



Mindtree

A Larsen & Toubro Group Company

Making The Jump

*A Mindtree Point of View for
Banking and Financial Institutions
on handling the transition
from LIBOR*








Context

The London Interbank Offered Rate (LIBOR) has been the de facto standard reference rate in global financial markets for decades; with a notional value of over £294 trillion globally in contracts, it is called the “world’s most important Interbank offered rate”.

After a series of allegations came to light in 2012 about the manipulation of LIBOR by some market entities, numerous penalties were levied and the Wheatley Review was commissioned by the UK government to investigate the situation and provide their recommendations. In 2017 the Financial Conduct Authority (FCA) examined the future of LIBOR and instituted regulations to replace LIBOR with an alternative Risk-Free rate. Following this Central Banks and Regulatory Authorities communicated that they will no longer require Financial Institutions (FIs) to use LIBOR beyond 2021. As a result of this Derivatives, Bonds, Mortgages, Loans, Mutual Funds, Securities, Underwriting, Deposit Advances, and Pension Funds have contracts that need to be transitioned to Alternative Reference Rates (ARRs).

Let’s have a quick look into the possible Alternative Reference Rates/Risk Free Rates (ARR) that can be used here, and the timelines for transitioning away from LIBOR.

	Current Benchmark	Alternative Risk-Free Rates		
Jurisdiction	Benchmark IR	Alternative RFR	Administrator	Overnight rate
 European Union	EURIBOR/ EONIA	€STR <i>(Euro Short Term Rate)</i>	European Central Bank <i>(ECB) (Working Group on Risk-Free Reference Rates for the Euro Area)</i>	Yes
 United Kingdom	GBP LIBOR	SONIA <i>(Sterling Overnight Index Average)</i>	Bank of England <i>(Working Group on Sterling Risk-Free Reference Rates)</i>	Yes
 United States	USD LIBOR	SOFR <i>(Secured Overnight Financing Rate)</i>	Federal Reserve Bank of New York (FRBNY) <i>(Alternative Reference Rates Committee)</i>	Yes
 Switzerland	CHF LIBOR	SARON <i>(Swiss Average Rate Overnight)</i>	Swiss National bank (SNB) and SIX Swiss Exchange <i>(The National WorkingGroup on CHF Reference Rates)</i>	Yes
 Japan	JPY LIBOR	TONAR <i>(Tokyo Overnight Average Rate)</i>	Bank of Japan <i>(Study Group on Risk-Free Reference Rates)</i>	Yes

LIBOR Replacement – Key Timelines:

Key Dates	LIBOR Transition Milestone
Sep 2012	Wheatley review of LIBOR
Jun 2014	FSB Benchmarks Report initiating changes
Dec 2016	TONA selected as AFR for LIBOR-JPY
Jul 2017	FCA Andrew Bailey announced LIBOR replacement
Dec 2017	SARON selected as AFR LIBOR-CHF
Feb 2018	IISDA Roadmap released
Apr 2018	SOFR launched as AFR by US Fed reserve for LIBOR-USD
Apr 2018	SONIA launched as AFR by Bank of England for LIBOR-GBP
Oct 2019	€STR AFR by ECB for LIBOR-EUR
Dec 2021	FCA stops LIBOR Support

A summary of key product classes and the notional values of contracts using ARFRs after 2021:

