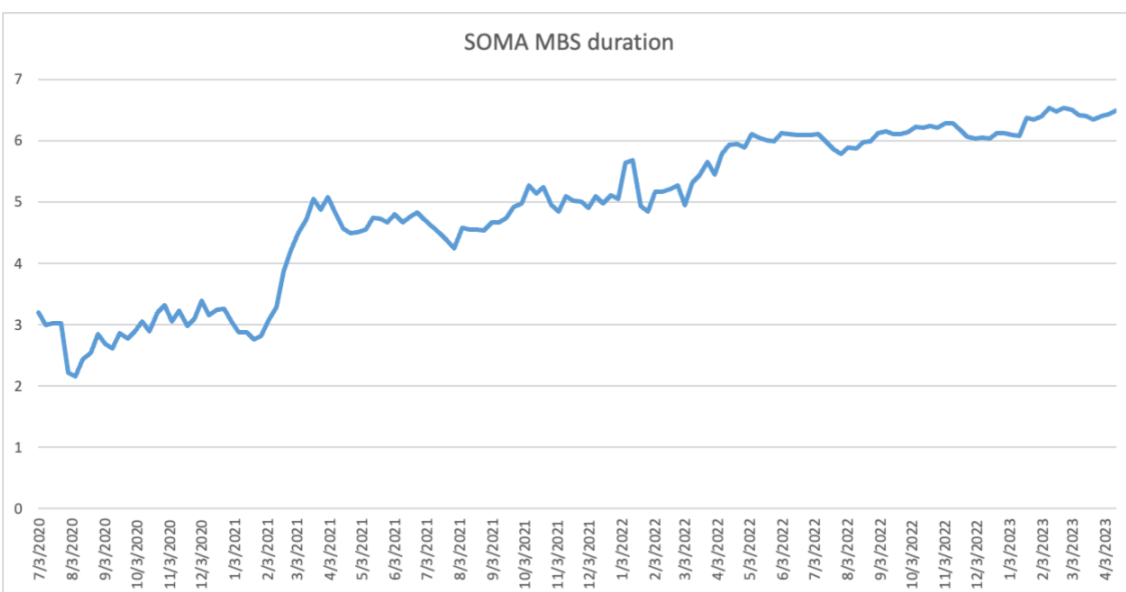
We favor the Flow concept of QT and are suspicious of the Stock concept favored originally by Ben Bernanke. Nonetheless we wanted to consider the Stock concept. The Fed SOMA holdings have dropped in notional during QT by $627BN or 7.8%



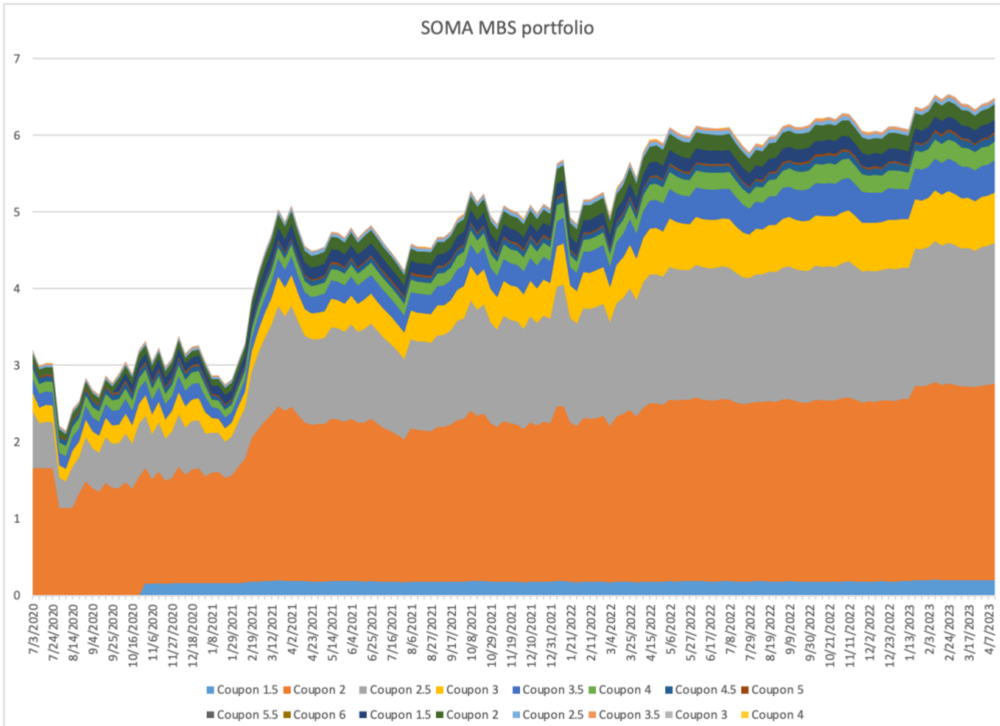
That pace is slower than was likely originally expected in March of 2022 when the plan was written down. The pace has been slower because MBS runoff has rarely met it's 35BN cap. The runoff has been slow because Mortgage rates have jumped, and all forms of refinancing have slowed or stopped. In particular, the incentive to refinance the mortgages on the Fed's balance sheet is zero and likely to be zero for years. That means the duration of the Fed's mortgage holdings has significantly extended.

