BY MATTHEW WELLS

The Fed's Dollar Liquidity Swap Lines

During the COVID-19 pandemic, the Fed loaned billions of dollars to central banks in desperate need of them

The World Health Organization declared COVID-19 a pandemic on March 11, 2020, and fear and uncertainty permeated daily life. The global economy was not immune from the panic. Dollars were quickly becoming scarce: Global trading of the currency ground to a halt, and since dollars were about the safest asset available, those who had them were not about to part with them. On top of that, a spike in demand by those seeking the safety of dollars led to a rapid increase in price. But the dollar was the world's dominant currency and medium of exchange. Without it, banks around the world wouldn't be able to lend, and buyers and sellers of goods and services wouldn't be able to conduct transactions, crippling the economy even further.

To stabilize currency markets and to prevent a worldwide economic meltdown, the Fed acted within days of the pandemic declaration, injecting billions of dollars into the global economy through what are known as dollar swap lines. Under these programs, overseas central banks temporarily swap their own currencies for dollars, which they then loan to banks in their jurisdictions. Those banks, in turn, can lend to businesses and households, extending credit, allowing bills to be paid, and keeping economies functioning. The currencies are then swapped back at a predetermined date.

Initially, on March 15, the Fed activated already-existing swap lines with the central banks of the European Union, Japan, England, Canada, and Switzerland, all of which were originally established during the global financial crisis (GFC) a decade earlier. The dollar had appreciated 7 percent against these currencies in just the week and a half following the March 11 pandemic declaration, but they weren't the only ones that would receive cash infusions from the Fed. Four days later, on March 19, the Fed opened lines with central banks of nine additional countries. The dollar had appreciated 12 percent against those countries' currencies over that same period.

The amount of money lent was substantial. The value of swap lines on the Fed's balance sheet went from nearly zero before the pandemic to $160 billion on March 19 and leveled off at nearly $450 billion by the end of April.

The central banks involved swapped back the dollars for their own currencies, and dollar liquidity returned to normal levels by that summer. How did the process come about so quickly, and how did the Fed achieve its stated goal of providing dollar liquidity as the lender of last resort? And finally, how did the Fed decide which central banks would receive assistance?

YOU'VE COME A LONG WAY, DOLLAR

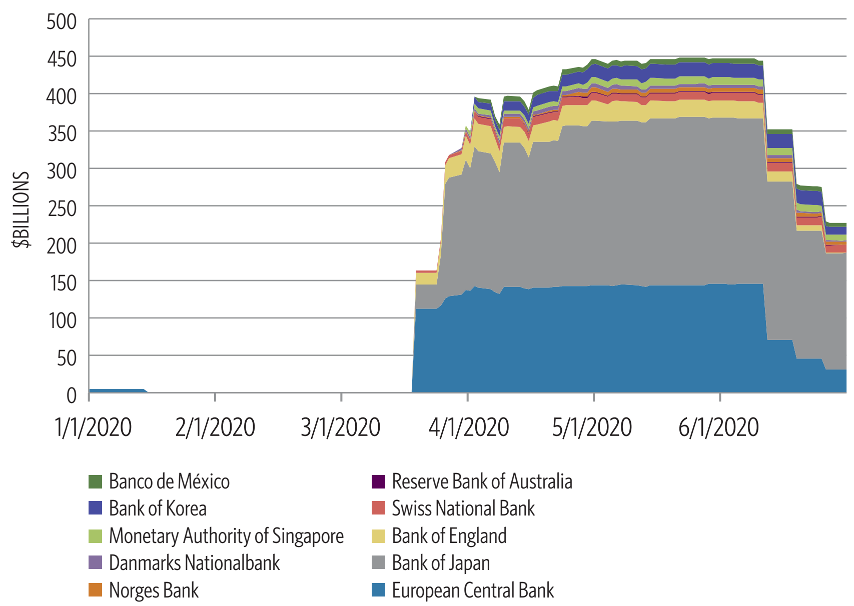
Money serves three complementary roles: a store of value, a unit of account, and a medium of exchange. In the 1980s, future Nobel laureate Paul Krugman argued that this reality fosters incentives for one currency to dominate global economic activity, and, during the post-World War II era, that currency has been the dollar. (See "Is Dollar Dominance in Doubt?" *Econ Focus*, Second Quarter 2022.) The dollar is the world's dominant reserve currency — as of 2022, dollar-denominated assets account for about 59 percent of foreign central bank and government reserves. Many other countries anchor their currency to the dollar, which gives them a stable exchange rate. Apart from continental Europe, which extensively uses the euro, most global trade is conducted in dollars; nearly $1 trillion in cash, about half of all U.S. banknotes in circulation, is overseas. Almost 90 percent of all foreign exchange transactions include the dollar as one of the currencies.