Benchmark Currency	Products	Product examples	Notional value after 2021	Market participants
<ul style="list-style-type: none"> ■ GBP LIBOR ■ USD LIBOR ■ EURO LIBOR, EURIBOR ■ CHF LIBOR ■ JPY LIBOR, JPY TIBOR, EUROYEN TIBOR 	<ul style="list-style-type: none"> ■ Over-the-Counter (OTC) derivatives 	<ul style="list-style-type: none"> ■ Interest rate swaps, Forward Rate Agreements (FRAs), ■ cross-currency swaps 	<ul style="list-style-type: none"> ■ £22 Tn ■ £1.5 Tn 	<ul style="list-style-type: none"> ■ Central Counterparties (CCPs) ■ Exchanges ■ Government Sponsored Enterprise (GSE) ■ Investment banks ■ Commercial banks ■ Asset Managers ■ Pension funds ■ Hedge funds ■ Regulated funds ■ Corporations, Banks
	<ul style="list-style-type: none"> ■ Exchange-Traded Derivatives (ETDs) 	<ul style="list-style-type: none"> ■ Interest rate options, Interest rate futures 	<ul style="list-style-type: none"> ■ £876 Bn 	
	<ul style="list-style-type: none"> ■ Loans 	<ul style="list-style-type: none"> ■ Syndicated loans, business loans, mortgages, credit cards, auto loans, consumer loans, student loans 	<ul style="list-style-type: none"> ■ £179 Bn 	
	<ul style="list-style-type: none"> ■ Bonds And Floating Rate notes (FRNs) 	<ul style="list-style-type: none"> ■ Corporate and non-US government bonds, agency notes, trade finance, FRNs, covered bonds, capital securities, 	<ul style="list-style-type: none"> ■ £229 Bn 	
	<ul style="list-style-type: none"> ■ Short-term Instruments 	<ul style="list-style-type: none"> ■ Repos, reverse repos, time deposits, Credit Default Swaps (CDS), commercial paper 		
	<ul style="list-style-type: none"> ■ Securitized Products 	<ul style="list-style-type: none"> ■ Mortgage-backed Securities (MBS), ■ Asset-backed Securities (ABS), ■ Commercial Mortgage-backed Securities (CMBS), ■ Collateralized Loan Obligation (CLO), ■ Collateralized Mortgage Obligation (CMO) 	<ul style="list-style-type: none"> ■ £411 Bn ■ £71 Bn ■ £235 Bn 	



Transition Planning

Individual financial institutions are expected to spend anywhere between £40 to £80 million every year for the next two years across the following activities to transition out of LIBOR:

- Assessment of current exposure to LIBOR
- Creation of new products based on new rates
- Creation of new legal documents/contract amendments for existing contracts which will go beyond 2021
- Identification of internal and external IT dependencies
- Adjustment of data management (historical data)
- Process adjustments

There will be major impacts in data management where new ARFRs create multiple challenges for Data sourcing, Modelling, and Distribution. Change impact from sourcing feeds collected from Market Data vendors will lead to modification of Data Modelling in the EDM platform, as well as downstream Data Distribution.

How Mindtree helps drive your LIBOR transition

The transition of LIBOR to a new benchmark rate is a complex task whose impact varies across Financial Institutions, and the implementation of new ARFRs to replace LIBOR will be different for each FI due to Product exposure. We bring a combination of industry expertise, robust program management, governance processes, and AI-driven solutions to deliver effective transitions for the industry.

Our transition roadmap covers the following key steps:

1. Risk and Impact Analysis covering Trading, Liquidity, Pricing, Risk valuation, Tax, Accounting, Legal Businesses, and Affiliated Technology Operations, across all lines of business and geographies
2. Setting up centralized governance and program management structures and processes
3. Identifying the right stakeholders required to conduct the assessment, set methodology, impact analysis and identifying the next steps from each business function

We then work with business owners to design a 4-phase LIBOR transition roadmap:



Initial and Exposure Assessment

Mindtree will conduct an Initial Assessment in 5 stages:

- a) **Product identification:** Identify all products and underlying products/instruments influenced by changes. Call out products that need to be transitioned to new rates or products that are maturing before 2021
- b) **Legal Documentation:** Determine all existing and new contracts which will be impacted by LIBOR transition
- c) **Client/Counterparties:** List counterparties and clients impacted with LIBOR changes, and communicate the actual accrual changes
- d) **Risk Analysis and Valuation:** Identify the contract term structure on who will be impacted with the new Alternative RFR, risk and valuation models that require changes
- e) **Business Process and application changes:** Listing key business processes affected along with the affiliated application that covers Trading, Pricing, Liquidity, Finance, Tax, Accounting, Treasury, Risk, and other functions

