FAREWELL IBOR

AND WHERE BANKS SHOULD NOW PLACE THEIR FOCUS

The financial world is coming to the end of the Interbank Offered Rates era. Currently, Interbank Offered Rates (IBOR) are based on submissions by participating banks. These are the rates at which the banks can obtain short-term unsecured loans in the interbank market. In the wake of the financial crisis, the regulatory requirements for liquidity and funding risk management and their impact on banks' funding profiles led banks to lean more towards secured than unsecured sources of funding. The banks also had to respond to various regulatory actions pertaining to their IBOR submission practices.

As a result, the volume of unsecured interbank term lending decreased significantly over the years. There is no longer sufficient activity in the unsecured interbank lending market to derive and reference a reasonable market-based, risk-free IBOR that can then be applied to both secured and unsecured products. This creates a dilemma for banks and regulators, as IBOR submissions reference transactions in a market that is not necessarily liquid. The London Interbank Offered Rate (LIBOR) is used as the reference rate for millions of contracts (which are worth more than $350 trillion)[1] in a broad range of products including retail banking loans, deposits, and over-the-counter (OTC)- and exchange-traded derivatives, but the market underlying the reference rate sees very few transactions. The result has been a complicated submission process to maintain confidence and help avoid misconduct.

The regulatory and market response to this challenge has been to explore and push for IBOR alternatives. The British Financial Conduct Authority announced that banks would no longer have to follow and adhere to LIBOR conventions after 2021.[2] However, banks may continue to submit quotes for LIBOR (or some types of LIBOR) in the absence of suitable alternatives.[3]

Secured borrowing rates are the front-runner to replace IBOR rates, as the secured borrowing market has become the key market for interbank liquidity transactions.[4] Global industry working groups have been established to identify and develop alternatives for the major currencies and to discuss considerations for the transition period.[5]

The consultation across the industry is expected to continue, and we believe that, over time, a consensus between regulators and the market should emerge on the most appropriate replacement to IBOR. It may be premature to speculate on the specific impact of the transition to the alternative IBOR, but in this document we will be looking at steps banks can take now and the factors that may affect their approach to a significant and complex change initiative.

GLOBAL OVERVIEW

For U.S. dollar-denominated markets, LIBOR is likely to be replaced by the Secured Overnight Financing Rate (SOFR) which is based on the cost of overnight loans secured with U.S. government debt.[6] This repo market is the largest source of dollar funding, and SOFR, which broadly represents the cost of funding, is viewed as a market-transaction-priced reference rate.[7]

EURIBOR (Euro Interbank Offered Rate) is the favored unsecured interbank offered rate for Euro transactions. And though the definition and methodology may differ, it is very similar to LIBOR in that it is based on submissions on the part of panel banks of fictitious transactions rather than actual transactions.

In 2018 the European Union Benchmark Regulation (EU BMR) came into force with a transition period until January 2020. This regulation places additional obligations on administrators and contributors with regards to the governance structures preventing conflicts of interest, robust procedures and ongoing control of record-keeping, auditing, and overseeing the quality of input data.[8] The demands are widely viewed to be achievable only with reference rates based on actual transactions.

FIGURE 1: LIBOR FOOTPRINT BY CURRENCY

ASSET CLASS	USD-LIBOR Volume Outstanding (2016) in $bn[1]	USD-LIBOR Volume Outstanding (2014) in $bn[1]	EURIBOR Volume Outstanding in $bn[1]	GBP-LIBOR Volume Outstanding in $bn[1]	CHF-LIBOR Volume Outstanding in $bn[1]	JPY-LIBOR Volume Outstanding in $bn[1]
Loans	4,700	8,371	5,594	674	182	128
Bonds	1,800	1,235	2,440	432	24	3
Securitization	1,800	2,556	1,367	536		1
OTC Derivatives	145,000	111,245	147,819	28,821	6,038	607
ETD[2]	45,000	30,272	17,344	3,449	200	44
TOTAL	**198,300**	**153,679**	**174,564**	**39,912**	**6,444**	**783**

[1] Table shows total volume outstanding in $bn as of 2014 (2016). Horizontal bars indicate percentage of assets with 'maturities' beyond 2021.

