



Module Benchmark Regulation & EMIR – Benchmark Regulation
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Welcome. I'm Michiel Lodewijk and I work as a Partner in the Financial Risk team of Deloitte.

I will provide you with an introduction in the interest rate benchmark reform also known as the IBOR reform.

Introduction
Important legal definitions used within the EU benchmark regulation that impact the reform of interest rates

Index
Any figure, that is published or made available to the public and regularly determined

Benchmark
Any index used to determine the amount payable under a financial instrument or financial contract, or the value of a financial instrument, or used to measure the performance of an investment fund

Interest rate benchmark
Benchmark determined on the basis of the rate at which banks may lend or borrow from other banks or agents other than banks, in the money market

Critical benchmarks
Benchmarks is used as a reference for financial instruments or financial contracts or for measuring performance of investment funds, having a value of at least EUR 500 billion on the basis of all the range of maturities of tenors of that benchmark
▶ (e.g. Euribor, USD LIBOR)

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The reform of interbank offered rates or IBOR in short, is the result of a reform that started more than a decade ago. The publication of the Principles for financial benchmarks - published by IOSCO in



2013 - was the first major publication in this field. It started the reform that should ultimately lead to a framework for the quality and transparency of the benchmarks used in financial markets.

At that time the so-called LIBOR scandal had already been in the news a lot. Several years later the European benchmark regulation was published, which became effective in January 2018. This European benchmark regulation aims to ensure the accuracy, robustness and integrity of benchmarks. It refers to benchmark as a specific index that is used in order to calculate payments of a financial contract, the value of a financial contract or the measure of performance.

The focus of the IBOR reform and the training of today is on interest rate benchmarks, which are rates that bank are lending or borrowing to each other or others. Hence, the name interbank offered rates, which describe the rates that banks lend to one another.

Most critical benchmarks – benchmarks that are used as a reference for at least 500 billion euro are for example Euribor, USD LIBOR or GBP LIBOR.

Introduction

The start of the IBOR transition



Why are the current interbank offered rates (IBORs) being replaced?

- Primarily because the current IBORs were always based on expert judgement of banks rather than actual trades.
- Further declines in transaction volumes in the past years, have emphasized this problem.
- The IBORs are reformed to guarantee the reliability, accuracy and integrity of the interest rates as these are essential in the financial infrastructure.

What are the consequences?

- Banks need to move to a new system to report interest rates to administrators such as the ECB.
- However, the big impact is for users of these rates (for example as trader, market maker, treasurer, investor, hedger, client, etc.).
- The transition away from the current IBORs has a significant impact on legal, accounting, valuations, risks management and on people performing these activities.
- Impact on benchmarks that are administered outside the European Union, the so called third-country benchmarks.

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As already mentioned, the LIBOR scandal was the main reason that markets and supervisors became aware that a change to the old IBOR rates was required. The old IBOR rates - such as Euribor or USD LIBOR - were primarily based on expert judgement instead of actual transactions. This was especially the case the last few years, when interbank transactions longer than a day become more and more uncommon.

However, every day, financial contracts worth trillions of euro's such as loans and derivatives are issued, exchanged and valued using these IBOR's. For example a loan that refers to the 6-month Euribor rate that is issued by a company to obtain funding or a pension fund that is hedging interest rate risk with interest rate swaps referencing 6-month Euribor. Hence, having reliable and accurate rates is very important.

The consequence of the IBOR reform is that panel banks – the banks that are in the panel based on which the interest rate benchmarks are based - need to submit their interest rate transaction data using a new methodology.

However, the big impact is for users of these rates (for example as a trader, market maker, treasurer, investor, hedger or client). The transition away from the current IBORs has a significant impact on legal, accounting, valuations, risks management and on people performing these activities.

Another relevant development as a result of the European benchmark regulation is that the so-called third-country benchmarks (benchmarks that are administered outside the EU) will need explicit approval before they can be used in the European Union. This mainly impacts the administrators of the benchmarks.

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Overview of the key EUR interest rates

While the transition from EONIA to €STR as an overnight rate is set in motion, it remains uncertain how long the Euribor (using the hybrid methodology) will remain to exist



There are a lot of interest rate benchmarks impacted by the IBOR reform, but let's start with two key euro interest rate benchmarks.

The EONIA or Euro OverNight Index Average, which was a rate based on overnight transactions between banks, and the Euribor or Euro Interbank Offered Rate, with Euribor published with several tenors, for example 1-month, 3-month and 6-months. The EONIA was not compliant with the European benchmark regulation that we mentioned earlier, so it will cease to exist by the end of this calendar year and is replaced with €STR, the euro short-term rate last year. €STR is also an overnight rate, but the methodology used to determine it every day is different and in line with the European benchmark regulation.