We decided to examine the SOMA portfolio in great detail. We used cusip level holdings detail to evaluate each bond in the portfolio then use top down and bottom-up methods to give a clear picture of the dynamics of the SOMA Stock of bonds. Thanks @danielsimonyi for all your help.

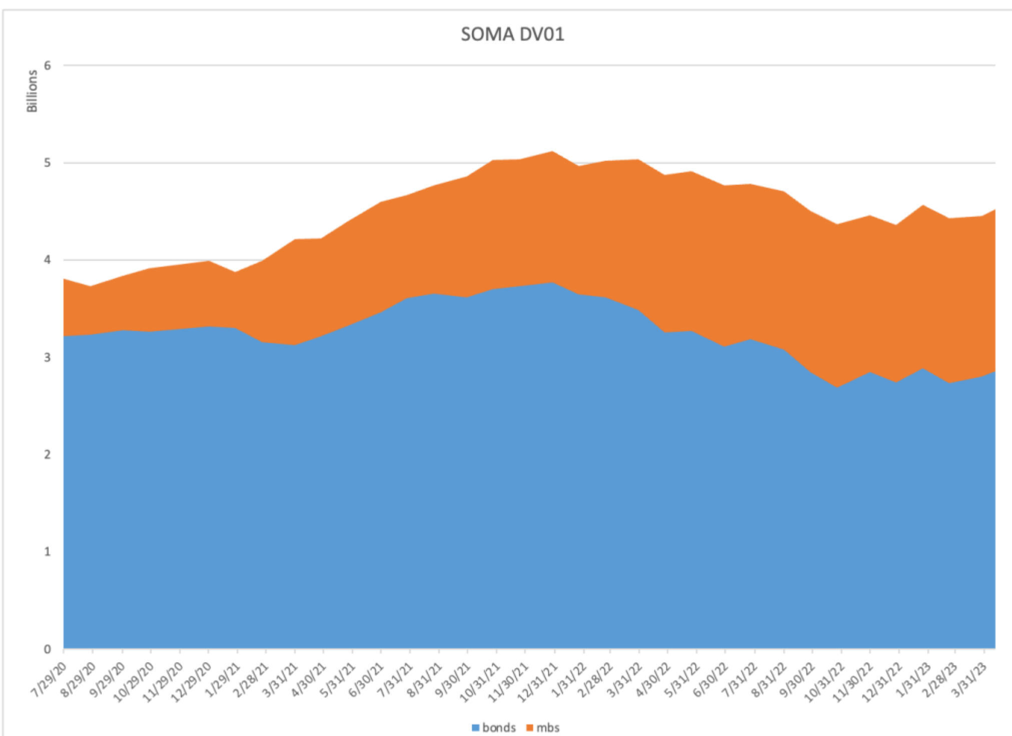
Notice the SOMA MBS duration has gone up by both buying and extension of duration.



