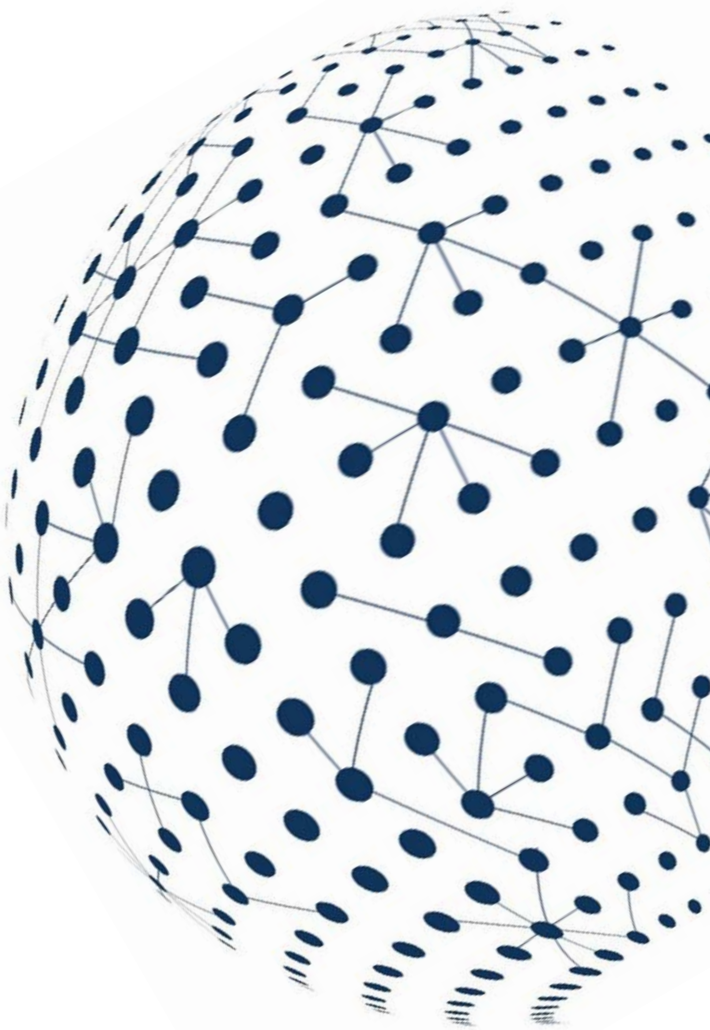
FSB FINANCIAL STABILITY BOARD

Reforming Major Interest Rate Benchmarks

2020 Progress report

“The year of transition away from LIBOR”



20 November 2020

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Executive summary

The transition away from LIBOR remains a significant priority. While important progress has been made over the course of 2020, this work needs to accelerate further in early 2021. Continued engagement from the private sector in conjunction with a significant commitment by the official sector is critical in order to support this transformational effort.

During the course of 2020, the disruption to global financial markets associated with the COVID-19 pandemic has further highlighted the fundamental weaknesses in LIBOR, and has reinforced the critical importance of the FSB's efforts to reform the production and use of global interest rate benchmarks. The 2014 Report highlighted a structural post-crisis decline in liquidity in the interbank unsecured funding markets underpinning IBOR benchmarks. The already challenging liquidity conditions were further exacerbated by developments in March 2020, where in many cases these rates were left reliant on judgement-based submissions rather than market transactions. These developments underscore that these markets are not the main markets that banks rely upon for funding and highlight the challenges when seeking to develop robust credit measures drawing upon unsecured wholesale funding costs. The FSB therefore maintains its view that financial and non-financial sector firms across all jurisdictions should continue their efforts in making wider use of more robust RFRs in order to reduce reliance on IBORs where appropriate.

Transition away from LIBOR in particular remains an essential task and a priority for the G20, which will strengthen the global financial system. Preparations for this transition have continued throughout 2020, with plans adapted to account for the impact of COVID-19 where required, and have laid foundations for a successful transition. While some aspects of firms' transition plans have been temporarily disrupted or delayed, others have been able to continue, including the release of new fallback language for derivative contracts from ISDA and the publication of market conventions for loans and other products based on RFRs in a number of jurisdictions. Relevant national working groups (NWGs) have also amended the timing of intermediate milestones in their benchmark transition programmes, where appropriate, to recognise the practical impacts. But all remain focused on making the necessary preparations ahead of the end of 2021.

