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Why Do Banks Need a Credit Sensitive Lending Benchmark?

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A wide range of financial contracts, ranging from floating-rate commercial loans to financial derivatives, are indexed to the London Interbank Offered Rate (LIBOR). This self-reported rate is based on the interest rate at which large banks estimate they can borrow short-term, unsecured funds from one another in London. Some have questioned LIBOR's reliability because it is self-reported. In addition, its regulator, the U.K. Financial Conduct Authority, said that it will stop supporting LIBOR at the end of 2021. In addition, post-crisis regulations have made it costly for banks to rely on unsecured, short-term wholesale funding leading to a decline in transactions. As a result, it is challenging to maintain a robust lending benchmark.

The use of LIBOR as such a benchmark acts as an effective hedge for banks, helping smooth net interest income during stress periods, since funding costs typically rise because of credit-risk and liquidity concerns. It is beneficial for banks' interest income if floating loan rates rise in tandem with their short-term funding costs during stressful periods, especially if bank liquidity needs increase due to draws on credit lines from their corporate customers.

In this post, we show that issuance of senior unsecured bonds by banks—an important source of banks' unsecured wholesale funding—was strong during the first half of 2020 and that LIBOR was highly correlated with banks' unsecured bond spreads. This strong positive correlation is significant because long-term debt is an important source of funding for large and regional banks. In addition, we show that bond issuance by banks was robust during the first half of 2020, which confirms the importance of long-term debt as an important source of funding. The elevated issuance occurred for several reasons: 1) to take advantage of extremely low-interest rates; 2) to help meet the long-term debt requirement that some of the largest banks are subject to; and 3) to take advantage of the market's positive reaction to the Fed's corporate bond purchase program.

The Secured Overnight Financing Rate (SOFR) has emerged over the past few years as the leading candidate to replace LIBOR and offers several advantages as a reference rate. First, it captures rates on overnight borrowings secured by U.S. Treasury securities, which means it is widely available and transaction based. Second, SOFR overnight reference rates are easy to calculate and do not depend on forward-looking indicators. Third, there is an increasingly liquid market for SOFR derivatives, which allows borrowers to more easily manage their interest-rate risk profile. And, finally, SOFR rates decline sharply during economic downturns due to flight-to-safety concerns, which help the transmission of monetary policy by lowering borrowers' interest costs.

However, while SOFR is an appropriate benchmark for derivatives and debt instruments, it is not a good one for commercial loans, such as term loans and lines of credit. Because SOFR falls relative to other benchmark rates when economic conditions deteriorate, it does not offer banks an effective hedge during times of economic stress. SOFR also encourages opportunistic rather than need-based draws on lines of credit that can divert bank funding from other nonfinancial businesses and households. This is a relatively new and important concern.

During the early stages of the COVID-19 pandemic, banks experienced sizable draws on credit lines, including CP back-up lines of credit. Some corporations that needed to repay maturing commercial paper were able to draw on credit facilities from banks. Other firms drew on credit lines simply to build up their cash balances. Overall, the increase in bank loans over the period was unprecedented and in excess of $700 bn over a short time. Banks have also had sizable inflows of deposits during the COVID-19 pandemic. To a large extent, the deposit inflows came from corporations drawing on their lines of credit, making the deposit inflows predictable and concentrated at the banks with the largest increases in C&I loans. This is relevant to the LIBOR/SOFR debate for two important reasons. First, the lending benchmark of lines of credit is typically LIBOR, and second, the draws on these lines expanded banks' balance sheets increasing both capital and long-term debt requirements.

