LIBOR reform impacts on models

“ It’s time to prepare for the challenges on models from the LIBOR transition

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Why is it time to be prepared?

The regulatory focus on the impacts of the LIBOR transition on model risk is increasing

The enterprise-wide impacts of transitioning away from LIBOR to alternative risk-free rates (RFRs) like €STR and SOFR is coupled with a tight timeframe. By the start of 2022 or July 2023 for selected USD LIBOR maturities, all remaining dependencies to LIBOR should be removed. This transition has pervasive impacts on a bank's products, operations as well as models and the risk landscape.

Overall, regulators have consistently stressed that the final deadlines will not be pushed back. Market participants can expect more scrutiny on their model validation and governance by regulatory bodies. Recently, JSTs and the ECB have reached out to several banks collecting responses on the impact of LIBOR on models and how the banks are preparing for the transition.

> “IBOR model transition is a complex, high-volume and business-critical task that could overload your potential already stressed resources.

The impacts of the LIBOR reform on models is complex and significant and involves all relevant stakeholders front-to-back

Given the urgency of focusing on other aspects in the LIBOR transition, the implications for models have only become a major focus in the past few months. Addressing and preparing for the remediation of models is a high-volume and business-critical task that could overload your potentially already stressed resources and depends on internal set ups, timing and external milestones. A significant number of banks' current models involve LIBOR, meaning they will need to be remediated, recalibrated and revalidated. This will impact all lines of defence (LoD) front-to-back in the following way:

Quant analysts (1st LoD)		Model validation (2nd LoD)		Internal audit (3rd LoD)	
Update & develop new models	Assess materiality of changes	Validate model & input changes	Update inventories	Review model	Challenge change criteria
Test & document changes	Submit for validation	Challenge & review FO updates	Document tests & results	Review governance program	Report to management & regulators

Understanding the impacts from the LIBOR reform on your model inventory is key

We have invested time and effort in engaging with key stakeholders, across front office, risk, model validation, internal audit and more, to truly understand the challenges that the LIBOR reform raises around models. Find below an overview of some key challenges from the IBOR reform in the different model type classes:

Pricing models

- **Cash products:** Compounding and new conventions may trigger coupon settlement disputes, while uncertainties in fallbacks will make marking fair value much more complex.
- **Derivatives:** Backwards-looking fallbacks may be incompatible with existing trade types like FRAs and range accruals. Also, fallbacks are set to transform vanilla trades like cap/floors into exotic payoffs.
- **Valuation adjustments (XVAs):** Illiquidity in non-linear RFR calibration instruments may create problems for exposure engines. Funding valuation adjustment (FVA) will now use the RFR curve as its base.