[2] Exchange-Traded Derivatives

Sources: Final Report on reforming interest rate benchmarks by market participants group (2014) and ARCC Second Report (2018)

As a result, reform proposals and alternatives for EURIBOR are being assessed. However, the transaction-based EONIA (Euro Overnight Index Average), the natural fallback candidate to EURIBOR, will likely not be chosen. EMMI (EONIA's administrator) have already stated that they will not take any steps to reform EONIA as it is viewed as not representative due to a decrease in the value of underlying transactions and the number of panel banks, which come from fewer eurozone countries.[9]

In September 2018, ESTER was recommended as the EONIA replacement, putting it also first in line as the EURIBOR successor in case reform efforts fail. ESTER reflects the wholesale Euro unsecured overnight borrowing costs for Euro-based banks and transactions are to be reported by institutions in accordance with the ECB's money market statistical reporting (MMSR). The ECB intends to start publishing ESTER by October 2019 (at the latest) and is preparing a pre-ESTER to facilitate adoption.[10]

In Switzerland, LIBOR is expected to be succeeded by the Swiss Average Rate Overnight (SARON), which is a repo-based and secured overnight rate established to replace the Tomorrow/Next Overnight Indexed Swaps (TOIS).[11] Replacements for British pound sterling (GBP) and Japanese yen (JPY) LIBOR are expected to be the Sterling Overnight Index Average Rate (SONIA) and the Tokyo Overnight Average Rate (TONAR), which are unsecured overnight rates.[12]

WHAT SHOULD BANKS FOCUS ON?

The move away from key reference rates to successor rates poses major challenges for financial institutions. For example, the term structure of the proposed alternatives and the credit risk component remain key areas of industry-wide discussion. The management of such challenges is closely linked to—and dependent upon—the set-up of a well-structured change project.

Such a project may include:

- Prioritizing the analysis of relevant business areas' needs to allow banks to voice and discuss their views in industry and regulatory forums;
- Understanding the change footprint (ranging from basic to highly complex) and sizing the level of investment that banks would need to commit; and
- Bringing in the right expertise at the right time, making sure that schedules are met while keeping the transition from becoming overcomplicated.

One possible approach is an outside-in view whereby banks start with assessing the business and legal risks to which they are exposed—even identifying any opportunities for early movers as part of the phase-out process—before turning inwards and attempting to understand how internal processes, calculations and models are affected.

THE OUTSIDE VIEW

BUSINESS AND LEGAL CONSIDERATIONS

The discontinuation of an existing reference rate and the transition to a new one comes with risks and may result in an undesired termination and lost business for the bank, or even litigation in extreme cases. For example, a counterparty can use the IBOR transition to lock in favorable interest rates when the contract stipulates that the last published LIBOR rate is to be used if no update is otherwise available on any given day.

The analysis of such contractual provisions and potential scenarios should include not only the bank's own contracts but also the client contracts, especially in cases where the bank provides fiduciary and investment advisory services.

COMMUNICATION AND CONSENSUS BUILDING

Banks, and all stakeholders involved in the IBOR transition are encouraged to develop a solid understanding of the business impacts of the latest market trends to effectively voice their concerns and requirements but also to secure a seat at the table – that is, to have a say in the speed and direction of the changes occurring throughout the industry.

Communication efforts should involve clients, investors and employees alike and consider the negative publicity on LIBOR reference rates in recent years. Equally, clear communication with clients based on thorough analysis of the business and legal risks may offer competitive advantages in attracting new clients.

Industry forums offer a good opportunity to contribute to the design of new market standards for migrating existing contracts or new products. The development of industry standards can facilitate the transition process and foster client confidence.

