

VIA EMAIL TO govsecreg@fiscal.treasury.gov

July 8, 2020

The Department of the Treasury
1500 Pennsylvania Ave., NW
Washington, DC 20220

Re: Request for Information Response – TREAS-DO-2020-0007

Ladies and Gentlemen:

We appreciate the opportunity to respond to the notice and request for information released by The Department of the Treasury (Treasury) related to the development and potential issuance of Treasury floating rate notes indexed to the Secured Overnight Financing Rate (SOFR). Fannie Mae issued the market's first SOFR-indexed securities in 2018 and we remain active in those markets. As you know, Fannie Mae is a large investor in Treasury securities.

We offer the following responses to the questions posed in the notice and request for information:

1. Market Demand

1.1 Which types of investors would be the primary buyers of Treasury SOFR-indexed FRNs? Would Treasury SOFR-indexed FRNs attract new investor types or additional demand from existing Treasury investors? Assuming the possibility of a 1-year or 2-year maturity, how would the tenor of a Treasury SOFR-indexed FRN affect demand?

Money Market Funds, Reserve Managers (assuming they are operationally ready for a SOFR index), banks and GSEs would likely be large buyers.

Since Treasury issued the first T-bill FRN, the average auction allotment to investment funds is 21% (<https://home.treasury.gov/data/investor-class-auction-allotments>). Also, funds participate through dealers who account for over 50% of auctions, and funds buy in the secondary market as FRNs roll down the curve. Based on fund holdings data, money market funds hold nearly half of T-bill FRNs outstanding. Demand from funds may be higher for a SOFR FRN based on observations in the agency market where 2a7 funds account for over 90% of investors in SOFR FRNs. SOFR FRNs serve as an investment alternative to large repo holdings of 2a7 funds.

A 1-year maturity would see more demand than a 2-year, especially from 2a7 funds that have WAL constraints. The shorter maturity could also see more demand from liquidity portfolios.

When considering other Treasury products, a 1-year maturity looks like the least disruptive option. A 1-year maturity can avoid cannibalizing 2-year FRNs. Additionally, a 1-year FRN should have little impact on 1-year T-bills – the short spread duration on the FRNs does not make them comparable investments to matched-maturity fixed bonds. Investors who do not have spread duration restrictions may also like the option of the longer maturities such as 2-years or 3-years.

1.2 Please estimate annual demand for Treasury SOFR-indexed FRNs. Would demand be greater for a shorter tenor? How would potential growth in issuance of SOFR-indexed FRNs by other issuers affect long-term demand for Treasury SOFR-indexed FRNs.

YTD 4/30/2020:

- Treasury issued \$78 billion in 2-year FRNs
- Treasury issued \$137 billion 1-year T-bills
- Agencies (FHLB, Fannie, Freddie and FFCB) issued \$252 billion in SOFR FRNs

Using these as proxies for Treasury SOFR FRN demand and multiplying each by three puts the potential annual demand between \$234 billion and \$750 billion – demand for a 2-year at the lower end of that range and demand for a 1-year at the high end of that range. Please note that the demand for the products above occurred during a period when Government MMF AUM increased by more than 40%.

Looking at FY 2019, puts issuance at a lower range:

- Treasury issued \$224 billion in 2-year FRNs
- Treasury issued \$346 billion 1-year T-bills
- Agencies (FHLB, Fannie, Freddie and FFCB) issued \$236 billion in SOFR FRNs

An increase or reduction in agency SOFR FRN issuance could affect demand for Treasury SOFR FRNs.

2. Pricing and Liquidity

2.1 Would introducing a Treasury SOFR-indexed FRN help Treasury finance the government at the lowest cost over time? Why or why not?

Introducing a Treasury SOFR FRN could help Treasury finance at a lower cost over time if 2a7 funds increase their allocation to Treasuries. Treasury SOFR FRNs would be an investment alternative to reverse repo and agency FRNs, which Government 2a7 funds have large holdings in. If 2a7 funds reallocate from repo holdings, it may put upward pressure on SOFR, offsetting some of the Treasury's funding benefit.

If 2a7 funds do not increase their Treasury exposure, and instead, change the composition of their Treasury holdings, a SOFR FRN could increase Treasury funding costs.

Investors outside of 2a7 funds should also be considered. For example, Treasury buyers who actively use derivatives would be able to synthetically create fixed-rate Treasury debt by purchasing a SOFR FRN and receiving the fixed leg on a SOFR swap. As a result, the SOFR floater could trade close to fixed-rate debt with the same maturity (assuming a liquid SOFR swap market). In this case, the cost savings or cost increase to Treasury would be driven by the performance of overnight SOFR relative to market-based expectations for overnight SOFR over the term of the debt at the time of issuance.

