

**Interest rate benchmark reform –
overnight risk-free rates and term rates**

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Executive Summary

Interest rate benchmarks play a key role in global financial markets. To ensure financial stability, benchmarks which are used extensively must be especially robust. The Financial Stability Board (FSB), working through its members, seeks to strengthen financial systems and increase the stability of global financial markets. Consistent with this, the FSB, working through the Official Sector Steering Group (OSSG) it set up to coordinate international work to review and reform interest rate benchmarks, welcomes the progress that has been made by public authorities and private sector working groups on the identification and development of overnight risk-free, or nearly risk-free, rates (RFRs) that are sufficiently robust for such extensive use.

These overnight RFRs are robust because they are anchored in active, liquid underlying markets. This contrasts with the scarcity of underlying transactions in the term interbank and wholesale unsecured funding markets from which some interbank offered rates (IBORs) are constructed.¹

Overnight RFRs may also be more appropriate for many users who wish to measure or hedge general interest rate movements rather than fluctuations in bank credit premiums. The FSB therefore continues to encourage the development and adoption of these overnight RFRs where appropriate, for example in business where term properties are not needed, or where exposure to bank credit risk is not necessary or desirable. This will enhance financial stability.

In the markets which face the disappearance of IBORs, notably markets currently reliant on LIBOR, there needs to be a transition to new reference rates. In these markets, it will be important in the period ahead to have a full discussion and establish further clarity among affected end users on how this transition should take place.

In some other markets, authorities and market participants continue to work on further reform or strengthening of IBORs, in tandem with their efforts to identify and facilitate the wider use of RFRs. In many of these markets too, authorities and market participants are working on enhancing market resilience by developing additional benchmarks to reduce reliance on a single IBOR rate and by adding fall backs into contracts to limit risks of contract frustration if an IBOR disappeared in future.

Some of the working groups on RFRs have also been considering the development of new forward-looking term rates derived from RFRs (these may also be described as “RFR-based term rates” or “term RFRs”).² In some markets, notably the largest part of the interest rate derivative markets, it will be important, however, that transition away from IBORs is to the new overnight RFRs rather than to these types of term rates. Transition will only reduce vulnerabilities if it addresses the core weakness of the IBORs – the lack of deep and liquid underlying markets. Because derivatives represent a particularly large exposure to certain IBORs, and because these prospective RFR-derived term rates can only be robustly created if derivatives markets on the overnight RFRs are actively and predominantly used, the FSB

¹ See FSB (2017), *Reforming major interest rate benchmarks: Progress report on implementation of July 2014 FSB recommendations*, 10 October, available at <http://www.fsb.org/wp-content/uploads/P101017.pdf>.

² The Annex gives a description of term RFRs.

believes that transition of most derivatives to the more robust overnight RFRs is important to ensuring financial stability.

An overnight RFR may not, however, be the optimal rate in all the cases where term IBORs are currently used. The FSB recognises that in some cases there may be a role for term rates, including RFR-derived term rates, or term rates derived from other liquid markets. If future use of term rates is relatively narrow compared with current use of IBORs, for example if it is concentrated largely in a segment of the cash rather than derivative markets, this more limited use would be compatible with financial stability.

Overnight RFRs

Market-led working groups in a number of jurisdictions have identified overnight RFRs as suitable alternatives or fall backs to IBORs. Market participants and authorities have begun work on transition to these RFRs, or the inclusion of these RFRs as fall backs to IBORs to enhance contract robustness to the risk of discontinuance of widely-used interest rate benchmarks.

The design of such rates has been influenced by the substantial changes in wholesale funding markets since many IBORs were first developed, the lessons learnt from past instances of benchmark manipulation, and by the guidelines in the International Organization of Securities Commissions (IOSCO) *Principles for Financial Benchmarks*.³ The RFRs are based on overnight trades in markets, whether unsecured or secured, where liquidity is deep enough to allow the rate to be strongly anchored in transactions, including in more adverse market conditions. To the extent that overnight RFRs are more strongly rooted in transactions than alternative measures, they represent the most robust alternatives available to the market.

The RFRs, by largely excluding bank credit risk, also closely track central bank policy rates, offering a more efficient and transparent way of measuring, managing, and hedging movements in those rates.

