THE LIBOR TRANSITION: A STRATEGIC APPROACH

In collaboration with

IBSintelligence

TABLE OF CONTENTS

01

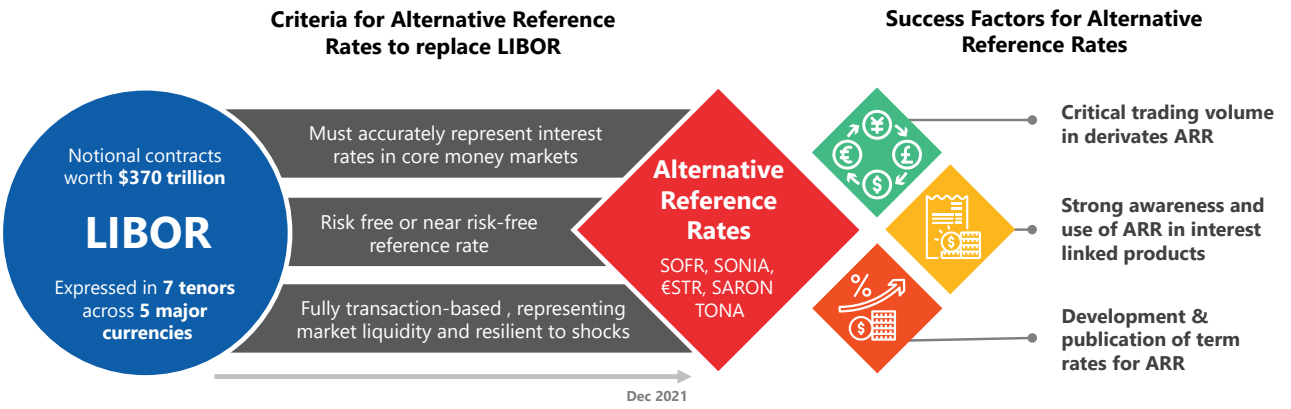
THE LIBOR TRANSITION– BACKGROUND

How does one change the underlying reference interest rate for around US$370 trillion worth of notional values in loans, bonds and derivatives which are distributed across global markets? That's the task at hand for all banks, financial institutions, regulators and central banks around the world ever since the LIBOR (London Interbank Offered Rate) scandal emerged in 2012 and the subsequent decision made in 2017 by the UK FCA to cease publishing LIBOR rates after 2021.

The LIBOR, run by the British Bankers Association, has been one of the most widely referenced rates globally. It is currently produced in seven tenors (overnight/spot next, one week, one month, two months, three months, six months and 12 months) across five currencies. Based on submissions provided by a panel of 20 banks, these submissions were intended to reflect the short-term interest rate at which banks could borrow money on unsecured terms in wholesale markets.

Over the years, the actual underlying interbank lending transactions reduced significantly, especially after the 2008 financial crisis, when banks began to prefer long-term funding. With the decline in overnight borrowing transactions, banks became more and more reliant on their submissions for LIBOR rates from algorithm-based estimates with insufficient underlying transactions.

The disparity between the underlying transactions and the quoted rates got to a point where less than $500 million in actual transactions were representing the LIBOR rate. This led to an opportunistic environment where some banks resorted to manipulating the rates and understating it for their own benefits, thus leading to the situation at hand.



TRENDS IN TRANSITION TO ARR FOR KEY MARKETS

While the LIBOR is a global benchmark, it is most extensively used in the US market with the notional value of LIBOR referenced contracts pegged at around $200 trillion. Of the total financial contracts referencing US LIBOR, around 96% are OTC and exchange-traded derivatives. Almost 82% of the total US LIBOR referenced financial contracts are likely to expire by 2021, leaving financial institutions to manage the transition of the remaining $36 trillion in contracts.

The adoption of the ARR for the US market, SOFR (Secured Overnight Financing Rate), is making good progress. The ARRC (Alternative Reference Rates Committee) is working to build adjustable-rate mortgages based on SOFR. In addition, the Fed has announced that it plans to publish 30, 90 and 180-day compound averages of SOFR in the first half of 2020 along with a "SOFR Index" that would allow market participants to calculate compounded SOFR rates over any period.

In the UK, most new floating rate debt issuances now refer to SONIA rather than Sterling LIBOR and trading volumes in SONIA OIS are now broadly equal to trading in Sterling LIBOR swaps. The SONIA loan market is also beginning to develop.