2.2 How would you expect a Treasury SOFR-indexed security to price relative to a comparable maturity 13-week T-bill FRN security? How would this pricing vary across the economic cycle and interest rate environments? Please provide pricing estimates.

We would expect a Treasury SOFR FRN to price close to the 13-week T-bill FRN. We think it is possible to price tighter based on the potential for greater investor demand, especially as SOFR matures as an index. Recent demand for agency SOFR FRNs highlights how tight a SOFR index can price relative to a T-bill index. In June 2020, 2-year agency SOFR FRNs priced less than 2 bps above than Treasury FRNs, using current yields as a measure of relative value. And based on credit and liquidity, a Treasury SOFR FRN should price tighter than an agency SOFR FRN.

In an increasing rate environment, 13-week T-bill FRNs may price at tighter spreads than SOFR FRNs because the 13-week rate could capture expected FOMC rate hikes whereas the overnight SOFR rate would not. The opposite would be true in a rate cutting cycle. Expected hikes/cuts versus delivered hikes/cuts could impact the Treasury's funding cost for 13-week T-bill floaters versus SOFR floaters. See the chart below in section 2.4. The pace of T-bill issuance can also change this dynamic.

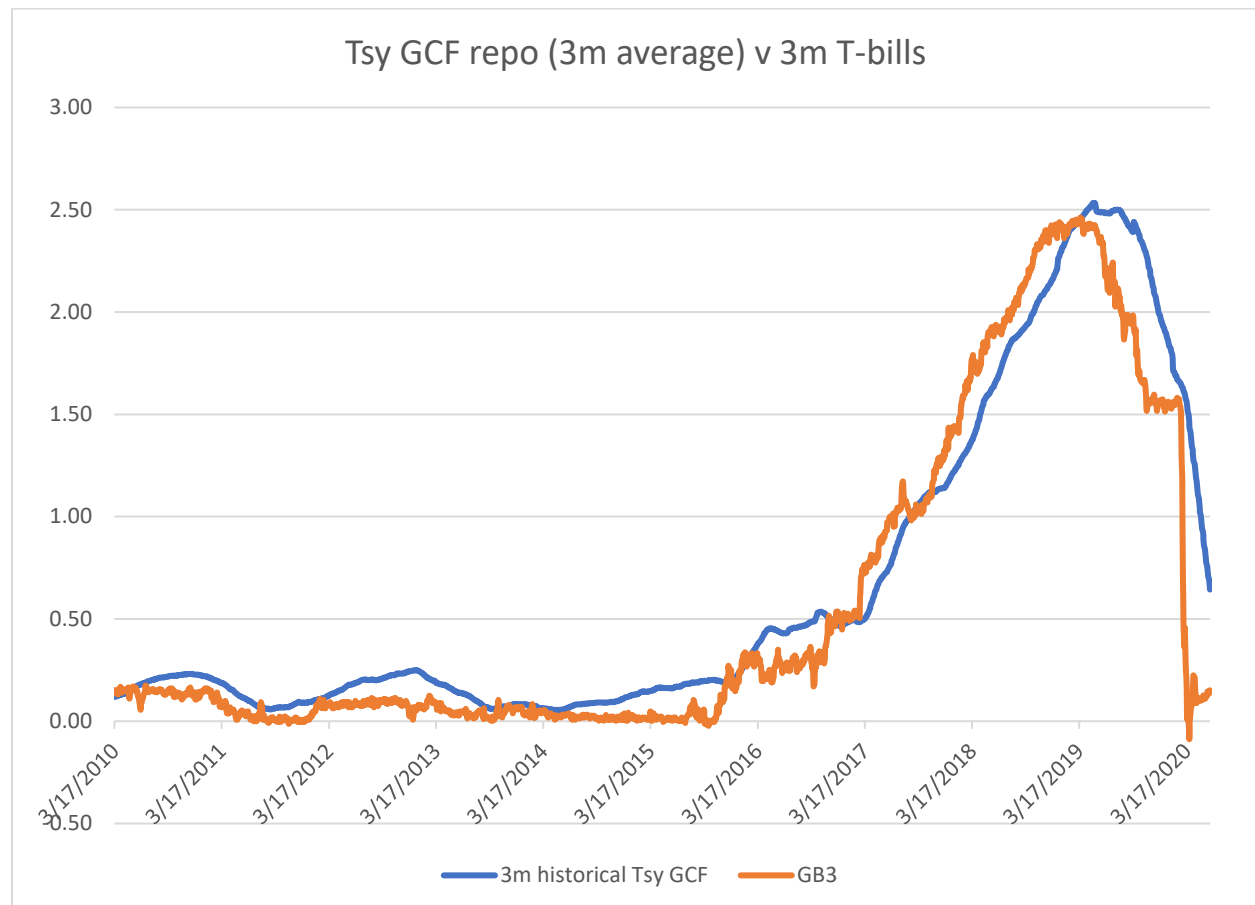
2.3 SOFR has risen significantly for certain short time periods, such as around some ends of months, quarters, and years. To what extent would such patterns, if they continue, affect the interest cost for Treasury on a SOFR-indexed FRN, the interest payments of which would be based on a SOFR averaged or compounded rate over a longer interest accrual period? To what extent would investors be willing to bid lower discount margins at auctions for Treasury SOFR-indexed FRNs in expectation of such patterns continuing? Please elaborate.

