



Treasury Borrowing Advisory Committee

Committee Charge #3

July 30, 2013

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Survey of Beneficial Debt Management Tools

Treasury continually seeks ways to minimize borrowing costs, better manage its liability profile, enhance market liquidity, and expand the investor base in Treasury securities. In light of these objectives, we would like the Committee to comment on the need, if any, for Treasury to implement other types of debt management tools. In answering the question, please review the tools employed by debt management authorities around the world.

Executive Summary

The charge to the TBAC concerning potentially beneficial debt management tools builds upon the work presented to the Committee in February 2011 ⁽¹⁾, which focused on potential new security types and debt management tools. In assessing the relevance of the topics reviewed in 2011, it is important to note the differences today that inform the recommendations herein:

- Recently announced introduction of a new product since the prior analysis, which considered a range of new products
 - The Floating Rate Notes (FRN) program, to be launched later this year, represents the first new product launch since the introduction of TIPS in 1997
 - Given the infrequency with which Treasury introduces new products, it appears premature to consider a new product introduction until the FRN is well distributed and seasoned, at the earliest
- Improving budgetary conditions and resulting market dynamics
 - The Federal budget deficit picture has improved substantially over the past several years -- and especially in the last six months. Consequently, Treasury's financing need is quite a bit smaller than previously anticipated. For example, in FY 2011, the budget deficit amounted to \$1.3 trillion while CBO currently expects the deficit in FY 2013 to be \$642 billion ⁽²⁾
 - At the same time, it appears that the Federal Reserve is moving closer to starting to wind down its asset purchase program, implying that the volume of net supply that must be absorbed by the private market could rise despite a potential decline in Treasury issuance
- Given the expected reduced issuance requirements coupled with the new product launch, we concluded that the refresh to the 2011 analysis should focus exclusively on process enhancements rather than revisit the array of potential new products. Factors that could motivate considering new products include:
 - The passage of time such that the introduction of a new product is appropriate
 - Fed ceases rollover of its maturing Treasury securities, which increases Treasury's marketable borrowing needs
 - Meaningful regulatory changes that alter the demand dynamics for U.S. Treasury securities

All discussions and suggestions are intended to adhere to Treasury's core principle of "regular and predictable" issuance

Notes

1. Presentation available here: <http://www.treasury.gov/press-center/press-releases/Documents/TBAC%20Discussion%20Charts%20Merged%202011.pdf>

2. "The U.S. Federal Budget: Infographic" by the Congressional Budget Office, December 2011 (<https://cbo.gov/sites/default/files/cbofiles/attachments/budgetinfographic.pdf>) and "Updated Budget Projections: Fiscal Years 2013 to 2023" by the Congressional Budget Office, May 2013 (<http://cbo.gov/sites/default/files/cbofiles/attachments/44172-Baseline2.pdf>)

Regular and Predictable Issuance is a Key Tenet of Debt Management

Treasury should remain a “regular and predictable” borrower in its debt management practice. Treasury is a regular market participant, not a market timer.

- Lowers costs by removing uncertainty and allowing investors to plan future commitments of funds
- Builds out a more complete yield curve and spreads out rollover risk
- Academic analysis has indicated that the years of opportunistic and flexible issuance by the U.S. Treasury resulted in “excess yield volatility” compared with periods of “regular and predictable” debt management practices.
 - A study of the 5-year Treasury note yield between January 1971 and May 1975 showed that the variance during periods of opportunistic and flexible issuance was 2.9 basis points higher than during regular and predictable issuance ⁽¹⁾
 - During the period, average short-term market volatility during auction announcement periods was noticeably higher during times of flexible issuance ⁽¹⁾

While in certain circumstances there may be value in reverse inquiry driven / opportunistic issuance, we do not believe that these benefits would outweigh the costs associated with a divergence from the principal of regular and predictable issuance and therefore should only be examined as a supplement to the current issuance schedule, if at all

- Regular and predictable issuance is an appropriate borrowing strategy if new issue sizes are large enough to remain liquid and prevent squeezes
 - In the case where it is necessary to decrease issue sizes, additional techniques can be employed (i.e., lowering the maximum bid percentage in an auction, increasing the non-competitive bid size in an auction, etc.)

