THE END OF LIBOR

LIBOR to SOFR Working Group, FRAC, OFR

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CHARGE

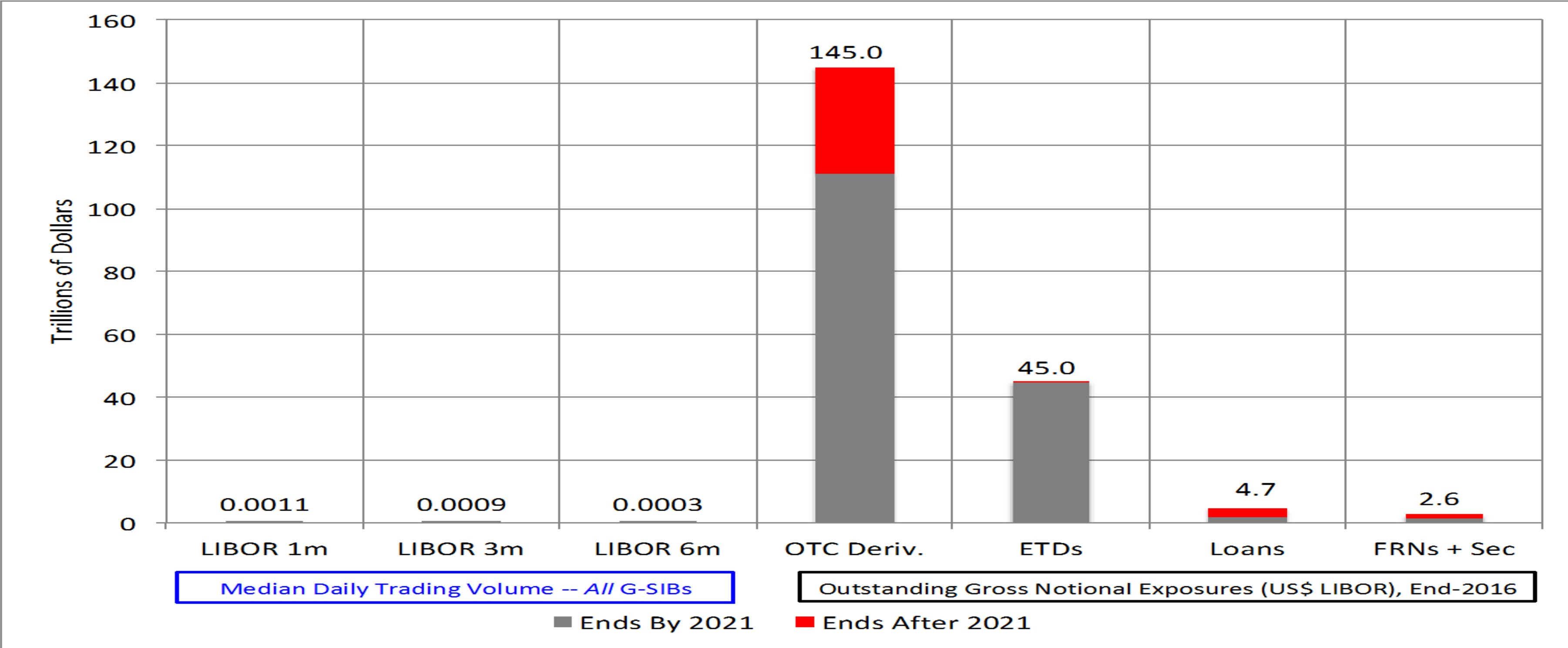
Charge: How should the challenges associated with the transition from LIBOR to SOFR be addressed?

- Q1: What are the major impediments to building volume in SOFR-linked contracts?
- Q2: What measures, if any, should the official sector consider to encourage adoption of the SOFR?

BACKGROUND: THE CLOCK IS TICKING

- 2012 – Bank misconduct revealed the unsuitability of LIBOR as a reference rate.
  - Based on judgment of market participants, not on observable transactions
  - Inverted pyramid: derivatives transactions vastly exceed interbank loans
- 2013 – IOSCO issues statement on principles for financial benchmarks.
- 2014 – FSB launches multi-jurisdictional undertaking to establish alternative reference rates for use in derivative transactions.
- 2017 – Andrew Bailey, head of UK FCA, makes it clear that the FCA will not use its authority to compel panel banks to submit LIBOR rates beyond 2021.

BACKGROUND: LIBOR'S INVERTED PYRAMID
EXPOSURE RELATIVE TO TRADING



Source: *ARRC Second Report*, March 2018. Working group calculations based on Table 1 and Figure 1.