The path to dominance hasn't always been smooth. Following World War II, American dollars flowed into Europe, funding much of the continent's reconstruction. At the time, the dollar was backed by gold, but with so many dollars in circulation abroad, the United States could no longer guarantee it had enough gold reserves if holders of those dollars wanted to convert them into gold at the fixed rate of $35 per ounce. To keep the value of the dollar elevated and stable relative to gold, over the next two to three decades, the Fed would purchase foreign currency on open currency exchange markets to then purchase dollars. Efforts to defend the dollar's value would continue even after Richard Nixon abandoned the gold standard in favor of a floating exchange rate in 1971. The practice finally petered out in the mid-1990s, when questions over the legality and wisdom of the practice led most central banks in developed economies to abandon it.

The dollar's global dominance in past decades has meant that the Fed has had to act as the lender of last resort not just in crises in the United States, but also in those that spread or arise overseas. During the GFC and the eurozone debt crisis that followed, the Fed initiated bilateral dollar liquidity swap lines with several European central banks — the European Central Bank, and the banks of Denmark, England, Sweden, Switzerland, and Norway — as well as those of Australia, Canada, Japan, South Korea, New Zealand, Brazil, Mexico, and Singapore. This was not the first time the Fed had used swap lines, but it marked a departure from the Fed's past rationale of intervening in exchange markets to influence a currency's value. Most of these lines were eventually closed as markets stabilized, although standing lines were left open with the central banks of Canada, the European Union, Switzerland, Japan, and England. These lines would come to play a crucial role a decade later during the pandemic.

A Pandemic-Driven Swap Line Surge

Fed dollar swap levels, January 2020 – June 2020



NOTE: The central banks of Brazil, Canada, New Zealand, and Sweden also had dollar swap lines but did not use them.
SOURCES: Federal Reserve Bank of New York; Federal Reserve Bank of Dallas.

A CONSEQUENCE OF DOLLAR DOMINANCE

The mechanics of the dollar swap lines are straightforward: Other countries' central banks swap their own currencies for an equivalent number of U.S. dollars from the Fed. At a predetermined date, the other central bank returns the dollars, plus interest, and the Fed then returns that currency to the other central bank at the original exchange rate. In between, these central banks lend those dollars to banks within their jurisdictions, who can then extend credit to individuals, businesses, and other banks as they see fit.

Swap lines act as a liquidity backstop when it is needed most during times of market stress. The sources of such stress can be traced to the dollar's unique role. During normal periods, central banks abroad needing to disperse dollars to banks and other financial institutions within their borders can purchase them through foreign exchange markets. Other participants in these markets include private banks and nonbank financial institutions such as money market funds, investment banks, and hedge funds based anywhere in the world. In times of economic stress, those holding dollars keep them, uncertain about the future value of any other asset; market participants holding other assets, including U.S. Treasurys, will also seek them out. As a result, during the pandemic, the swap basis spread, which is the premium these institutions pay for dollars on the foreign exchange market, widened dramatically. This was a key sign that conditions in the market were deteriorating.

While the supply of available dollars dried up quickly, businesses that operated in dollars still needed to invoice and pay for goods and services, and banks still needed to extend credit. The swap lines were a way for foreign banks to get access to dollars after markets shut down. This is much like domestic banks frequently turning to the Fed in times of stress and is "a natural consequence of the dominance of the dollar," says Ricardo Reis, an economist at the London School of Economics and a consultant in the Richmond Fed's research department. "Their absence was a hole in a global financial system where banks outside of the U.S. are using dollars very actively."

