Overview of LIBOR Reforms

Briefing on Reference Rate Transition of ADB’s Sovereign Loans

September 2020
Overview of LIBOR Reforms

September 2020
Today’s Agenda

- Overview of London Interbank Offered Rate (LIBOR) Reforms
- Introducing Secured Overnight Financing Rate (SOFR)
- Next steps
- ADB’s Transition Approach
What is LIBOR?

- The London Interbank Offered Rate (LIBOR) is the most widely used benchmark for short-term interest rates.

- LIBOR is used as a reference rate for financial contracts and as a benchmark to gauge funding costs and investment returns.

- It is estimated that globally, some $200 trillion–$300 trillion financial contracts are benchmarked on LIBOR.
LIBOR Transition

▪ In 2017, the United Kingdom’s Financial Conduct Authority (FCA) announced it will no longer compel banks to submit rates for LIBOR beyond 2021.

▪ This is because there are not enough transactions in the short-term wholesale funding market for banks to anchor the benchmark.

▪ Financial regulators have strongly encouraged financial institutions to prepare for the replacement of LIBOR before the end of 2021.

The survival of LIBOR in its current form “could not and would not be guaranteed”.

— Andrew Bailey. The Future of LIBOR. Speech delivered by the FCA chief executive at Bloomberg, London. 27 July 2017
What is LIBOR’s replacement?

- Across jurisdictions, regulators are promoting national currency-specific Alternative Reference Rates (ARRs).

- For US dollar-denominated loans and securities, the recommended new benchmark Secured Overnight Financing Rate (SOFR) is based on transactions in the US Treasury repurchase market, where banks and investors borrow or lend US Treasury securities overnight.

- Australia, Europe, and Japan are pursuing a multiple-rate approach to benchmarks with reformed reference rates that continue alongside ARRs.
What is LIBOR’s replacement?

<table>
<thead>
<tr>
<th>Country</th>
<th>LIBOR–IBOR</th>
<th>New Risk-Free Rate</th>
<th>Public or Private Sector Working Groups</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>US Dollar LIBOR</td>
<td>SOFR</td>
<td>Alternative Reference Rates Committee</td>
<td>Secured rate that covers multiple overnight repurchase market segments</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>GBP LIBOR</td>
<td>SONIA</td>
<td>Sterling Working Group on Risk-Free Rates</td>
<td>Unsecured rate that covers overnight wholesale deposit transactions</td>
</tr>
<tr>
<td>Japan</td>
<td>JPY LIBOR, TIBOR, and Euroyen TIBOR</td>
<td>TONAR</td>
<td>Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks</td>
<td>Unsecured rate that captures overnight call rate market</td>
</tr>
<tr>
<td>Europe</td>
<td>EUR LIBOR and Euribor</td>
<td>ESTR</td>
<td>Euro RFR Working Group and European Money Markets Institute</td>
<td>Unsecured rate that captures the overnight wholesale deposit transactions</td>
</tr>
<tr>
<td>Australia</td>
<td>BBSW</td>
<td>AONIA</td>
<td>Australian Financial Markets Association</td>
<td>Unsecured rate that captures an overnight term</td>
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</table>
SOFR

- It is produced by the Federal Reserve Bank of New York with a methodology and governance structure consistent with international best practices.

- In recommending SOFR as the alternative reference rate to USD LIBOR, the Alternative Reference Rates Committee (ARRC) looked for a rate that met its selection criteria including robustness, governance, ease of use and quality.

- SOFR has several characteristics that make it safer and less vulnerable to manipulation than LIBOR, including: Full reliance on transaction data, based on an active underlying market and consistent with international best practices.
What are the key differences between LIBOR and SOFR?

SOFR and LIBOR reflect short-term borrowing costs but there are key differences.

<table>
<thead>
<tr>
<th>SOFR</th>
<th>LIBOR</th>
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<tr>
<td>Relies entirely on transaction data from over $700 billion in daily</td>
<td>Is based partially on market-data and partially on expert judgment.</td>
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<tr>
<td>repurchase transactions with a diverse set of borrowers and lenders.</td>
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<td>Measures the cost of collateralized borrowing overnight based on</td>
<td>Measures the cost of uncollateralized borrowing in the interbank market</td>
</tr>
<tr>
<td>interbank trades and secured by US Treasury securities.</td>
<td>and incorporates a built-in credit-risk and liquidity component.</td>
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<tr>
<td>A backward-looking rate, published daily.</td>
<td>A forward-looking rate, published daily, with term rates from 1 day to 1 year.</td>
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</table>
What is the multiple-rate approach to benchmarks in Europe and Japan?

