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Implementing the IBOR-transition in and around Loan IQ

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In recent years the financial system's regulators have worked towards discontinuing the existing reference rates for unsecured lending within the interbank market (IBOR, Interbank Offered Rate). Consequently, the important LIBOR (London Interbank Offered Rate) will most likely not be published anymore already by end of 2021. Therefore, the post 2021 LIBOR publication is no longer guaranteed by the British Financial Conduct Authority (FCA). As a substitute for IBOR rates the regulators in alignment with industry representatives have proposed overnight Risk Free Rates (RFRs) as new benchmarks. These rates are expected also to be used for pricing loans after the cessation of LIBOR.

The Interbank Offered Rates define the conditions for lending unsecured money within the interbank market and are used as a benchmark not only for cash-instruments (e.g. loans) but for all kinds of financial products. But there are two major reasons why already in 2013, the G20 instructed the Financial Stability Board

(FSB) to work out a fundamental reform of these reference rates with the aim of an ultimate IBOR-cessation.

The first reason is that the daily volume within the unsecured interbank market in the aftermath of the financial crisis 2008/09 has been shrinking massively. Consequently, especially the LIBOR-rates are representing conditions on a quasi-illiquid lending-market where expectations are built on a limited number of underlying transactions [1].

The second reason is the scandal regarding the manipulation of the LIBOR rate (London Interbank Offered Rate), which became public in 2011. It was discovered that the panel-banks, whose estimates are used to calculate the different LIBOR rates on a daily-basis, were manipulating the daily rates by falsely inflating or deflating their estimates [2].

In order to substitute the IBOR-rates, the regulators have proposed as new reference rates the following rates: SOFR (USD) in the US, SONIA (£) in Great-Britain, SARON (CHF) in Switzerland and €STR (EUR) in the EU. There are further rates in the different jurisdictions, such as Japan, Australia or European non-Euro states.

It is noteworthy that in Europe the €STR is substituting the EONIA. Due to a successful reform of the EURIBOR, the rate will not be discontinued and can be used as a trustworthy benchmark for lending products until further notice.

The IBOR-rates replacement is causing a radical change for all financial products that are using those rates and it affects both cash (as loans) and non-cash products (as derivatives or swaps). New instruments being based on the proposed Risk Free Rates (RFRs) have already been established in both money- and capital markets.

Impact of Risk Free Rates on the lending business

Banks need to adapt their IT-systems towards a new interest-methodology to be able to offer lending being based on the new reference rates.

Both for existing and future lending business, the interest calculation must be based on the new reference rats, which are floating and by nature do not have term structures (tenors). Since the interest rates for a given interest period are not known in advance anymore, the interest can only be calculated over the complete period (so called backward-looking approach). For this the interest rates need to be compounded over the cycle.

Consequently, the banks are not able to tell their borrowers the due amount for the next due date at the beginning of the interest cycle (in advance). Instead, the interest needs to be compounded in arrears. Consequently, the borrower can only be informed about the actual interest due amount shortly before the next due date.

The following formula is used for interest compounding:

$$R = Compounded\ to\ date\ Average\ Rate$$

$$\left[\prod_{i=1}^{d_b}\left(1+\frac{n_i * r_i}{N}\right)-1\right] * \frac{N}{d_c}$$

d_b	the number of business days for the Risk Free Rate (RFR). The RFR is published for each RFR business day
d_c	the number of calendar days in the interest period
r_i	the interest rate applicable on RFR business day i
n_i	the number of calendar days for which the rate r_i applies
N	the day count convention for quoting the number of days in the year (e.g. N=360)
i	represents a series of ordinal numbers representing each business day in the interest period

Furthermore, it is important to mention that a missing credit-risk component within the new Risk Free Rates is another methodological change that needs to be addressed within the IBOR-transition. Once the legacy IBOR-business will be repriced based on the new Risk Free Rates, the credit-risk needs to be incorporated into the overall interest rate by the banks.

Additionally, also the funding of the loan portfolio needs to be adjusted towards the Risk Free Rates. In particular, this applies to the cost of funds which in future most likely will also be based on a compounded base-rate.

It is worth mentioning that due to the missing interest fixing on the loan side the bank can forward the interest rate risk towards the lender. Therefore, the bank does not need to hedge that kind of risk on the funding side. But, especially during the IBOR-transition period, banks might face a so-called base-risk. Reason is, that banks might still do their funding based on the legacy reference rates although they are already handing out loans based on the Risk Free Rates [3], [4].

Alternative Reference Rates in Loan IQ

Loan IQ as a core lending system for complex loans is also affected by the IBOR-transition since one of its major functionalities is the interest calculation for its loan portfolio.

Finastra as the vendor of Loan IQ allows by the newly introduced Alternative Reference Rate (ARR)- functionality calculating the interest accruals with the so-called Compounding in Arrears method. This method will be applied in case the loan is priced based on the Risk Free Rates (e.g. SONIA or SOFR).

A precondition for the new ARR functionality is © Loan IQ Version 7.5.1 and a separated license for the ARR-functionality. Also, the availability of the daily Risk-Free Rates in the Loan IQ funding desk is a prerequisite for the proper interest compounding.

Loan IQ allows the configuration of certain parameters within the interest calculation which are also reflected in the LMA-terms, for example:

i. Lookback Days
ii. Lockout Days
iii. Observation Period Shift
iv. Pricing Lag (most of the new rates are published with a delay of 1 day)
v. Payment Lag
vi. Additional Spread to reflect the credit-risk

Also, the Delayed Compensation can be based on the Compounding in Arrears method. Additionally, Finastra provides a free enhancement such that also the cost of funds can be calculated by a formula (incl. Interest Compounding).