Note

1. “The Emergence of ‘Regular and Predictable’ As a Treasury Debt Management Strategy” by Kenneth D. Garbade, FRBNYH Economic Policy Review, March 2007

Section 1:

Primary Market Techniques

A Multiple-Price Auction Format

Tool

- Auctions are the most common method of government bond issuance in major developed economies and have proven to be a cost-effective and transparent way to issue debt
- Current method in the U.S. is a single-price (Dutch) auction model
 - Bidding process identifies the lowest yield (highest price) at which the auctioneer can sell all available bonds
 - All bidders in the auction who bid below the auction yield (above the auction price) will receive bonds at the auction yield
- Other sovereign countries employ an alternative multiple-price (English) auction method
 - Successful bidders are awarded bonds at the yield at which they bid
 - Non-competitive bids are awarded at the weighted average price of competitive bids

Background

- Per a 2009 OECD study, 19 of 29 countries studied used single-price and 20 used multiple-price auction methods (some used both) ⁽¹⁾
- Empirical studies by Malvey, Archibald and Flynn in 1995 and by Malvey and Archibald in 1998 found evidence that participants bid more aggressively in single-price auctions than in multiple-price auctions ^{(2) (3)}
- Auction of 2-year notes in May 1991 under the prior multiple-price format, which led to a squeeze in secondary market availability, was a catalyst for an investigation into alternative ways to conduct Treasury auctions
 - The Dutch auction process was consequently adopted, along with limitations on the size of individual bids
 - By 1998, Treasury fully replaced multiple-price auctions with single-price auctions

Benefits

- In theory, multiple-price auctions could lower the cost of borrowing

Considerations

- In practice, multiple-price auctions enable the possibility of collusion and cornering
- Multiple-price auctions create a “Winner’s Curse” or “Seller’s Curse”: the winner pays the highest price, which may lead bidders to scale back their bids in case they ultimately win
- In 1959 Milton Friedman argued that the simplicity of single-price auctions would reduce bidders’ cost of preparing bids, broaden their participation, and reduce the incentive to collude or to try to corner the market ⁽⁴⁾

Notes

1. “New Challenges in the Use of Government Debt Issuance Procedures, Techniques and Policies in OECD Markets” by Hans J. Blommestein, OECD: Financial Market Trends, 2009
2. “Uniform-Price Auctions: Evaluation of the Treasury Experience” by Malvey, Archibald and Flynn, Department of the Treasury, 1996
3. “Uniform-Price Auctions: Update of the Treasury Experience” by Paul Malvey and Christine Archibald, Office of Market Finance, Department of the Treasury, October 1998
4. Milton Friedman 30 Oct 1959 Hearing before the JEC 86th Congress Testimony in Employment, Growth and Price Levels

B Syndications

Tool

- Distribute a primary offering of Treasury securities to investors via a syndicate of broker-dealers
- Appoint a small group of joint-bookrunning managers to interface with the market and assume underwriting liability for the offered securities
 - Build an order book of investor demand at a starting price recommended by lead-managing broker-dealers
 - Tweak pricing range to determine the clearing level for Treasury's target size
 - Allocate securities to investors at the market-clearing price

Background

- Used by other sovereign nations for primary issuance
 - Favored generally by countries with lower issuance needs, but also used in certain circumstances by the United Kingdom, Japan, Italy, France, and Germany
 - Germany uses syndications for the first ever issuance of a new federal security
- Primary method of new-issue distribution for other securities, including GSE benchmark bullets, investment grade corporate bonds, high yield bonds, and equities

