# Report to the Secretary of the Treasury from the Treasury Borrowing Advisory Committee of the Securities Industry and Financial Markets Association

November 1, 2017

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Letter to the Secretary

Dear Mr. Secretary:

Economic growth was solid in the third quarter, despite the destructive damage of the major hurricanes that struck the nation in August and September. Real GDP expanded 3.0% (annual rate) last quarter, led by ongoing gains in personal consumption expenditures, rising spending on equipment, and inventory investment. Over the past four quarters, real GDP rose 2.3%, close to its average pace over the past five years.

Since the Committee last met in early August, the Federal Open Market Committee (FOMC) agreed at its September meeting to begin its balance sheet normalization program. The program will reduce over time the reinvestment of the principal payments received for the Federal Reserve's securities holdings. Prior to this decision, all principal payments from the holdings of Treasury and mortgage backed securities were re-invested. Starting with the securities maturing in October, the Fed began the process of shrinking a balance sheet that was expanded substantially during the recession and subsequent economic recovery in order to provide additional monetary policy accommodation. The FOMC program will cap the amount by which the balance sheet can shrink each month, raising that cap each quarter over the next four quarters. How far the Federal Reserve will go in reducing its balance sheet remains unclear, though most officials have said they expect it to remain higher than was the case prior to the financial crisis. The consensus among primary dealers is that the Fed's securities holdings will decline over the next three or four years, from roughly $4-1/4 trillion to around $3 trillion.

Due to effective Fed communications, financial markets were largely unaffected by the announcement of balance sheet run-off. Meanwhile, interest rates have risen since August as investors gained confidence in the domestic and global economy. The broad trade-weighted value of the US dollar has moved up recently, but is little changed overall since August. Despite the rise in interest rates and the US dollar coming off the recent lows, equity markets have been strong, and major market indexes have continued to march to new highs.

Against this favorable financial backdrop, the US economy continued to chug along in the third quarter. Industrial production was held down considerably in August due to the hurricanes, and other activity measures and employment were severely disrupted during the quarter. Nevertheless, the damage and suffering caused by the storms is expected to be transitory. Looking forward, rebuilding efforts seem likely to support activity in the coming months. The recent strength in consumer spending, new home sales, and vehicle sales are all consistent with this assessment. Overall, real personal consumption expenditures slowed to a 2.4% (annual rate) pace in the third quarter, only a little below the 2.7% growth seen over the preceding four quarters.

Business fixed investment rose at an annual rate of 3.9% in the third quarter, with another solid increase in equipment spending. While real structures investment fell back in the third quarter following a strong gain in the first half of the year, investment in equipment has posted back-to-back solid quarters, rising 8.6% in the third quarter. Investment in intellectual property expanded 4.3%. The contribution from inventory investment to overall GDP growth in the third quarter was roughly 3/4 of a percentage point, as businesses made up for the lack of such investment earlier in the year. While there may be more room for inventory investment in the current quarter, another contribution of that magnitude seems unlikely. After weakening at the end of 2015 and remaining soft for most of last year, the better data on investment has been welcome news this year. Manufacturing surveys remain optimistic. Orders and shipments of nondefense capital goods have posted strong increases in recent months, and in the most recent data the level of those orders remains above shipments, which bodes well for future capital expenditures.

Among the softer spots for growth recently, residential investment fell 6.0% in the third quarter, the second quarterly decline in a row. Multifamily housing units under construction have been declining and single family starts and permits have drifted sideways this year. House prices, in contrast, have continued to move higher, raising some concern over affordability for some market segments. However, with mortgage rates expected to remain relatively low, an expanding labor market, and with rebuilding efforts already underway in storm-affected regions, residential investment should pick up in the coming quarters.

Government spending and investment edged down a little in the third quarter. Federal outlays continued to increase while state and local governments' spending and investment contracted for the second straight quarter. Plans for federal tax reform continue to be developed by Congress and the administration. The relevant committees in Congress are expected to begin working on the specific legislative proposals this week but much uncertainty about the details remains. The timing of any enactment of a tax cut, or whether some cuts will be phased in, are among the important questions that need to be answered for assessing how such stimulus might affect the contour of economic activity over the next several quarters.