Development of term rates

Some of the working groups on RFRs have also been considering the development of new RFR-derived term rates that could be based on transactions or executable quotes, in relatively active and liquid markets for derivatives linked to the RFRs, such as overnight index swaps and futures markets.

Such RFR-derived term rates would measure a forward expectation of overnight RFRs over a designated period or term. Where swaps and futures markets are more active than term unsecured funding markets, these reference rates could be more firmly anchored in transactions and executable quotes than term IBORs in those currencies.

Users in some jurisdictions have indicated a desire or need for such term rates. The FSB supports the exploration of the potential to create new RFR-derived term rates in these jurisdictions.

³ IOSCO (2013), *Principles for Financial Benchmarks*, available at <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD415.pdf>.

In those markets which face the disappearance of the IBORs on which they rely, and in which forward-looking term rates are not needed, work to transition away from IBORs at risk of disappearance, should not, however, await progress on developing these new term rates. This is both because of the limitations of term rates described further below, and because the development of new term rates is at an earlier stage and less certain than the establishment of RFRs.

Moreover, it may not be practicable, desirable or necessary to create an RFR-derived term rate in all currencies. This may be because relevant derivatives markets are not deep and liquid enough to support a robust benchmark, because there are few compelling instances in which such a term RFR is actually required, or because an IBOR is still supported by sufficiently active funding markets and continues to be considered reliable by both relevant authorities and market participants in the relevant jurisdiction.

Availability of such term rates could, however, facilitate a transition away from IBORs in those cases where it is not practicable to use either the compounded overnight RFR observed over the contractual reference period and calculated at the end of the period shortly before payment is due, or a measure of observed RFRs set at the beginning of the interest period.

Limitations and benefits of term rates

There are some limitations to RFR-derived term rates that may mean they are not the best choice in some markets.

They are by their nature a derivative of RFR markets.⁴ Because these RFR-derived term rates would be based on derivatives markets, their robustness will depend on derivatives market liquidity. Activity in these derivative markets may, however, be relatively thin. The liquidity of such markets also varies significantly across currencies. Where liquidity is not as deep or continuous as in overnight funding markets, RFR-derived term rates cannot equal the robustness of the overnight RFRs. Moving the bulk of current exposures referencing term IBOR benchmarks that are not sufficiently anchored in transactions to alternative term rates that also suffer from thin underlying markets would not be effective in reducing risks and vulnerabilities in the financial system. Therefore, the FSB does not expect such RFR-derived term rates to be as robust as the RFRs themselves, and they should be used only where necessary.

Term rates do, however, provide market participants advance knowledge and certainty of their interest rate obligations. In this context term rates can be valuable to some market participants who want or need to plan cash flow to make interest or coupon payments based on a forward-looking rate.

Where will a term rate be a suitable alternative or fall back to an overnight RFR?

As stated above, the FSB considers that the overnight RFRs are a more suitable alternative than a term RFR in the bulk of cases where an IBOR is currently used. The best way of transitioning

⁴ Overnight Index Swap or futures markets based on the relevant overnight RFR are not, however, the only potential source from which a transaction-based term rate could be derived. In some currencies, it may be possible to create a term rate from transactions in other markets such as those for cash products or foreign exchange swaps.

to these overnight RFRs will be by including them as the reference rate in new transactions from the outset.

The FSB has also highlighted the importance of work to ensure fall back arrangements are in place where contracts use an IBOR that is at risk of discontinuance. In January, IOSCO published a statement setting out the importance for users of financial benchmarks of contingency plans for the cessation of a benchmark, including sufficiently robust fall back provisions in their financial contracts and instruments.⁵ In some jurisdictions, notably the European Union, regulated firms are required by law to include robust plans in the event of such discontinuance. The overnight RFRs will be suitable fall back rates in most of these cases. Inclusion of such fall backs is important to mitigate the risk of potential IBOR discontinuance. Where an IBOR faces significant risk of discontinuance, however, avoiding a reference to the IBOR when the contract is first agreed will be a more effective risk mitigant.