Investors may bid lower discount margins in expectation of SOFR spikes. However, data has shown that month-end/quarter-end and year-end spikes smooth out over time (see chart in 2.4 below). Additionally, Federal Reserve intervention in repo markets in 2019 and 2020 reduces those expectations.

2.4 During the global financial crisis, repurchase agreement rates were persistently higher than Treasury bill rates. More recently, during the COVID-19 outbreak, liquidity in Treasury and other markets (including repurchase agreement markets) exhibited signs of stress. How would potential future periods of market stress affect SOFR? In a potential future period of market stress, how might interest costs for Treasury differ between a Treasury SOFR-indexed FRN and the 13-week T-bill FRN? Please elaborate.

Market stress and its effect on T-bill and SOFR FRNs depends largely on the monetary and fiscal response to the stress as well as the cause of the stress. For example, a higher share of T-bills in a Fed purchase program could put more downward pressure on 13-week T-bill rates than on SOFR. In contrast, a faster pace of T-bill issuance can put more upward pressure on 13-week T-bill rates than on SOFR.

Over time and on average, overnight Treasury repo tracks 13-week T-bills closely, with Treasury GCF repo averaging 8 bps over T-bills since 2010. However, during a rate hike environment (such as 2017 to 2018), repo trades below 13-week T-bills. Due to availability of historical data, the chart uses Treasury GCF repo instead of SOFR. Since the Fed began publishing SOFR on 4/2/2018, Treasury GCF averaged 6 bps above SOFR and was 54% more volatile than SOFR.



2.5 How liquid would Treasury SOFR-indexed FRNs be in secondary markets? Please compare the expected liquidity of Treasury SOFR-indexed FRNs to Treasury bills, the existing 13-week T-bill FRN, and off-the-run short-dated coupons.

Liquidity for Treasury SOFR-indexed FRNs would likely be similar to liquidity for 13-week T-bill FRNs, which are typically less liquid than T-bills.

3. Security Structure

3.1 What are the primary considerations Treasury should evaluate when structuring a Treasury SOFR-indexed FRN? How would different potential security structures affect investment decisions by market participants, including with respect to activity in derivatives markets?

We see coupon calculations and payment conventions as the primary considerations. Daily compounding and avoidance of lockouts (use 2-5 day lookback observation shift instead) will most

closely mimic rolling an overnight reverse repo. Compounding will also better align with the derivatives market. A payment delay should be avoided.

3.2 Some previously gathered feedback has suggested a 1-year final maturity for original issuance of a Treasury SOFR-indexed FRN. Is this maturity or another maturity preferable for a Treasury SOFR-indexed FRN? Please elaborate.

A 1-year final maturity would be the least disruptive to other Treasury products such as T-bills and 2-year FRNs.

3.3 Is a quarterly issuance frequency with two re-openings appropriate for a Treasury SOFR-indexed FRN, similar to the existing 13-week T-bill FRN? What factors should Treasury consider in making this decision?

Treasury can re-open a 1-year SOFR FRNs more frequently, perhaps bi-weekly. The WAM impact on 2a7 funds is significantly lower than a 1-year T-bill. However, WAL impact to 2a7 funds is double 6-month T-bills and should be considered when sizing a 1-year, especially if issued weekly.

3.4 When during the month should Treasury auction SOFR-indexed FRNs? When should auctions settle?

If it is a 1-year maturity, the market can likely accommodate new issues monthly with re-openings bi-weekly. For a 2-year or longer, an issuance pattern similar to the current 2-year FRNs would be more appropriate.

3.5 Should interest on Treasury SOFR-indexed FRNs be calculated based on a simple average or a compounded average of SOFR? Should Treasury consider indexing the security to an average rate based on SOFR, such as those recently published by FRBNY as administrator for SOFR? If so, what would be the optimal averaging period for a SOFR-indexed FRN?

A compound daily average most closely resembles rolling overnight repo and aligns with ARRC's SOFR FRN guidance and SOFR swaps.