As the lender of last resort in a global economy that depended on dollars, the Fed moved quickly to open the swap lines. When, on March 15, it activated the existing lines with the five central banks that had the standing lines from a decade earlier, it lowered the interest rate it charged for the swap. The Federal Open Market Committee, or FOMC, the Fed body that sets monetary policy, made the decision in coordination with the other central banks involved. In announcing the action, it stressed that by shoring up financial markets overseas, it was also protecting the U.S. economy from deteriorating further: "The swap lines ... serve as an important liquidity backstop to ease strains in global funding markets, thereby helping to mitigate the effects of such strains on the supply of credit to households and businesses, both domestically and abroad."

These lines had no limit on the amount that the other central banks could swap, and the period of the swap was either one week or 84 days. On March 20, these central banks announced they would increase the frequency of these operations from weekly to daily, signaling to all who needed dollars that they would not have to wait to get them.

To further enhance the system's liquidity, on March 19, the Fed reestablished temporary lines with the same nine countries that had such arrangements during the financial crisis. These banks, however, would have limits: Denmark, Norway, and New Zealand could swap up to $30 billion each, while the other six could swap up to $60 billion. Of the 14 countries with swap line arrangements with the Fed, Japan was the biggest user, swapping about $225 billion in currency. Four countries — Brazil, Canada, New Zealand, and Sweden — did not draw on their swap lines at all. (See chart.)

Most of the world's central banks did not have dollar swap line arrangements, but that did not mean they and other market actors in need of dollars were locked out of accessing them directly from the Fed. The Fed also created the Foreign and International Monetary Authorities (FIMA) Repo Facility on March 31. Instead of turning in their own currencies for dollars, central banks and other monetary authorities with accounts at the New York Fed, which provides dollar-denominated banking services to those clients, could temporarily exchange any U.S. Treasury securities they owned for dollars. The FIMA facility also ensured the ongoing smooth operations of the Treasury market by demonstrating to account holders that they could get dollars if they needed them without having to liquidate their Treasury holdings.

WHAT RESTORED STABILITY?

In an article from May 2020, New York Fed economists Nicola Cetorelli, Linda Goldberg, and Fabiola Ravazzolo examined whether these efforts alleviated the funding strains that arose during the early days of the COVID-19 outbreak. They found the key factor that reduced the foreign exchange swap basis spread (that is, kept the price of dollar funding from rising further) for currency pairs with standing swap lines was the announcement of daily one-week operations at swap central banks on March 20.

The announcement of daily operations, on top of the actions taken earlier that week, stopped the widening of the basis spread for countries with standing swap lines, and the researchers noted the spread started to narrow when the first settlements of daily one-week operations were completed. It appears that banks abroad, market makers, and other intermediaries needed certainty that they could access backstop dollars to lend, and that they wouldn't run out of dollars. Knowing the dollars were there in case of need alleviated those concerns and brought the premium back down to normal levels.

"You have to be extremely careful to ensure the central bank on the other side is willing and able to repay you all the time, so that liquidity does not become credit."
— Ricardo Reis

Ravazzolo and Goldberg also found in a December 2021 report that once funding became available through the swap lines, the dollar premium also quickly dropped in countries with temporary swap arrangements, and it later dropped for those with access to the FIMA facility but without access to the swap lines. Dallas Fed economists J. Scott Davis and Pon Sagnanert noted that when swap line activity peaked in early June, the spread had returned to prepandemic levels. Further, they noted the currencies with standing swap lines had stopped depreciating on March 19, and they regained in one week almost half of the value they had lost since the pandemic began. By early June, all swap line currencies were back at prepandemic exchange levels.

WHO GETS A SWAP LINE?

If swap lines brought stability back to the dollar markets of the countries that had them, why weren't they extended to every country? Reis suggests a driving factor in determining which countries received swap lines was the Fed's degree of confidence that the other side would be able to return the dollars at the operation's maturity. As a central bank, "you have to be extremely careful to ensure the central bank on the other side is willing and able to repay you all the time, so that liquidity does not become credit," he says.