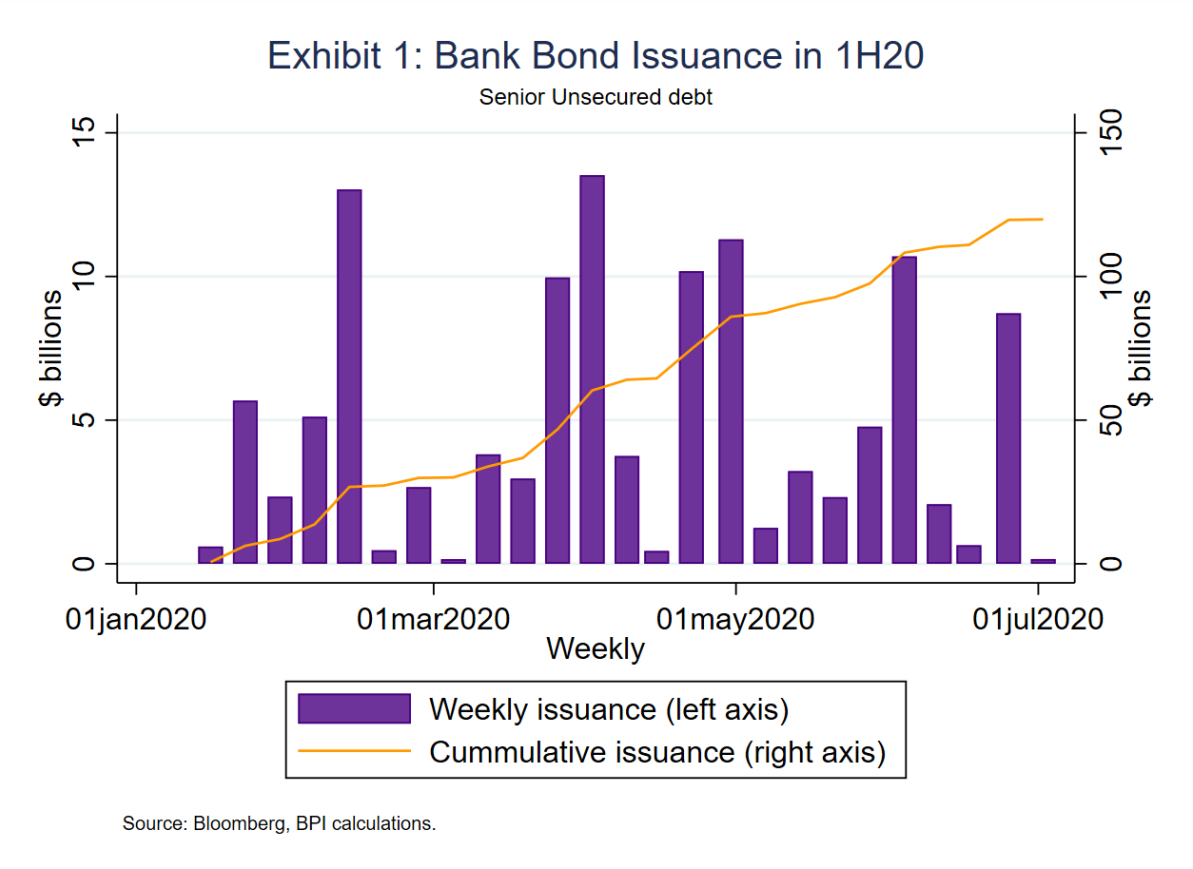
As line draws and deposit inflows expanded their balance sheets, banks were forced to issue long-term debt to restore their buffers on long-term debt requirements. Moreover, the issuance of senior unsecured bonds during the pandemic was also robust for regional banks, not just the GSIBs. This was partly driven by very low long-term interest rates, and partly because of bond investors' favorable reaction to the Fed's emergency lending facilities.

Bond Issuance was strong in the first half of 2020 . . .

Long-term debt is an important source of funding for banks, and issuance has been strong during the COVID-19 pandemic. Based on the data reported on the FR Y-15, unsecured long-term debt accounts for approximately 10% percent of banks' liabilities.[1] In addition, the largest and most systemic U.S. banking organizations (U.S. GSIBs) are subject to total-loss absorbing capacity (TLAC) requirements, which promotes the use of long-term debt.[2] The TLAC rule requires those banks to fund themselves with specified minimum amounts of long-term debt and Tier 1 capital to absorb losses under resolution and avoid runs on short-term debt of their operating subsidiaries. Specifically, to meet the TLAC rule's long-term debt requirement, banks must have long-term debt that exceeds 9.5 percent of risk-weighted assets and 4.5 percent of total leverage exposure.