Benefits

- Increases certainty of execution
- Enables price discovery and greater transparency for market participants
- Facilitates a uniform-price clearing mechanism at a price that matches investor demand
- Provides a competitive incentive for bookrunning managers, through underwriting commissions and status, to find marginal buyers
- Fulfills the edict of "regular and predictable" borrowing, if syndications are announced in the quarterly calendar of issuance
- Allows a broader distribution of new issues

Syndications (Cont'd)

Considerations

- Requires a syndicate to be selected by Treasury and compensated for underwriting liability
- Exposes Treasury to market movements across a multi-hour or multi-day execution window
- Incorporates syndicate discretion into the investor allocation process
 - Participating investors agree to accept the universal price offered by the bookrunning managers
 - Decision to allocate to a buyer is made by the syndicate, rather than by the buyer's marginal price
- Enables market psychology to affect pricing outcome, if investors become “spooked” by a slow book-building process or price widening
- Deep existing investor base and highly liquid secondary trading market for Treasury notes enables a smooth auction process for new issuance without a syndicate
- Current primary dealer framework incorporates broker-dealers in the new-issue process without discretion toward specific broker-dealers or investors

Additional Considerations

- Syndication may be an effective distribution tool in the issuance of a new Treasury product, where price discovery and execution certainty will be critical
- A syndicate structure is likely not additive for the upcoming FRN issuance given it has been well publicized, is expected to be short-term and therefore is likely to attract a deep investor base
- In contrast, syndication is more likely to be additive for products where the investor base is less certain and the pricing benchmarks are less clear
 - For example, Treasury securities with maturities greater than 30 years, foreign currency-denominated issues, or potentially longer-dated FRNs

C Responding to Reverse Inquiries & Window-Driven Issuance

Tool

- Capture opportunistic windows for issuance and respond quickly to investor demand
 - Treasury may regularly post issuance targets, to supplement or complement the existing funding plan
 - Treasury may also respond to specific investor demand for a new issue (such as an ultra-long duration instrument that targets niche investors) or re-opening

Background

- Mimics a funding strategy employed by other frequent borrowers
 - GSEs currently use this funding model for issuance of callable bonds, structured notes, floating-rate notes, and discount notes
 - Corporate borrowers, especially financial institutions, will issue in optimal market windows and post opportunistic target funding levels for structured Medium Term Notes (MTNs) and commercial paper

Benefits

- Retain flexibility in strategy to issue securities in opportunistic windows
- Respond to specific investor demand for a given product or maturity at an optimal price
- Use posted funding targets to drive investor participation to a target point on the maturity curve for Treasury to issue
- Receive real-time feedback from investors on price and demand

Considerations

- Increases operational burden on Debt Management Office
 - Small issue sizes and new streams of CUSIPs will need technological and operational support
 - Treasury must monitor issuance targets to avoid creating unintended dislocations between primary and secondary markets
- Integration with current issuance strategy may pose challenges
 - If used in conjunction with existing auction processes, may impact demand from investors and dealers in auctions
 - If used instead of auction processes, may impact perception of Treasury as a “regular and predictable” borrower
- Change in target levels could lead to indirect gains or losses for holders of existing securities
- Lumpy and unpredictable cash flow needs may generate negative carry costs on opportunistic issuance
- Fragments secondary liquidity if issue sizes are small and may cause issue-specific mispricings in periods of market stress, creating orphaned secondary market segments like the high coupon callables issued in the 1980s

D Taps and Mini Tenders

Tool

- A tap is a sale of government securities where the debt management agent believes that there is a dislocation in the market caused by excess demand for a particular issue or sector
 - Removes or reduces the dislocation by re-opening an existing issue to increase the outstanding notional
 - Performed as needed, to correct adverse lending conditions
 - Announcement and auction actions are taken quickly
- A mini-tender is also a sale of government securities to correct market dislocations
 - Announcement is made in advance via the supply calendar