LIBOR Area	Exposure	Alternative Reference Rate	Secured / Unsecured
USA	$200 trillion	SOFR (Secured Overnight Financing Rate)	Secured
UK	$30 trillion	SONIA (Sterling Overnight Index Average)	Unsecured
Switzerland	$5 trillion	SARON (Swiss Average Rate Overnight)	Secured
Euro Area	$2 trillion	€STR (Euro Short-Term Rate)	Unsecured
Japan	$30 trillion	TONA (Tokyo Overnight Average Rate)	Unsecured

Source: International Monetary Fund Report

In Europe, compared to EUR LIBOR, market usage is higher for the other interbank overnight benchmarks - EURIBOR and EONIA. The recommended ARR for all three is the Euro Short Term rate, €STR. However, until term rates for €STR are developed to replace EURIBOR, the latter has been reformed to meet the benchmark regulation requirements. EONIA is now being computed each day as the €STR plus a spread of 8.5 basis points until EONIA's discontinuation on 3 January 2022.

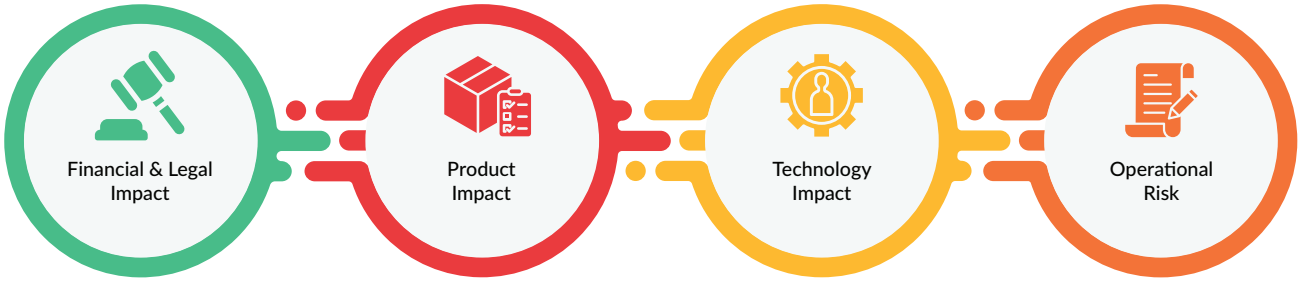
The Australian market has adopted a multiple-rate approach and is maintaining its LIBOR equivalent, BBSW (Bank Bill Swap Rate), as the credit-based benchmark for the Australian dollar alongside the replacement rate called Cash Rate. However, as market participants transition from referencing LIBOR to ARRs, there may be some corresponding migration away from BBSW towards the Cash Rate.

In Asia, the biggest market with exposure to LIBOR is Japan. Similar to Australia, the benchmarks committee in Japan is following a multiple-rate approach, promoting the use of the uncollateralized overnight call rate (TONA) as the identified JPY RFR. At the same time, the reformed TIBOR (Tokyo Interbank Rate) will continue to be used. Japan will aim to start releasing rates for the new benchmark that will replace the LIBOR by mid-2021.

Another key market in Asia is Singapore, however, here the Singapore Dollar (SGD) derivatives do not reference the SIBOR (Singapore Interbank Rate) but reference the SOR (SGD Swap Offer Rate) which is computed from actual transactions in the USD/SGD FX swap market and utilizes USD LIBOR as an input. The benchmarks committee has identified SORA (Singapore Overnight Rate Average) as the most suitable and robust alternative benchmark to SOR. Going forward, derivatives will transition to using SORA, while a multiple-rate approach will be adopted for cash markets.

03

IMPACT OF LIBOR TRANSITION ON BANKS AND FINANCIAL INSTITUTIONS



The transition from LIBOR rates to alternative rates is expected to have a multifold impact on banks and financial institutions. The impact can be broadly grouped into four primary areas.

Financial & legal impact due to outstanding contracts

For any commercial bank or financial institution on the buy or sell-side, the first most natural financial impact will be on the contracts that depend on LIBOR rates in any of the five currencies. All derivatives and cash products will need to be assessed for direct and indirect exposure to LIBOR as a benchmark. This could potentially run into several hundred billion dollars in notional values for many financial institutions. Where the maturity of the contracts goes beyond 2021 (as true for a significant percentage of contracts), arrangements must be made to remediate the contracts well in time to avoid the effects of both - dissipating confidence on the benchmark and the contractual risk towards the end date.