- Europe and Japan are pursuing a multiple-rate approach to benchmarks with reformed reference rates besides developing ARRs.

- **Europe.** In July 2019, the reformed Euribor was found compliant with the European Union Benchmark Regulations and continues to be used. The Euro Short-Term Rate (€STR) is the recommended ARR.

- **Japan.** The Tokyo Overnight Average Rate (TONAR) is recommended as an ARR for JPY LIBOR. The Tokyo Interbank Offered Rate has undergone a series of reforms to increase transparency and will continue for the foreseeable future.
Preparation Check List

The LIBOR transition is a significant event and it is important to properly plan for it across the entire operations.

- **Establish Governance:** Implement a robust governance structure with accountable senior management to oversee the delivery and coordination of a LIBOR transition program.

- **Assess Risks:** Assess LIBOR-linked exposures.

- **Develop a Plan:** Establish a transition plan and allocate resources.

- **Assess Contracts:** Understand the financial and legal impacts resulting from transitioning via fallbacks, and plan mechanisms for implementing.

- **Operational and Technology:** Ensure operating models and technology systems are ready.

- **Accounting and Reporting:** Determine accounting and reporting treatment of the LIBOR transition.

- **Risk Management:** Identify, measure and monitor risks of the transition and establish oversight for ongoing management.

- **Communication:** Proactively engage with impacted internal and external stakeholders.
ADB LIBOR Transition Approach

Governance Structure
- Alternative Reference Rate Steering Committee
- Alternative Reference Rate Working Group
- Alternative Reference Rate Project Management Team

Work Streams
- Infrastructure and Systems
- Governance and Policy
- Financial and risk analysis
- Contracts and communications
- Borrower outreach

Liaisons
- Engage Regional Departments to facilitate outreach to Borrowers
- Engage banking partners and relevant industry groups for market and regulatory updates
- Engage swap counterparties and have regular dialogues regarding ISDA Protocols
- Engage with IT vendors and other relevant financial bodies (legal, accounting)
- Engage with relevant MDBs on key issues and considerations
Preparing for the Reference Rate Transition of ADB’s Sovereign Loans

September 2020
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- Implications of the LIBOR reforms for ADB and its Borrowers
- Proposed Changes
- Borrower Outreach
- Next Steps
What are the implications of the LIBOR reforms for ADB and its Borrowers?

- Market participants with LIBOR-linked financial products must prepare to shift to Alternative Reference Rates (ARRs) by 31 December 2021.

- ADB has a total LIBOR exposure of $169 billion (31 December 2019).

- Market participants are actively preparing for the transition process.
What is ADB’s proposed approach for transitioning sovereign loans?

- The OCR Loan Regulations require an amendment to address an uncertain LIBOR transition path and to avoid potential losses for ADB and borrowers.

- ADB proposes to amend the OCR Loan Regulations to broaden the circumstances in which the reference rate can be replaced and enable ADB to determine alternative reference rates.
What are the advantages of the proposed changes?

- The proposed amendment to the OCR Loan Regulations will give ADB and its borrowers the flexibility to act in a timely manner toward an uncertain LIBOR transition path.

- The proposed approach allows ADB to minimize risks and to pass stable and cost-effective rates to borrowers.

- The risk of a disorderly LIBOR transition would be detrimental to ADB and its borrowers.
What Principles does ADB propose to determine ARRs?

- **Follow a market-based approach:** ADB will review market developments, inform borrowers, and highlight any developing market consensus.

- **Maintain the cost pass-through principle:** ADB will continue to be guided by this principle and ensure ADB does not systematically gain or lose from the conversion of LIBOR-based borrowing costs into ARRs.

- **Offer uniformity:** Treat all borrowers the same without any borrower having systematic gains or losses at the expense or gain of other borrowers.

- **Ensure transparency:** ADB will disclose its transition calculation methodology to its Board of Directors and its borrowers.
What is ADB’s amendment process?