Background

- Used by 10 out of 29 countries studied by the OECD in 2009 ⁽¹⁾
- The most recent execution of a tap by Treasury was in the re-opening of four issues on October 8 and 9, 2008 ⁽²⁾
 - These taps had tails of 41.1bps, 15bps, 7.1bps, and 7.8bps
 - Tails may have been a function of the rapid execution as well as financial conditions at the time

Benefits

- Alleviates market dysfunction in times of great stress or systemic failure
- Reduces market pressure if there is temporary excess demand for an issue or other exceptional circumstances
- Allows lower borrowing costs for Treasury, since rich issues are typically the target securities
- Enables Treasury to fine-tune their borrowing requirements, in the case of mini-tenders. Treasury can consult the market prior to a mini-tender to understand the preferred timing and target issues
- Facilitates smooth management of Treasury's debt maturity profile (i.e., fill in a long-end gap in the yield curve)

Notes

1. "New Challenges in the Use of Government Debt Issuance Procedures, Techniques and Policies in OECD Markets" by Hans J. Blommestein, OECD: Financial Market Trends, 2009
2. "The Introduction of the TMPG Fails Charge for US Treasury Securities" by Garbade, Keane, Logan, Stokes, and Wolgemuth, FRBNY Economic Policy Review, October 2010

Taps and Mini Tenders (Cont'd)

Considerations

- Unpredictable or irregular operations may have negative market implications
- May adversely affect current holders of the target securities
- Once implemented, market may come to rely on taps or mini-tenders as a source of liquidity
- Market requires sufficient time to digest announcements of a tap, in order for the tool to be effective
- Communication strategy is critical
 - Methods will have the most impact if the market has sufficient time to digest an announcement and position appropriately
 - Treasury may provide advanced notice or define a set a parameters that will warrant action

E Over-Allotment Option (“Greenshoe”)

Tool

- Allow underwriters to use incremental buying power to maintain an orderly trading market

Background

- Over-allotment option typically serves two potential purposes in an equity or equity-like offering
 - If after-market conditions are strong, the issuer or selling shareholders deliver additional shares, increasing the base offering size by 15%
 - If after-market conditions are weak, the underwriters buy up to 15% of the base offering in the after-market to stabilize the price and improve liquidity
- Over-allotment option is not used by investment grade corporations or the GSEs in senior debt offerings
- As applied to Treasury securities, a greenshoe would provide primary dealers with the right to buy incremental notes within a defined short period of time after the auction at the same price that the securities clear the auction

Benefits

- Increases after-market demand
 - If new notes trade well after an auction, primary dealers may purchase incremental securities from Treasury within a defined short period of time to cover primary dealers’ short positions.
 - If new notes are subject to selling pressure after an auction, primary dealers may purchase incremental securities in the aftermarket to stabilize performance
- Creates an incentive for primary dealer participation in auction processes
- Process increases availability of a new issue and facilitates a more healthy repo market for a new issue
- Over-allotment could alleviate primary dealer auction constraints due to increased direct bidder participation

Considerations

- Not clear that Treasury has use for excess funds or would benefit from “under-issuing” in order to allow for greenshoe exercise
- Limits visibility for investors into final issue size in the inaugural auctioning of the securities
- The over-allotment option is only an effective tool in the issuance of a new security, not in a periodic re-opening of an existing issue
- Requires a formula to calibrate primary dealers’ portions of the over-allotment option
- Presents operational challenges to manage a short position and execute a greenshoe

Section 2:

Secondary Market Techniques

A Repurchases: Buybacks and Switches

Tool

- Actively adjust Treasury's outstanding debt and maturity profile through liability management
 - Repurchase outstanding issues in whole or in part ("buybacks")
 - Issue new securities to replace repurchased securities ("switches")

