

October 7, 2016

**Addressing Global Dollar Liquidity Strains:
The Role of the Federal Reserve's Swap Arrangements**

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Introduction

One role of a central bank is to provide a liquidity backstop—a source of funds in circumstances where access to the market or market liquidity itself is compromised. By providing this funding, the Federal Reserve can help assure the availability of credit to U.S. firms and households. When the locus of such liquidity strains is in dollar markets abroad or foreign currency markets here in the United States, the Federal Reserve's swap arrangements can play a role in mitigating such strains.

This note examines the role of central bank liquidity swap arrangements in the context of the Federal Reserve's monetary policy toolkit. The note is organized in the following sections: a description of swap lines including their historical use in the United States, issues when establishing these types of arrangements, the benefits and costs of these tools, and an examination of related facilities that could be used in conjunction with or instead of swap lines to provide dollar liquidity. The note's bottom line is that—as was learned during the global financial crisis (GFC) of 2007-2009 and the euro-area financial turmoil of 2011-2012—tight dollar liquidity conditions in offshore funding markets can lead to significant increases in money market rates in the United States, with the potential to disrupt the flow of credit to U.S. households and businesses, and that dollar liquidity swap lines with foreign central banks can materially lessen the negative effects of these liquidity shortfalls. Similarly, although not the primary focus of this note, the Federal Reserve could tap the foreign currency liquidity swap lines to provide foreign currency funding to financial institutions.

Description, History, and Recent Usage

The United States has a long history of swap arrangements with foreign central banks, dating back to the 1930s and the establishment of the Treasury Department's Exchange Stabilization Fund (ESF). In the 1960s, in response to increased pressure on the fixed exchange rate system, the United States—via the Federal Reserve—established currency swap arrangements with

the other G-10 central banks, some additional foreign central banks, and the BIS.¹ But, after years of disuse—following the move to flexible exchange rates—most currency swap arrangements were allowed to lapse in 1999.²

During the GFC, however, concerns about credit risks and higher demand for liquidity placed great strains on the global market for funding in U.S. dollars. Global dollar funding costs soared, and market liquidity dried up for maturities longer than overnight. Dollar demand pressures in offshore markets spilled over to U.S. funding markets. In the federal funds market, the funds rate often moved higher early in the New York trading day, when demand from European firms was remarkably strong, and lower at the end of the day, when demand from Europe had receded.³ In response to these financial market stresses, the Federal Reserve established a series of dollar liquidity swap lines, first with the European Central Bank (ECB) and the Swiss National Bank (SNB) in December 2007, and later with the Bank of England, (BOE), the Bank of Japan (BOJ) and the Bank of Canada (BOC).⁴ Later still, swap lines were extended to other advanced-economy central banks and to four central banks of emerging market countries—Brazil, Korea, Mexico, and Singapore. Initially, the lines were all instituted with caps, and the dollars were distributed by the foreign central banks via auctions and fixed-rate repo operations.⁵

Over the course of the GFC, caps on the lines to some of the key advanced-economy central banks were raised multiple times as funding pressures intensified, and in October 2008, the caps on the lines for the BOE, BOJ, ECB, and SNB were removed. Tenders were subsequently conducted by these four central banks at a fixed rate with full allotment.⁶ In the week ending December 10, 2008, the total amount of dollar liquidity swaps outstanding hit a peak of more than \$580 billion, accounting for over 25 percent of the Fed's total assets. Usage of the swap lines gradually declined towards zero over the next few years as market stress declined and, in February 2010, the swap lines

¹ The arrangements were with Japan, Germany, France, United Kingdom, Italy, Canada, Belgium, the Netherlands, Sweden, Switzerland, Austria, Denmark, Norway, Mexico, and the BIS. These swap arrangements were set up to facilitate exchange rate intervention rather than provide a liquidity backstop.

