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RISK MANAGEMENT

IBOR transition: the next challenge for global financial markets, institutions and actuaries

London, 1969. A Greek banker is in the process of providing an $80 million loan to the Shah of Iran. However at the time, nobody knew that the end result of this loan would become a critical component in today's global financial markets. It would be the start of the Interbank Offered Rates (IBOR) era. Now, 50 years later, after trillions of euros and dollars in financial contracts and with fines running in the billions, the era is coming to an end and replacement rates are approaching. This will pose a major challenge for asset managers, banks, insurers and pension funds.

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Many people working in the financial industry are familiar with IBORs such as London Interbank Offered Rate (LIBOR) or its euro equivalent Euro Interbank Offered Rate (EURIBOR) in their day-to-day work. However, only a handful know the history behind this concept that can arguably be dubbed as one of the most important numbers in the world. The Greek banker in question was Minos Zombanakis and he was tasked to come up with a syndicated loan structure referencing a variable interest rate that reflected the participating banks' loan conditions[1]. The participating banks would provide rates at which they could borrow (offered rates) that would be averaged after minor adjustments. This simple concept still remains at the heart of IBORs to this day. Each day, the following question is asked to a set of panel banks:

"At what rate could you borrow funds, were you to do so by asking for and then accepting interbank offers in a reasonable market size just prior to 11 am?"

However, it is not difficult to see that this question is of a subjective nature. This subjective component provided an opportunity where panel banks could manipulate their offered rates in order to gain from financial positions they held themselves. It turned out that IBORs did not reflect an objective interbank borrowing rate after all! After the Wheatley Review in 2012 and many billions of dollars in fines, it was finally decided by the Financial Conduct Authority (FCA) in 2017 that IBORs should be reformed.

WHAT IS THE PROBLEM?

Currently hundreds of trillions of dollars in financial contracts, including derivatives, are still referencing LIBOR and the similarly determined EURIBOR[2]. These contracts are kept by asset managers, banks, insurance companies and pension funds as part of

managing their balance sheet. In the financial market, the IBORs are considered as 'risk-free' reference rates and are therefore used for valuation purposes. What makes the transition particularly interesting is that these rates are not only relevant for institutions selling or holding financial derivatives referencing IBORs. The pension and insurance sectors can expect changes on other parts than their asset portfolio since long-term liabilities are often valued using swap curves based on IBORs.

THE HUNDREDS OF TRILLIONS DOLLARS ARE A SYMBOL OF THE POTENTIAL FRAGILITY

The hundreds of trillions of euros and dollars in financial contracts referencing to EURIBOR and LIBOR are a symbol of the potential fragility in the global financial markets. For the functioning of these markets, it is essential to have objective reference rates that truly reflect the value they are intended to represent. Since IBORs became increasingly important regulators worldwide pushed for reforms towards reference rates satisfying objectivity characteristics. As part of a wider initiative regarding benchmark rates, the European Union introduced its Benchmark Regulation (BMR) in June 2016 under which euro reference rates such as EURIBOR and EONIA fall. In short, BMR states that interest rate benchmarks should be based on actual transactions and that the value of trades substantiating the reference rates should comply with a certain minimum threshold. The transitional period up to 1st of January 2020 for euro related rates offers the financial industry and benchmark administrators time to transition away towards Alternative Reference Rates (ARRs) such as ESTER (EUR). For the GBP and USD related IBOR rates the implementation date of ARRs such as SOFR (USD) and SONIA (GBP) is 1 January 2022.

"The discontinuation of LIBOR is not a possibility. It is a certainty. We must anticipate it, we must accommodate it and we must adapt to it." – J. Christopher Giancarlo (US Commodity Futures Trading Commission (CFTC) Chairman)

However, the path towards the introduction and integration of these ARRs is far from complete. In the UK, in an attempt to seek assurance from financial firms' senior management in the understanding of the risks involved, the FCA and Prudential Regulatory Authority (PRA) warned CEOs of major banks and insurance companies in September 2018. As the quote of J. Giancarlo states, the discontinuation of LIBOR post 2021 can be considered as a highly certain event. Consequently, its main successors such as SOFR (for USD) and SONIA (for GBP) are already published and used as reference rates in financial contracts.

Whereas the path towards the new ARR system is already determined in the US and UK, Europe appears to be lagging behind. EONIA will cease to exist as a benchmark rate and it is questioned whether a novel EURIBOR methodology could meet the standards of the EU's Benchmark Regulation. The euro benchmark rate successor of EONIA, ESTER, will not be not formally published until October 2019 and therefore no contracts are referencing it yet to this date. However, the uncertainties surrounding the euro benchmark rate successor do not disregard the need for actions that financial institutions should be taking.

WHY IS IT RELEVANT?