Background

- Treasury engaged in a repurchase program from March 2000 to April 2002 as a result of the emergence of a fiscal surplus
 - United States swung from a \$290 billion deficit in 1993 (4.7% of GDP) to a \$236 billion surplus in 2001 (2.4% of GDP)
 - Treasury's buyback program ceased as deficits returned by FY 2003
 - United States has only posted a surplus in 5 of the last 42 fiscal years
- Corporate borrowers engage opportunistically in liability management exercises through tenders, exchanges, and open market operations
 - Low interest rate environment since 2009 has provided an incentive for investment grade corporate borrowers to repurchase high-coupon debt and refinance with lower-cost funding
 - Considerations include net present value analysis, accounting implications, and long-term interest rate views
- Fannie Mae and Freddie Mac also have a history of conducting repurchases
 - GSEs have engaged in reverse-auction buybacks, tender offers, and exchanges
 - Repurchased securities include callable bonds, benchmark bullets, floating-rate notes, subordinated debt, and foreign-denominated securities

Repurchases: Buybacks and Switches (Cont'd)

Benefits

- May be an effective tool to manage Treasury debt in periods of surplus
- Smooth the predictability of new issuance in periods of shrinking deficits or rising surplus
 - When cash needs decrease, repurchasing outstanding issues will delay the need to abruptly eliminate a current auction series
- Prevent an extension of the average maturity of outstanding debt in periods of surplus
 - Repurchase long-dated maturities
 - Redeem shorter-dated maturities without refinancing
 - Reduce aggregate new issuance
- Increase size and liquidity of new Treasury issuance, using new financing to fund repurchases
- Lower Treasury's interest expense in low interest rate environments by replacing high-coupon debt with lower-cost financing
- Buybacks can potentially help Treasury better manage its seasonal cash balances

Considerations

- Treasury currently effectively adjusts to seasonal cash flows by moderating the supply of bills
- Reduce liquidity of outstanding issues, where liquidity in off-the-run notes is already vulnerable in periods of market stress
- Subject to revenues and cyclical cash balances, if repurchases are performed for cash management purposes
 - Treasury may be more active in repurchases during periods of higher tax revenue
 - Auction sizes could be variable in periods of low revenue
- Face replacement risk, where the coupon on new issuance may be higher than the coupon on the repurchased securities
- Can influence the yield curve as a result of the distribution of purchases
- Create a potential impact on futures markets, where the cheapest to deliver security may be affected by a reduction in outstanding Treasury coupons
- Issuance-funded repurchases may contradict Treasury's objectives as a "regular and predictable" borrower and can adversely impact the yield curve

B Securities Lending Facility / Collateral Swap Facility

Tool

- A securities lending facility provides a temporary source of securities to the financing market to promote the efficient functioning of markets
- A collateral swap facility enables the exchange of high quality assets for posted collateral

Background ⁽¹⁾

- The Federal Reserve Bank of New York (FRBNY) operates a securities lending facility
 - Offers Treasury and Agency securities for loan from the System Open Market Account (SOMA) portfolio via a daily auction process
 - Security loans are collateralized on an overnight basis with Treasury bills, notes, bonds and inflation-linked securities
- Failure by a primary dealer to re-deliver collateral against borrowed securities by the loan maturity date results in a penalty fee equal to the general collateral repo rate plus a fail charge

Benefits

- A securities lending facility at Treasury would complement the Fed's SOMA lending program
- Market dislocations and fails may be significantly reduced if Treasury implements a separate facility

Considerations

- Legal implications of creating a Treasury facility ⁽¹⁾
 - Treasury may likely need new authority to be able to issue securities for the purpose of securities lending
 - Issuance for this purpose should be considered in the context of the debt ceiling
- Existing FRBNY securities lending facility, which is limited to Treasury-for-Treasury swaps, has proven to be beneficial, but at this point it seems premature to consider an extension of this mechanism for the Treasury Department