The storms held down employment by a substantial amount in September. Nonfarm payroll employment fell by 33,000 during the month. In the state-level data, employment fell by 127,000 in Florida alone. With widespread evacuations in the state during the time of the month that the establishment employment survey references, such a sizeable one-month decline is understandable. According to news reports, the vast majority of the workers out of work due to the storms are expected to have returned by mid-October. For the 12 months prior to the storm, nonfarm payroll employment averaged increases of a healthy 175,000 jobs a month, and the unemployment rate declined to 4.4%. In September, the unemployment rate fell further, to 4.2%. Whether that decline may have been due to some storm-related volatility is less clear. Regardless, even if there were some reversion after the storm, the unemployment rate would still be considered low, and is likely over time to continue to move lower. Wage gains accelerated in the September data as well. Smoothing through the monthly volatility, wage increases remain modest by most historical comparisons, but have been broadly rising in recent years.

Following a disappointing second quarter, consumer price inflation has remained subdued in recent months. Total personal consumption expenditures inflation ticked down to 1.5% in the year ended in the third quarter. Inflation excluding food and energy has been even weaker, slipping to 1.3%, owing partly to a few idiosyncratic and transitory factors earlier in the year, ongoing low goods inflation outside of energy and food, and a slowing in some services prices during the past year, including owners' equivalent rent (the largest share of personal consumption expenditures after health care). Measures of inflation expectations have been little changed overall since the start of the third quarter, including market-based measures of inflation compensation which remain relatively low by historical standards.

In light of this financial and economic backdrop, the Committee reviewed Treasury's November 2017 Quarterly Refunding Presentation to the TBAC. During fiscal year 2017, total receipts edged up 1% driven by an increase in individual income and payrolls taxes that more than offset a decline in corporate taxes. Total outlays over the same period increased 3%. Based on the Quarterly Borrowing Estimate, Treasury's Office of Fiscal Projections currently projects a net marketable borrowing need of $275 billion for the first quarter of FY 2018, with an end-of-December cash balance of $205 billion. For the second quarter of FY 2018, net marketable borrowing need is projected to be substantially higher at $512 billion, with a cash balance ramping up to $300 billion by the end of March. Considerable uncertainty attends the size of the cash balance over this period as the assumptions depend on the timing of Congressional action to raise the debt limit.

Treasury also reviewed the performance of FRNs and TIPS. FRNs have successfully expanded the Treasury's investor base. Since 2014, there has been $615 billion in cumulative issuance with $328 billion currently outstanding. FRNs have been less costly to issue than 2-year fixed-rate notes, comparable in cost to 1-year bills, but more expensive than 3-month and 6-month bills. Given the favorable performance of FRNs and positive feedback from market participants, consideration should be given to the potential for increasing FRN issuance, perhaps as early as the first half of 2018. Introduced in 1997, TIPS represent over $1.2 trillion or approximately 9 percent of the marketable debt portfolio, making the instrument the largest inflation-linked debt program in the world. Over the entire life of the program, TIPS have been less costly compared to equivalent nominal coupons. However, that owes entirely to two periods of unusually low inflation. In terms of investor demand, TIPS enjoy a loyal investor base, but have had limited success in significantly diversifying Treasury's investor base relative to nominal coupons. In light of these observations, it was agreed that at a future refunding the TBAC will study the TIPS programs in detail.

The first TBAC charge was to discuss the size of T-bill issuance over the coming years. Presently, the T-bill share of marketable Treasury debt outstanding is quite low compared with history. In terms of the demand for T-bills, there are many alternatives such as agency paper and the Fed's reverse repo facility, although none of them are perfect substitutes. As a consequence of their unique risk-free characteristics and relative scarcity, T-bills trade rich to coupons and other similar instruments. Given the market's demand for T-bills and the significant financing gap confronting the Treasury in the coming years, the presenting members suggested that the T-bill sector can absorb significant volumes of new supply. They suggested that allocating around one-third of the financing gap to T-bills would make sense. Anything much above that share could shorten the weighted average maturity (WAM) and necessitate T-bill auction sizes that approach the primary dealer maximum estimates. There was general agreement among the Committee members that increasing the T-bill share of issuance to somewhere between 25%

and 33% (over what's required for the cash balance detailed in the Treasury's liquidity management framework) made sense given the supply and demand dynamics described in the presentation.