Generally speaking, because of the new ARR-functionality the complete interest calculation can be continued in Loan IQ after the IBOR transition, without any new workarounds.

Finbridge as a partner for the IBOR-transition in and around Loan IQ

Finbridge supports the implementation of the new ARR-functionality in Loan IQ by a comprehensive advisory service. We are supporting our customers throughout the full IBOR-transformation in and around Loan IQ.

The respective Advisory Services include:

- Analysis of Status Quo:
    - Precondition for the application of ARR-functionality is © Loan IQ version 7.5.1. or higher
    - The ARR-functionality is part of © Loan IQ version 7.5.1 but requires a separate license
    - In case the bank is still running on an older version of Loan IQ, a release upgrade is necessary before the ARR functionality in Loan IQ can be activated
- Analysis of the Loan IQ ARR-functionality

    - Loan IQ allows choosing between four new interest calculation methods. These can be assigned to a pricing option. The methods are

        i) Compounding in Arrears

        ii) Daily Rates with Compounding

        iii) Simple ARR

        iv) Simple Average

    - The individual setup in Loan IQ requires a comprehensive business analysis

- Design of a business specification by taking business requirements into account
    - Taking into account current market standards and the guidelines of institutions such as Federal Reserve, Bank of England, European Central Bank, Alternative Reference Rates Committee and Loan Market Association
    - Analysis of current loan portfolio
- Loan IQ configuration incl. documentation
- Impact analysis on downstream systems and potential interface changes (impacted business units are Treasury, Finance, Market data, Reporting und Client communication)
- Migration Concept for legacy business

Why choosing Finbridge as a Partner

Finbridge as an experienced consultancy company offers professional advisory services based on longstanding industry knowledge and high-quality standards. As Finastra implementation partner Finbridge offers deep Loan IQ knowledge. More than 30 consultants have worked on Loan IQ related projects. Furthermore, Finbridge employs 20 Finastra-certified Loan IQ consultants (Version 7.5 incl. ARR functionality). The close partnership with Finastra is also reflected in a longstanding Loan IQ project experience (implementation projects and release-upgrades incl. ARR functionality).

Sources and References

[1] The Guardian Zeitung, Libor Scandal: the bankers who fixed the world's most important number https://www.theguardian.com/business/2017/jan/18/libor-scandal-the-bankers-who-fixed-the-worlds-most-important-number , downloaded at 20th of July 2020

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[3] BIS, Beyond LIBOR: a primer on the new reference rates, https://www.bis.org/publ/qtrpdf/r_qt1903e.pdf, downloaded at 20th of July 2020

[4] Olivery Wyman, Time to switch rates – Libor transition unter: https://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2019/jun/Time-To-Switch-Rates-LIBOR-Transition-FINAL.pdf, downloaded at 20th of July 2020

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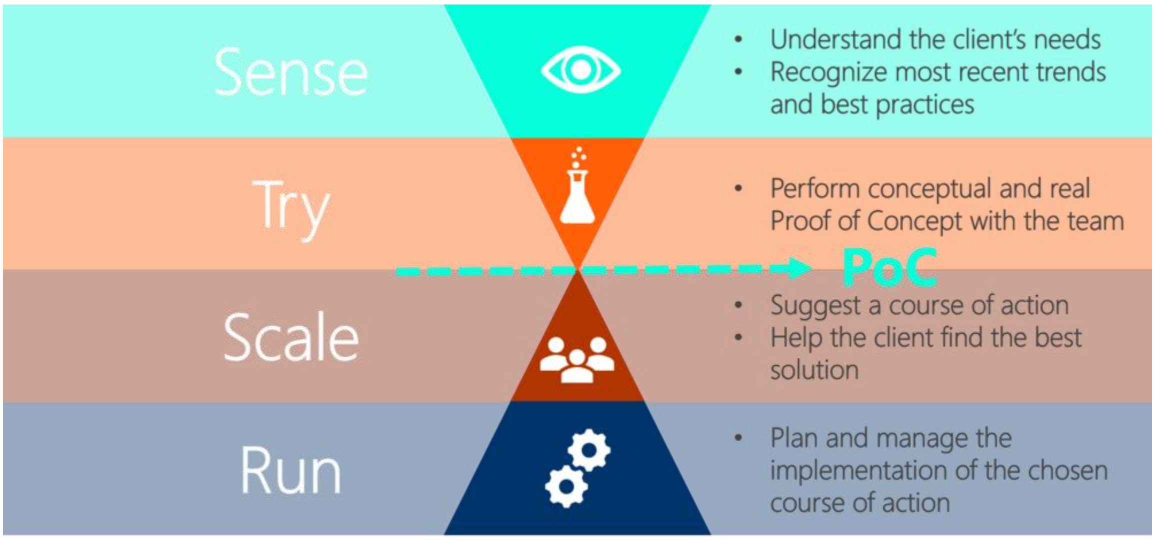
Digital Transformation @ Finbridge

Digital Transformation is Finbridge's latest initiative, focused on introducing innovative methods and technologies to our clients.

Finbridge works in an integrated and structured way on various fronts of Digital Transformation. We support our clients in overcoming individual challenges, especially digitalization of traditional technologies and processes when existing, to reach their limits.

Our experts benefit from many years of experience from a wide variety of project assignments and are well acquainted with challenges that arise in the daily operations of our clients.



Innovation path: how can we support our customers?
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