Note

1. See "References" for further information (slide 21)

Appendix

Significant Squeezes in the U.S. Treasury Market

Significant Squeezes	Issue	Background	GC Repo Rate (%)		Action
April 1986	9.25% Feb 2016	May refunding, some foreign investors did not lend the old issue	6.75	High GC rate made repo failure on 9.25 Feb 16 costly	No action: the 9.25% February 2016 traded with a negative repo rate for some time
September / October 2001	5-year, 4.625% May 2016 and 10-year, 5% Aug 2011	Significant fails, 9/11	3.5 to 2	Bank of New York had their operations in the World Trade Center, so settlements of many trades were negatively impacted	Treasury reopened the OTR 10-year on Oct 4, 2001 and indicated a possible reopening of OTR 5-year as well
June 2003	On-the-run 10-year: 3.625% May 2013	Chronic short position in market due to long-term buyers not lending the issue	1.00	Low GC rate made repo failure on 3.625% May 2013 not so costly	No action: fails persisted until end of year after quarterly 10-year note auction in November 2003
October 2008	4 issues suffered major shortage	Credit crisis: demise of Lehman Brothers and the Reserve Fund breaking the buck	0.02	The ultra low level of GC would have normally meant the fails wouldn't have been so costly, but there was an extreme flight to simplicity as well as quality going on and many dealers were short	Treasury re-opened 4 issues: 4.25% Aug 2015 and 4.125% May 2015 on Oct 8, 2008, then 3.5% Feb 2018 and 4% Feb 2015 on Oct 9, 2008

Source: "The Introduction of the TMPG Fails Charge for US Treasury Securities" by Garbade, Keane, Logan, Stokes, and Wolgemuth, FRBNY Economic Policy Review, October 2010

Appendix: Global Issuance Recap

Global Issuance Recap

	Debt Instrument	Maturity	Auction Type	Auction Timeline	Syndicated	Taps / Mini-Tenders	Buybacks / Switches
 U.K.	Conventional Gilt	2 years – 50 years	Multiple-price auction	Announcement: Tuesday of the previous week; Auction: 30-yr issued quarterly, 5-year and 10-year issued 1 st and 3 rd month of the quarter; Settlement: 3 business days after transaction	Yes: GBP5Bn 50-yr done on 6/2013, (GBP 3.5Bn more in conventional gilts to come for FY 2013)	Tap: Yes, but none since April 1996; Mini-tenders: ~GBP 2Bn sales to date	Buybacks of 6 or fewer months remaining to maturity to smooth maturity peaks; Switches on an ad-hoc basis, last one done 2001 in Treasury stock
	Index-Linked Gilt	5 years – 50 years	Single-price auction	Announcement: Tuesday of the previous week; Auction: Monthly with varying maturities; Settlement: 3 business days after transaction	Yes: GBP 12.5Bn planned for FY 2013	Tap: Yes, but none since November 1998; Mini-tenders: ~GBP 750MM sales to date	Switches on an ad-hoc basis, Last one done 2001
	Other Products	Treasury Bills, Double-dated Gilts and Undated Gilts (both not in circulation currently); DMO provides a Post Auction Option Facility (PAOF) for successful bidders at all auctions to have the option to acquire up to an additional 10% of the total gilts they were allotted at the average accepted price of the auction; Last reverse gilt auction in 2001					
 Japan	JGB	2 years – 40 years	Competitive price auction (2-year, 5 year, 10-year, 20-year, 30-year); Competitive yield auction / Dutch (40-year)	Announcement: About a week before auction at 10:30AM; Auction: Bidding closes at 12PM, 2-year issued end-month, 5-year issued mid-month, 10-year issued beginning of month, Issuance times of longer-maturity bonds vary; Settlement: 2 – 3 business days following auction	Yes: Not since the 1990's	Not ad-hoc but two tap auctions per month (JPY300Bn in 5-year – 15-year and in 15-year – 30-year); Mini-tender: No	Buybacks done on a monthly basis, recently focused on Linkers and Floaters; No switches
	Inflation-Indexed Bonds	10 years	None specified	None specified	No	Tap: No; Mini-tender: No	Buybacks recently targeted in 10-yr Inflation-linked and 15-yr Floaters
	Other Products	5 – 10-yr auctions also issued through non-competitive auctions for smaller bidders; OTC sales system of 2-yr, 5-yr, 10-yr JGBs, price determined by MOF for each issue, max value of JPY100 per individual applicant, monthly OTC sales; Also issue Floating Rate Bonds					
 Germany	Schaetze, Bobl, Bund	Schaetze: 2-year, Bobl: 5-year, Bund: 10- and 30-year	Multiple-price auction	Announcement: 6 business days prior to auction; Auction: Wednesdays at 11:30AM; Settlement: 2 business days following the auction	No	Tap: Yes, usually only off benchmarks; Mini-tender: No	Buybacks on a daily, ad-hoc basis in the secondary market (no announcements beforehand, no post-trading data); Switches on an ad-hoc basis
	Bobl / EI, Bund / EI	Bobl / EI: 5-year, Bund / EI: 10-year	Multiple-price auction	Announcement: Flexible; Auction: Wednesdays at 12:00PM	Yes: only for first issuance and first reopening	Tap: Yes, more sporadically than Bund / Bobl taps; Mini-tender: No	Buybacks on a daily, ad-hoc basis in the secondary market (no announcements beforehand, no post-trading data); Switches on an ad-hoc basis
	Other Products	Foreign currency bonds, Federal Savings Notes; Bunds are strippable					