[1] Based on 31 banks that report FRY-15.

[2] The largest foreign banks operating in the U.S. are also subject to TLAC requirements, but they don't issue debt directly in U.S. markets, only through their foreign parents.



Source: Bloomberg, BPI calculations.

As a result of the large expansion of bank balance sheets during the early stages of the COVID-19 pandemic, some GSIBs were required to issue long-term debt to create additional balance sheet capacity and avoid breaching the minimum requirements and buffers. As shown in Exhibit 1, banks issued about $30bn in long-term debt in March 2020 alone. The need to issue long-term debt was alleviated in April after the Federal Reserve allowed banks to temporarily exclude deposits at the Fed (a/k/a/ "reserves") as well as U.S. Treasuries from their total leverage exposure. Yet large banks continued to issue long-term debt because of low interest rates and improved market sentiment driven by the Fed's response. Overall, U.S. banks issued nearly $120 bn in unsecured long-term debt during the first half of 2020. The banks exempted from TLAC requirements accounted for about one-fifth of this issuance, or $27bn, over those 6 months.

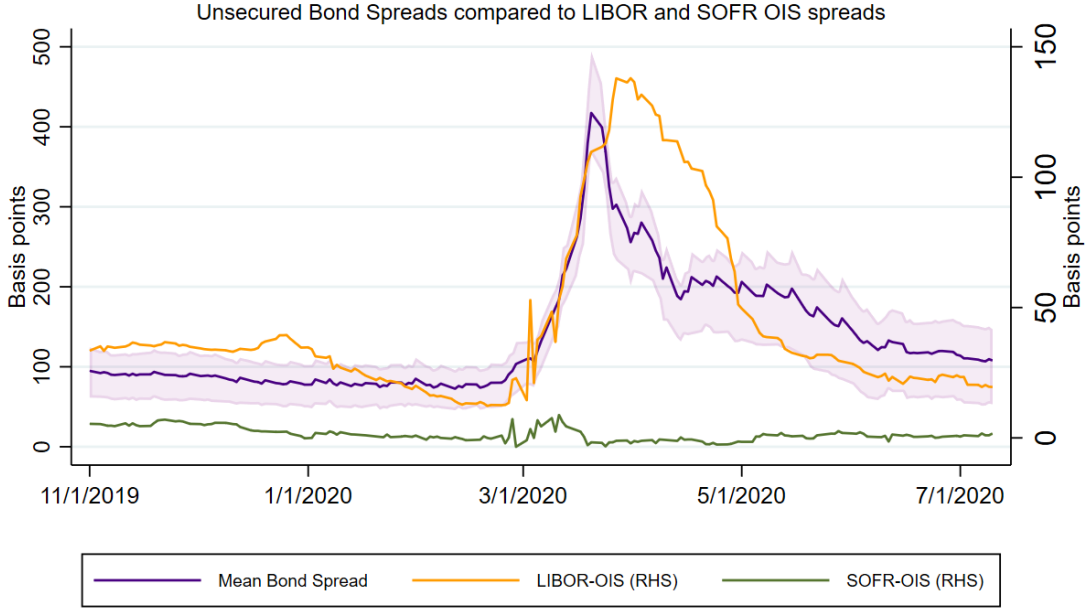
. . . and bond spreads as well as LIBOR spiked at the end of March

Next, to assess the cost of long-term debt, we looked at data from Bloomberg on senior unsecured bond spreads of banks before and during the early stages of the COVID-19 pandemic. Our sample consists of 339 unique bonds issued by 22 publicly traded CCAR banks and traded over the first half of 2020. Exhibit 2 plots the cross-sectional mean and the interquartile range of unsecured bonds spreads included in our sample. The mean unsecured bond spread was below 100 bps before the start of the COVID-19 pandemic. At the onset, the mean bond spread exceeded 400 bps for a couple of days. The increase in bond spreads reflected some credit concerns due to the pandemic and funding stresses.

