Minutes of the Meeting of the Treasury Borrowing Advisory Committee of the Securities Industry and Financial Markets Association April 30

May 1, 2019

The Treasury Borrowing Advisory Committee (TBAC) convened in a closed session at the Hay-Adams Hotel at 9:30 a.m. All members were present. Counselor to the Secretary Craig Phillips, Deputy Assistant Secretary for Federal Finance Brian Smith, Director of the Office of Debt Management Fred Pietrangeli, and Deputy Director of the Office of Debt Management Nick Steele welcomed the Committee. Other members of Treasury staff present were Ayeh Bandeh-Ahmadi, Chris Cameron, Dave Chung, Travis Daugherty, Courtney Demartini, Tom Katzenbach, Peter Phelan, Renee Tang, and Brandon Taylor. Federal Reserve Bank of New York staff members Susan McLaughlin, Jake Schurmeier, and Scott Sherman were also present.

Director Pietrangeli began with an overview of the fiscal situation. Pietrangeli noted that during the first half of FY2019 receipts were up \$10 billion relative to the comparable period last year. Increases in customs duties, as well as social insurance and excise taxes, were mostly offset by declines in individual and corporate taxes. After calendar adjustments, FY2019 year-to-date outlays were \$98 billion higher than the comparable period last year.

Pietrangeli noted that, in response to seasonal borrowing needs during the January-March 2019 quarter, net issuance of Treasury bills increased by \$140 billion. Turning to the April-June 2019 quarter, Pietrangeli noted that the current borrowing estimate is \$30 billion with an end-of-June cash balance of \$270 billion. These borrowing estimates, combined with the net coupon issuance at current levels, imply a nearly \$240 billion bill pay-down over the quarter. To date, over the April-June quarter, Treasury has paid down roughly \$100 billion in bills.

Next, Pietrangeli turned to the near-term fiscal outlook by referencing the most recent annual marketable borrowing estimates from the Office of Management and Budget, the Congressional Budget Office, and the primary dealers. He highlighted that Treasury is currently well funded, but that significant funding gaps are projected starting in FY2021.

Pietrangeli next provided a brief overview of potential implications for Treasury issuance from the Federal Reserve's March 2019 updates to its balance sheet normalization plans, which include ending capped redemptions of the System Open Market Account (SOMA) portfolio at the end of September 2019. He also provided estimates of the effect of Agency Debt and MBS reinvestments into Treasury securities. Finally, he noted that despite potential reductions in projected privately-held net marketable borrowing needs resulting from these changes, a meaningful financing gap is still expected by FY 2021. Committee members noted that some uncertainty remains regard¬ing the Federal Reserve's balance sheet policy, particularly with regard to the resumption of balance sheet growth and the composition of the SOMA portfolio; these factors will be an important consideration for Treasury issuance decisions going forward.

Pietrangeli next reviewed recent trends in foreign holdings of Treasury securities. He noted that foreign participation in auctions remains in line with historical levels and the amount of foreign holdings has remained steady or has increased gradually since 2014, even as borrowing needs have grown substantially. He concluded that domestic buyers have increasingly absorbed the larger debt issuance since 2014.

Deputy Assistant Secretary Smith then summarized recent feedback from primary dealers. Primary dealers noted that Treasury is well positioned to meet financing needs for the remainder of FY2019. Nearly all primary dealers recommended holding nominal coupon issuance sizes steady at this refunding. For the rest of the calendar year, some primary dealers suggested coupon sizes should remain constant, while others projected temporary cuts, especially in 2- and 3-year note sizes. Nevertheless, primary dealers broadly agreed that by 2021 coupon sizes will need to increase given projected deficits.

There was brief discussion by the Committee about several primary dealers' expectation that Treasury may reduce coupon sizes in light of the TBAC's prior recommendation that bills constitute one-quarter to one-third of issuance. The Committee agreed that their recommendation was intended to be an average over time, and that Treasury should manage short-term or unexpected changes in financing needs through bill issuance, rather than changes to coupon sizes.

Next, Smith summarized primary dealer feedback on the expected timing for the Federal Reserve to resume growing its balance sheet, the long-run composition of its assets, and the

transition from the current portfolio. Primary dealers provided a range of estimates for the timing of balance sheet growth, with a median in the third calendar quarter of 2020. Nearly all primary dealers indicated that the Federal Reserve would likely move towards a SOMA portfolio that holds primarily Treasury securities in the long run, and that the maturity profile of its Treasury holdings would be somewhat shorter than it is currently. A little more than half of the primary dealers expected the SOMA portfolio to roughly match Treasury's debt profile, while others expected the SOMA portfolio to be skewed to shorter duration, with some variation on the expected composition of such a portfolio. Finally, most primary dealers expect any shift in SOMA holdings to be very gradual.

Next, there was a brief discussion related the Treasury Market Practices Group's (TMPG) recent announcement seeking comments on updates to its Best Practices for Treasury, Agency Debt, and Agency Mortgage-Backed Securities Markets to incorporate recommendations supporting efficient clearing and settlement in these markets. The presenting member gave a brief overview of the updates, emphasizing that several clearing and settlement issues are outside the scope of the TMPG's best practices and the TMPG believes a further review by public- and private-sector stakeholders other than the TMPG could be warranted.

Next, Debt Manager Taylor provided a summary of primary dealer feedback related to secondary market Treasury securities transaction data collected by the Financial Industry Regulatory Authority (FINRA) through its Trade Reporting and Compliance Engine (TRACE). He reminded the Committee that the data is currently provided only to the official sector, and that a potential policy for public dissemination is still being evaluated. At this time, Treasury is seeking further information on the reporting process and the possibility for data enhancements. Taylor noted that feedback from primary dealers about their experience reporting to TRACE was broadly positive. When asked about potential data collection improvements to improve official sector understanding, including a reduction in the reporting delay, identification of execution method (for example whether trades are conducted electronically or through traditional voice channels), and additional trade-type identifiers based on whether a trade is linked to another instrument, primary dealers indicated that such enhancements were generally feasible given sufficient implementation time. Taylor concluded by stating that Treasury will further evaluate the feedback and continue to work with other official sector agencies and FINRA to evaluate ways to improve the TRACE data.