Scoping and Program plan

- a) Design the strategic program plan to remediate the LIBOR replacement-taking product, underlying product, counterparty/clients, legal contracts and business process and application migration

Transition planning and implementation

- a) Analyze the products, contracts, client/counterparty, regulatory business process, and system remediation requirements
- b) Redesign the business workflow and aligned application. Recalibrate Valuations, Forecasting, and Scenario models
- c) Use intelligent solutions such as AI/ML led by NLP model to read, identify, report, and revise the contracts, and capture the appropriate Alternate Risk Free rates in the application
- d) Effective counterparty/client outreach throughout contract lifecycle with bulk mail automation mechanism
- e) Data Management Changes in enterprise data management platform, modelling approach, and third-party data integrations to align with the rates replacements
- f) Testing support covering both system and user acceptance and building workflow to monitor new Alternate RFR rates impact

Readiness and Post Go-live managed services

- a) The operations team will provide post implementation/ go-live services including process automation, remediation tasks, and process excellence
- b) Capacity planning, continuous maintenance support



Mindtree's Artificial Intelligence-driven Solution for LIBOR Transition, powered by Capital Quant

Mindtree has partnered with the leading FinTech provider Capital Quant to provide Cognitive Automation Solutions for LIBOR transition programmes - the core of this is the FinStinct Machine Learning and NLP based solution. Agreement documents are uploaded into the platform and digitized, ML and NLP based models are used to identify and extract the key terms from the contract. The system also identifies whether a contract needs to be re-papered, and finally it provides a workflow to take the agreement from Extraction → Validation → Generation of amendments.

The FinStinct platform automates the following:

1. Identifying all contracts for potential references to LIBOR
2. Extraction of key terms from the existing LIBOR contracts
3. Identifying the new terms to be included based on the product category
4. Identifying the fallback provisions
5. Building contract amendments
6. Trade rate reset and validation across all related documents



Challenges

- **High Volume processing**
- All potential contracts impacted by LIBOR replacement must be renewed
- **Contracts:** ISDA Masters/Credit Support Annexure, Confirms, Loans, Leases, Credit Agreements, Repos Agreements
- **Complex Analysis:** Access, identify and extract New Alternative Risk free rate replaced with legacy LIBOR



Solution

Mindtree AI Solution Allows Banks & Financial Institutions to

- On-board Automated NLP based processing engine that reads contracts/agreements with reference rates and extracts the relevant text in structured formats
- Floating rate contracts/agreements including derivatives confirms, commercial loans, repurchase agreements, retail loans, etc.
- Interpret, determine and backup Rules to prioritize challenging and non-standard contracts/agreements
- Access and identify Rates tied to other indices like SOFR, SONIA, TONAR



Benefits

- Efficient processing of Contracts and Agreements
- Results oriented solution
- Solution identifies and processes relevant announcements resulting in elimination of need for human intelligence and effort

Conclusion

The transition away from LIBOR, a global standard for decades, is a transformational initiative for Financial Institutions across the board. Our view is that the time is now, for FIs to start their assessment and the transition journey, to ensure that this change is executed smoothly. We can help you assess, plan, and execute this transition seamlessly and with minimal disruption to business operations.

About Mindtree

Mindtree [NSE: MINDTREE] is a global technology consulting and services company, helping enterprises marry scale with agility to achieve competitive advantage. "Born digital," in 1999 and now a Larsen & Toubro Group Company, Mindtree applies its deep domain knowledge to 290+ enterprise client engagements to break down silos, make sense of digital complexity, and bring new initiatives to market faster. We enable IT to move at the speed of business, leveraging emerging technologies and the efficiencies of continuous delivery to spur business innovation. Operating in more than 15 countries across the world, we're consistently regarded as one of the best places to work, embodied every day by our winning culture made up of over 21,000 entrepreneurial, collaborative and dedicated "Mindtree Minds".