BUSINESS OPPORTUNITIES

Changes in market conventions tend to have potential downsides but can also present banks with new business opportunities. Banks' may be able to seize business opportunities arising from the IBOR transition, particularly in the areas of trading, arbitrage strategies and new products and/or marketing channels.

RISK MANAGEMENT

Many OTC derivatives which hedge risk exposures rely on reference rates which will soon be reset. As a result, banks may not be able to hedge open positions in the same way, using the same strategy, or at the same costs as they do today. This may be caused by changes in the depth of markets, which may precede the actual phase-out. In the transition period banks may also be exposed to significant basis risks between old and new reference rates. Hedging products for this transition period may be expensive and/or unavailable, putting additional profit and loss at risk.

WHAT'S NEXT: IMPACT AND SCENARIO ANALYSIS

We recommend starting a top-down impact analysis of the new rate environment as early as possible, with the involvement of the appropriate business functions and legal specialists. Once the relevant risks have been identified and quantified—and an understanding of the contracts behind these have been developed—banks should devote energy to identifying relevant scenarios. For example, they might evaluate the likelihood that a synthetic LIBOR will survive in a niche market, or whether industry-agreed migration schemes might be viewed as collusion in a specific country. Ultimately, this evaluation should allow banks to map the impact of the shift by position size, profit at risk and probability of occurrence.

THE INSIDE VIEW

FINANCIAL ACCOUNTING AND CONTROLLING

LIBOR benchmarks are commonly used as discounting rates in both external financial disclosures and internal financial controlling. Banks should consider how they intend to discount future cash flows in the post LIBOR era, but also develop a suitable transition approach. Banks will probably want to avoid having unexplained gains or losses and should also consider running parallel disclosures on their external financial statements early, to boost the confidence of their investors. For internal financial controls, the incentives provided to business divisions and trading desks may become crucial. Any transition strategy pursued internally should continuously monitor developments in the products traded with third parties.

INTERNAL PRICING

Internal trades as well as external positions refer to IBOR. In a complex organization with multiple businesses and sophisticated internal risk transfers, the number of transactions affected should be a multiple of all external tickets. Typically, banks' internal funds transfer pricing (FTP) framework should also be based on a floating rate. Moving away from LIBOR also calls for appropriate timing and alignment with internal finance and treasury operating models to continue seamless functioning throughout the transition.

RISK MODELS

Discounting also plays an important role in the development of risk metrics and models. As is the case with the finance function, the bank's risk function should be able to handle fundamental changes. Additional changes in the risk area may relate to running parallel risk profiles implied by the new reference rates and conducting plausible stress tests despite the lack of historical data or inputs for stress scenarios.

