LIBOR TRANSITION

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1.Purpose

The purpose of this paper is designed to inform and explain the key risks and mitigants surrounding the transition to SOFR ("Secured Overnight Financing Rate") from LIBOR ("London Interbank Offered Rate").

2.Background

LIBOR has been the primary global benchmark for short term interest rates for more than 30 years but very little underlying transactions to support the process, the majority of panelist submissions each day are based on expert judgment. It is expected that at year-end 2021, the London Interbank Offered Rate (LIBOR) will cease to function as the benchmark reference rate for an estimated $200 trillion in U.S. dollar exposures and $370 trillion globally. It is difficult to overstate the influence of LIBOR, its ubiquitous reach impacts every corner of the financial system—from sophisticated securities trades to consumer loans that fund the purchase of homes, cars, and education.

The outcome transition from LIBOR to a RFR (“Risk Free Rate”) is NOT set out in legislation even though regulators have stated their intentions repeatedly. The U.S Federal Reserve regards this transition as market participant driven. The consequence of this lack of legislative underpinning is that different (regulated) firms could take different views as to what actions need to be taken and why. Furthermore, unregulated counterparties are not subject to any regulatory pressure to renegotiate LIBOR-linked products and therefore may be reluctant to engage. Alternatively, some firms maybe quicker off the mark and gain a competitive advantage both in market share and reputation.

3.Transition

The two most important component parts of this transition are the switching to a RFR and the conversion of existing documentation to reference this switch which is incorporated in fallback provisions. ISDA is leading the charge in the derivatives space in organizing an approach converting term rate LIBOR to an overnight rate and adjusting for credit spreads. ARRC in the cash space, has released guiding principles which are voluntary and include considerations around the articulation and usage of fallback trigger events, a successor rate with the encouragement of using SOFR, credit spread adjustments and mitigating market value transfer at the time of transition from LIBOR to SOFR.

SOFR is the elected successor of US Dollar Libor and is explained below. During Q2 2018, LCH and CME began clearing SOFR linked derivative products.

4.SOFR

The LIBOR phase-out has prompted global efforts to replace it with alternative reference rates. In the United States, the Alternative Reference Rates Committee, created by the Federal Reserve, has put forth the Secured Overnight Financing Rate (SOFR) for US Dollar LIBOR. The SOFR, which is based on triparty repo data from Bank of New York Mellon, cleared bilateral repo transactions, and general collateral finance repo data from the Depository Trust & Clearing Corporation, is considered a more reliable benchmark. SOFR complies with the Principles for Financial Benchmarks published by the International Organization of Securities Commissions. The New York Fed publishes SOFR daily, SOFR measures the cost of overnight borrowings through repo transactions collateralized with US Treasuries and is based on actual transactions.

While the SOFR will ultimately provide more assurance than LIBOR, in the short-term financial institutions must plan to mitigate the risks caused by the transition. To manage the LIBOR transition successfully, financial institutions must take an informed, diligent, and enterprise-wide approach. Working groups for major currencies have now selected their Alternative Reference Rates (ARRs) which are helping market participants to prepare for a smooth transition. These ARRs are based on the overnight cost of borrowing in secured or unsecured markets and are typically based on some risk-free rate (RFR).

4.1 Differences between SOFR AND LIBOR

USD Libor	SOFR
Unsecured rate: Interest rate at which banks can borrow in the interbank market on an unsecured basis	**Secured rate:** measures the cost of borrowing overnight with US Treasuries as collateral (also know as the repo rate)
Multiple term rate: available in maturities from overnight to 12 months (with 3-month tenor being the mostly widely used)	**Overnight rate:** only available on an overnight basis
Credit risk premium: the rate reflects that the borrowing bank could default	**Minimal credit risk:** since the rate is secured and overnight there is minimal credit risk
Little or no transactions	**Entirely transaction based**
Privately administered: International Continental Exchange (ICE) acts as the administrator	**Publicly administered:** US Fed Reserve
Declining transaction volumes	**Robust transaction volumes**

5.IBOR Program

5.1 IBOR Contract Inventory and Exposure Assessment

- Note which lines of business are affected and how that exposure affects resources and your overall risk profile.
- Know where all LIBOR-related contracts are stored and whether they have been digitized.
- Determine whether your institution, as constituted, has the necessary technology, data, and personnel to ensure for a smooth transition from LIBOR.
- This program may be an opportunity to improve data integrity firm wide.
- Inventory-taking must also include the impact of the LIBOR phase-out on various models. Determine how replacing or revamping several LIBOR-related models will impact the organization’s model risk management and model development resources.
- Examine the likely impact on liquidity, pricing committee activities, the Comprehensive Capital Analysis and Review (CCAR), the new Current Expected Credit Loss (CECL) standard for the Allowance for Loan and Lease Losses, and the overall balance sheet.