Production of LIBOR cannot be guaranteed after the end of 2021. The administrator of LIBOR, ICE Benchmark Administration (IBA), has recently announced that it will consult on its intention that the euro, sterling, Swiss franc and yen LIBOR panels would cease at end-2021. Announcements in relation to US dollar LIBOR are expected to follow.[1] In parallel, the UK Financial Conduct Authority (FCA) set out its potential approach to the use of proposed new powers under the Financial Services Bill[2] to ensure an orderly wind down of LIBOR.[3]

With only one year left until end-2021, all market participants – both financial and non-financial firms across the globe – must now ensure they follow the necessary steps to avoid disruption

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[1] IBA (2020) *ICE Benchmark Administration to Consult On Its Intention to Cease the Publication of GBP, EUR, CHF and JPY LIBOR*, 18 November

[2] UK Parliament (2020) *Financial Services Bill*, 21 October

[3] FCA (2020) *FCA consults on new benchmarks powers*, 18 November

to the performance of their contracts. This will require steps to stop issuance of new products linked to LIBOR and efforts to transition away from LIBOR in legacy contracts wherever feasible. Due to the widespread use of LIBOR around the world, steps to assess exposures, update processes and amend contracts must be taken by a very wide range of firms, across all jurisdictions. In order to support this process, the FSB released a global transition roadmap in October setting out the high-level steps firms will need to take now and over the course of 2021 to complete their transition.

For transition to occur on time, market participants will need to cease use of LIBOR as a benchmark in all new activity across global markets as soon as possible and this needs to be a key priority for the months ahead. While products based on RFRs have been available in other markets for some time, factors including the need to upgrade underlying infrastructure and engage with a broad customer base have caused progress in loan markets to move more slowly. Much new lending is still linked to LIBOR, increasing the stock of contracts affected by its eventual discontinuation. Industry working groups across currency areas have set targets for this activity to move to alternative reference rates in the coming months, and it is vital that those targets are met.

Given the extent of risks associated with a failure to prepare adequately for the transition, the onus of action is on firms. Global and national financial regulators will be monitoring progress closely. In its July 2020 report to the G20 on supervisory issues related to the transition,[4] the FSB highlighted the clear risks to global financial stability posed by continued reliance on LIBOR and the significant negative impact that may be felt by both financial and non-financial institutions if adequate preparations are not made. In many cases, awareness of these risks was lower in non-LIBOR jurisdictions, despite significant exposures arising from the global use of US dollar LIBOR in particular. The report made a number of recommendations to increase the intensity of supervisory engagement and monitoring on this issue, particularly where preparations are falling behind the recommended timelines. Internationally, the FSB will continue to monitor progress and coordinate these efforts.

Whilst official-sector-led solutions have been proposed to deal with narrow pool of 'tough legacy' contracts that cannot feasibly transition away from LIBOR by the end of 2021, the importance of active market-led transition remains. There have been a number of proposals by authorities and national working groups including in the US, UK and EU to help manage an orderly wind-down of LIBOR and, in particular, provide a legislative solution for tough legacy contracts. However, market participants should continue to progress their transition efforts and plans proactively, particularly through active conversion and the insertion of robust and workable fallbacks where feasible. Cooperation among authorities internationally is also encouraged in order to coordinate proposed solutions across borders.

Looking beyond LIBOR, benchmark transition more broadly remains a crucial step to increase the resilience of markets reliant on interest rate benchmarks, through a combination of reforms to existing benchmarks and increased use of more robust RFRs. This work remains a multi-year international effort, taking into account diverse circumstances prevailing in different markets. Across all FSB jurisdictions covered by the report, whether moving away from one of

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[4] FSB (2020), Supervisory issues associated with benchmark transition: Report to the G20, July

the IBOR rates or pursuing a multiple rate approach, there is a common view that the use of more robust RFRs should be encouraged across global interest rate markets where appropriate, and that contracts referencing IBORs should have robust fallbacks. Key developments in this area during 2020 have included the adoption of €STR and SOFR as the standard discount rates for cleared derivatives in euro and US dollar markets respectively.