² In addition, in the days following the September 11, 2001 terrorist attacks, temporary (30 days), capped swap lines were established with the European Central Bank (\$50 billion) and the Bank of England (\$30 billion), and the cap on the Bank of Canada's swap line via the North American Framework Agreement was temporarily raised to \$10 billion.

³ The staff of the Trading Desk at the Federal Reserve Bank of New York ("the Desk") injected reserves in the morning, in part to offset the firmness in rates. The injection created an excess supply of reserves, which would lead to rates crashing late in the day.

⁴ Foreign currency liquidity swap lines were first established with the BOE, ECB, BOJ, and SNB during the GFC in April 2009.

⁵ The fixed rate of the repo operations was tied to the rate of the Federal Reserve's domestic Term Auction Facility (TAF).

⁶ The fixed rates of the foreign central bank tenders were initially set at the U.S. dollar OIS rate plus 100 basis points to encourage use only as a backstop and to limit moral hazard.

were allowed to expire. However, after only a few months, the swap lines with the BOC, BOE, BOJ, ECB, and SNB were reinstated (in May 2010) as the European debt crisis worsened and offshore dollar funding pressures reemerged.⁷ In October 2013, the swap lines for these five central banks were converted to standing lines with no preset limits, and it was reiterated that the lines continued to serve as a “prudent liquidity backstop.”⁸

Currently, the Federal Reserve maintains dollar liquidity lines with just these central banks. In addition to these arrangements, which are the main focus of this note, there exist other capped swap lines with Mexico and Canada as part of the North American Framework Agreement, established in 1994.⁹

Under the current standing swap line arrangements, when a foreign central bank draws on its U.S. dollar liquidity line with the Federal Reserve, the Federal Reserve transfers U.S. dollars to the foreign central bank’s account at the Federal Reserve Bank of New York (FRBNY) and the foreign central bank transfers foreign currency to a Federal Reserve account at the foreign central bank. The amount of foreign currency transferred is equivalent in value to the dollars drawn, based on the spot exchange rate prevailing in the market at the time, which is mutually agreed upon by both central banks. The foreign central bank then lends the dollar liquidity to financial institutions in its jurisdiction for a period that matches the term of the swap. At the end of the swap term, the foreign central bank returns the dollars it drew plus a fee, and the Federal Reserve returns the foreign currency. The fee is currently set at the U.S. dollar OIS rate (corresponding to the maturity of the swap) plus 50 basis points (recently around 90 basis points for one-week swaps).¹⁰ Since the removal of caps on the swap lines, the foreign central banks have tendered dollars to foreign institutions at an interest rate equal to the fee that the Federal Reserve charges the foreign central banks. It is important to note that the swap line transaction is only between the Federal Reserve and the foreign central bank; that is, the obligation to repay the Federal Reserve belongs to the foreign central bank, not the institutions to which the foreign central bank lends the dollars.

⁷ At the end of November 2011, the Federal Reserve announced that the price charged by foreign central banks at their dollar tenders would be lowered by 50 basis points, from OIS plus 100 basis points to OIS plus 50 basis points. In addition, at this time, foreign currency liquidity swap lines were reestablished between the Federal Reserve and these foreign central banks (link: <http://www.federalreserve.gov/newsevents/press/monetary/20111130a.htm>).

⁸ For details, please see the October 31, 2013 press release from the Federal Reserve (link: <http://www.federalreserve.gov/newsevents/press/monetary/20131031a.htm>).

⁹ The NAFA swap lines were established to “expand the pool of potential resources available to the monetary authorities of each country to maintain orderly exchange markets.” See the announcement in the June 1994 Federal Reserve Bulletin for more details (link: https://fraser.stlouisfed.org/scribd/?item_id=20864&filepath=/docs/publications/FRB/1990s/frb_061994.pdf).

¹⁰ The Federal Reserve Act (section 14), which provides the legal basis for swap operations, allows for spot purchases and forward sales of foreign currency against dollars.