For contracts with adequate fallback language available (i.e. to state what should be done in case LIBOR rates are unavailable), this will be relatively simple so that any residual changes are ascertained and agreed to quickly with client and counterparties. Contracts without any fallback language must be negotiated to either extend with new terms and conditions based on alternative benchmarks or be terminated amicably to avoid any undue 'winner' and 'loser' situation for the clients or counterparties involved (and thus avoiding financial risk or legal risk).

Optionality in contracts will be an added consideration to prioritize remediation of contracts, as it will add to the uncertainty of contingent claims around the time of discontinuation of LIBOR and hence must be factored in as well. For buy-side institutions, in addition to contracts for longer-term hedging or investment purposes, the primary impact will be on the use of LIBOR rates either as a performance benchmark or as an analytic benchmark and will mean significant changes. Such impact will also have to be assessed for investor disclosures and reporting, financial statements and regulatory disclosures, in addition to all internal documentation on associated operational processes and standards.

Product impact

The second area of impact would be market-readiness for new financial products. From the standpoint of clients and counterparties, it may well be the same products continuing with an altered benchmark and associated terms and conditions. But from a business systems standpoint, it would practically be a new product in many of the cases. This will require developing new products as well as modifying existing ones.

Several benchmarks may exist to design new products for markets that are yet to catch up, but the key would be liquidity and market confidence. The move to risk-free rates may be inevitable, even in the presence of credit-based benchmarks (as in the case with BBSW in Australia). It would be prudent that new products be made operational well in advance and should have co-existed with LIBOR-based ones before the latter are phased out completely.

Communication and negotiation with customers and counterparties even for new products will be a very critical piece in the program. Getting agreements as per a clear plan to ensure that there are no impediments to business-as-usual would be in order, even more so to maintain reputation. An added consideration in developing new

products would be the contracts on older products that get rolled over with time, so that the same is factored in for adequate time of replacement with the new product.

Technology impact

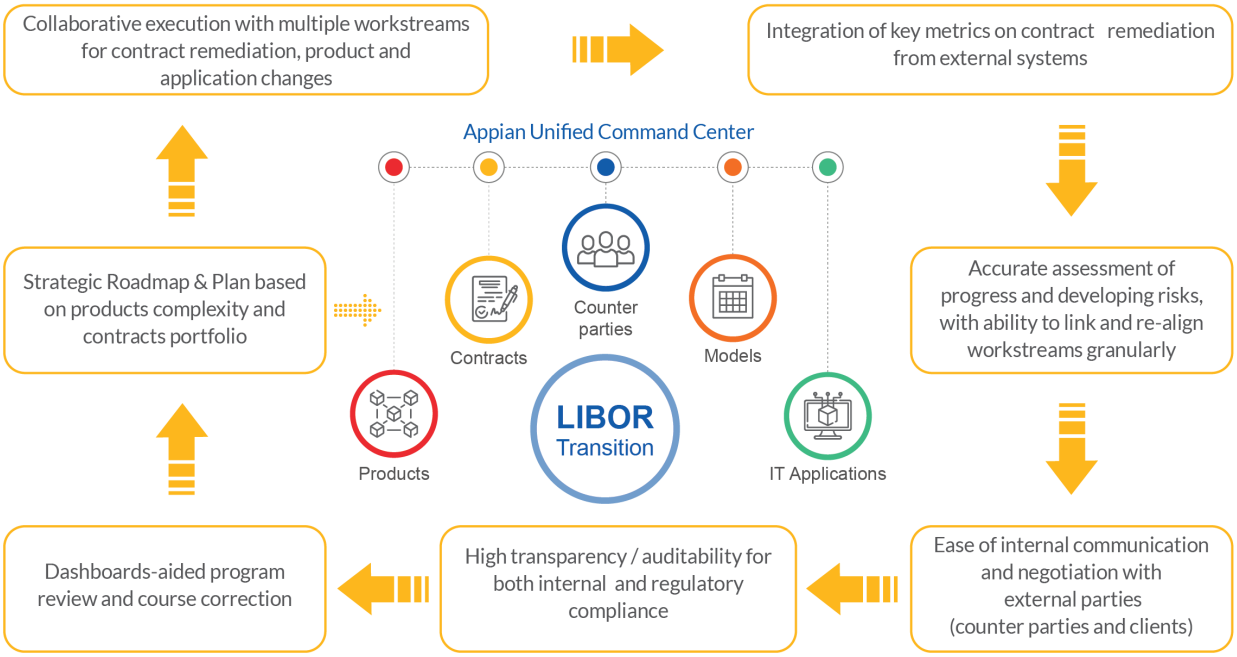
The third area of impact will be in IT application changes spanning all business processes from front to middle to back office. This is perhaps the most difficult piece to assess. All aspects including external data integrations, system integrations, historical data, data transformations, risk modelling and reporting must be considered in addition to functional code changes. Major technology or infrastructure revamps should not be required; however, the impact will invariably be across business systems catering to different markets and geographies and hence complex. In case of home-grown applications that have undergone customizations for several years, impact analysis will be increasingly complex, particularly where standards relating to business taxonomy, documentation and code changes may not have been followed rigorously. In case of vendor software (COTS or commercial-off-the-shelf software), impact analysis will require due expertise of the vendor for both the software provided by them and to trace it further down to other systems integrated with same.