At the end of March, after approval of the economic stimulus package from Congress and the Federal Reserve's announcement that it would open emergency lending facilities to help stabilize markets, banks' unsecured bond spreads gradually reverted to normal levels. Most likely, the Fed announcements had the largest effects on bond spreads, but the Fed's programs depended on the availability of credit support through the CARES Act. By the end of June, the mean bond spread was nearly back to its pre-pandemic level.

Exhibit 2: Bank Unsecured Bond Spreads

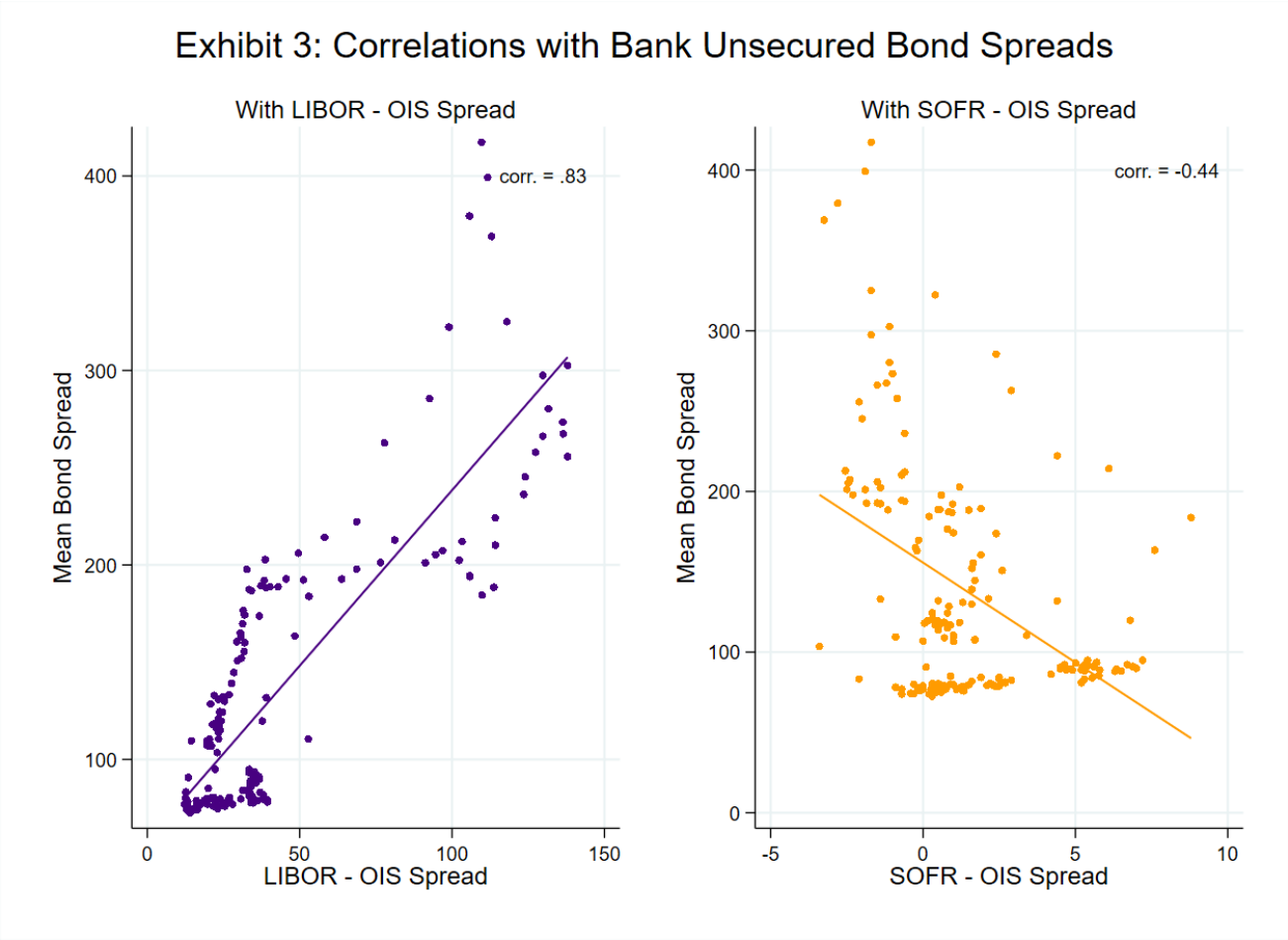
Unsecured Bond Spreads compared to LIBOR and SOFR OIS spreads