The FSB considers that the greater robustness of overnight RFRs compared with term rates makes overnight RFRs a better reference rate choice than term rates in markets where participants do not need forward-looking term rates. Where the value of contracts referencing the benchmark is very large, markets will need to reference a robust benchmark, such as overnight RFRs, to avoid systemic risk. Benchmarks which are used extensively must be especially robust in order to ensure financial stability.

This is true in the market which constitutes the largest part of current IBOR usage – the market for interest rate derivatives. Where transition away from an IBOR is necessary, overnight RFRs are a better choice than term RFRs for these markets, both because these markets have a long history of using derivatives based on overnight rates and therefore do not in most cases need term rates, and because the extensive use of derivatives dictates that they should refer to the most robust rates. In the case of fall backs in contracts which reference term IBORs, an appropriate credit spread would need to be added to rates produced by compounding the overnight RFR, but a forward-looking term rate is not, in most cases, needed.

For this reason, and because the development of new RFR-derived term rates is at an earlier stage and less certain than the establishment of the RFRs, the FSB supports a focus on the overnight RFRs as a primary IBOR fall back rate, in the work which it has invited the International Swaps and Derivatives Association (ISDA) to lead on robust fall backs for derivatives which reference IBORs.⁶ If the major derivative markets that are currently reliant on IBORs at risk of discontinuance were to fall back to RFR-derived term rates rather than overnight RFRs, and these RFR-derived term rates did not have sufficient liquidity to support production of a benchmark robust across the range of market conditions, this would not be effective in addressing systemic risks. The FSB welcomes ISDA's consultation,⁷ which contemplates fall backs based on the overnight RFRs, and encourages market participants to respond to that consultation.

Feedback that the OSSG has received from market participants suggests that in many cases the choice of interest rate benchmark is motivated largely by being able to transact at the tightest

⁵ IOSCO (2018), "Statement on Matters to Consider in the Use of Financial Benchmarks", Available at <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD589.pdf>.

⁶ See letter dated 7 July 2016 from the then co-chairs of the OSSG to ISDA, set out in Appendix C of FSB (2017), op. cit.

⁷ At the time of writing, ISDA's consultation document was expected to be published at www.isda.org on 12 July 2018.

spreads, or lowest cost. Those market participants say that, assuming a future world in which liquidity in many derivative markets is focused around overnight RFRs, and spreads are tightest in these markets, many other markets that currently use term rates are likely to choose over time to rely on overnight RFRs instead.

In other cases, however, the benefit of fixing the interest rate at the beginning of the period over which interest is paid using a forward-looking term rate may outweigh cost savings and other benefits of using an overnight RFR. In these cases, a forward-looking term rate may be a suitable choice. If future use of term rates is relatively narrow compared with current use of IBORs, for example if it is concentrated largely in a segment of the cash rather than derivative markets, this more limited use would be compatible with financial stability.

Term rates could also form part of a fall back in some cash-product contracts which reference an IBOR, notably where that contract requires planned interest or coupon payments based on a forward-looking rate. In other cash products, contract holders may prefer overnight RFRs, for example in order to facilitate hedges using derivatives, and to maintain consistency across the cash-products and derivatives contracts.

Where market participants move to a forward-looking term rate or to the overnight RFRs, the FSB envisages that, if they are structured appropriately, either choice could be hedged using derivatives that reference the RFR directly with little or no basis risk. This is true because they would be structured based on the same floating rate payment streams that are envisioned for derivatives based on the RFRs.

Progressing transition

Previous FSB reports have noted that questions surrounding the long-run viability of some IBORs, notably LIBOR, underline the importance of transition to alternative RFRs. In currency areas which use these IBORs, it is important that momentum is maintained to fulfil the FSB's recommendations regarding RFRs. The most robust replacements for these IBORs, particularly for derivatives markets, are the overnight RFRs, because they are firmly and consistently grounded in transactions from active markets.

The situation varies across currency areas, however, and in some jurisdictions there are no plans to promote an immediate transition to RFRs at this stage. In many of these jurisdictions, there is nevertheless effort to devise fall backs to IBORs that are based on the RFRs to enhance contract robustness as a contingency against risks of IBOR discontinuance, and in some there is a legal requirement for some benchmark users to establish robust written plans for such an event.