BACKGROUND: LIBOR FOOTPRINT, 2016

	Volume	Extend After 2021	Extend After 2025
OTC Derivatives	145	33.9	14.8
Exchange-traded Deriv.	45	0.5	0.0
Business Loans	3.4	2.2	0.1
Consumer Loans	1.3	0.5	0.2
Bonds (FRNs/VRNs)	1.8	0.3	0.1
Securitizations	1.8	0.9	0.4
Total	199	38.3	15.6

Note: U.S. dollars in trillions. Source: *ARRC Second Report*, March 2018, Table 1,
Federal Reserve Bank of New York and working group calculations.

BACKGROUND: ARRC 1.0

- 2014 – Creation of the Alternative Reference Rate Committee
  - Supported by the Federal Reserve Board and the FRBNY, ARRC is a group of private-market participants convened to help ensure a successful transition from USD LIBOR to a more robust reference rate.
  - Initially constituted to produce an alternative for USD LIBOR for derivatives.
  - Evaluated alternatives based on a range of features, including indicators of benchmark and methodological quality, accountability, governance, and ease of implementation.
  - In 2017, ARRC identifies the secured overnight financing rate (SOFR) as the best choice to replace LIBOR.
    - SOFR is a broad measure of the cost of borrowing cash overnight collateralized by Treasury securities. It is published daily by the FRBNY.
  - Issues paced transition plan.

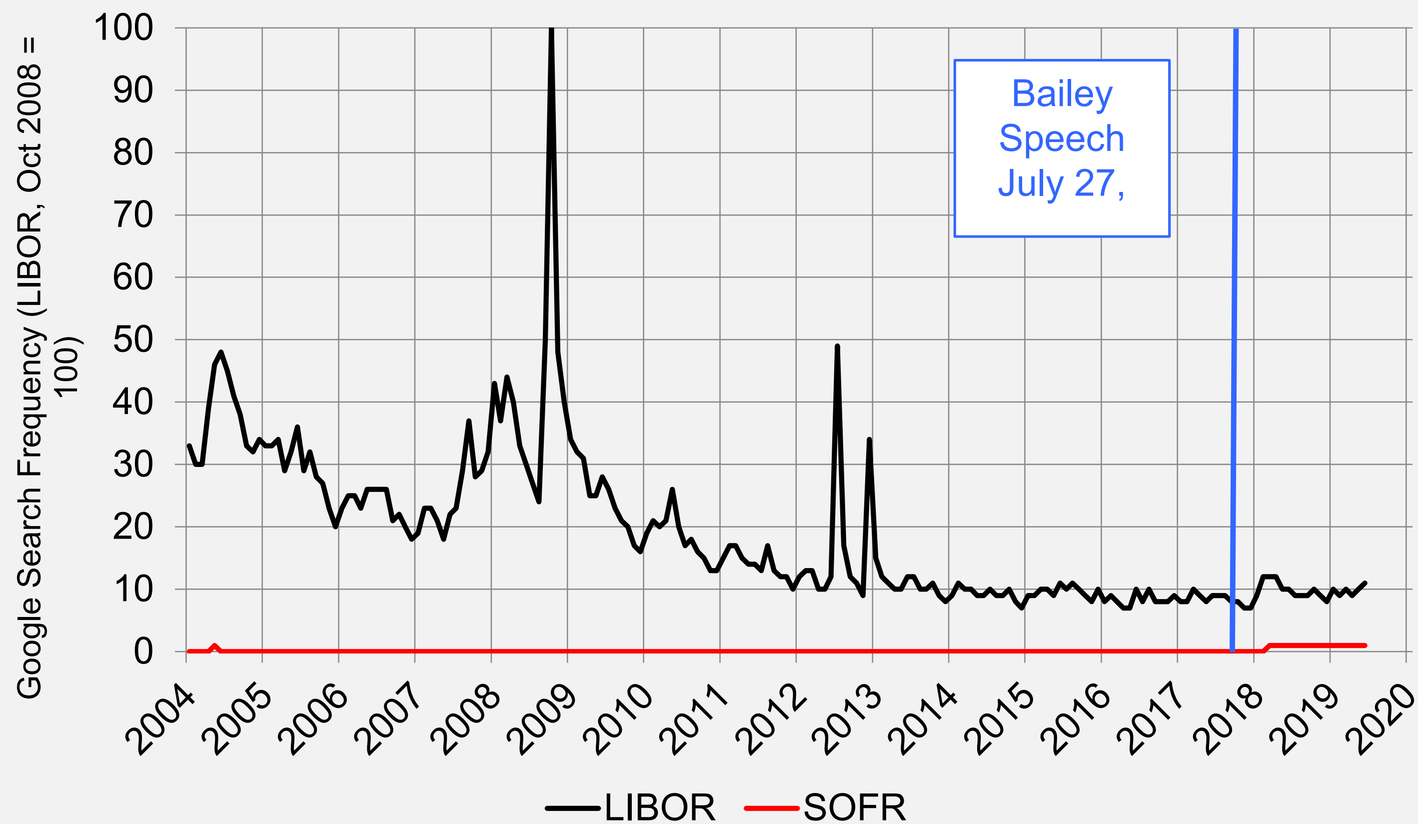
Q1: WHAT ARE THE MAJOR IMPEDIMENTS TO BUILDING VOLUME IN SOFR-LINKED CONTRACTS?