Source: OECD, National Central Banks, National Debt Management Offices

Appendix: Global Issuance Recap (Cont'd)

Global Issuance Recap (cont'd)

	Debt Instrument	Maturity	Auction Type	Auction Timeline	Syndicated	Taps / Mini-Tenders	Buybacks / Switches
 Italy	CTZ, BTP	CTZ: 2-year; BTP: 3-year – 30-year	Single-price auction	Announcement: 2 business days prior to auction; Auction: 2-year at end of month, 2-year issued mid-month, 5-year and 10-year issued end of month; Settlement: 3 business days following the auction	Yes: EUR15Bn 15-yr in January 2013; EUR6Bn 30-yr in May 2013	Tap: Yes, off the-runs more regularly; Mini-tender: No	Buybacks and Switches on an ad-hoc basis
	CCTeu (FRN), BTP€i (Linker)	CCTeu: 5-year, BTP€i: 5-year to 30-year	Single-price auction	CCTeu: Announcement: 2 business days prior to auction; Auction: End of most favorable month; Settlement: 2 business days following the auction; Announcement: 2 business days prior to auction; BTP€i: Auction: End of month together with CTZ auction; Settlement: 3 business days following the auction	None in 2012 – 2013 but BTP Italia deal this year (see Other Products section)	Tap: Yes, CCTeu fairly regularly and Linkers more sporadically; Mini-tender: No	Beginning June 2010, MEF offered opportunity to exchange current CCTs with new CCTeu
	Other Products	BTP Italia (Inflation-Linked Bonds): EUR17Bn syndicated deal in 2013; Bonds over 5 years are strippable					
 France	BTAN, OAT	BTAN: 2 years – 5 years; OAT: 7 years to 50 years	Multiple-price auction	Announcement of BTAN and OAT: 4 business days prior to auction; BTAN Auction: 3 rd working Thursday of each month at 10:50AM; OAT auction: 1 st working Thursday of each month at 10:50AM; Settlement of BTAN and OAT: Tuesday following the auction	Yes: EUR4.5Bn of 30-yr OAT done on May 25, 2013 (usually 1 syndication in the long end each year)	Tap: Yes, sporadically, more frequently for 30-year bonds than for shorter paper; Mini-tenders: No	Buybacks daily, Switches on an ad-hoc basis
	OATi, OAT€i (Inflation Linked)	≥ 7 years	Multiple-price auction	Announcement: 4 business days prior to auction; Auction: 3 rd working Thursday of month at 11:50AM; Settlement: Tuesday following the auction	Yes: sporadic, EUR3bln of 15yr in 2008	Tap: Yes, sporadically; Mini-tenders: No	Buybacks on an ad-hoc basis
	Other Products	Floating rate OAT Bonds: TEC 10 OAT (last matured in 2009, none in circulation currently), OATs and BTANs are strippable					
 Canada	Nominal Bond	2-year to 30-year	Multiple-price auction	Announcement: Week prior at 3:30PM; Auction: Usually on Wednesday by 12:00PM; Settlement: 2 business days for 2- and 3-year bonds; 3 business days for 5-, 10-, and 30-year bonds	Yes: not since 1991	Tap: No; Mini-tenders: No	Buybacks and switches done regularly; bond buybacks done once or twice a quarter, target off-the-runs (12 months – 25 years); cash management buybacks (under 18 months) done weekly; Switches quarterly in 2-yr paper, less frequently in 30s
	Real Return Bond	30-year	Single-price auction (as scheduled for the 9/5/2013 30-yr auction)	Announcement: Week prior at 3:30PM; Auction: Usually on Wednesday by 12:05PM; Settlement: 3 business days after auction	Yes: sporadic; 30-yr deal in the mid 1990's	Tap: No; Mini-tenders: No	No buybacks nor switches
	Other Products	Canadian Savings Bonds, Canadian Premium Bonds, Foreign currency funding (syndicated offerings)					