In recent years, the BOE, BOJ, ECB, and SNB have all been holding weekly dollar funding operations using full-allotment fixed-rate tenders of 1-week maturity. Take-up at these operations has occurred only at some of the ECB and BOJ tenders and has generally been for small amounts, with some slightly larger draws occurring at quarter ends.¹¹ However, the existence of the operations, even without take-up, appears to have offered some reassurance to markets, particularly around some potential risk events, such as the United Kingdom's referendum on membership in the European Union in June 2016.¹²

Key Features of Swap Programs

This section discusses some of the key features/choices that need to be addressed when establishing swap lines. These choices can be related to the following questions: 1) With which central banks should the Federal Reserve establish swap lines? 2) How integrated should swap lines be in the monetary policy framework? 3) How large should the swap lines be? 4) How should the funding provided by the swap lines be priced?

Selection of Counterparties: Perhaps the first issue that must be considered is what criteria should be used in deciding with whom the Federal Reserve should establish swap lines. During the GFC, the Federal Reserve used multiple criteria including: the importance in global dollar funding markets of the local dollar market, the importance of the foreign economy to the U.S. economy, the extent to which the country pursued prudent policies (including the independence of the central bank), and if there was good reason to believe that the swap lines would actually help. Whether these criteria are reached becomes less clear cut as one considers central banks outside of the major advanced economies. At the FOMC meeting on October 28-29, 2008, the staff recommended that requests for swap lines from the central banks of Brazil, Mexico, Korea, and Singapore be approved as these economies met such criteria.¹³ Nathan Sheets, Director of the Division of International Finance at the Federal Reserve Board at the time, laid out the case for establishing swap lines with these countries' central banks. He first noted that "...each of these economies has significant economic and financial mass" and that "Singapore is a major financial center." Linkages and

¹¹ The BOC does not hold regular tenders. However, using the terminology of the long-run framework project, the swap lines (both U.S. dollar and Canadian dollar) with the Bank of Canada are still "integrated" into our monetary policy framework as they are part of the standing swap network, they are operational, and occasional small-value test exercises occur to ensure their readiness.

¹² The drawings on the swap lines surrounding the referendum on June 23, 2016, were not particularly outsized, though the ECB drawing of \$2 billion during the week ending July 13, 2016 was the largest drawing since 2013.

¹³ Transcript of October 28-29, 2008 FOMC meeting from the Federal Reserve Board's public website. (link: <http://www.federalreserve.gov/monetarypolicy/files/FOMC20081029meeting.pdf>)

implications for the rest of the world were also cited; "...a further intensification of stresses in one or more of these countries could trigger unwelcome spillovers for both the U.S. economy and the international economy more generally." Sheets also argued that "...these economies have generally pursued prudent policies in recent years, resulting in low inflation and roughly balanced current account and fiscal positions or, in the case of Singapore, sizable surpluses." And the final criteria was perceived as met, as there was "good reason to believe that swap lines with the Federal Reserve would be helpful in defusing the economic and financial pressures that they now face."

Integration: Another issue is whether swap lines should be—in the terminology of the Long-Run Framework (LRF) project—"integrated," "conditional," or "not operational." Following the GFC, it was determined that the swap lines with the key reserve currencies should be made standing facilities, which puts them in the category of "integrated." Standing facilities allow for the fastest reaction to market and operational disruptions and, in addition, they also likely provide the greatest deterrent to potential financial disruptions—that is, the mere existence of swap lines can lessen liquidity concerns to the point that crises are avoided. Another non-trivial advantage of standing lines is that they avoid unwanted signaling that times are bad when activated or that the Federal Reserve is indifferent to the economic situation when they are not activated. "Conditional" lines would also confer the benefits of speed and possible crisis prevention, but to a lesser degree than "integrated" facilities. It might be prudent for swap lines with some central banks to be "conditional" or "not operational," particularly if the case for having swap lines with these central banks is less clear cut by the criteria noted above. The swap lines established during the GFC but not in use today could be considered to be in the "not operational" category.