1. Key themes

Background

In 2014, in response to the declining volume of transactions in key interbank unsecured funding markets as well as to cases of attempted manipulation in relation to key IBORs, the FSB made several recommendations relating to:

- strengthening of IBORs by anchoring them to a greater number of transactions, where possible, and improving the processes and controls around submissions;
- identifying alternative near-risk-free rates (RFRs) and, where suitable, encouraging market participants to transition new contracts to an appropriate RFR.[5]

Since 2014, work related to the transition has been coordinated at the international level by the FSB's Official Sector Steering Group (OSSG) at the request of the G20. This work remains a G20 priority, and the OSSG continues to facilitate international engagement on IBOR transition and building global consensus on relevant issues.

Since the OSSG was formed, all of the major IBORs have been strengthened, and although certain jurisdictions have adopted a "multiple-rate" approach, where it is considered possible that the IBOR coexists with the RFR, there is a continuous effort across FSB members to see a reduced reliance on IBORs and promote adoption of more robust alternative rates where appropriate. This is in the interests of global financial markets and the broad range of market participants who rely on them.

In particular, the UK FCA has stated it does not intend to compel panel banks to submit to LIBOR beyond 2021. Consistent with this, IBA has announced it will consult on its intention to cease the GBP, EUR, CHF and JPY LIBOR panels at 31 December 2021, and expects to be able to make further announcements regarding USD LIBOR in due course.[6] The FCA set out its potential approach to the use of proposed new powers under the Financial Services Bill to ensure an orderly wind down of LIBOR.[7] FSB member authorities consider that the current widespread reliance on LIBOR across its five currencies (USD, EUR, JPY, GBP and CHF) must be removed before the end of 2021. After this point, LIBOR benchmarks may either cease entirely or become unrepresentative of the underlying market they purport to measure, with potentially disruptive effects for contracts without appropriate safeguards in place.

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5 FSB (2014), *Reforming Major Interest Rate Benchmarks*, 22 July.

6 IBA (2020) *ICE Benchmark Administration to Consult On Its Intention to Cease the Publication of GBP, EUR, CHF and JPY LIBOR*, 18 November

7 FCA (2020) *FCA consults on new benchmarks powers*, 18 November

Benchmark transition in light of COVID 19

The emergence of COVID-19 has been a defining feature of the past year with widespread implications. In a letter to G20 Finance Ministers and Central Bank Governors ahead of their April meeting, the FSB Chair highlighted the challenges presented by COVID-19 and confirmed that work on benchmark transition remained a priority for the G20 Presidency and the FSB.[8]

Consistent with the above, transition away from LIBOR by all relevant parties, including both financial and non-financial firms, remains a key priority and should now happen swiftly in order to minimise risks to financial stability as the end of 2021 approaches. A survey undertaken among FSB members has shown that notwithstanding operational challenges and some impact on progress in a number of areas, the COVID crisis has not created substantive impediments to LIBOR transition. The timing of certain intermediate milestones recommended by industry bodies to achieve this has been reassessed to account for developments related to COVID-19 over the course of 2020, but these preparations must still be completed by end-2021.

The direct correlation between LIBOR and banks' overall borrowing costs weakened during the global financial crisis – given a much lower dependence on the short term unsecured markets that LIBOR seeks to measure – and has arguably weakened further since. As the FSB observed in July, the market volatility associated with COVID-19 highlighted that the underlying markets LIBOR seeks to measure are no longer sufficiently active, nor are they the main markets that banks rely upon for funding.[9]

The increase in the most widely used LIBOR rates in March 2020 put upward pressure on the financing cost of those paying LIBOR-based rates. While central bank policy rates were being reduced globally, LIBOR rates increased and those increases were passed on to end users of the financial system at a time when the financial system ought to have played a key role to facilitate liquidity during the COVID-19 disruptions. For those borrowers, at the height of the disruption these increases offset in large part the reductions in interest rates in those jurisdictions where central banks lowered policy rates. By contrast, preferred RFRs based on overnight rates continued to function and, in many cases, the volumes underpinning them rose.