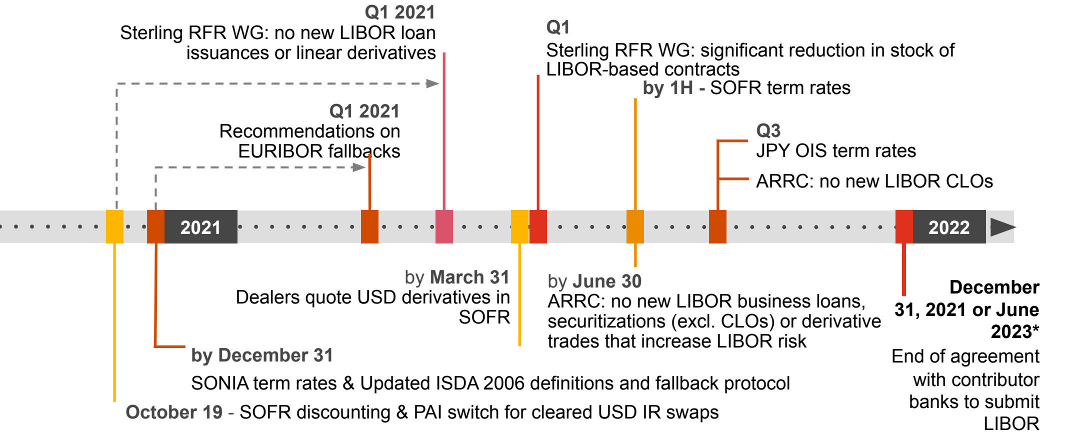
Banking Book models

- **Treasury and ALM:** Funds transfer pricing updates will now reference RFRs as the funding curve, and inputs will need to be reviewed. Existing models & infrastructure may need updating to handle multicurve environments.
- **IRRBB:** The new way of formulating basis risk form the introduction of RFRs will require assessment before feeding ICAAP. Cash flow discounting will now involve RFR curves.
- **Credit models:** Depending on the balance between expert judgement and statistical rigor, LIBOR may be an input into scorecard models. There are also impacts for discounting with loss given default (LGD) models.

Risk & Capital models

- **Internal model approaches (IMA):** Insufficient time series history with RFR may lead to increases in RNIM or non-modellable risk factors (NMFR) under FRTB-IMA. There is also a lack of observability through sufficiently long stress periods for SVaR.
- **Internal model methods (IMM):** The margin period of risk (MPOR) may increase due to limited liquidity in new and potentially legacy instruments.
- **Capital adequacy (CCAR, ICAAP):** Regression models require both a time series to show past relationships (e.g. LIBOR) and a forecastable variable (e.g. SOFR).

LIBOR transition dates



* For all IBORs and USD LIBOR 1W and 2W December 31, 2021 applies, for all other USD LIBOR maturities the deadline was move to June 2023 according to a ICE Benchmark Administration (IBA) statement November 2020.

Timely preparation is essential to overcome the IBOR reform challenges and minimize risks

A few banks have already set up dedicated work streams for LIBOR transition impacted models – others are treating it as a side-of-the-desk task for other areas of their LIBOR programs. Initial impact assessments, models focused strategies, plans and budgets are being developed.

> “ Any bank failing to pay sufficient attention to models in its IBOR transition will face growing risks.

We believe taking a proactive approach now will realise a more fluid transition program for model work streams to the end of 2021 and beyond. To be prepared for the challenges ahead, you need to consider the following points:

1. Challenge: Aligning your model strategy closely to your IBOR product strategy

- The product strategy will need to consider the plan for instruments currently incompatible with the nature of the proposed fallbacks.
- New products based on RFRs need to be considered in model development, implementation and validation.

2. Challenge: Underestimating the volume of necessary model work

- While some aspects of the LIBOR reform may mirror the LIBOR to OIS discounting transition, the challenges are much deeper with reference index updates and an increasing number of new products to maintain that also will need to be validated.
- Plan and budget resource efforts as soon as possible as model work on the transition will occur at the same time as other initiatives like FRTB resulting in efforts likely to be in excess of normal BAU.

3. Challenge: Anticipating future needs to ensuring flexibility in infrastructure

- Many recent updates in the cash-world for example seem to break consistency with their derivative counterparties and the final conventions are not yet set in stone.
- Model infrastructure should be suitably adaptable to accommodate alternative conventions to aid a quick and efficient entry to markets.

4. Challenge: Preparing for regulatory scrutiny on transition impacted models

- Regulation requires an impact analysis (e.g. material or immaterial impact) on capital requirements before implementing a change (e.g. change of discounting methodology, inclusion of fall-back rates etc.) on the total market risk Pillar I regulatory capital, Pillar II, Banking Book and Trading Book models, separately.
- Whether LIBOR transition makes ex-ante notification or model change necessary, regulators are certainly looking for well documented impact assessment and model changes.

How you can benefit from us

Gaining comfort from our front2back perspective and strong grasp of regulation	Leveraging our breadth and depth of market insight from engagement across banks	Utilizing our deep understanding of the challenges around models and MRM	Relieving your internal teams of the burden of LIBOR related model implications

Reach out to us to better understand the implications of IBOR on your models!

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