Size: During the GFC, the size of the dollar liquidity shortfall was unclear, which led to repeated increases of the caps on the swap lines, until—as noted earlier—the caps on some of the lines were removed. The removal of caps allowed these foreign central banks to offer full allotment tenders at a fixed rate. If larger swap lines had been in place at the outset of the crisis, it's possible that market stresses would have been more contained and spillovers to U.S. markets more limited. Although domestic programs can partially address these spillovers, they are imperfect substitutes for swap lines, which can more directly address shortages of dollar liquidity abroad, as was shown by the "time of day" issues early in the financial crisis. Still, one size does not necessarily fit all,

and swap lines with preset limits might be more appropriate for central banks of smaller economies or those which are borderline in meeting the counterparty criteria outlined above.¹⁴

Pricing: The Federal Reserve's liquidity swap lines are a backstop source of funding, and therefore their pricing relative to the private market is an important issue to consider. In general, deposit-taking firms abroad can acquire dollar funding in the Eurodollar market, and many firms can borrow in their domestic currency and use foreign exchange swaps to obtain dollars.¹⁵ However, in times of market stress, obtaining dollars via either of these methods can become expensive.

There are two separate parts to the pricing of dollar liquidity via the swap lines—the fee the Federal Reserve charges foreign central banks and the interest rate the foreign central banks charge their borrowing institutions. Of course, the total “all-in” cost for a firm obtaining dollar funding from the foreign central bank also includes the cost of margins and collateral determined acceptable by the foreign central bank.

The current pricing strategy of the dollar liquidity swap lines is to set the fee charged the foreign central bank and, consequently, the interest charged by the foreign central banks at its accompanying U.S. dollar operations (currently the same amount as the fee) at a level such that: 1) continued market functioning is assured; 2) dollar funding via the swap lines is not an attractive alternative during normal market conditions; 3) the price of accessing the lines, along with any associated stigma, is not so high that it discourages usage in a stressed situation. In other words, the cost of sourcing dollars at the foreign central bank should be set sufficiently high to incentivize banks to structure their balance sheets and manage their dollar funding risks such that recourse to the central bank is contained to periods of stressed market conditions. But during periods of greater stress, the full allotment feature of the current facilities should result in foreign central banks providing liquidity in greater amounts, which is likely the desired outcome in these circumstances. And, as funding pressures wane, the penalty (higher-than-market) rate should naturally lead to swap line balances being wound down. Although any liquidity provisioning or lender-of-last resort facility inherently introduces some moral hazard, this pricing strategy can help to reduce the amount

¹⁴ In principle, pricing of drawings on the swap lines can be adjusted to make caps unnecessary, but charging different central banks different fees might be politically difficult.

¹⁵ In a foreign exchange swap (FX swap), two parties agree to exchange two different currencies and to reverse the transaction at a specified time in the future; thus, the FX swap has two legs—a spot transaction and a forward transaction—and is roughly equivalent to collateralized borrowing, where the collateral is the other currency. Because of the offsetting spot and forward transactions, an FX swap does not involve exchange rate risk for either counterparty.

of moral hazard associated with the Federal Reserve's dollar liquidity swap lines. (Moral hazard is discussed further in the Benefits and Costs section.)

As noted above, the interest received by the foreign central banks from borrowers currently is equal to the fee charged by the Federal Reserve. However, foreign central banks could charge a higher rate. Foreign central banks are arguably taking on some default risk in their transactions with the foreign institutions, so the foreign central bank may wish to be compensated for taking on this risk.¹⁶ From the perspective of the Federal Reserve, if the foreign central bank offered dollars to borrowers at a rate that exceeded the fee owed to the Federal Reserve, then it would be even clearer to the public that the Federal Reserve's counterparty is the foreign central bank and not the institutions borrowing dollars from that central bank.¹⁷