In greater detail

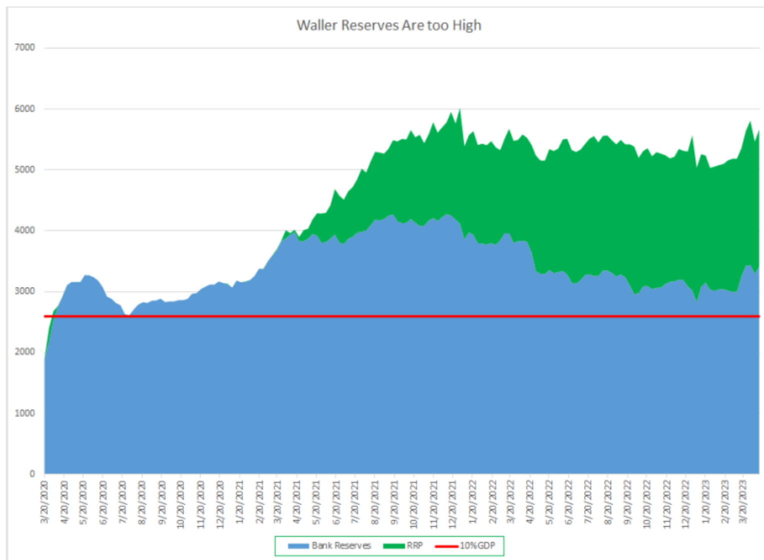


We added the cusip level details of the entire portfolio, accounted for rundown and the convexity of the UST SOMA holdings, and calculated the aggregate DV01 of the portfolio. The portfolio DVO1 has actually gone up over the past two quarters despite the notional going down by over $400BN.



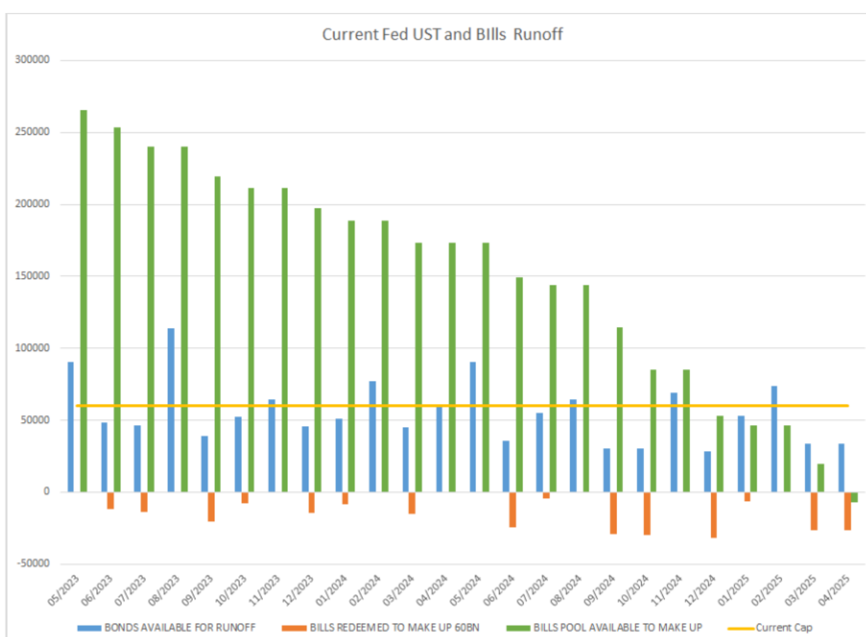
It is our view, the increase in Fed DVO1 is not a factor in the recent risk premium collapse. As we said we are a not advocates of the Stock of SOMA school of thought, but it is interesting to think about the overhang of duration that the Fed portfolio represents if sold.

The extreme negative levels of the bond term premium have proven the level of QT to be a failure to achieve policy goals. Furthermore, the "Waller Reserves" of RRP+ Reserves remains enormous relative to GDP. They represent a tinder box of potential inflationary asset purchases or real economy spending.