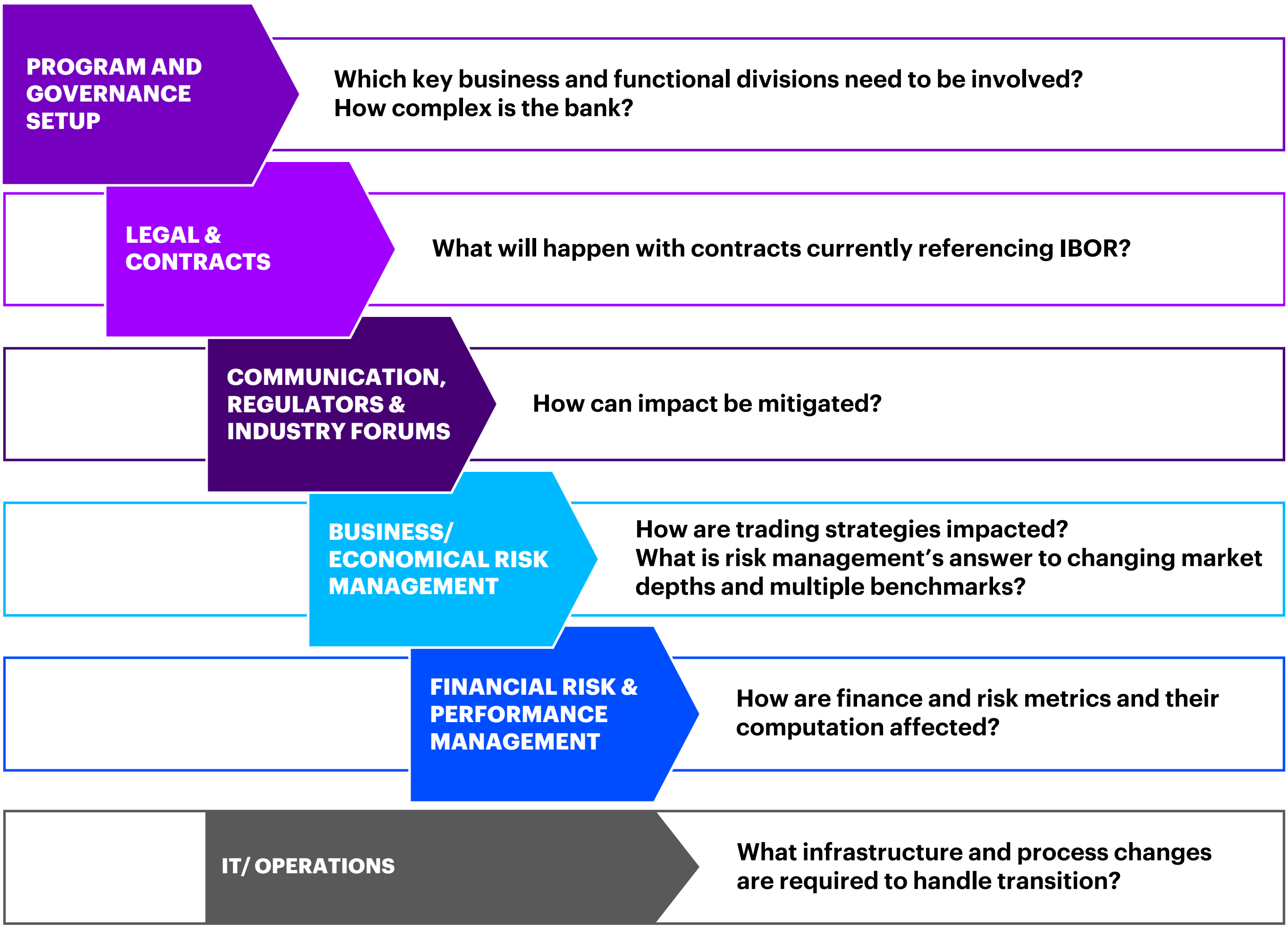
IT

All the previously mentioned areas require support from the bank's IT organization. However, new functional requirements and associated IT builds should only play minor roles, for example, in the adoption of new products or to allow workflows with parallel references. Key IT work is most likely to include the front-to-back analysis of reference rate creations, integration into existing systems, implementation and testing of curve configurations within systems and support of the migration strategy. The latter may include major migration scripts to amend internal or external trades and their discounting factor. Depending on the bank's migration strategy, this work might have to be executed over the course of a weekend, thus requiring automation in execution, validation and potentially even running a fallback operation.

WHAT'S NEXT?

Internal complexities should be significant in the IBOR phase-out. Failing to properly execute the transition within the bank may be as detrimental as failing to correctly go through the process properly in addressing external legal and client commitments. Key functions such as Finance and Risk should be involved early on and should have input into the thought process behind the transition plan. IT changes should require the bank to work backwards, allowing for sufficient headroom but also understanding potential conflicts with other change initiatives the bank may be undertaking.