Even without introducing a margin between the fee charged by the Federal Reserve and the interest charged by the foreign central banks, other changes to the current pricing might be worth considering. One key factor influencing the decision about pricing would be an assessment of the point at which, during a period of market stress, it would be desirable for central bank funding to become attractive. This assessment would presumably depend on balancing the risk that disruptions in dollar funding markets become widespread and threaten the flow of credit to U.S. households and businesses against the risk that the funding backstop induces moral hazard and increases the social costs that attend over-reliance on public resources. The current pricing strategy, which employs a spread (50 basis points) over a measure of the monetary policy stance of the central bank (an OIS rate that varies with the maturity of the funding), sets a minimum for how high rates of funding alternatives in the market would need to rise before central bank funding becomes attractive. On top of that, the level of stigma associated with obtaining funding from the central bank would also influence the point at which financial institutions see central bank funding as attractive. While the stigma associated with going to the facility may be difficult to estimate or suppress, the level of the spread offers policymakers some control over the tradeoff between moral hazard and the risk of disruptions in the functioning of funding markets.

¹⁶ Foreign central banks already use collateral policy and haircuts to address the risk stemming from lending to financial institutions, but those policies do not offer any compensation to the central bank.

¹⁷ The rate that foreign central banks charge the borrowing institutions is not currently part of the swap agreement, but it could potentially be made a part of future arrangements, either explicitly or in some less formal way. A potential downside to a foreign central bank charging an amount that exceeds the fee could be the public perception that the Federal Reserve is providing dollar liquidity to the foreign central bank at a price that is lower than it needs to be and thereby enabling the foreign central bank to profit from merely redistributing the funds at a markup.

Yet another consideration is the pricing of the swap lines relative to other facilities. The rate charged at swap line tenders currently (about 90 basis points) is less than at the Federal Reserve's primary credit facility (currently 100 basis points). From a public relations point of view, it might not be ideal for foreign financial institutions to be able to borrow dollars from their central banks at a lower rate than U.S. financial firms can borrow from the Federal Reserve.¹⁸

The Benefits and Costs of Swap Lines

The liquidity swap lines support several of the key objectives of the LRF project. Specifically, swap lines can help the Federal Reserve control domestic (or onshore) short-term money market interest rates by addressing liquidity strains in foreign dollar funding markets, and they can help mitigate financial stability risks.

Swap lines provide a dollar-funding backstop that foreign central banks can use to support the funding of financial institutions in their jurisdictions. These institutions may face difficulty securing dollar funding in private markets in an environment of market stress, where a shortage of dollar liquidity can lead to very aggressive bidding on dollar funds in foreign private markets and sharp increases in dollar yields abroad. These pressures can spill over to domestic markets and lead to higher U.S. interest rates and broader financial market disruptions, as those entities that can borrow in the United States and lend abroad bid up the cost of funds domestically in order to arbitrage the gap in rates. In addition, the inability to fund dollar-denominated securities and loans abroad could lead to fire sales or a constrained ability to provide dollar-denominated credit. Finally, the mere existence of swap lines can help prevent funding pressures in the first place; uncapped lines with a known pricing structure provide a ceiling to funding costs for eligible borrowers from the foreign central bank, which can help allay market concerns about the availability of liquidity. By mitigating tensions in off-shore dollar funding markets, the swap lines thus limit the spread of these tensions to U.S. markets and thereby support the availability of credit to U.S. households and businesses at a price that is in line with the domestic monetary policy stance.

In addition, the swap lines support the financial stability objectives of the Federal Reserve by limiting strains in money markets that can disrupt market functioning. The dollar, as the world's reserve currency, is critical to the global financial system. When there are problems in dollar funding markets, either because of operational issues, panic, or acts of god, swap lines with foreign

¹⁸ Similarly, it might also be optimal to try to avoid a situation in which it is less expensive for firms to borrow dollars via the swap lines and then swap the dollars in the private market for the foreign currency than to borrow the foreign currency directly from the foreign central bank.

central banks are a means of getting dollars to major financial centers and defusing the spread of strains throughout the global financial system, including to the United States.