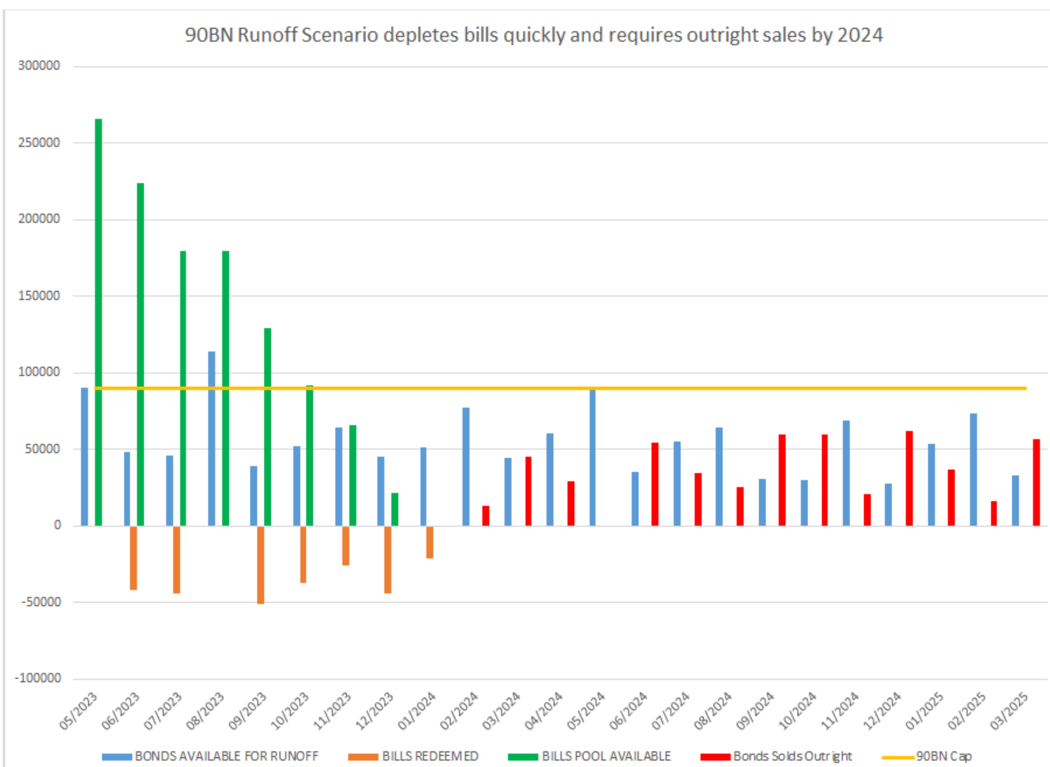
Lastly, Accelerating QT now, while there is a strong and lasting bid, shrinks the balance sheet and provides room for more QE if needed in the future.

Assuming the Fed will continue with runoff for UST the options for changing the program are limited by the actual runoff schedule.

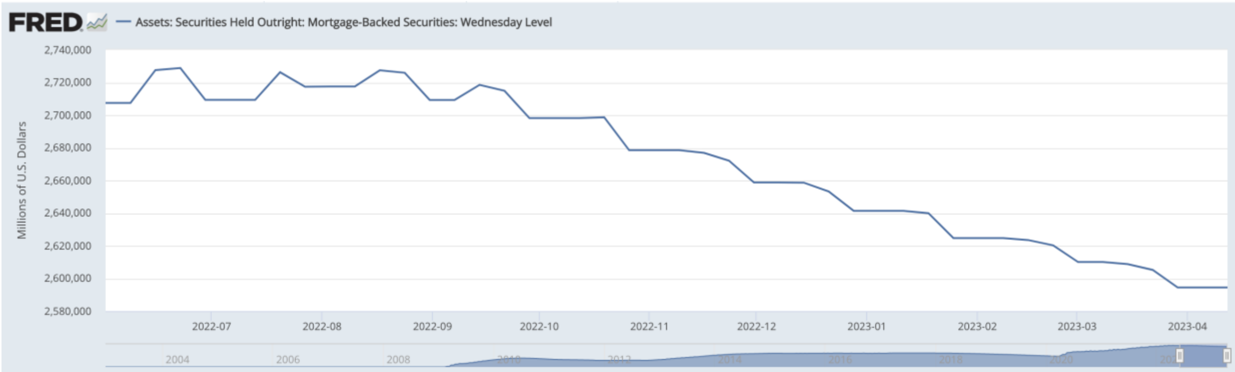


Over the next year runoff of UST will be below cap in 75% of the months. This means the Fed will run down its Bills inventory quickly just to make the 60BN cap. During 3 out of the next 12 Months the Fed will reinvest, 30BN into UST in May, 54BN in August, and 17BN next February. **We think they should essentially remove the cap entirely for reinvesting.**

