

July 31, 2019

WELLS
FARGO

SECURITIES

Economics and Rate Strategy

Jay H. Bryson, Acting Chief Economist
jay.bryson@wellsfargo.com

1-704-410-3274

Michael Pugliese, Economist
michael.d.pugliese@wellsfargo.com

1-212-214-5058

Mike Schumacher, Senior Strategist
michael.schumacher@wellsfargo.com

1-212-214-5043

Boris Rjavinski, Senior Strategist
boris.rjavinski@wellsfargo.com

1-212-214-5045

Zachary Griffiths, Associate Strategist
zachary.w.griffiths@wellsfargo.com

1-704-410-5843

Economics and Rate Strategy Treasury Refunding Highlights

- In its quarterly refunding statement this morning, Treasury announced no changes to its already-elevated slate of nominal coupon auctions. **Treasury also affirmed that it “currently anticipates no further changes in issuance sizes for nominal coupon and floating rate notes for the remainder of the 2019 calendar year.”**
- That said, the amount of maturing coupon securities is set to rise substantially over the next couple years. With current auction sizes raising less and less new money over time, and because we expect the deficit to continue growing over the next couple years, **we expect Treasury will eventually need to increase auction sizes. In our view, the increases will occur no sooner than the second half of 2020.**
- Updated quarter-end cash balance estimates released on Monday are somewhat higher than we had anticipated. **Consequently, we now expect net T-bill issuance to be just shy of \$200 billion for the second half of this year and \$202 billion in Q1-2020.**
- Despite some shifts in the timing, the overall story for T-bill supply has not changed on balance: **we expect an inflection point in bill supply is imminent, and is unlikely to reverse until next April’s tax receipts come in.**
- Treasury also announced what we expect to be the final adjustments for quite some time to its TIPS issuance schedule. The changes include a \$2 billion increase to the August 30y TIPS reopening and a \$1 billion increase to the September 10y TIPS reopening. **These changes to TIPS issuance were in line with what we had anticipated in our preview piece.**
- **For 2019 as a whole, we look for net Treasury issuance to be \$1.1 trillion, after accounting for changes in holdings by the Federal Reserve.** The coupons/bills split is about \$1 trillion and \$100 billion, respectively. In 2020, we look for \$629 billion in net coupons and \$259 in net bills, again after accounting for anticipated changes in Fed holdings.

Please see page 4 for the rating definitions, important disclosures and required analyst certifications.
All estimates/forecasts are as of 07/31/19 unless otherwise stated.

This report is available on wellsfargoresearch.com and on Bloomberg WFRE

Together we'll go far



No Change to Nominal Coupon Auction Sizes

In its quarterly refunding statement this morning, Treasury announced no changes to its slate of nominal coupon auctions. [As we highlighted in our preview piece](#), our deficit forecasts already assumed a budget deal along the lines of what was agreed to last week. Large deficits should result in continued heavy Treasury supply, but the end to the Fed’s balance sheet runoff reduces the need to increase auction sizes in the immediate future. Based on our estimates, the Fed could purchase as much as \$291 billion of Treasury securities through auction add-ons (reinvesting maturing Treasuries) and \$234 billion in Treasuries through secondary market purchases (replacing MBS principal paydowns) in 2020 (Figure 1). On balance, this should help reduce the need for near-term changes to the auction schedule. Treasury affirmed this morning that it “currently anticipates no further changes in issuance sizes for nominal coupon and floating rate notes for the remainder of the 2019 calendar year.”

However, Treasury needs to cope with a wave of maturities. Treasury began a broad-based effort to ramp-up auction sizes early in 2018, and by Q1-2020 the first wave of this higher supply will begin to mature, since the shortest-dated nominal coupon security is a 2y note. This means that, all else equal, net issuance almost certainly will fall if coupon auctions hold steady in size. Figure 2 highlights the expected maturity schedule over the next two years for coupon-bearing Treasury securities.

We expect the U.S. federal budget deficit to continue growing over the next couple years, which will put additional pressure on Treasury to increase auction sizes at some point. While still a ways away at this point, we expect the increases to occur no sooner than the second half of 2020.