So far we discussed the background of the IBOR transition. Why is all of this relevant for financial institutions such as asset managers, banks, insurers and pension funds, and hence, for actuaries? Our expectation is that the IBOR transition will have both financial as operational consequences for all of these parties. Using IBORs as risk free reference rates is part of the daily business of these professions and as mentioned before, financial contracts with exposures of hundreds of trillions of euros and dollars are still referencing to IBORs, which not all will expire before 2020 and/or the end of 2021.

The first thing a financial institution should do right now is to get a grip on where their IBOR exposures lie. This can be done by performing an IBOR impact assessment. An effective way to perform the impact assessment can be to identify which components on the balance sheet, either IFRS or Solvency II, are referencing to IBORs and will be impacted by the transition.

As an example, for the investment portfolio, IBORs are used for the valuation of different types of assets (e.g. derivatives) and liabilities. The reference rates are used to determine the appropriate discount rate of future cash flows as part of the market valuations. The IBOR transition means amongst others problems that the current valuation methodologies applied will need to be revised and adjusted so that ARRs can be used instead. For contracts expiring from the start of 2020 (for EUR) and the end of 2021 (for GBP and USD) ARRs will need to be included.

THIS CANNOT BE DONE BY HUMANS ALONE

Financial contracts can contain agreements between parties to exchange IBOR related cash flows. Since these IBORs will disappear, renegotiating between these parties needs to take place to include a replacement rate or end the existing agreement. As asset managers, banks, insurers and pension funds hold millions of financial contracts linked to IBORs, one can imagine that the renegotiation of each contract will have major legal, operational and even financial consequences. This cannot be done by humans alone and provides opportunities for intelligent automation (such as Machine Learning and artificial intelligence). In general, insurers and pension funds have a large portfolio of interest rate derivatives to manage interest rate risk. A large part of the derivatives will have exposure to IBORs. For the interest rate hedging to be effective from 1 January 2020, the different parties should consider the transition to ARRs. Insurers and pension funds should also realise that their current liabilities are dependent on IBORs (e.g. the best estimate liabilities for insurance contracts with options and guarantees depend on the EIOPA basic risk-free curve that is based on EURIBOR rates). Hence, financial institutions should start developing contract and fallback language and revise pricing and valuation methodologies now and not wait for the implementation of the ARRs at the start of 2020.

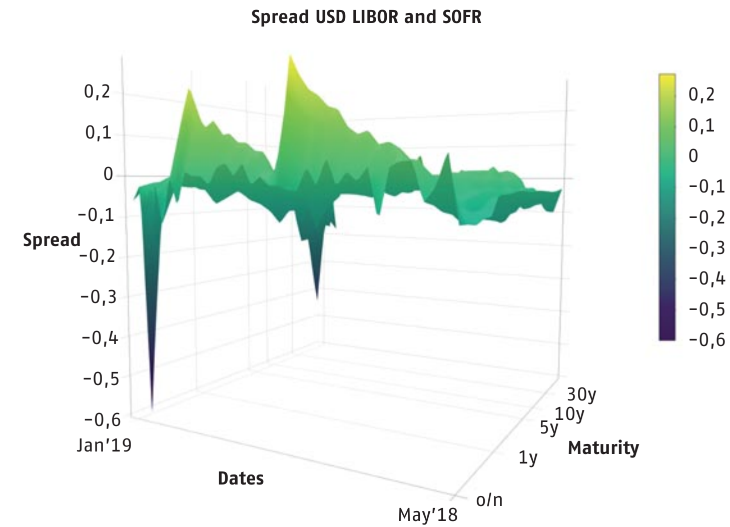

Figure 1: spread (in %) between the SOFR and the USD LIBOR overnight rate for different dates and maturities

AND THERE IS MORE…

The transition to alternative risk free rates is expected to require significant changes across business processes, data and technology infrastructure. This includes models and processes that should be appropriately incorporated. In addition, balance sheet, P&L and risk exposures may be impacted as a result of the transition to alternative RFRs (e.g. SCR and valuation change in basic curves). The GBP and US markets show that the ARRs such as SOFR (USD) and SONIA (GBP) are different from their overnight predecessors which results in financial impacts. To illustrate see figure 1 in which we displayed the spread between the SOFR and the USD LIBOR overnight rate for different dates and maturities.

2019 will be the year for transformations to get prepared for the IBOR transition that will have major impacts on the financial market. There are a lot of challenges, especially for the Eurozone taking into account the implementation date of 1 January 2020. Many uncertainties exist, but one thing is certain: the IBOR transition is a certainty; not a choice. ■

1 – https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr667.pdf

2 – LIBOR: 200 trillion USD (New York Fed, ARRC); EURIBOR: 111 trillion EUR (ECB Working Group on Euro Risk-Free Rates).

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