- Borrower outreach to provide an update of ADB’s approach to transition its sovereign loans and market information on LIBOR transition.
- Consultations are intended to inform borrowers and assist in finalization of the R-paper to be presented to the Board of Directors on October 2020.
- If the R-paper is approved, further section 3.02(c) of the OCR Loan Regulations will be made applicable to new loans.
- For existing loans, ADB will seek such a change in agreement with borrowers’ consent. ADB will seek a single consent from a borrower for all their loans and will coordinate the amendment process through the Regional Departments.
Timeline

- **18 August 2020**: Board discussion date of the working paper
- **29 October 2020**: Board discussion date of the R-paper
- **28 February 2021**: ADB target for obtaining borrowers’ agreement to amend its existing sovereign loans with LIBOR exposure
- **First half of 2021**: Financial Product paper replacing the LIBOR-based loan product with new ARR
APPENDIX
Abbreviations

- AONIA – Australian Overnight Index Average
- ARR – Alternative Reference Rate
- ARRC – Alternative Reference Rates Committee
- €STR – Euro Short-Term Rate
- FCA – Financial Conduct Authority
- LIBOR – London Interbank Offered Rate
- SOFR – Secured Overnight Financing Rate
- SONIA – Sterling Overnight Interbank Average Rate
- TONAR – Tokyo Overnight Average Rate
Issues with LIBOR

ICE LIBOR: Quarterly Volume Report – Q1 2018

Comparison of SOFR and LIBOR

Source: Bloomberg, Federal Reserve Bank of New York

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Global Development on IBOR Transition

The following table offers an overview of the main developments in each local jurisdiction and globally (*future dates may be subject to change*).

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<thead>
<tr>
<th></th>
<th>Pre-2020</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
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<tbody>
<tr>
<td><strong>UK</strong></td>
<td>Apr-17: Reformed SONIA selected as GBP RFR</td>
<td>Mar-20: Interest rate swap conventions change from GBP LIBOR to SONIA</td>
<td>End of Q3-20: BoE Target - cessation of issuance of GBP-LIBOR based cash products (excluding loans)</td>
<td>Q1-21: BoE target - Stock of LIBOR referencing contracts significantly reduced</td>
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<td></td>
<td>Apr-18: Reformed SONIA published</td>
<td>Jun-20: UK Govt. proposal to amend UK BMR and FCA accompanying statement</td>
<td>End of Q1-21: BoE target - No new issuance of GBP LIBOR referencing loan products expiring after end-2021</td>
<td>End of Q3-20: BoE Target – Lenders to include clear contractual arrangements for all new and re-financed GBP LIBOR loans to facilitate conversion prior to end-2021</td>
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<td></td>
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<td>Early Aug-20: Anticipated publication of SONIA Compounded Index</td>
<td>Late-20: Provisional live SONIA term rate expected to be published</td>
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<td><strong>US</strong></td>
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<tr>
<td><strong>Europe</strong></td>
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<td><strong>Switzerland</strong></td>
<td>Dec-17: Last TOS fixes prior to Saron transition</td>
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<tr>
<td><strong>Japan</strong></td>
<td>Dec-16: TONA selected as JPY RFR</td>
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<tr>
<td><strong>Europe</strong></td>
<td>Oct-19: EureXSTR published</td>
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<td><strong>Global</strong></td>
<td>Feb-20: ISDA consultation pre-cessation fallbacks</td>
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*U.S. ARRC Best Practices Targets:
1. Recommended fallback should be included for newly issued FRNs, residential ARMs and securitisations
2. Recommended fallback language should be included for new business and student loans; Vendors should be ready to support business loans and consumer mortgages; No new applications for LIBOR ARMs and dealers should offer electronic market making in SOFR Derivatives
3. Vendors should be ready to support SOFR for securitisations; No new LIBOR FRNs maturing after 2021; Dealers should amend interdealer CSAs to use and make markets in SOFR-linked interest rate volatility products
4. No new LIBOR business loans, derivatives and floating rate securitisations maturing after 2021
5. No new LIBOR CLOs maturing after 2021

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SOFR by Numbers

~$1 trillion
The transaction volume underlying SOFR averages around $1 trillion per day. This is far greater than the volumes underlying overnight unsecured rates, and, while not a direct comparison, dwarfs the volumes underlying term unsecured rates—such as the ~$500 million estimated to underlie 3-month USD LIBOR.

300+
The ARRC has 300+ diverse private market institutions and associations involved on its working groups, supporting the transition to SOFR, its preferred alternative to USD LIBOR.

2021
After 31 December 2021, market participants should assume LIBOR will not continue. The ARRC encourages market participants to continue to adopt SOFR in a range of financial contracts and incorporate appropriate fallback language in LIBOR-referencing contracts.