Operational risk of transition

A resultant set of the above individual areas is the operational risk of transition itself, which can be significant and snowball to higher proportions, if not planned for adequately. All the areas are strongly interlinked. So, if existing products are to be modified or new ones launched through the standard operational processes, they cannot be seen independent of all other application change projects required to be executed. Likewise, contract remediation activities will invariably overlap with existing systems and any use of automation technologies (and consequent integration) to recommend or effect changes in financial contracts, will also need to ensure that existing risk in the other two impact areas (application changes and product modifications) isn't aggravated further.

04

KEY CHALLENGES AND STRATEGIC CONSIDERATIONS FOR THE TRANSITION



For banks and financial institutions to be able to manage the LIBOR transition successfully, it is important to understand the challenges and pitfalls associated with the transition and plan strategically in order to avoid them.

Remediating contracts: Going for the imminent risks first

To begin with, assessing the financial impact of LIBOR transaction can be a daunting task which will require accurately quantifying the contract exposures at various levels, such as business line, product, region and legal entity (client or counterparty). This requires banks and financial institutions to have a complete inventory of existing contracts, supporting documentation, contractual triggers, terms and conditions, and presence of any fallback clauses. However, approaching the remediation cannot be a ready-fire-aim approach. Planning for the remediation will require an effective and firm roadmap, which driven largely by the product line. Internal expertise of the organization on financial products will need to be strongly channelized. If required, external experts should be made available. Addressing these contract changes manually would be a behemoth task, especially for larger banks and financial institutions. While banks and financial institutions use reporting tools to capture contract-related data, typically almost 80% of the information remains unstructured and left locked up in documents rather than extracted into easily searchable metadata.

Automation will be a critical lever for large institutions for the assessment of underlying documentation in case of complex structured products and to recommend changes, which designated teams can take to completion faster. Text analytics, Machine Learning and Natural Language Processing (NLP) technologies will be key here in analyzing, recommending and even effecting changes required, not to mention the cost savings that they will bring for large scale remediation. It will also help ensure that the organization does not have to rely too strongly on its own subject matter experts on financial products and help reduce the burden on the legal function as well.

In addition, an accurate communication plan must be drawn up to ensure all stakeholders in contracts are part of the process continually. This includes carrying out negotiations where remediation isn't straightforward and assumes higher importance in case of multiple parties involved such as in

syndicated loans or other multi-lateral contracts, where risks are higher.

Product modification and new products operationalization

Existing financial products dependent on LIBOR rates will not stay usable in their current form. Whether it is a modification to existing products or any new product design (based on the chosen alternative reference rates), operationalizing products must happen largely alongside contract remediation. The roadmap to LIBOR transition must factor in the timelines for launching new products alongside contract remediation.

Hence, it could be expected that there will be a phase where LIBOR based contracts will continue to be issued (and will continue to fall under the remediation workstream based on the expiration date, optionality etc.) until alternative rate-based products replace the same entirely in a phased manner. This should also allow creating the right confidence and the necessary depth in the markets for the new products, as is being seen with the SOFR.

A critical part of the strategy for product modification or creation of new products would be the communication plan within the organization as well as that with clients and counterparties. All operational and financial implications must be communicated to gain their confidence before launching modified or new products. For COTS (commercial-off-the-shelf) product processor systems, the COTS software vendors must be an integral part of the transition program and take adequate ownership of changes in their systems as they would be most conversant with the functional aspects.