Figure 1

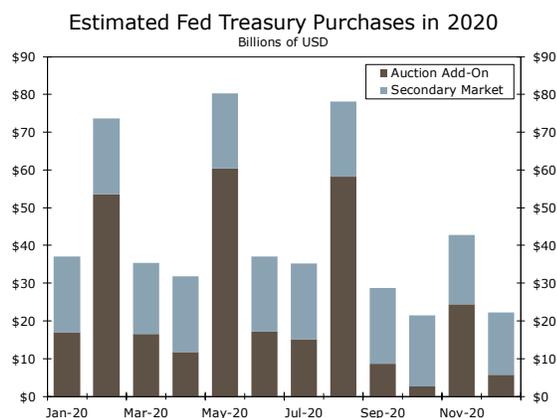
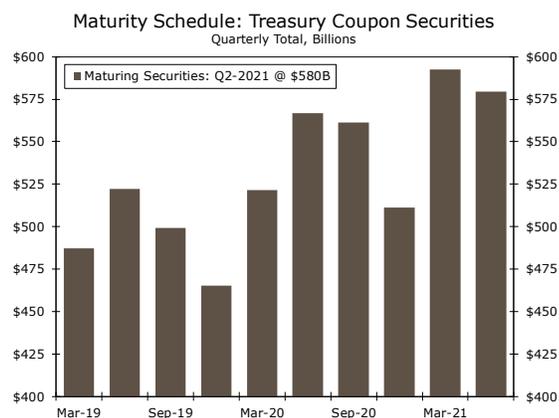


Figure 2



Source: U.S. Department of the Treasury, Bloomberg LP and Wells Fargo Securities

Bill Supply: More in the Near-Term, Less in Q1-2020

Updated quarter-end cash balance estimates released on Monday suggest the Treasury will rebuild its cash balance more aggressively than we expected. Treasury’s cash balance assumptions are \$350 billion at the end of Q3 and \$410 billion by the end of the year. Assuming Treasury hits these targets, some of the bill issuance we previously had penciled in for calendar Q1-2020 should be pulled forward. We now expect net bill issuance to be just shy of \$200 billion for the second half of this year and \$202 billion in Q1-2020 (Figure 4). Note that about \$40 billion of bills was paid down in July, meaning that the August-December period would see about \$240 billion in net bill supply.

In a surprise to some market participants, Treasury did not announce an increase to 1m and 2m bills set to be auctioned on Thursday August 1, holding them constant at \$35 billion each. Given that the recent budget agreement is yet to be formally signed into law, Treasury may simply be prudently waiting for the all-clear signal to ramp up issuance. With the Senate scheduled to leave for recess on Friday, the bill will likely be law by the end of the weekend. We look for Treasury to boost the 3m and 6m auctions slated for Monday August 5 (Figure 3). As we have previously noted,

increased bill supply could put further pressure on funding markets, and this pressure could be particularly pronounced at the end of Q3.

TIPS Adjustments Likely Complete... For A While

Treasury announced a few adjustments to its TIPS issuance schedule. The changes were a \$2 billion increase to the August 30y TIPS reopening and a \$1 billion increase to the September 10y TIPS reopening. With these changes fully phased in 2020, TIPS issuance on a gross basis will be \$155 billion, an increase of \$24 billion for the year.

Figure 3: WFS weekly bill issuance forecast, Q3-2019

week of	4-week	8-week	13-week	26-week	52-week	net supply
7/1/2019	40	35	36	36	0	-9
7/8/2019	40	35	36	36	0	-6
7/15/2019	35	35	36	36	26	-11
7/22/2019	35	35	36	36	0	-14
7/29/2019	35	35	36	36	0	-11
8/5/2019	35	35	39	39	0	-5
8/12/2019	55	35	42	39	26	23
8/19/2019	65	35	45	39	0	39
8/26/2019	65	35	45	39	0	39
9/2/2019	65	35	45	39	0	39
9/9/2019	65	35	45	39	26	19
9/16/2019	65	35	45	39	0	9
9/23/2019	60	35	45	39	0	4
Prior Quarter CMB						-
Current Quarter CMB (issued and mature in Q3)						50
Q3 total						116

Source: Bloomberg LP and Wells Fargo Securities

Figure 4: Gross and Net Treasury Issuance, 2019-2020

Security	Historical Q1 2019	Historical Q2 2019	Projected Q3 2019	Projected Q4 2019	Projected Q1 2020
Notes & Bonds					
2y	120	120	120	120	120
3y	114	114	114	114	114
5y	123	123	123	123	123
7y	96	96	96	96	96
10y	75	75	75	75	75
30y	51	51	51	51	51
2y FRN	56	56	56	56	56
TIPS					
5y TIPS	0	32	0	32	0
10y TIPS	24	11	26	12	26
30y TIPS	8	0	7	0	8
Total					
Net Coupons	180	209	230	288	235
Net Bills	140	-229	116	82	202
SOMA Redemptions	65	65	43	0	0
SOMA Purchases (-)	0	0	0	60	59
Coupons	0	0	0	51	50
Bills	0	0	0	9	9
Net Coupons to the Public	245	274	273	237	185
Net Bills to the Public	140	-229	116	73	193
Cash Balance (Quarter-End)	334	264	350	410	375
WAM	69	70	70	70	71