The Euribor is not replaced with another interest rate, however the methodology used to determine it every day is changed such that it complies with the European benchmark regulation. However, there are still doubts by market participants whether Euribor is the most accurate, reliable and robust rate to use in financial contracts. Hence, one of the most important question in financial









markets today is whether Euribor will cease to exist in a few years. That might happen if the use of it will significantly decrease, and market participants move to €STR based contracts completely.

Benchmark rates changes

The current IBORs are replaced by overnight risk-free rates for each major currency, however there are slight differences between them



 GBP LIBOR	 EONIA	 USD LIBOR
<ul style="list-style-type: none"> The GBP LIBOR interest rate is the average interbank interest rate on the London money market The rate is based on unsecured funds denominated in British pounds sterling to be discontinued (end 2021) 	<ul style="list-style-type: none"> EONIA is the overnight rate based on transactions between banks In the transition period, EONIA is recalibrated as €STR plus a fixed 8.5 basis points spread. to be discontinued (end 2021) 	<ul style="list-style-type: none"> The USD LIBOR interest rate is the average interbank interest rate on the London money market The rate is based on unsecured funds denominated in US Dollar to be discontinued (end 2021 / 2023)
 SONIA	 €STR	 SOFR
<ul style="list-style-type: none"> Bank of England Unsecured Fully transaction-based, overnight Published since 1997 Development of forward-looking term rate by end 2020 	<ul style="list-style-type: none"> European Central Bank Unsecured Fully transaction based, overnight Published since October 2019 Feedback on public consultation derivatives-based term rate as a fallback rate to EURIBOR 	<ul style="list-style-type: none"> Federal Reserve Bank of NY Secured Fully transaction-based, overnight Published since April 2018 Production of term rate as soon as possible

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We have shown that EONIA – the old overnight rate used for contracts in euro’s – will be replaced by €STR. Similar reforms can be seen for a lot of countries and markets across the globe and often a so-called risky term-rate (such as GBP-LIBOR, EURIBOR or USD-LIBOR) will at a certain point be replaced by a (risk-free or near-risk free) overnight rate. This overview shows the comparison between the overnight rates for the British pound, euro and US dollar.

The overnight rates that have been developed for these three currencies are the SONIA, €STR and SOFR. Each have different backgrounds and transition paths over time. SONIA was in name already the old overnight rate used for financial contracts in British pounds, however, it will completely replace the GBP-LIBOR. This is different from Euribor and €STR as we just discussed, as it is still uncertain whether Euribor will cease to exist. In the US the SOFR will replace the USD-LIBOR rates, however the transition path is much more uncertain and has recently been extended to 2023.

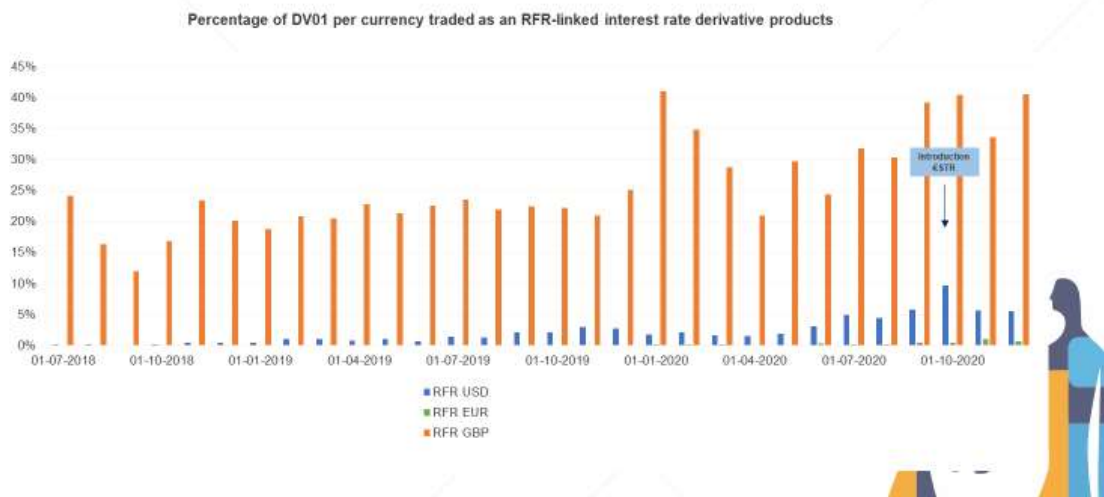




Another important difference, is that SONIA and €STR are unsecured rates, so based on uncollateralized funding, whereas SOFR is a secured rate, based on collateralized funding. Secured and unsecured rates can behave very differently for example in times of severe market stress, as secured contracts are more save due to the collateral that underlies it.