3.6 What coupon frequency should be used for a Treasury SOFR-indexed FRN? Note that the existing 13-week T-bill FRN pays coupons quarterly. Would a semi-annual, or other coupon frequency be preferred? When during the month should coupon and principal payments be made?

Quarterly coupons align with outstanding Treasury FRNs and agency SOFR FRNs. As a result, quarterly can reduce fragmentation of conventions in the FRN market.

3.7 Should the index rate for a Treasury SOFR-indexed FRN reset daily, weekly, or at some other frequency?

Daily

3.8 Should a Treasury SOFR-indexed FRN incorporate a lockout (i.e., last k rates for an interest period set at SOFR k days before the period ends), a lookback or “lag” (i.e., for every day in the interest period, use SOFR from k days earlier), or a payment delay (i.e., coupon and principal payments made k days after the end of the interest period) in its structure? If so, what values would be appropriate for each attribute? Please explain relevant considerations for these features.

A two-day lookback with no lockout allows investors to capture more daily resets (because it avoids lockouts) and reduces the number of conventions, which makes the structure more investor friendly and can help with standardization of SOFR FRNs for other issuers. Treasury should avoid a payment delay because it adds a convention and is unnecessary if you have a two-day observation shift.

3.9 In light of FRBNY’s data contingency procedures for the publication of SOFR, what contingency measures should Treasury consider incorporating into the terms of a SOFR-indexed FRN if SOFR, or an average rate based on SOFR, is temporarily unavailable or revised?

We propose following industry recommended fallback language for SOFR.

Existing 13-Week T-bill FRN

4.1 If Treasury decides to issue SOFR-indexed FRNs, what, if any, changes should Treasury make to the existing 13-week T-bill FRN issuance program?

If it is a 1-year SOFR FRN, no changes are needed for the existing 13-week T-bill FRN program.

4.2 Should Treasury issue FRNs indexed to both indices, or should Treasury consolidate FRN issuance on a single index?

If there is one year between SOFR FRN and T-bill FRN maturities, the two indices can co-exist in the near-term. Initially, keeping the existing FRN index may benefit Treasury because not all current Treasury FRN buyers may have the operational capability to buy a SOFR indexed FRN. Over time, Treasury should consolidate to a single index.

4.3 If there is not sufficient demand for both Treasury FRNs to coexist, which index would generate the greater long-term demand and better meet Treasury's issuance objectives? Please elaborate.

A SOFR index could create greater long-term demand as the SOFR swap market matures – this could attract more buyers who would swap a SOFR FRN back to fixed. Also, SOFR is an attractive index to the

largest FRN buyer base – 2a7 money market funds – because they have large repo holdings and it can be easy to assess relative value of a SOFR FRN versus a large portion of their portfolios. SOFR is also attractive to GSE liquidity portfolios funded with SOFR indexed debt. Demand from other investors such as Reserve Managers may also grow as use of SOFR grows and becomes more widely accepted in other markets.

4.4 Should Treasury consider issuing 13-week T-bill FRNs with a 1-year final maturity? How should the decision regarding issuance of Treasury SOFR-indexed FRNs affect this possibility?

No, not at this time because it can further complicate the introduction of a SOFR FRN.

5. Market Transition

5.1 What proportion of likely investors is currently operationally ready to purchase Treasury SOFR-indexed FRNs? For those investors that are not ready, what are the main impediments? How much lead time and investment would be required for additional investors to become operationally ready to purchase Treasury SOFR-indexed FRNs? Would any of the security structure choices mentioned in Section 3 above affect the operational readiness of likely investors?

Based on money market fund holdings of agency SOFR FRNs, most large funds are ready to purchase Treasury SOFR FRNs. Based on how low foreign participation in agency SOFR FRNs is, it does not appear than many central banks are ready to purchase Treasury SOFR-indexed FRNs.

5.2 To what extent would Treasury's issuance of SOFR-indexed FRNs advance the overall market transition away from U.S. dollar LIBOR? How would different market segments (e.g., FRNs, derivatives, business loans, consumer products) be affected by Treasury's decision to issue SOFR-indexed FRNs? What effect would Treasury's issuance of SOFR-indexed FRNs have on the overall market transition away from LIBOR beyond that caused by current issuance of SOFR-indexed FRNs by other issuers? Please provide specific details of the cause and effect relationships you expect.

Treasury issuance will likely have a large impact on standardizing SOFR FRN conventions, which would benefit the SOFR FRN market, especially in agencies. It could also promote more SOFR swap volume if investors swap FRNs back to fixed as an alternative to T-bill or Treasury coupon purchases. We do not think it will meaningfully affect market segments such as business loans and consumer products.

We appreciate this opportunity to respond to your notice and request for information. Thank you for your efforts on this important topic.

Sincerely,

Robert C. Ives
Senior Vice President and Treasurer
Fannie Mae