Source: Bloomberg LP and Wells Fargo Securities

DISCLOSURE APPENDIX

Analyst's Certification

The research analyst(s) principally responsible for the report certifies to the following: all views expressed in this research report accurately reflect the analysts' personal views about any and all of the subject securities or issuers discussed; and no part of the research analysts' compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by the research analyst(s) in this research report.

Important Disclosures Relating to Conflicts of Interest and Potential Conflicts of Interest

Wells Fargo Securities does not compensate its research analysts based on specific investment banking transactions. Wells Fargo Securities research analysts receive compensation that is based on and affected by the overall profitability of their respective department and the firm, which includes, but is not limited to, investment banking revenue. Wells Fargo Securities may sell or buy the subject securities to/from customers on a principal basis or act as a liquidity provider in such securities.

Wells Fargo Securities Fixed Income Research analysts interact with the firm's trading and sales personnel in the ordinary course of business. The firm trades or may trade as a principal in the securities or related derivatives mentioned herein. The firm's interests may conflict with the interests of investors in those instruments.

Additional Information Available Upon Request

About Wells Fargo Securities

Wells Fargo Securities is the global brand name for the capital markets and investment banking services of Wells Fargo & Company and its subsidiaries, including but not limited to Wells Fargo Securities, a U.S. broker-dealer registered with the U.S. Securities and Exchange Commission and a member of NYSE, FINRA, NFA and SIPC, Wells Fargo Prime Services, a member of FINRA, NFA and SIPC, Wells Fargo Bank, N.A. and Wells Fargo Securities International Limited, a U.K. entity investment firm authorized and regulated by the Financial Conduct Authority.

Notice to U.S. Investors

Unless prohibited by the provisions of Regulation S of the 1933 Act, this material is distributed in the U.S., by Wells Fargo Securities, which takes responsibility for its contents in accordance with the provisions of Rule 15a-6 and the guidance thereunder, under the U.S. Securities Exchange Act of 1934. Any transactions in securities identified herein may be effected only with or through Wells Fargo Securities.

This report was prepared by Wells Fargo Securities Global Research Department ("WFS Research") personnel associated with Wells Fargo Securities and Structured Asset Investors, LLC ("SAI"), a subsidiary of Wells Fargo & Co. and an investment adviser registered with the SEC. If you are paying directly for this research, it is being provided by SAI. For all other recipients in the U.S. this report is being provided by Wells Fargo Securities.

Important Information for Non-U.S. Clients

EEA

The securities and related financial instruments described herein may not be eligible for sale in all jurisdictions or to certain categories of investors. For recipients in the EEA, this report is distributed by Wells Fargo Securities International Limited ("WFSIL"). WFSIL is a U.K. incorporated investment firm authorized and regulated by the Financial Conduct Authority. For the purposes of Section 21 of the UK Financial Services and Markets Act 2000 ("the Act"), the content of this report has been approved by WFSIL, an authorized person under the Act. WFSIL does not deal with retail clients as defined in the Directive 2014/65/EU ("MiFID2"). The FCA rules made under the Financial Services and Markets Act 2000 for the protection of retail clients will therefore not apply, nor will the Financial Services Compensation Scheme be available. This report is not intended for, and should not be relied upon by, retail clients.

Australia

Each of Wells Fargo Securities, Wells Fargo Securities Asia Limited and Wells Fargo Securities International Limited is exempt from the requirements to hold an Australian financial services license in respect of the financial services it provides to wholesale clients in Australia. Wells Fargo Securities is regulated under U.S. laws, Wells Fargo Securities Asia Limited is regulated under Hong Kong law, and Wells Fargo Securities International Limited is regulated under U.K. law, all of which differ from Australian laws. Any offer or documentation provided to Australian recipients by Wells Fargo Securities in the course of providing the financial services will be prepared in accordance with the laws of the United States, Hong Kong or U.K. and not Australian laws.

