Repo Markets, LIBOR, SOFR and QE4

Repo markets, LIBOR and SOFR are all connected. Major changes are taking place in this normally sleepy corner of the financial sector. We review what happened, provide some near-term dates to look out for, and revisit a statistic that may indicate where we are headed next.

Timeline: What Happened / What Happens Next

- **September 17, 2019**: On an otherwise uneventful day, liquidity in the repo markets dried up and repo rates spiked. In response, the Federal Reserve began injecting hundreds of billions of dollars into the repo market. At the time, authorities blamed a combination of corporate tax payments and the monthly Treasury auction. These were only proximate causes.
- **December 8, 2019**: The Bank for International Settlements (BIS) released a report, which concluded that the events in September had two fundamental causes. Four large banks that had been underpinning the repo markets were moving their short-term funds into US Treasuries, reducing supply in the repo market. At the same time, hedge funds were increasing leverage, which increased demand.
- **December 4th, 2019**: Credit Suisse claims that the Federal Reserve will launch QE4 before year-end in response to the repo market crisis.
- **December 12th, 2019**: The Federal Reserve will publish an updated schedule of its liquidity operations.
- **December 15th, 2019**: Quarterly corporate tax payments are due.
- **December 17th, 2019**: Auctions for 3-, 10- and 30-year Treasuries settle.

The LIBOR/SOFR Connection

LIBOR rates are among the most important benchmark interest rates. The gross notional value of all financial products tied to USD LIBOR is currently estimated at $200 trillion.[1] The only problem: the unsecured, term-lending markets which LIBOR is based on have slowly disappeared over the past 40 years, leaving LIBOR rates unstable and subject to manipulation. In 2018, the Alternative Reference Rates Committee decided that LIBOR should be replaced by a new benchmark, the Secured Overnight Financing Rate (SOFR), which is based on …wait for it…. repo rates!

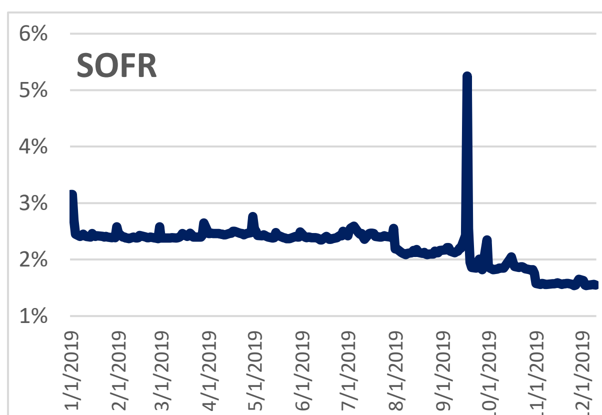

Figure 1: SOFR Rates (source: The New York Fed)

On the plus side, SOFR does appear to provide an accurate measure of repo rates. As you can see in Figure 1, SOFR rates spiked on September 17th, 2019, during the repo crisis. Prior to that date, the mean one-day change in SOFR was just 3 bps. On September 17th, SOFR jumped 282 bps to 5.25%. The Committee would like the transition from LIBOR to SOFR to be complete by the end of 2021.

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[1] *Second Report of the Alternative Reference Rates Committee*, March 2018.

One reason the Alternative Reference Rates Committee chose SOFR, as opposed to OIS swap rates, was that SOFR was based on transactions between financial firms, providing a measure of independence from government agencies (OIS swap rates are based on the Fed Funds rate). That argument seems less convincing, when the Federal Reserve needs to inject hundreds of billions of dollars to backstop the repo market.

Independence aside, if the repo market is this fragile, is this the market we want to underpin our new benchmark? The repo market has been shrinking ever since the financial crisis due to changes in financial regulations. Undoing these new regulations would likely reverse the trend, but would make large financial institutions more vulnerable. This is not a tradeoff that regulators are likely to embrace.

This may be a good time to ask how reliant the financial system should be on short-term borrowing, and what that short-term borrowing should look like. We already have one example of a short-term funding market breaking down at just the wrong time: the commercial paper market during the financial crisis. What do we think will happen to the repo market during the next downturn?

Where Do We Go from Here?

In August, we wrote *How Will Libor End*. In addition to providing more background on LIBOR and SOFR, we developed a measure of the relative volume of 3-month Eurodollar future contracts (which are based on 3-month USD LIBOR), and 3-month SOFR futures (which are based on the overnight SOFR rate).

At the time, the volume in SOFR futures was hovering around 2% that of Eurodollar futures. Figure 2 provides an update. The relative volume has remained stable. This could be taken as good news by champions of SOFR: the market for SOFR futures did not completely evaporate after the events in September. This in turn may reflect optimism about the future of the underlying repo market.

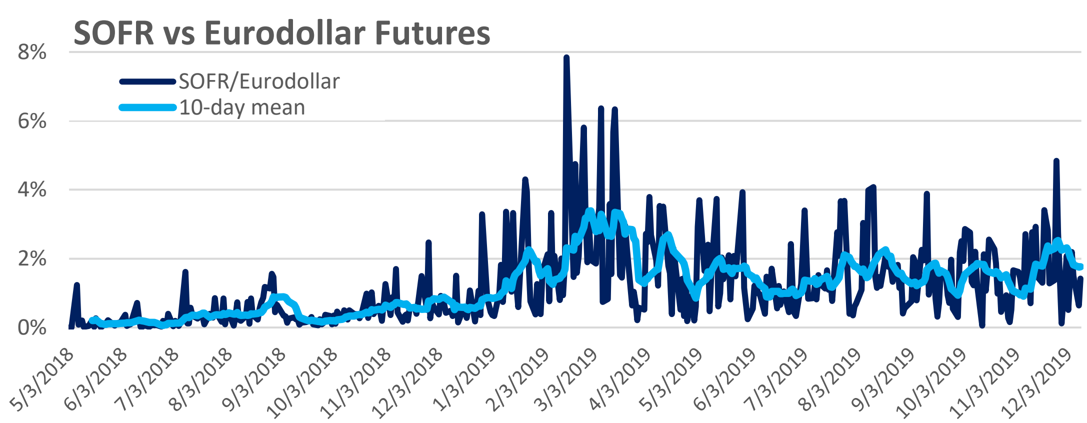

Figure 2: Relative Volume of SOFR and Eurodollar Futures (source: Refinitve)

At the same time, as we pointed out in August, if SOFR is going to replace LIBOR by the end of 2021, then the volume in SOFR should be growing relative to Eurodollar futures. This transition can't happen overnight. If volume in SOFR futures does not pick up soon, this could be a sign of trouble ahead.

This story is not over yet. We will continue to post updates and events unfold.