- Investigate your third parties to determine to what extent their activities add to your LIBOR exposures.

5.2 Review of Contractual Terms and Contract Renegotiation

- All stakeholders should be made aware of and as comfortable as possible with the transition, including customers, the board, counterparties, rating agencies, and investors. Communicating with customers, especially about the conversion factor to put LIBOR and the alternative rate on par, can help avoid reputation-harming complaints and conflicts.
- Review contractual terms to determine fallbacks if LIBOR or another IBOR temporarily or permanently discontinues
- Prepare to negotiate impacted contracts if necessary
- Product differentials: Market Protocols in derivatives will make contracts amendments much easier, whilst amending bond structures will be harder as they require majority consent.
- Organizations should also be prepared to eventually explain their plans and actions to U.S. regulators, who may choose to follow the U.K. by requiring such disclosures.
- Train and educate staff to ensure the quality, professionalism, and accuracy of all communications.

5.3 IBOR Exposure Reducing Considerations

- At the very least, be sure that any new instruments that extend out past the end of 2021 include adequate “fallback language” that clearly states which rate will be referenced in the event that LIBOR is no longer available as a benchmark.
- For existing instruments that extend past the end of 2021, financial institutions might consider proactively negotiating new fallback language.
- Any fallback will likely have to include a conversion rate to bridge the gap between the alternative rate and LIBOR. For example, because SOFR is a risk-free rate and LIBOR is not, an adjustment to the SOFR will be necessary to make it commensurate with LIBOR. The goal of these conversions should be no or minimal value transfer between parties. Conversions from LIBOR to SOFR that are seen to favor a financial institution will introduce reputation, legal, and compliance risk.
- To mitigate reputation and legal risk, any move to a new reference rate should be preceded by early and frequent communication with the institution’s customers that clearly explains the institution’s transition plans, and provides education on the LIBOR phase-out.
- Work with third parties to ensure they are taking LIBOR-transition steps that mirror your efforts.

5.4 Infrastructure/Systems changes

- Organizations should have mechanisms in place to ensure they are aware of key guidance and trends. For example, the Alternative Reference Rates Committee on April 25, 2019, issued recommendations for more robust fallback language for new originations of syndicated loans and floating rate notes. ARRC is expected to follow up with recommended fallback language for other instruments. Other key information and data yet to be issued or determined regarding the LIBOR transition includes guidance regarding its federal income tax implications, the development of more and longer tenors for the SOFR, and industry standard conversion factors.

5.5 Treasury Processes Considerations

- Consider issues related to tax accounting (including hedge accounting) and corporate treasury issues (funds transfer pricing) particularly if valuation changes are anticipated as a result of the transition from IBORS to RFR's.

6.Transition Risks

<table>
<tr><th>Risk</th><th>Risk Statement</th><th>Risk Mitigant</th></tr>
<tr><td>Delivery Risk</td><td>The creation of winner and losers which might result in reputational damage
Client unwillingness to transition which may result in LIBOR exposures continuing to grow
Review intra group contracts</td><td rowspan="3">Construction of new contracts with new fall back language
Different approaches can be taken across products (e.g., incorporating market protocols or allowing firms to amendments following the discontinuation of LIBOR.
If amendments are considered material for tax purposes, this may constitute a disposal of the existing contract and entering into a new contract for corporation tax purposes in certain jurisdictions.
Identification of instruments which might be affected by tax issues both from the firm and counterparty perspective.
Firms should note that the EMU BMR (Article 28 (2)) requires benchmark users to have robust, written plans in place, setting out how they would deal with situations where a benchmark is materially changed or discontinued.
Training programs, leading practices and an escalation process which can highlight key issues.</td></tr>
<tr><td>Legal Risk</td><td>Fall back solutions in existing contracts become impractical or materially change the economics
No Fall back solutions
What constitutes a trigger?
Difference in fallback methodologies for cash and derivative products.
Wide difference in fallback provision for different types of instruments. See Appendix
Overreliance on fallbacks, they should be regarded as “seatbelts”.
Amendments to existing contracts may result in potential tax issues.
Tax implications in corporate interest restriction rules, transfer pricing and thin capitalization rules.
Accounting implications may result in the derecognition of contracts and or the discontinuation of hedge relationships</td></tr>
<tr><td>Conduct Risk</td><td>Selling new Libor linked contracts, lead to claims of mis selling
Inadequate disclosures and conflicts of interest</td></tr>
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Operational Risk	• Large volumes of contracts to renegotiate • Transitioning back book/legacy trades • Switching off LIBOR processes and infrastructure • Profit and Loss deviations, fair value adjustments • Changes to back office processes i.e. confirmations, trade capture and data capture systems i.e. market data repository • Vendor dependency on changes • Introduction of new products linked to SOFR • Poor customer outreach	• Staff involvement in industry and risk management associations • Strategy to reduce LIBOR exposures and build demand in SOFR based products. • Full disclosures add to firm communications with client e.g. Many floating rate prospectuses file with the SEC have included a risk factor on LIBOR. • Firms should identify instruments that may be affected by accounting issues. E.g. they should identify their Libor exposures and outstanding hedge relationships and consider if repapering is needed and if it so evaluate how their existing hedges may be affected. • Looking at other market especially the UK, which has been comfortable with a compound in arrears term rate based on SONIA to calculate coupon payments for Floating rate notes • Work with a dedicated group of clients that have multiple jurisdictional exposures in order to devise a standard playbook
Model Risk	• Data references must be changed • Analytics changes, enhancements to calculate the implied term structure for overnight rates, curve construction • Market risks models will require backfill of historical data for any replacements. • Models will require back testing after implementation of new benchmark. • Changes to internal models to calculate regulatory capital • Lack of liquidity and observable transactions after the introduction of SOFR may cause some risks to become "unmodellable" • Insufficient SOFR liquidity may make it difficult to build a curve and price products. • Changes to model code	