The second TBAC charge was to provide an update and extension on the efforts the Committee has made on developing optimal issuance models. The TBAC began this work last January in order to help guide the conversation about how to finance the government's borrowing needs at the lowest risk-adjusted cost over time while maintaining a regular and predictable pattern of issuance. The presenting members set the stage for the discussion by showing the projected path of debt supply over the coming years. The likelihood is that Treasury will need to increase issuance across the whole range of maturities. The optimization framework suggests some modalities for how to confront this challenge. The presenting members explicitly stressed that this model is to be used for pedagogy rather than a literal tool to calibrate issuance quarter by quarter.

In the modeling framework, the current environment of low real yields, low term premium and rising budget deficits favors issuance in the belly of the curve. For the avoidance of doubt, the "belly" is defined as 2-, 3-, and 5-year notes, consistent with the language used in the presentation. Some market participants have different definitions of the belly or intermediate issuance which includes 7s or 10s or excludes 2s and 3s. For the purposes of this discussion, anything beyond 5s is described as longer-term issuance and anything less than 2s is shorter-term issuance. Increased long-end issuance could be appropriate in certain cases. Heavier reliance on the long end may be attractive when the debt manager is especially risk averse, or if the macroeconomic environment is characterized by low deficits and significantly negative term premium. On the flip side, the model sees increased issuance of T-bills as appropriate when the term premium is high and budget deficits are low, neither of which is true today. Nevertheless, supposing that Treasury finds it desirable to meet investor demand for liquidity in T-bills (as suggested by the first charge and outside the purview of the modeling framework), the model shows that heavier allocation to T-bills should be met with greater long-end issuance. In other words, if the T-bill share is to be increased, Treasury should aim for more of a bar-bell strategy, coupling increased issuance of T-bills and longer-term coupons.

In this particular model, issuance in the belly of the curve looks attractive for meeting the higher funding needs likely facing the Treasury. The belly provides the best trade-off between expected cost and risk, under a variety of different risk metrics such as variation in funding costs or budget deficits, and has no material impact on the current WAM. Further extension of the WAM from current levels by increasing long-end issuance appears inefficient today compared with the past when the WAM was much shorter.

In the ensuing discussion, attention focused on the assumptions and parameterization of the model. It was noted that different assumptions about, for example, the term premium would yield different results. Several members noted that demographic demand for longer-term duration would mean a lower term premium than assumed in the model and favor more duration. However, another member suggested that the shrinkage of global central bank balance sheets would go in the opposite direction. The consensus was that it makes sense to see how these driving assumptions may evolve over time rather than taking a dogmatic stance at any particular time.

The members then turned to a discussion on the strategy and timing for how to meet the financing gap in the coming quarters. In terms of the strategy, members agreed that the modeling framework and T-bills charge shaped their views about how to make specific recommendations. It was unanimously agreed that increased issuance should favor T-bills and the belly of the curve—recalling that the "belly" is defined as 2s, 3s, and 5s—along with longer-term issuance so that the outcome would result in no material change in the WAM one way or another. The Committee also noted that the WAM is an outcome of the issuance strategy and not a goal in and of itself. WAM is just one of several useful measures of funding risks.

In terms of the timing, the Committee had highlighted at the prior refunding in August a narrow window from the November refunding to Q1 2018 in order to make specific recommendations on increased issuance. Given the significant uncertainties about the impact of tax reform on the fiscal trajectory and the unresolved nature of the debt limit, the Committee agreed to make specific recommendations about increased T-bills and coupon issuance at the February refunding.

Respectfully,

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Jason G. Cummins

Chairman

TBAC Recommended Financing Table Q4 2017 and TBAC Recommended Financing Table Q1 2018