- Path dependence is a major challenge. Financial intermediaries, their clients and their vendors have used it for decades. They have designed credit models, IT and other systems to accommodate use of LIBOR. Moreover, markets for LIBOR-linked assets remain active.
- Shifting to a new benchmark is a large-scale coordination problem: SOFR-linked alternatives to LIBOR need to be widely used to “gain currency” and for markets to have adequate liquidity.
- In its short history thus far, SOFR exhibits quarter- and year-end spikes. While these can be managed, market participants have not yet settled on a common set of conventions to address this issue. There is no guarantee of timely and complete convergence regarding such market practices.
- LIBOR is an IBOR; SOFR is a RFR. While banks already rely extensively on secured funding, shifting to assets that will be are linked to an RFR (rather than an IBOR) raises transition costs for some. Some market participants are accustomed to relying on an IBOR that includes a credit risk premium.
- SOFR forward-looking term rates are not yet available. Some market participants have reason to want, or are accustomed to using, term rates.

Q2: WHAT MEASURES, IF ANY, SHOULD THE OFFICIAL SECTOR CONSIDER TO ENCOURAGE ADOPTION OF THE SOFR?

- All of the major financial regulators are ex officio members of ARRC. Some have taken a leadership role in efforts to minimize potential disruptions from the cessation of LIBOR. Financial regulators should continue to work with ARRC to minimize frictions that impede the transition from LIBOR.
- FSOC can play an important role in ensuring ongoing coordination among financial regulators and prompting each to use its authority to advance the transition from LIBOR.
  - Prudential regulators should continue, and in some instances increase, efforts to promote preparedness of firms that they oversee, including regional and community banks. In some cases, such as the largest intermediaries, effective supervision may require granular data to assess preparedness. Some operational and other risks may not be apparent until firms make meaningful progress toward transitioning away from LIBOR.
  - The SEC should consider taking steps akin to those taken prior to Y2K to promote preparedness across firms and to ensure firms are providing investors adequate information with respect to exposures and preparation efforts.
  - Regulators should consider producing and disseminating “best practices” guidance for different types of firms, including questions that boards and audit committees may use to assess risks and milestones for progress.
  - The OFR should consider updating data on market-wide size and mix of financial instruments that reference USD LIBOR alongside ARRC’s efforts to publicize the use of SOFR.
  - Regulators should consider how best to promote awareness of the importance of this transition. This should likely include both direct and indirect efforts to promote consumer education.

NEED TO BROADEN AWARENESS



Source: Google Trends, accessed June 28, 2019.

IMPLEMENTATION: ARRC 2.0

2018 – ARRC is reconstituted with an “expanded membership to help ensure the successful implementation of the pace transition plan” and ”to serve as a forum to coordinate and track planning across cash and derivatives products.”

- Focus on how to widen use of SOFR beyond derivatives to full universe of USD LIBOR-linked instruments. ARRC 2.0 efforts include:
  - Creation of working groups to engage with industry and promote outreach and address other issues associated with the end of LIBOR.
  - After broad consultation and comment period, issued standardized fallback language for each class of LIBOR-linked instruments.
  - Has issued letters to major financial regulators regarding how they can help address issues that might impede transition and how they might encourage use of SOFR.
  - ARRC members have been actively engaged in work led by ISDA.

Nevertheless, the pace of adoption in the market shows that much work remains to ensure timely progress sufficient to limit the risk of financial disruption.

LIBOR IS AN IBOR; SOFR IS A RFR

- LIBOR and SOFR are different.
  - SOFR is a secured rate based on overnight transactions in the U.S. dollar Treasury repo market. Because it is free of counterparty (credit) risk, it is called a "risk-free rate" (RFR).
- There is currently no term SOFR. ARRC's paced transition plan anticipates a term reference rate by the end of 2021, but that remains dependent on a deepening of the market. Even then, a term SOFR would *not* include a component for bank credit risk.
  - Banks that relied on LIBOR-linked debt to fund loans will have to add an uncertain, time-varying credit risk premium when funding loans using SOFR-linked debt, with a potentially material difference in times of stress. The lack of a credit premium in SOFR means banks may need to devise new models to price loans over the credit cycle.