Shifting to a discussion of the Treasury Inflation-Protection Securities (TIPS) program, Deputy Director Steele began with an overview of the TIPS program, which currently represents around 9 percent of overall Treasury marketable borrowing outstanding. Steele highlighted general dynamics in the TIPS market, including trading volumes across tenors and auction participation. Next, he discussed the ongoing implementation of TIPS program enhancements, including the modification to the TIPS auction calendar to accommodate the new original 5-year TIPS in October.

The Committee then reviewed its financing recommendations. The Committee agreed that Treasury is well-suited to meet its financing needs in FY2019 given its current financing schedule. As a result, the Committee recommended that Treasury leave nominal coupon auction sizes unchanged for the coming quarter. In addition, the Committee agreed that Treasury should continue to increase TIPS sizes in 2019 in conjunction with announced calendar changes, including a \$1 billion increase to the June 5-year TIPS reopening, a \$1 billion increase to the next 10-year TIPS new issue in July, applicable to subsequent reopenings, and a \$2 billion increase to the 30-year TIPS reopening in August.

Next, Debt Manager Katzenbach reviewed preliminary feedback from market participants about the potential for a new Treasury product indexed to the Secured Overnight Financing Rate (SOFR). Treasury's market outreach has focused on how a SOFR-linked product may affect Treasury's funding costs and whether it would diversify Treasury's investor base. Feedback on these topics was diverse among the wide range of participants Treasury has spoken to so far. Market participants noted that Treasury issuance of a SOFR-linked product would likely promote market adoption and support the transition from LIBOR to SOFR. In addition, a number of market participants appeared to agree that irrespective of whether the index is Treasury bills or SOFR, Treasury should explore introducing a floating rate instrument with a one-year final maturity. Katzenbach noted that Treasury will continue to study these topics and has not reached any definitive conclusions at this stage.

The Committee followed with a presentation on the potential market pricing of a SOFR FRN. The presenting member reviewed pricing estimates, which suggest that it would not cost Treasury more to issue a SOFR FRN than to issue an FRN linked to the 3-month Treasury bill. While demand from 2a-7 government—only money funds for a SOFR-linked product would likely be robust, the Committee noted that further study of potential demand and supply dynamics was warranted. In addition, several Committee members raised questions about the potential

structure of a SOFR-linked product. The Committee also recognized the importance of clear communication to the market regarding how a potential SOFR FRN would fit into Treasury's existing suite of securities. Overall, the Committee was encouraged by preliminary analysis suggesting that a SOFR FRN may be attractive from a taxpayer perspective and agreed on the importance of additional study into several remaining questions. Moreover, the Committee expressed its view that Treasury should play a prominent role in supporting the development of the SOFR market, on the assumption that doing so would not increase debt service costs.

Next the Committee turned to a presentation on the optimal funding mix of fixed versus floating rate securities (considered to include both bills and FRNs by the presenting member). The presenting member began by noting that FRNs are attractive to a broad set of investors and allow Treasury to diversify its investor base. Next, the presenting member provided an overview of enhancements to the Committee's debt optimization model to evaluate FRNs and introduced a measure of rollover risk. The presenting member's initial analysis suggests a favorable risk and return trade-off from reducing the allocation of floating rate debt and increasing the allocation of short to intermediate term fixed-rate debt, though important assumptions and limitations to the analysis were noted. In addition, the presenting member showed that the weight given to bills versus FRNs within the floating rate allocation depends on the tolerance for rollover risk.

The Committee adjourned at 12:30 p.m. for lunch.

The Committee reconvened at 1:45 p.m.

The Committee continued its discussion on the optimal mix of fixed versus floating rate debt, remarking that the improvements to the debt optimization model are helpful in informing recommendations. Finally, the presenting member noted the benefits of the rollover risk metric compared to weighted-average maturity.

The Committee adjourned at 2:45 p.m.

Brian Smith

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April 30, 2019

Certified by:

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TREASURY BORROWING ADVISORY COMMITTEE QUARTERLY MEETING

COMMITTEE CHARGE - APRIL 30, 2019

Fiscal Outlook

Taking into consideration Treasury's short, intermediate, and long-term financing requirements, as well as the variability in financing needs from quarter to quarter, what changes to Treasury's coupon auctions do you recommend at this time, if any?

SOFR-linked Issuance

Treasury continues to evaluate the possibility of issuing floating rate notes tied to SOFR; one important component of this evaluation pertains to market pricing. How should Treasury model expected interest costs for potential SOFR-linked issuance? How has existing SOFR-linked issuance by other issuers priced compared to expected 'fair value'? What factors have affected pricing of existing issuance and what factors do you expect to be most important going forward? Are there any lessons regarding product structure that Treasury can draw from SOFR-linked issuance to-date?

Fixed versus Floating Rate Treasury Securities

Please comment on the optimal funding mix of fixed versus floating rate securities, including the primary relevant factors for Treasury to consider.

Financing this Quarter

We would like the Committee's advice on the following:

- The composition of Treasury notes and bonds to refund approximately \$55.4 billion of privately-held notes maturing on May 15, 2019.
- The composition of Treasury marketable financing for the remainder of the April-June 2019 quarter, including cash management bills.
- The composition of Treasury marketable financing for the July-September 2019 quarter, including cash management bills.