Source: Alternative Reference Rates Committee (ARRC)
LIBOR to SOFR

Transition Timeline

- **2017'2**: Andrew Bailey announces FCA will not compel panel banks to submit LIBOR after 2021.
- **2018'1H**: First SOFR futures begin trading on CME.
- **2018'2H**: European Investment Bank (EIB) issues first compounded SOFR FRN.
- **2019'1H**: Fed begins work aimed at publishing a series of backward-looking SOFR averages.
- **2019'2H**: Market for SOFR-linked cash & derivatives instruments continue to build.
- **2020'1H**: CME Group Launches SOFR Options.
- **2020'2H**: Bloomberg to publish indicative spread calculations & all-in fallback rates.
- **2021'1H**: Efforts continue for potential legislative fix for tough legacy contracts in US & UK.
- **2021'2H**: Regulatory to increases scrutiny of market participants’ preparedness for the transition away from LIBOR.

(1) Alternative Reference Rates Committee (ARRC) convened by the Federal Reserve in 2014.

What happens under ADB’s OCR Loan Regulations if LIBOR ceases?

- If LIBOR ceases and ADB cannot agree on an alternative for calculating the floating rate of interest with each borrower, the OCR Loan Regulations apply a three-step determination process to try and calculate the floating rate of interest.

- Ultimately, the most recent calculated LIBOR rate will be applied for the current interest period. Repeating this process for each interest rate fixing will complicate hedging and may lead to asset–liability mismatches.

- The current OCR Loan Regulations are not sufficient to protect ADB and borrowers from potential losses in a situation when LIBOR ceases.
What happens under ADB’s OCR Loan Regulations if LIBOR becomes unreliable?

- There is a risk that LIBOR is no longer representative of the underlying market it seeks to measure but is still published.

- Where a reference rate is still published, the OCR Loan Regulations apply the reference rate, but it may not be representative of the cost of funding. This will undermine the cost pass-through principle.

- The current OCR Loan Regulations are not sufficient to protect ADB and its borrowers from potential losses in a situation when LIBOR is declared no longer representative.
What Is the Proposed Amendment Language for the OCR Loan Regulations?

- The proposed amendment is to include in the OCR Loan Regulations a further section 3.02(c) as set out below.

Section 3.02(c). If interest on any amount of the Loan is calculated based on LIBOR or Euribor, and ADB determines that (i) such Reference Rate has permanently ceased to be quoted for the relevant Loan Currency or a public statement or publication of information by the regulatory supervisor for the administrator of the Reference Rate announcing such Reference Rate is no longer representative has been made or (ii) ADB is no longer able, or it is no longer commercially acceptable for ADB, to continue to use such Reference Rate, for purposes of its asset and liability management, ADB shall apply such other Reference Rate for the relevant Loan Currency, including any applicable spread, as it may reasonably determine. ADB shall promptly notify the Borrower and the Guarantor of such other reference rate and any spread, and of related amendments to the provisions of the Loan Agreement necessary to give effect to its application, which shall become effective as of the date of such notice.

- In addition, the defined term “Reference Rate” in the OCR Loan Regulations is to be amended as follows:

“Reference Rate” means: except as ADB has otherwise made a determination in accordance with Section 3.02(c), in respect of any Loan Currency other than Euro, LIBOR, and in respect of Euro, Euribor; and

If a determination is made in accordance with Section 3.02(c), such other reference rate and any spread for the Loan Currency as ADB shall reasonably determine and promptly notify the Borrower and the Guarantor.
What is the current language for the OCR Loan Regulations?

- If LIBOR were to cease, in accordance with the current OCR Loan Regulations, ADB can apply the following section to change the reference rate:

  **Section 3.02(b) of the OCR Loan Regulations provides that:**

  “Whenever, in light of changes in market practice affecting the determination of the Floating Rate applicable to all or any portion of the principal amount of the Loan, ADB determines that it is in the interest of its borrowers as a whole and of ADB to apply a basis for determining the Floating Rate other than as provided in the Loan Agreement and these Regulations, ADB may modify the basis for determining such Floating Rate upon not less than three-months’ notice to the Borrower and the Guarantor of such new basis. The new basis shall become effective upon the expiry of the notice period unless the Borrower or the Guarantor notifies ADB during such period of its objection thereto, in which case such modification shall not apply to the Loan.”
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ADB

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