ISSUE: ONGOING USE OF LIBOR

- BIS report (March 2019) shows that LIBOR-linked issuance remains far larger than the sum of SOFR- and SONIA-linked issuance.
  - While open interest in SOFR futures has climbed rapidly, it is less than one percent of open interest in three-month Eurodollar futures.
  - Given their complementary roles, advancing the cash and derivatives markets in SOFR is a bootstrapping challenge.
- Official sector should consider broadcasting this type of message more broadly:
  - *"At this moment, many seem to take comfort in continuing to use LIBOR—it is familiar, and it remains liquid. But history may not view that decision kindly; after LIBOR stops, it may be fairly difficult to explain … why it made sense to continue using a rate that you had been clearly informed had such significant risks attached to it."* Randal Quarles, FRB Vice Chair for Supervision and FSB Chair, June 4, 2019

LEGACY ASSETS

- Many financial instruments that reference LIBOR lack fallback language appropriate for the current situation.
- Derivatives: The notional value of derivatives referencing LIBOR far exceeds the cash instruments outstanding. There are, however, coordination mechanisms in place to facilitate transition in this domain. ISDA is taking steps to enable the use of a protocol and amendments to achieve broad adoption of new fallbacks even for existing instruments. Process is underway but far from complete.
- Cash instruments:
  - Exposure arising from missing or inadequate fallback language is hard to measure since many agreements that use LIBOR as a reference rate are not publicly available.
  - Much of the fallback language currently in place seems to have been designed to accommodate a *temporary*, but not a *permanent*, cessation of LIBOR.
  - Many instruments, like floating rate notes, are difficult or practically impossible, to amend.
  - ARRC is contemplating ways to help address these challenges, which may not be conducive to centralized solutions.

DATA CHALLENGE

- ARRC and market participants continue to use 2016 data.
- OFR, with support of FSOC members, could seek to update this data in order to monitor exposures.
  - Continued creation of LIBOR instruments means that exposures are not static.
  - An accurate and more granular picture of current LIBOR exposures could help regulators understand the scale and scope of the transition challenge.
  - The process of updating could reveal pockets of activity that were not uncovered in 2016.
  - The ability of financial institutions to produce timely measures of their exposures in also an indication of their preparedness.

MARKET ACTORS V. MARKET PROCESS

- Core challenge: in contrast to the incremental market-driven process that led to the rise of LIBOR over decades, market participants have little time to complete a transition to SOFR before the end of LIBOR.
- An incomplete transition could pose serious risk to financial stability when LIBOR ceases.
- In the long run, there is no reason to expect that SOFR will be the sole replacement for LIBOR. Market-based efforts to use alternative reference rates are needed to assess when and on what terms SOFR will be the optimal replacement and when another reference rate might suit.
- ARRC:
  - Has played the leadership role in identifying SOFR as a viable alternative, producing a range of materials to facilitate transition from LIBOR to SOFR, and engaging broadly with market participants, trade groups, and regulators throughout the process.
  - Has laid the foundation for a transition away from LIBOR.
- But:
  - To avoid financial instability when LIBOR ceases, the transition is too big and needs to occur too fast to rely solely on these efforts.

NEXT STEPS

- U.S. regulators should continue and strengthen ongoing efforts to support the transition from LIBOR. Some examples underway include:
  - Ongoing efforts to consider and respond to ARRC recommendations in a timely fashion.
  - Use of supervisory authority to promote planning by the largest banking organizations.
  - Working with CCPs that have a key role in setting norms (including discount rates) for the swap market.
- Some ways that the official sector can complement efforts underway include:
  - ARRC has created a Consumer Products Working Group. This is helpful, but additional efforts likely are needed to educate consumers regarding the transition.
  - Seek ways to ensure that nonfinancial firms are aware of and taking adequate steps to prepare for the transition.
  - Identify challenges, even if low-probability, that could obstruct an adequate transition.

IMPORTANCE OF FSOC AND OFR

- FSOC
  - Role for market and prudential regulators to ensure timely transition from LIBOR that avoids financial instability .
    - Example: contraction of LIBOR-linked gross exposures could involve a role for both the CFTC (encouraging procedural developments) and prudential regulators (monitoring exposures)
  - Could consider how best to share information, monitor progress, and address potential problem spots and identify practices.
- OFR
  - Data: Should consider institutionalizing a process for assessing LIBOR exposure with some frequency at a granular and aggregate level.
  - Opportunity to work with other jurisdictions to collect and share data on the global transition from LIBOR.

CONCLUSION

- The LIBOR transition is an unprecedented global financial engineering project of massive scale that will require extraordinary coordination and cooperation across institutions, markets and jurisdictions.
- Among other steps, this will require identifying, updating, and ensuring achievement of key milestones in the transition from LIBOR.
- The official sector should continue, and consider increasing, efforts to ensure that all financial institutions are prepared for the cessation of LIBOR at the end of 2021.
- The official sector should consider expanding communication of necessary changes beyond financial institutions to the broader economy, including the general public.