FIGURE 2: COMPONENTS OF SUGGESTED APPROACH



Source: Accenture, October 2018

FIGURE 3: LIBOR PHASE-OUT

	EUR EURIBOR/EONIA	**CHF** LIBOR	**GBP** LIBOR	**USD** LIBOR	**JPY** LIBOR
PRIOR	**2012** LIBOR + EURIBOR manipulations				
	2013 G20 commissioned the FSB to review and reform major interest rate benchmarks				
		2014 IBA took over administration of LIBOR and MPG published final report on reforming interest rate benchmarks			
		2013 Launch of NWG Group on CHF Reference Rates			**2015** BoJ established SG to identify JPY alternative RFR
					December 2016 BoJ selected TONAR as an alternative to JPY LIBOR
2017	**September 2017** Launch of WG tasked with identification and adoption of an alternative Euro RFR		**March 2017** BoE presented the final design of SONIA reform		
			April 2017 The Group recommended SONIA as its preferred alternative RFR	**June 2017** ARRC recommended SOFR as preferred alternative rate to USD LIBOR	
		July 2017 The future of LIBOR speech by the UK FCA's Andrew Bailey			
		October 2017 SARON is recommended and first SARON swaps are cleared.			
		December 2017 Discontinuation of TOIS fixing			
2018	**January 2018** EU BMR enforced on 1/1/ 2018. Transition period for certain new and existing benchmarks until 1/1 2020.*				**March 2018** SG discussed next steps in financial benchmark reform, which includes the identification of market practices and contract design for the adoption of TONAR
	February 2018 EMMI concluded that EONIA's compliance with EU BMR cannot be warranted	**June 2018** Consultation of Swiss corporates on CHF LIBOR to examine possible transition issues. WG presents 3 possible scenarios for the transition to SARON and term-sheet for the 3M SARON Futures	**April 2018** SONIA reform implemented	**April 2018** Federal Reserve Bank of New York published SOFR	
	May 2018 WG admits challenge in meeting deadline for BMR				
	June 2018 Financial Stability Report concluded that risks to financial market stability can only be reduced through a transition away from reliance on IBORs				
	SEPTEMBER 2018 WG recommended ESTER as the Euro RFR and replacement for EONIA. WG requests extension of transition period to 2 years minimum				**August 2018** BoJ formed Cross-Industry Committee on JPY Interest Rate Benchmarks, tasked with facilitating the use of JPY interest rate benchmark
	18/10/2018" Subgroup 4 planned to present the criteria for recommending an EONIA transition path at the working group meeting on 18 October 2018 and its report – most likely including a recommendation – at the working group meeting on 19 December 2018.	**October 2018** WG meeting (Fallback template loan contracts, conclusion on term rates, readiness discussion)	**December 2018** 14/12. Deadline for PRA and FCA requests on board-approved assessments of banks´ key risks relating to LIBOR discontinuation and details of risk mitigation plans	**End of 2018** Trading in futures and/or uncleared SOFR OIS	
2019	**October 2019** ESTER is expected to be published by ECB*		**2019** GBP LIBOR fallback language agreed and SONIA implementation begins. Development of operational capability for SONIA-referencing FRNs, loans, etc. Term benchmark rate available	**Q1 2019** Trading begins in cleared SOFR OIS and current EFFR discounting environment	
	End of 2019 Outcome of BMR compliancy of reformed EURIBOR expected*				
2020	**January 2020** EU BMR becomes effective, EU Transfer period ends.* Reformed EURIBOR or available alternative and ESTER as an alternative for EONIA implemented*			**Q1 2020** CCPs offer SOFR discounting environment and allow choice between clearing new or modified swap contracts in current AI/ discounting environment or one that uses SOFR for PAI and discounting**	
2021				**Q2 2021** CCPs no longer accept new swap contracts for clearing with EFFR as PAI and discounting. Existing contracts roll off over time as they mature or are closed out***	
			End of 2021 Catalyze a broad-based transition to SONIA	**End of 2021** Creation of term reference rate based on SOFR derivatives market	
		End of 2021 LIBOR submissions and publications cease			
		Post 2021 Transition and fallback plans in place, LIBOR production no longer guaranteed by FCA			

Source: Accenture analysis based upon publicly available documents

ABBREVIATIONS

ARRC Alternative Reference Rates Committee was convened by the Federal Reserve (FED) in order to identify best practices for alternative reference rates, identify best practices for contract robustness, develop an adoption plan, and create an implementation plan with metrics of success and a timeline.

