FAQ – Questions on SOFR

Q: What is SOFR?

SOFR stands for Secured Overnight Financing Rate. SOFR is a broad measure of the cost of borrowing cash overnight, collateralized by U.S. Treasury securities in the repurchase agreement (repo) market. SOFR is a compounded overnight rate, whereas LIBOR is a term rate.

Q: How is SOFR determined?

SOFR is published by the Federal Reserve Bank of New York and is a volume-weighted median overnight repo rate comprised of three different repo sectors: (i) tri-party repurchase agreements (repo), (ii) general collateral finance repo, and (iii) bilateral treasury repo transactions cleared through Fixed Income Clearing Corporation.

Q: What is the timeline of the transition from LIBOR?

The below chart is the ARRC's Recommended Best Practices. These dates were released in May 2020 and are intended to clarify the timelines and interim milestones that the ARRC believes are appropriate for transitioning away from USD LIBOR. In addition to assist with the transition, in 2019, the central counterparty clearing houses (CCPs) LCH and CME Group announced that, effective at the close of business on October 16, 2020, the discounting and price alignment interest for USD-denominated interest rate swaps will transition from Effective Federal Funds Rate (EFFR) to SOFR. The ARRC is continuing to develop materials and recommendations for the transition.

The ARRC's Recommended Best Practices

Product	Hardwired fallbacks incorporated by	Tech/Ops Vendor Readiness	Target for Cessation of New use of USD LIBOR	Anticipated fallback rates to be chosen by
FRNs	**6/30/2020**	**6/30/2020**	**12/31/2020**	**6 months prior to reset after LIBOR's end**
Business Loans	**9/30/2020**	**9/30/2020**	**6/30/2021**	**6 months prior to reset after LIBOR's end**
Consumer Loans	**Mortgages: 06/30/2020; Student Loans: 09/30/2020**	**Mortgages: 09/30/2020**	**Mortgages: 09/30/2020***	**In accordance with relevant consumer regulations**
Securitizations	**6/30/2020**	**12/31/2020**	**CLOs: 09/30/2021, Others: 06/30/2021**	**6 months prior to reset after LIBOR's end**
Derivatives	**Not later than 4 months after the amendments to ISDA 2006 Definitions are published**	**Dealers to take steps to provide liquid SOFR derivatives markets to clients**	**6/30/2021**	

**The September 30, 2020 date for consumer loans refers to new applications for closed-end residential mortgages using USD LIBOR and maturing after 2021.*

Q: What are the key differences between LIBOR and SOFR?

LIBOR	SOFR
• Unsecured rate. • Interbank funding market participants (panel banks). • Consensus-based; depends on expert judgements. • May be prone to the risk of manipulation. • Forward-looking rate with a term structure. • Built-in credit component based on credit conditions amongst panel banks. • $500 million underlying transactions. • Not durable during stressed market conditions.	• Secured rate. • Broad array of market participants (multiple industries). • Fully transaction-based. • Not subject to same risks of manipulation. • Backward-looking overnight rate. • Historical credit adjustment relative to LIBOR needs to be added. • $850 billion underlying daily transactions. • Historically durable during stressed market conditions.

Q: Will SOFR be equivalent to LIBOR?

Industry groups and market participants are working to develop a spread adjustment, which would attempt to make LIBOR and SOFR more comparable. The adjustment is necessary to account for the bank credit risk premium in various IBORs, which is absent in the RFRs as they are generally risk-free or nearly risk-free rates. This would be a one-time adjustment; it is meant to apply primarily to legacy LIBOR-based loans that would need to transition to SOFR-based loans around the time of LIBOR discontinuance. There is also considerable work to be done to develop a term structure for SOFR.

ISDA released the results of a derivatives fallback consultation, and expects to proceed with developing fallbacks based on the "compounding setting in arrears" rate and the "historical median" spread adjustment for derivatives. The ARRC has stated that it would consider publishing a spread adjustment for cash products as well. This is a one-time spread adjustment and the spread will not be dynamic, instead will be static.

Q. What if the market is reluctant to adopt SOFR (Regulatory or Legislative Solutions)?

The transition away from LIBOR has been guided by regulators, but if markets are reluctant to accept SOFR, regulators could use a variety of tools to help facilitate its adoption. The IOSCO (International Organization of Securities Commissions) stated that any amendments to legacy trades, due to benchmark reform, would be excluded from the new non-centrally-cleared margin requirements.

Regulators have also begun requesting firms to submit their transition plans and updates. Following the letter that the UK's FCA and UK Prudential Regulation Authority (PRA) wrote to the CEOs of major banks requesting details of the steps taken to manage the transition away IBORs, additional Regulators have written to firms to provide their updates on the transition from LIBOR.

Q. How does the NY Fed's involvement in the Treasury repo markets affect SOFR?

SOFR is a measure of the overnight cost of financing U.S. Treasury securities in the repurchase agreement (repo) market. It includes market data from bilateral trading (trimmed to exclude certain

transactions using high-demand "on special" collateral) and the tri-party repo market. The dynamics driving pricing, volatility and risk in the U.S. Treasury repo market are therefore closely aligned with those driving SOFR levels unlike LIBOR. The Fed's Federal Open Market Committee is responsible for periodically setting targets for several key interest rates, enforced through open market operations. Changes to the Fed's reverse repo rate directly impact Treasury repo rates and therefore SOFR. Additionally, other mechanisms employed by the Fed such as Quantitative Easing actions (the unwinding of the Fed's balance sheet) can have an impact on SOFR as it transfers collateral back into capital markets increasing repo rates and thereby SOFR. Finally to alleviate the impact of unique liquidity events (such as the SOFR Surge of September 2019) the Fed has the ability to add liquidity to the repo market through the use of a standing repo facility to alleviate pronounced volatility in the SOFR rate.

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Updated as of June 4, 2020

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