There is very little direct pecuniary risk or cost in having swap lines. As noted earlier, the counterparty to the swap transaction is the foreign central bank, so—given the existing swap line counterparties—the default risk is essentially zero. Moreover, the spot and forward legs of the swap are conducted at a single exchange rate agreed upon at the time of the drawing, so there is also no exchange rate or market risk. The operational costs of maintaining accounts and conducting operational tests are also fairly minimal.

The use of uncapped swap lines in times of market stress can—as during the GFC—rapidly increase the size of the Federal Reserve’s balance sheet. This temporary increase could impose some costs if they require additional market operations by the Federal Reserve to drain reserves in order to maintain interest rates at their desired levels.¹⁹ Although having standing swap lines does not appear to have implications for the choice of operating regime by the Federal Reserve, different regimes could influence the extent to which additional market operations are needed in connection with the use of the swap facilities.

But perhaps more important than the operational aspects, a rapid, large increase in the balance sheet from the use of swap lines could draw negative political attention from those who see the swap lines as fostering the use of U.S. taxpayer resources to “bail out” foreign financial institutions or support intervention in foreign exchange markets. Hence, it is important that communications from the Federal Reserve make clear that the swap lines primarily exist to keep funding liquidity issues abroad—particularly a pullback in dollar funding—from adversely affecting domestic financial conditions and thus the U.S. economy. To strengthen this point, it can be stressed that each drawing on a swap facility must be approved by the Federal Reserve and can be rejected if the purpose of the drawing is contrary to the agreed role of the swap lines and thus U.S. economic interests.²⁰

Of course, as is true with all financial backstops, the backstop facility made available by swap lines could foster moral hazard. That is, having swap lines—or even the view in the market

¹⁹ To the extent that the swap-related liquidity injections arise from an increase in demand for dollar liquidity, downward pressures on dollar funding rates in the market should be limited.

²⁰ The FOMC has authorized the Chair of the Federal Reserve to approve all drawings on the U.S. dollar liquidity swap lines. The Chair may also approve a schedule of potential drawings and in that case may then authorize the manager of the System Open Market Account to approve individual drawings according to that schedule. By contrast, the FOMC would approve any drawings on the Federal Reserve’s foreign currency liquidity swap lines. Governance of the swap lines is set out in the FOMC’s Authorization for Foreign Currency Operations.

that swap lines are likely to be instituted in a crisis—can induce institutions to take on more dollar risk than they otherwise would or than might be socially desirable. Indeed, it is possible that not just private actors could be influenced, as foreign regulators could also be less aggressive about requiring firms in their jurisdictions to manage dollar liquidity needs than would be the case if the swap lines were not there as a backstop. And unlike for domestic liquidity programs, the Federal Reserve must partly rely on the foreign official sector to set standards that deal effectively with moral hazard with regard to the swap lines. That said, to date, moral hazard stemming from the swap lines has not appeared to be a significant problem, perhaps because of the existing pricing policies. As noted in the previous section, through the pricing of the dollar funding, policymakers can—to a degree—adjust the extent to which the backstop facility induces moral hazard. In addition, new regulatory regimes—through the use of stress tests, liquidity coverage ratios and net stable funding ratios, among other methods—are placing much more emphasis than in the past on ensuring that banks can weather liquidity pressures before relying on central bank backstops.