Source: OECD, National Central Banks, National Debt Management Offices

References

Securities Lending Facility (Slide 16) – Additional Background Information ⁽¹⁾ ⁽²⁾

- **Background ⁽¹⁾**

- The FRBNY has been operating a securities lending facility since 1969. The FRBNY’s securities lending program offers securities for loan from the System Open Market Account or SOMA portfolio. Lending is done on an overnight basis and to prevent overnight bank reserves from being severely affected by the supply/demand changes, the security loans are collateralized with Treasury bills, notes, bonds and inflation-linked securities rather than cash. The theoretical supply of a particular issue is limited to 90% of each Treasury and Agency security held in the SOMA with a maturity greater than 13 days. If less than 90% of a particular issue is held in the SOMA, then the entire SOMA holding can be lent. Primary dealers are limited to 25% of this theoretical supply. If a primary dealer fails to deliver collateral against borrowed securities by the loan date, cash will be held overnight against the loan without interest and a penalty fee equal to the general collateral repo rate will be applied-- in addition to the lending fee and the fail charge. Failure by a primary dealer to re-deliver collateral against borrowed securities by the loan maturity date will mean a penalty fee equal to the general collateral repo rate plus the fail charge. The fail charge was introduced in 1 May 2009.
- The fail charge is calculated by:
$$c = \frac{1}{360} * 0.01 * \max(3 - R, 0) * P$$

(C = fails charge, R = Fed Funds target rate, P = amount of funds due from the non-failing party)

- **Legal Issues:**

- A 2006 White Paper by the Office of Debt Management at the Department of the Treasury ⁽²⁾, cites Chapter 31 of Title 31 of the United States Code that authorizes the Secretary of the Treasury to issue Treasury securities, and authorizes the Secretary to borrow amounts necessary for expenditures, and may issue securities for the amounts borrowed, as well as to buy, redeem or refund outstanding securities. However, there is no reference to securities lending. It seems likely that the Treasury would need new authority to be able to issue securities for the purpose of securities lending.
- Debt ceiling issues are another matter to consider. If the securities lending facility received collateral trading well above par value borrowing from the securities lending facility could be said to be increasing the debt subject to the debt limit.

Notes

1. "The Introduction of the TMPG Fails Charge for US Treasury Securities" by Garbade, Keane, Logan, Stokes, and Wolgemuth, FRBNY Economic Policy Review, October 2010
2. "Consideration of a Proposed Treasury Securities Lending Facility" Department of the Treasury, Office of Debt Management, May 2006