Canada

This report is distributed in Canada by Wells Fargo Securities Canada, Ltd., a registered investment dealer in Canada and member of the Investment Industry Regulatory Organization of Canada (IIROC) and Canadian Investor Protection Fund (CIPF). Wells Fargo Securities, LLC's research analysts may participate in company events such as site visits but are generally prohibited from accepting payment or reimbursement by the subject companies for associated expenses unless pre-authorized by members of Research Management.

Hong Kong

This report is issued and distributed in Hong Kong by Wells Fargo Securities Asia Limited ("WFSAL"), a Hong Kong incorporated investment firm licensed and regulated by the Securities and Futures Commission to carry on types 1, 4, 6 and 9 regulated activities (as defined in the Securities and Futures Ordinance (Cap. 571 of The Laws of Hong Kong), "the SFO"). This report is not intended for, and should not be relied on by, any person other than professional investors (as defined in the SFO). Any securities and related financial instruments described herein are not intended for sale, nor will be sold, to any person other than professional investors (as defined in the SFO). The author or authors of this report is or are not licensed by the SFC. Professional investors who receive this report should direct any queries regarding its contents to Mark Jones at WFSAL (email: wfsalresearch@wellsfargo.com).

Japan

This report is distributed in Japan by Wells Fargo Securities (Japan) Co., Ltd, registered with the Kanto Local Finance Bureau to conduct broking and dealing of type 1 and type 2 financial instruments and agency or intermediary service for entry into investment advisory or discretionary investment contracts. This report is intended for distribution only to professional investors (Tokutei Tousehika) and is not intended for, and should not be relied upon by, ordinary customers (Ippan Tousehika).

The ratings stated on the document are not provided by rating agencies registered with the Financial Services Agency of Japan (JFSA) but by group companies of JFSA-registered rating agencies. These group companies may include Moody's Investors Services Inc, Standard & Poor's Rating Services and/or Fitch Ratings. Any decisions to invest in securities or transactions should be made after reviewing policies and methodologies used for assigning credit ratings and assumptions, significance and limitations of the credit ratings stated on the respective rating agencies' websites.

Published reports and additional disclosure information are available at www.wellsfargoresearch.com.

This report is for your information only and is not an offer to sell, or a solicitation of an offer to buy, the securities or instruments named or described in this report. Interested parties are advised to contact the Wells Fargo entity in their local jurisdiction with which they deal, or the entity that provided this report to them, if they desire further information or if they wish to effect transactions in the security discussed in this report. The information in this report has been obtained or derived from sources believed by Wells Fargo Securities Global Research Department ("WFS Research"), to be reliable, but WFS Research does not represent that this information is accurate or complete. Any opinions or estimates contained in this report represent the judgment of WFS Research at this time, and are subject to change without notice. Certain text, images, graphics, screenshots and audio or video clips included in this report are protected by copyright law and owned by third parties (collectively, "Third Party Content"). Third Party Content is made available to clients by Wells Fargo under license or otherwise in accordance with applicable law. Any use or publication of Third Party Content included in this report for purposes other than fair use requires permission from the copyright owner. Certain website links included in this publication are not maintained, controlled or operated by Wells Fargo Securities. Wells Fargo Securities does not provide the products and services on these external websites and the views expressed on these websites do not necessarily represent those of Wells Fargo Securities. Please review the applicable privacy and security policies and terms and conditions for the website you are visiting. All Wells Fargo Securities and SAI research reports are disseminated and available to all clients simultaneously through electronic publication to our internal client websites. Additional distribution may be done by sales personnel via email, fax or regular mail. Clients may also receive our research via third party vendors. Not all research content is redistributed to our clients or available to third-party aggregators, nor is WFS Research responsible for the redistribution of our research by third party aggregators. Wells Fargo Securities, LLC ("WFS") is registered with the Commodities Futures Trading Commission as a futures commission merchant and is a member in good standing of the National Futures Association. Wells Fargo Bank, N.A. ("WFBNA") is registered with the Commodities Futures Trading Commission as a swap dealer and is a member in good standing of the National Futures Association. WFS and WFBNA are generally engaged in the trading of futures and derivative products, any of which may be discussed within this publication. Any discussion within a Rates Strategy report of specific securities is not intended to provide a fundamental analysis of any individual issuer described therein. Investors should not expect continuing information or additional reports relating to any security described therein. For the purposes of the U.K. Financial Conduct Authority's rules, this report constitutes impartial investment and substantive research. Each of WFS and Wells Fargo Securities International Limited is a separate legal entity and distinct from affiliated banks. Copyright © 2019 Wells Fargo Securities.