IT application changes

The first challenge here will be the impact analysis across IT applications and ascertaining interdependencies. Implementing all the changes in operational processes (almost all of which would be embedded in IT systems and therefore will entail application changes) is a complex process and prone to complexities if not done holistically across the organization. Legacy homegrown systems will add to this complexity due to all the customizations over time.

Further, the complexity will vary widely based on the nature of the core functions and inherent processes of the financial institutions. Thus, the challenges for lenders (commercial & retail) will be significantly different when compared to buy-side firms (Asset & Fund Management), sell-side firms (brokerage & market makers) or firms acting as issuers and underwriters. Impact analysis itself should be made comprehensive with the use of automation tools (such as for code and process analysis).

Similarly, planning for application changes should ensure prioritization and grouping of projects based on end-to-end business scenarios for different product lines and particular product types, rather than a piecemeal approach for each application. For a transition of this complexity, revisiting assumptions regularly will help reduce project execution risks.

Managing operational risk of the transition

Lastly, overall program management of the transition will not be straightforward but will have to be a well-balanced act between all the workstreams – contract remediation, products modification and application changes, as well as all internal and external stakeholders. It is recommended to have a unified approach centered on workflow capabilities that stitches together the entire planning, collaborative execution, communication (internal and external) and risk management.

End-to-end business scenarios must be assessed for all the workstreams together, where the business processes move through multiple applications and departments, rather than addressing changes at the level of business applications, products or departments alone. The added complexity in program-managing the whole exercise will be rapidly instituting adequate mechanisms of communication internally as well as with clients and counterparties for contracts remediation. Beyond minimizing legal and counterparty risk through appropriate risk governance, risk control must also include oversight for internal misconduct, to prevent ways of 'gaming' the system and even consequent regulatory risk, by ensuring that clients availing LIBOR products are treated fairly. Adequate auditability needs to be built in as a deterrent on all actions taken as part of the workstream activities.

HEXAWARE'S LIBOR TRANSITION OFFERING

Hexaware has the right set of capabilities to enable banks and financial institutions in transitioning to an alternative rates regime. We have partnered with entities that bring very relevant expertise to address the LIBOR transition challenge. On the one hand, we have expert business consultants to drive the overall financial and operational impact assessment and derive a strategic roadmap for a risk-mitigated transition. On the other, we have specialist technology partners who help embed automation for strategic advantage in analysis and remediation of complex contracts. In addition, our application transformation capabilities, technology tools and frameworks for applications impact analysis help synergize the above business expertise and automation capabilities. We hold the experience of carrying out the transition at one large financial institution in the US where we have enabled implementing alternative rate based products. We are now helping remediate impacted financial contracts and carry out application modifications necessary to cater to these alternative rates.

Our BPM-based UCC (Unified Command Center) solution helps tie together the entire transition into a "one-stop-shop" platform, complete with aspects of transition governance, progress tracking, escalation, client communication and negotiation. Our strategy of approaching this complex transition with end-to-end scenarios helps not only streamline the whole transition process by integrating multiple workstreams but also provides the necessary risk governance mechanism to highlight and address the operational risk that comes with the regulatory transition of this scale and nature. This becomes more pertinent since the impact practically spans across all the departments of the financial institution and is also strongly affected by external stakeholder considerations.

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ABOUT HEXAWARE

Hexaware is the fastest growing next-generation provider of IT, BPO and consulting services. Our focus lies on taking a leadership position in helping our clients attain customer intimacy as their competitive advantage. Our digital offerings have helped our clients achieve operational excellence and customer delight by 'Powering Man Machine Collaboration.' We are now on a journey of metamorphosing the experiences of our customer's customers by leveraging our industry leading delivery and execution model, built around the strategy— 'AUTOMATE EVERYTHING™, CLOUDIFY EVERYTHING™, TRANSFORM CUSTOMER EXPERIENCES™.'

We serve customers in Banking, Financial Services, Capital Markets, Healthcare, Insurance, Manufacturing, Retail, Education, Telecom, Hi-Tech and Professional Services (Tax, Audit, Accounting and Legal), Travel, Transportation and Logistics. We deliver highly evolved services in Rapid Application prototyping, development and deployment; Build, Migrate and Run cloud solutions; Automation-based Application support; Enterprise Solutions for digitizing the back-office; Customer Experience Transformation; Business Intelligence & Analytics; Digital Assurance (Testing); Infrastructure Management Services; and Business Process Services.

Hexaware services customers in over two dozen languages, from every major time zone and every major regulatory zone. Our goal is to be the first IT services company in the world to have a 50% digital workforce.

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