Source: Bloomberg.

Note: Sample includes all unsecured senior bonds. The option-adjusted spread is defined as the difference between the yield on the bond and that of the corresponding maturity-matched Treasury bond adjusted for the embedded options in the bond. The shaded area represents the interquartile range.
SOFR 3M Forward rate is obtained through Federal Reserve Board FEDS Notes

Exhibit 2 also plots the spreads between the 3-month LIBOR and the overnight index swap rate (a proxy for the risk-free rate) and between the 3-month forward SOFR and the OIS. Despite questions about LIBOR's reliability, the correlation between the LIBOR-OIS spread and the average bond spread was very high. In contrast, the SOFR-OIS spread was little changed throughout this period. The left panel of Exhibit 3 plots the correlation between the 3-month LIBOR-OIS spread and unsecured bond spreads. The panel on the right shows the correlation between the 3-month forward SOFR-OIS spread and the unsecured bond spreads. As seen in the left panel, the correlation between the two measures of bank funding costs is quite elevated at 83 percent. By contrast, the correlation between SOFR and bank funding costs is significantly negative.



The divergence between the two series in Exhibit 3 highlights the value of having a lending benchmark that widens when credit concerns spike. Under the LIBOR benchmark, if a firm draws on its line of credit, the increase in lending rates also rises as the cost banks would face if they had to raise more liquidity from investors. By contrast, if SOFR became the lending benchmark, there would not be a similar increase in the lending rate during a period of stress, and banks would lose an effective hedge against the rise in funding costs.

If SOFR becomes the lending benchmark rate, there are two possible outcomes. First, banks could replace the natural hedging from LIBOR with other alternative hedging strategies, but that would obviously increase the cost of lending since loan rates would have to incorporate the additional cost of providing such loans. Alternatively, banks would have to reduce the size of committed credit lines to minimize funding losses during times of stress. Moreover, the uncertainty regarding the spread between bond spreads and SOFR would also reduce credit availability during downturn conditions due to the mismatch between lending and borrowing costs of banks. Banks could also charge larger spreads for SOFR-priced loans than LIBOR-priced loans in view of the risk that their marginal cost of funds could significantly exceed SOFR under stress. If that is the case, throughout the cycle, borrowers will face higher interest costs with a SOFR benchmark.

Final Thoughts

LIBOR will cease to exist at the end of 2021. We have discussed how SOFR is a poor substitute for LIBOR as a lending benchmark rate. Because LIBOR is highly correlated with unsecured bond spreads, it works as an effective hedge against the rise in bank funding costs during stress periods. In contrast, we showed that SOFR was negatively correlated with an unsecured measure of bank funding costs during the pandemic. Had SOFR been the lending benchmark rate in March, it would have exacerbated mismatches between assets and liability yields during the COVID-19 crisis and could have led to a tightening of bank credit.

After LIBOR ceases to have support, it will be important to develop a credit-risk-sensitive benchmark that is transaction based. This will foster more stability to net interest income and bank capital during periods of economic stress. For this reason, the Federal Reserve Bank of New York has been holding workshops with banks and business borrowers to help facilitate development of a robust credit-spread benchmark among the participating banks.