Wells Fargo Securities Economics Group

Jay H. Bryson, Ph.D.	Acting Chief Economist	(704) 410-3274	jay.bryson@wellsfargo.com
Mark Vitner	Senior Economist	(704) 410-3277	mark.vitner@wellsfargo.com
Sam Bullard	Senior Economist	(704) 410-3280	sam.bullard@wellsfargo.com
Nick Bennenbroek	Macro Strategist	(212) 214-5636	nicholas.bennenbroek@wellsfargo.com
Tim Quinlan	Senior Economist	(704) 410-3283	tim.quinlan@wellsfargo.com
Azhar Iqbal	Econometrician	(212) 214-2029	azhar.iqbal@wellsfargo.com
Sarah House	Senior Economist	(704) 410-3282	sarah.house@wellsfargo.com
Charlie Dougherty	Economist	(704) 410-6542	charles.dougherty@wellsfargo.com
Erik Nelson	Macro Strategist	(212) 214-5652	erik.f.nelson@wellsfargo.com
Michael Pugliese	Economist	(212) 214-5058	michael.d.pugliese@wellsfargo.com
Brendan McKenna	Macro Strategist	(212) 214-5637	brendan.mckenna@wellsfargo.com
Shannon Seery	Economic Analyst	(704) 410-1681	shannon.seery@wellsfargo.com
Matthew Honnold	Economic Analyst	(704) 410-3059	matthew.honnold@wellsfargo.com
Jen Licis	Economic Analyst	(704) 410-1309	jennifer.licis@wellsfargo.com
Coren Burton	Administrative Assistant	(704) 410-6010	coren.burton@wellsfargo.com

Wells Fargo Securities Economics Group publications are produced by Wells Fargo Securities, LLC, a U.S. broker-dealer registered with the U.S. Securities and Exchange Commission, the Financial Industry Regulatory Authority, and the Securities Investor Protection Corp. Wells Fargo Securities, LLC, distributes these publications directly and through subsidiaries including, but not limited to, Wells Fargo & Company, Wells Fargo Bank N.A., Wells Fargo Clearing Services, LLC, Wells Fargo Securities International Limited, Wells Fargo Securities Canada, Ltd., Wells Fargo Securities Asia Limited and Wells Fargo Securities (Japan) Co. Limited. Wells Fargo Securities, LLC is registered with the Commodities Futures Trading Commission as a futures commission merchant and is a member in good standing of the National Futures Association. Wells Fargo Bank, N.A. is registered with the Commodities Futures Trading Commission as a swap dealer and is a member in good standing of the National Futures Association. Wells Fargo Securities, LLC and Wells Fargo Bank, N.A. are generally engaged in the trading of futures and derivative products, any of which may be discussed within this publication. Wells Fargo Securities, LLC does not compensate its research analysts based on specific investment banking transactions. Wells Fargo Securities, LLC's research analysts receive compensation that is based upon and impacted by the overall profitability and revenue of the firm which includes, but is not limited to investment banking revenue. The information and opinions herein are for general information use only. Wells Fargo Securities, LLC does not guarantee their accuracy or completeness, nor does Wells Fargo Securities, LLC assume any liability for any loss that may result from the reliance by any person upon any such information or opinions. Such information and opinions are subject to change without notice, are for general information only and are not intended as an offer or solicitation with respect to the purchase or sales of any security or as personalized investment advice. Wells Fargo Securities, LLC is a separate legal entity and distinct from affiliated banks and is a wholly owned subsidiary of Wells Fargo & Company © 2019 Wells Fargo Securities, LLC.

Important Information for Non-U.S. Recipients

For recipients in the EEA, this report is distributed by Wells Fargo Securities International Limited ("WFSIL"). WFSIL is a U.K. incorporated investment firm authorized and regulated by the Financial Conduct Authority. For the purposes of Section 21 of the UK Financial Services and Markets Act 2000 ("the Act"), the content of this report has been approved by WFSIL, an authorized person under the Act. WFSIL does not deal with retail clients as defined in the Directive 2014/65/EU ("MiFID2"). The FCA rules made under the Financial Services and Markets Act 2000 for the protection of retail clients will therefore not apply, nor will the Financial Services Compensation Scheme be available. This report is not intended for, and should not be relied upon by, retail clients.

SECURITIES: NOT FDIC-INSURED/NOT BANK-GUARANTEED/MAY LOSE VALUE