Benchmark rates changes

The current interbank offered rates are replaced by overnight rates, but liquidity development these new risk-free rates ('RFRs') is very different compared across currencies



Another important difference between the overnight rates for British pound, euro and US dollar is in the adoption of these rates.

The graph shows that SONIA (in orange) is already widely adopted. While the adoption of SOFR in the US (in blue) is lacking significantly compared to SONIA. The adoption of €STR (shown in green) is almost not visible in this graph and very low. A key reason for this slow transition is the important role that Euribor still plays in financial contracts and financial markets in Europe.

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Areas of impact for investment managers

There are different areas where the IBOR transition influences investment managers, either in general operations or in derivatives specifically

Impact area	Impact	Specific impact on derivatives
Legal	<ul style="list-style-type: none"> Contracts must be changed to include fallbacks and refer to new rates 	<ul style="list-style-type: none"> Collateral agreements (CSA's) must be reassessed and renegotiated, and fallbacks must be in place
Risk Management	<ul style="list-style-type: none"> Risk management activities and methodologies for interest rates hedges must be adjusted 	<ul style="list-style-type: none"> Changes in the interest rate causes changes in the risk management strategy and mandate
Valuations and accounting	<ul style="list-style-type: none"> Valuations need to be changed and can impact hedge effectiveness 	<ul style="list-style-type: none"> Changes in the valuation as the underlying curves (e.g. discount and forwards curves) change
Collateral	<ul style="list-style-type: none"> The amount of collateral held can change 	<ul style="list-style-type: none"> Changes the valuation of derivatives and therefore also changes in collateral amounts
Technology and operations	<ul style="list-style-type: none"> IT implementations are impacted in order to incorporate use of new interest rates 	<ul style="list-style-type: none"> Changes are required to systems used for trading, deal-capturing, risk management and valuations
Interest rate dynamics	<ul style="list-style-type: none"> Transition from a 'risky' term rate to an (almost) 'risk-free' overnight rate 	<ul style="list-style-type: none"> Changes to the reference rates used in derivatives creates potential basis risk
Liquidity	<ul style="list-style-type: none"> Impact on the liquidity for current and new interest rates products 	<ul style="list-style-type: none"> Changes in the availability of derivatives for specific interest rates when hedging interest rate risks
Cross-currency	<ul style="list-style-type: none"> New overnight rates can show different behavior between currencies 	<ul style="list-style-type: none"> Changes to cross-currency derivatives

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So far we have spoken a lot about the reform of the interest rates. There we also indicated that the big impact of the IBOR reform is for users of these rates (for example a trader, market maker, treasurer, investor, hedger or client).

With this overview we want to make that a bit more tangible for investment management in specific. For that we defined eight impacted areas. For each impact area this table describes the impact for investment managers in the second column. Note that these are important impacts and that other consequences can also occur. The third column describes some specific impacts on derivatives.

Let's start with legal. Numerous contracts must be changed to include fallback language and refer to the new interest rates. Also collateral agreements must be reassessed and renegotiated, and fallbacks must be put in place there.

For risk management, activities and methodologies for interest rates hedging and hence derivatives use must be evaluated and adjusted.

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Valuation methodologies will change, and hence also valuations of derivatives and other financial products. This can also impact the effectiveness of hedge relationships. Interest rate swap valuations will change specifically as the underlying interest rate curves change.

The amount of collateral exchanged can change as well. The IBOR reform effectively changes the valuation of derivatives and therefore also changes the amount collateral held.

The IBOR reform also has a significant impact on operations and technology. IT implementations are impacted as the new interest rates need to be incorporated in trading, deal-capturing, risk management and valuation systems.

Interest rate dynamics change as well as the IBOR reform results in a change from a 'risky' term rate to an (almost) 'risk-free' overnight rate. Furthermore, the changes to the reference rates used in derivatives creates potential basis risk.

The IBOR transition path impacts the liquidity for current and new interest rates products. The resulting availability of derivatives on specific interest rates will impact hedging interest rate risks.

And finally cross-currency or foreign exchange impacts. The new overnight rates can show different behavior of forward rates. currencies. The IBOR reform also changes the interest rates underlying cross-currency derivatives.

This brings us to the end of this presentation. I hope you enjoyed this session and I wish you success with the preparations for your MiFID assessment. Thank you for watching.