Removing the cap creates a dilemma regarding the bills market and how quickly the bills inventory of the SOMA portfolio is exhausted. In the current plan, in months that the Bond runoff is greater than the Cap the Fed reinvests the proceeds. We think they should stop doing that and let the whole bond runoff occur. However, in months that the Bond runoff is less than the cap the Fed has allowed enough of their bills inventory to be redeemed to make up the difference. Remember in both bonds and bills redemption the QT pressure of pushing duration into the private sector is entirely dependent on the US Treasury Issuance and its composition. The effect on the Fed balance sheet is the same no matter what assets runoff. The total balance sheet reduction is 60BN. For those who believe that QT operates based on balance sheet size one may advocate for a larger cap. We think that is an open question. If the Fed decided to increase the cap to 90BN they would quickly exhaust the bills inventory they have. That would of course richen bills and perhaps drag some private sector cash like investment out of RRP which is attractive. It would also reduce the balance sheet by an extra 360BN per year. But it would then mean that in order to keep up to a 90BN target significant outright sales of bonds would have to occur. Runoff wouldn't be enough.



In order to cause the balance sheet to shrink the Fed must consider stopping reinvestment in UST, they may also uncap the amount of bills they are willing to let runoff but that speeds up the time frame for when outright treasury sales will be needed. The Fed needs to balance those issues. However there remains the high duration MBS portfolio which is running off at well below target.



Since QT began the SOMA MBS portfolio is only down 113BN. Based on the caps it should have been down 300BN. The Fed will need to consider speeding up QT in order to offset massive negative risk premiums on bonds. As shown speeding up QT will push forward the timing on outright sales of UST. MBS already is going woefully slow. Outright sales have to be discussed of both. One additional concern is that all the Assets of the SOMA portfolio look like the liquid assets of the the banking system. Will the Fed sell what the banks need to sell. We will see but the Fed is in a difficult position. Negative risk premiums are easing financial conditions. The Waller reserves are too big. We suggest they get moving while the Ducks are quacking for bonds.

In synthesis all assets have been driven up by risk premium contraction due to insatiable demand for bonds. With or without the Fed increasing QT we are a seller of assets.

Current Portfolio and Performance

	Assumed Portfolio size	$ 100,000,000					
	LTD P/L	$ 47,443,233					
	Total Return	47.44%		YTD Return		2.14%	
	Today's Date	4/17/2023		Portfolio Created		4/15/2019	
Date	Position	Entry Price	Amount	Worst case los	MTM	P/L	Open/Close
10/20/2022	CLZ23 95/105 Call Spread	2.1	476	$ 1,000,000	0.85	$ (595,238)	Open
1/4/2023	FXI ETF	30.28	115,000	$ 500,000	29.35	$ (106,950)	Open
2/24/2023	NDX 11500/10750 4/21/23 Put Spread Recession Isl	165.00	61	$ 1,000,000	1	$ (993,939)	Open
2/24/2023	SPX 3750/3350 April 21 2023 Puts Two's and Spoos	42.50	235	$ 1,000,000	0.5	$ (988,235)	Open
3/2/2023	SPX 3750/3350 April 21 2023 Puts Two's and Spoos	36.00	278	$ 1,000,000	0.5	$ (986,111)	Open
3/16/2023	NDX 12500/11750 6/16/23 Put Spread	230.00	43	$ 1,000,000	130	$ (434,783)	Open
3/28/2023	NDX 12500/11750 6/16/23 Put Spread	170.00	59	$ 1,000,000	130	$ (235,294)	Open
3/28/2023	SPX JUNE 3900/3500 Put Spread	60.00	333	$ 2,000,000	30	$ (1,000,000)	Open
4/3/2023	SPXAPril 4125.4200 Call Spread	34.00	-243	$ 1,000,000	25	$ 218,700	Open
2/1/2023	SFRZ4 ShortTwos and Spoos	97.085	-1600	$ 2,000,000	96.8	$ 1,140,000	Open
3/15/2023	ZN 117/113 Call Spread	1.8125	-914	$ 2,000,000	1.625	$ 171,429	Open
4/13/2023	DS Beta Short Component GLD	189.805	(5,269)		185.09	$ 24,841	Open
4/13/2023	DS Beta Short Component GSG	21.05	(47,506)		20.92	$ 6,176	Open
4/13/2023	DS Beta Short Component SPY	410.5	(6,090)	$ 500,000	413.08	$ (15,713)	Open
4/13/2023	DS Beta Short Component TIP	110.805	(22,562)		109.68	$ 25,382	Open
4/13/2023	DS Beta Short Component TLT	106.9	(28,064)		104.16	$ 76,894	Open
4/13/2023	Net Positive carry	2.00%				$ -	Open