This was a concern a decade earlier, as well, when the Fed activated the swap lines during the GFC. While there was no meaningful opposition on the FOMC to the idea of swap lines for the European and other western central banks, there was some concern about whether they should be extended to any emerging market economies. In the October 2008 FOMC meeting, Nathan Sheets, then-director of the Board's Division of International Finance, suggested Mexico, Brazil, Singapore, and South Korea deserved special consideration in view of their "global economic significance." Timothy Geithner, then-president of the New York Fed agreed, further pointing out that relative to the central banks of some European countries, "they actually have managed the countries' balance sheets better because they at least have a huge amount of their assets in dollars." There was still enough uncertainty, however, regarding their ability to repay the dollars at the end of the swap that the Fed insisted their agreements allow it to hold additional assets of those countries' central banks as collateral.

The committee acknowledged that by choosing some countries and excluding others, it was perhaps stigmatizing those that were left out. During the GFC, those countries most likely would have to seek assistance at the International Monetary Fund, which was establishing other lending facilities at the time. But Sheets argued that rather than making judgments, the committee was only "ratifying perceptions [about the relative economic stability of countries], rather than creating new ones" — as they might have done if they included other emerging-market countries such as Chile, which was a specific example mentioned by several members.

This justification did not sway some who still maintained the Fed's swap line regime was unfair. Prior to the pandemic, for example, a governor of the Reserve Bank of India stated that its lack of access amounted to "virtual apartheid." Despite these sentiments, the Fed did not extend swap line operations where it didn't believe they were necessary. Former St. Louis Fed President James Bullard suggested that the FIMA Repo Facility was a "way to sidestep [the] issue" of which central banks received swap lines because any central bank or governmental monetary entity with an account could exchange Treasurys for dollars.

Even though the swap lines were restricted to a few key locations determined by the Fed, dollars still spread through the global dollar network. Once the swaps were settled and the dollars were in the hands of recipient central banks, it was up to them to look at the credit risk of all available counterparties and decide how to distribute those dollars in their jurisdictions. Importantly, however, one of those counterparties receiving dollars, such as a local bank, could be a branch of an international bank headquartered in a country that did not have swap lines or use the FIMA facility. After that local bank received the dollars from the central bank, they could then flow either to the bank's home country or anywhere else in the global financial system through either its own internal capital markets or through further lending to other banks in other dollar markets abroad.

THE DOLLAR ISN'T GOING ANYWHERE... FOR NOW

After the flurry of central bank activity in the spring of 2020, dollar liquidity had returned to normal by early June. Since then, the swap lines have been quiet, aside from the spring of 2023, when Credit Suisse, a major international bank, collapsed in the wake of the failure of two U.S.-based banks, Silicon Valley Bank and Signature Bank. Whereas during the pandemic, banks were reluctant to lend because dollars were scarce, in this situation, banks were hesitant to lend because they were unsure about the credit profile and solvency of their counterparties. As was the case in the GFC and the pandemic, the central banks of Canada, England, Japan, Switzerland, and Europe worked with the Fed to restore confidence and dollar liquidity.

The dollar swap lines, while crucial to the global economy, are not the only ones. Currently, there are about 175 central bank swap lines active around the world linking various central banks to each other. There is a strong regional network in Europe involving both the euro and Swiss franc, and the Japanese yen is also widely distributed around the world. China alone has swap lines with 41 countries and a limit of over $550 billion. Perhaps as evidence of its long-term ambition to have the renminbi supplant the dollar as the world's dominant currency, many of the Chinese swap lines have been established to assist what it views as partner countries in need of assistance. Observers note, however, that while swap lines are important because they make a currency much more available than it would otherwise be, it will need other elements to fall into place, as it requires getting businesses to align their various costs and revenue sources in that currency, which itself is costly and takes time. In the meantime, the dollar remains the safest bet — and asset — available.

The Great Depression made it clear that financial crises do not remain isolated. The Bretton Woods regime was created with that awareness in mind, and its institutions — including the dominance of the dollar — were designed to allow the central banks of the world to manage those crises as they appeared. While the United States has benefitted from the dollar's position in that regime, the Fed, as its central bank, has also felt obligated to act as the lender of last resort to mitigate the potentially devastating effects that can accompany systemic market failures. **EF**

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