Market Risk	• Certain instruments move from floating to fixed rate, increase duration • If Libor ceases, and different instruments that use it fall back to, different rates or at different times, basis risk will be higher and hedging more difficult. • Re-evaluation of hedging practices • If derivatives and cash markets diverge on triggers and term rate adjustments, increased basis between the two products will develop, making hedging ineffective. • Different market conventions (Cross currency) • Adaption of new RFR risk management tools • Valuation of legacy assets/liabilities	
Credit Risk	• Risk in counterparty disputes over margining especially in the OTC uncleared space since many legacy derivative contracts are exempt from certain requirements laid out in derivatives clearing legislation. • Given the number of different relationships that a firm may have with the same client, on balance and off-balance sheet, a coordinated approach will be needed to address the challenges. • The ability to pass on increased funding costs in times of stress through the embedded credit premium in LIBOR.	
Regulatory Risk	• Impact on other IBORS, e.g. From January 2020, firms will no longer be able to use	

	EONIA or EURIBOR for new contracts in accordance with the European Benchmarks Regulation. (EU BMR). It is still uncertain as to whether they can use these benchmarks for Legacy trades • When the UK leaves on the 31st October from the EU, LIBOR will no longer be authorized under the EU BMR under a no deal arrangement with EU. Supervised EU entities could be prohibited from using LIBOR. • Increased scrutiny by the Regulators over timelines and plans together with Board engagement. Possible sanctions if the firms have failed to act in the best interests of their customers or managed risk ineffectively. • Impact on wider rules, margin requirements and the Fundamental Review of the Trading Book	
Strategic Risk	• LIBOR transition will affect a firm' product mix, the behavior of its balance sheet, the economics of the underlying business and its competitive position in the market	

7. Existing FALLBACK Provisions

Product Type	Fallback Provisions
Derivatives	Under the 2006 ISDA Definitions, if the specified rate source for USD LIBOR is not available, the calculation agent will request quotes from four banks in the London interbank market. If less than two quotes are given, the calculation agent will solicit quotes from major New York-based banks. The rate will be the arithmetic mean of the quotes given.
Mortgages and Consumer Loans	For mortgages, the mortgagee typically has ultimate authority to name a successor rate. Consumer loans are more varied but provide similar flexibility to the lender.
Floating Rate Notes	Calculation agent appointed under the documentation must first poll a sample of banks for a fallback rate (first the European banks, and if no quotes are available, followed by the US banks). If quotes are not received, the note will convert to fixed rate at the last published value of LIBOR. Most FRNs require unanimous consent of the noteholders to adjust these terms.
Securitization	Fallback provisions typically require a poll of banks for a fallback rate. If quotes are not received, then security will convert to fixed rate at the last published value of LIBOR or the prime rate.
Agency Mortgage Backed Securities	Agencies have the contractual right to name a successor rate.
Commercial Backed Securities	he CMBS can revert to the prime rate, but this could present basis risk. Changes to the reference rate require unanimous consent from investors.

Collateralized Loan Obligations	CLO indentures are a particularly difficult set of contracts to amend as many such indentures require 100% vote of each class and majority of equity holders.
Corporate Loans **Bilateral Loans**	Bilateral loans have the flexibility to be renegotiated by the borrower and the lender to include fallback provisions in case of permanent discontinuation of LIBOR.
Syndicated Loans	Syndicated loans typically require unanimous lender consent to amend their RATS (rate, amortization, term, and security/collateral) terms. However, syndicated loans are amended frequently, and they are expected to have an easier transition than CLOs to the RFR.

John Thackeray is the founder and CEO of Risk Smart Inc. Over his long career, he has held many risk positions, including CRO posts where he interacted and engaged with US and European regulators. He frequently contributes articles on his risk insights to the Financial Executives Networking Group (FENG).