Possible Other Tools for Addressing Dollar Liquidity Problems Abroad

Of course, the first line of defense for a foreign central bank against a shortage of dollars in its domestic market is to hold dollars reserves that can be lent out at short notice. Many foreign official institutions see it as desirable to hold their dollar reserves in an account at the Federal Reserve Bank of New York. However, because the Federal Reserve does not pay interest on deposits held by official institutions, holding cash in this way is costly. An interest-earning alternative would be to hold U.S. Treasury securities, which are often perceived as being as liquid as cash. However, late in the day, liquidity in the private Treasury repo market may not be sufficient for a central bank to do a large repo transaction without markedly affecting prices. Partly for this reason, the Federal Reserve provides an alternative investment facility known as the foreign repo pool.²¹ At the end of each business day, cash balances held by foreign central banks in foreign repo pool accounts are swept and invested in an overnight repurchase agreement using securities held in the System Open Market Account (SOMA). At maturity, on the following business day, the securities are repurchased at a price reflecting a rate of return tied to comparable market-based Treasury repo rates. By providing this service, the Federal Reserve reduces the cost to foreign

²¹ For more details on the foreign repo pool see the Services for Central Banks and International Institutions page of the Federal Reserve Bank of New York's website (<https://www.newyorkfed.org/aboutthefed/fedpoint/fed20.html>).

central banks of holding cash dollar balances at the Federal Reserve for unanticipated liquidity needs.²²

Outside of promoting self-insurance by foreign central banks, the main tool that the Federal Reserve currently has operationally ready to provide liquidity abroad is the standing central bank liquidity swap facilities. But there are other options that could be considered in conjunction with or possibly—in some instances—as alternatives to swap lines with foreign central banks. One such tool is a repo facility, whereby the Federal Reserve provides dollar liquidity to a foreign central bank and takes assets eligible in U.S. open-market-operations (OMOs) sets as collateral. The most likely example would be a repo of some of a foreign central bank’s Treasury holdings at FRBNY. This type of facility addresses the desire by some policy analysts that foreign central banks bear some opportunity cost, beyond providing local currency, which has minimal cost to the central bank, in accessing dollar funding from the Federal Reserve. In addition, the facility has several advantages as compared with the foreign central bank transacting in private markets to obtain dollars: 1) it avoids time of day issues in private repo markets, 2) it avoids large price movements stemming from a large liquidation of dollar assets, and 3) it offers an alternative to liquidation of Treasuries in the market should circumstances arise in which the Federal Reserve would prefer foreign central banks to hold on to their Treasuries. In addition, it is operationally easy for foreign central banks to increase their collateral at the Federal Reserve, and they can pass-through eligible collateral from the private sector as well.²³ Lastly, the repo facility could be made available to countries where a liquidity swap line would be problematic.

However, such a repo facility does share some of the costs associated with the swap lines, such as the potential for unwanted political attention. This could particularly be the case if the facility has fewer restrictions (formal or informal) on the acceptable uses of the funding provided. In addition, the repo facility would allow foreign central banks to lengthen the duration of their reserves as longer-term Treasuries could be exchanged easily for dollars when needed.²⁴ It is

²² Use of the foreign repo pool has increased significantly since mid-2014 as constraints placed on account-holders’ ability to vary the size of their investments have been removed, the supply of balance sheet offered by the private sector to foreign central banks appears to have declined, and some central banks wish to maintain more robust dollar liquidity buffers. See the speech “Money Markets after Liftoff: Assessment to Date and the Road Ahead” by Simon Potter, EVP, FRBNY, at Columbia University, February 2016. (<https://www.newyorkfed.org/newsevents/speeches/2016/pot160222>)

²³ A pass-through of collateral from the private sector could be helpful in a case where a private institution has trouble obtaining dollar funding but has eligible collateral. The foreign central bank could pass-through the collateral to the Federal Reserve, receive dollars via the repo facility, and then on-lend the dollars to the private institution.

²⁴ Currently, foreign central bank dollar reserves tend to be of shorter maturities, in part to have easier access to liquidity, either from letting securities mature or via selling.

unclear if this change in the official sector's portfolio balance preference would be desirable or not, but it could affect the supply of longer-term securities available to the private sector.

Between the foreign repo pool, the Federal Reserve's central bank liquidity swap lines, and other potential facilities, the Federal Reserve appears to have some options for coping with potential strains in global dollar funding markets.