The FSB's OSSG continues its work to bring together authorities involved in interest rate benchmark reform, and to coordinate those efforts where appropriate. Important early steps towards transition have been taken. There are promising signs of markets in some jurisdictions adopting new overnight RFR-based products. There is much further to go. The FSB plans to produce its next full report on progress in November.

Annex – What is a term rate?

A term rate captures the observed or expected average rate over a given period. For example, IBORs are produced at various maturities: overnight, one week, one month, two months, three months, six months and one year.

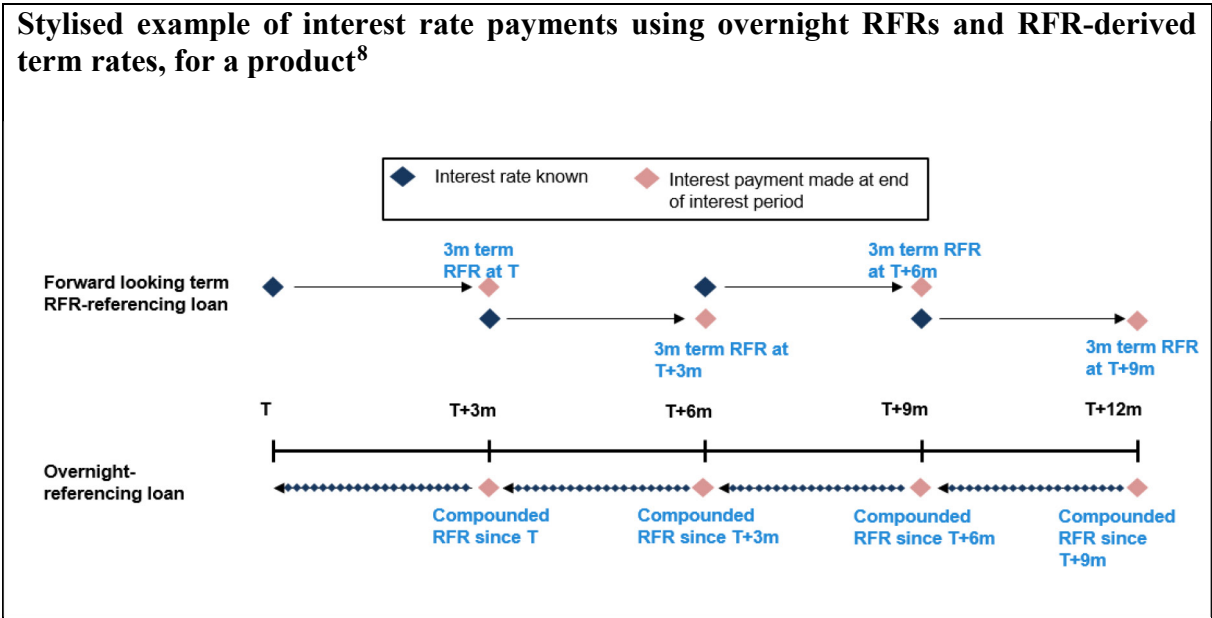
By contrast, overnight rates are produced at an overnight maturity only.

A term rate could be calculated at the end of a period or term based on observed rates during the period ('backward-looking'). Such a calculation is generally done by compounding the actual overnight rate over the length of the period. So a compounded overnight rate refers to the realised rate calculated from overnight rates over a given period.

Another possibility for a term rate is for it to be fixed at the outset of a given period, hence capturing expected rates over the period ('forward-looking'). Most current IBORs are forward looking term rates.

In principle, forward-looking term rates could be based on overnight RFR-referencing derivatives such as futures or overnight index swaps in which a fixed rate payment is exchanged (swapped) for the floating RFR, because these provide information on market expectations of the RFR over a forward-looking period. These can be referred to as "RFR-derived term rates", "RFR-based term rates" or "term RFRs".

The figure below shows a stylised example of a one year loan, either: i) using an overnight rate, where interest payments are based on realised overnight rates over a three-month period (backward-looking), or ii) using a term RFR derived from derivatives, where payments are based on expectations of overnight rates over a three month period (forward-looking).



⁸ In practice, if compounded RFR is used, payments could be calculated at the exact end of the period with payments to follow, or a number of days before the end, to allow for payment at the end.