BMR European Benchmark Regulation introduces a common framework to ensure the accuracy and integrity of indexes used as benchmarks in the European Union.

CCP Central Counterparty clearing house is a corporate entity that reduces counterparty, operational, settlement, market, legal and default risk for traders.

EFFR Effective Federal Funds Rate is calculated as a volume-weighted median of overnight federal funds transactions reported in the FR 2420 Report of Selected Money Market Rates.

EMMI European Money Markets Institute provides the EURIBOR and EONIA index.

ESTER Euro Short-Term Rate

FCA Financial Conduct Authority regulates the financial services industry in the UK.

FRN Floating Rate Note

FSB Financial Stability Board is an international body that monitors and makes recommendations about the global financial system.

IBA ICE Benchmark Administration is the world's most experienced administrator of regulated benchmarks, and leading the way in benchmark reforms.

MPG Market Participant Group was established by the FSB to propose options for robust reference interest rates that can serve as potential alternatives to existing LIBOR, EURIBOR and TIBOR benchmark rates.

NWG National Working Group is the key forum for considering proposals to reform reference interest rates in Switzerland.

OIS Overnight Index Swap is an interest rate swap involving the overnight rate being exchanged for a fixed interest rate.

PAI Price Alignment Interest is the overnight cost of funding collateral. It is debited from the receiver and transferred to the payer to cover the loss of interest on posted collateral.

PRA Prudential Regulation Authority is a United Kingdom financial services regulatory body.

RFR Risk-Free Rate are alternative rate indexes that would replace LIBOR and offer greater breadth of observable trade activity.

SARON Swiss Average Rate Overnight

SG Study Group on Risk-Free Reference Rates has conducted necessary deliberations on the identification of a Japanese yen nearly risk-free benchmark rate.

SOFR Secured Overnight Financing Rate

SONIA Sterling Overnight Index Average Rate

TONAR Tokyo Overnight Average Rate

WG Working Group is industry-led and was established to identify and recommend risk-free rates that could serve as a basis for an alternative to current benchmarks used in a variety of financial instruments and contracts in the euro area.

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FOOTNOTES

* The Working Group on Euro risk-free rates requested the following legislative adjustments in September 2018:

1. An extension of the transition period for index providers of all designated critical benchmarks and the use of those critical benchmarks for a minimum of 2 years.

2. The Working Group requests the EU Commission to designate ESTER and possibly the ESTER-based term structure as critical benchmarks, thereby ensuring the market will understand these to be the successor rate(s) to non-BMR compliant benchmark(s).

** CCPs begin allowing market participants a choice between clearing new or modified swap contracts (swaps paying floating legs benchmarked to EFFR, LIBOR, and SOFR) into the current PAI/discounting environment or one that uses SOFR for PAI and discounting.

*** CCPs no longer accept new swap contracts for clearing with EFFR as PAI and discounting except for the purpose of closing out or reducing outstanding risk in legacy contracts that use EFFR as PAI and discount rate. Existing contracts using EFFR as PAI and the discount rate continue to exist in the same pool, but would roll off over time as they mature or are closed out.

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CONTACTS

OSSIP HÜHNERBEIN
Senior Manager, Accenture Finance & Risk
ossip.huehnerbein@accenture.com

EVA MAYBUD
Managing Director, Accenture Finance & Risk
eva.maybud@accenture.com

ADNAN NIAZI
Senior Manager, Accenture Finance & Risk
adnan.niazi@accenture.com

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