Other measures, which purport to measure bank credit risk in the same way as is currently done in LIBOR, are potentially subject to similar challenges. The FSB has discussed the outstanding question of how credit sensitive rates can be created without replicating the same weaknesses as LIBOR. Any exploration of whether new robust credit sensitive benchmarks can be developed should occur without obstructing transition by end-2021.

The box below describes the weakening direct correlation between LIBOR and banks' overall borrowing costs during and since the global financial crisis, and explores in more detail how these dynamics played out during March 2020.

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[8] FSB (2020), *FSB Chair's letter to G20 Finance Ministers and Central Bank Governors: April 2020*

[9] FSB (2020), *FSB statement on the impact of COVID-19 on global benchmark reform*, 1 July

Box 1: March 2020 Experience Reinforces The Importance of LIBOR Transition

During the 2007-09 global financial crisis, activity in the underlying market that LIBOR seeks to measure – unsecured wholesale term lending to banks – declined noticeably as banks increased their reliance on broader sources of both unsecured and secured financing. At the same time, the volume of core deposits, which typically pay rates well below LIBOR, rose sharply. Indeed, a recent note from the US Federal Reserve found that *average repo rates* were more correlated with overall bank funding cost than *LIBOR* was over the 2007-09 financial crisis, as core deposits rose while wholesale unsecured funding fell markedly.[10]

The direct correlation between LIBOR and banks' overall borrowing costs has arguably weakened further since the global financial crisis. During that period banks have made significant changes to the way they fund themselves, making them more robust. This includes a much lower dependence on the short-term unsecured markets that LIBOR measures, replaced by an increase in the proportion of funding they get from deposits, term instruments and secured borrowing. In its recent note, the U.S. Federal Reserve has estimated that term wholesale unsecured funding is only about 3 percent of U.S. bank funding.

As the FSB set out in its 2014 Report, these changes have caused the wholesale-unsecured funding markets that underpin certain IBORs to become too thin to support robust IBOR reference rates. Together with the growth in derivatives volumes, a significant divergence has occurred between the use of IBORs and the degree of activity in their underlying markets, with an increasing level of expert judgement and governance necessary to fill the gap.[11] In the particular case of LIBOR, the reduction of applicable wholesale-unsecured funding markets is a fundamental problem that has caused it to be unsustainable and its continued widespread use to pose a risk to financial stability.

Although reliance on term unsecured funding has diminished since the financial crisis, the same dynamics witnessed during the 2007-09 crisis were repeated in March of this year as the limited market transactions underpinning LIBOR benchmarks fell away, leaving them almost entirely reliant on expert judgement. As a result of market volatility in March, LIBOR rates — and hence costs for borrowers — rose as central bank policy rates fell, and underlying market activity was low, reinforcing the importance of completing the transition to alternative rates by end-2021.

In its Interim Financial Stability Report in May 2020, the Bank of England described these dynamics in some detail.[12] In the key three-month sterling Libor rate, the proportion of 'transaction-based' (Level 1) submissions rose above 10% only once over the preceding year (Graph 1). A clear majority of inputs are routinely based on 'expert judgement', due to an absence of sufficient transactions to inform Level 1 and Level 2 submissions. During March, the limited market transactions underpinning Libor benchmarks fell away, leaving them almost entirely reliant on expert judgement. In the week of 16 March, Level 1 submissions in three-month sterling Libor fell to zero, leaving no 'transaction-based' inputs supporting the rate. More broadly, over half of the 35 published Libor rates contained no Level 1 submissions during this week, compared to an already material level of rates which did not contain level 1 submissions in the previous week (around one third), By contrast, the value of transactions underpinning SONIA, the preferred RFR in sterling markets, increased in the weeks following 16 March – from its previous average of around £40 billion per day to over £60 billion in April (Box 1, Graph 1B).

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[10] Board of Governors of the Federal Reserve System (2020) *How correlated is LIBOR with bank funding costs?*, 29 June

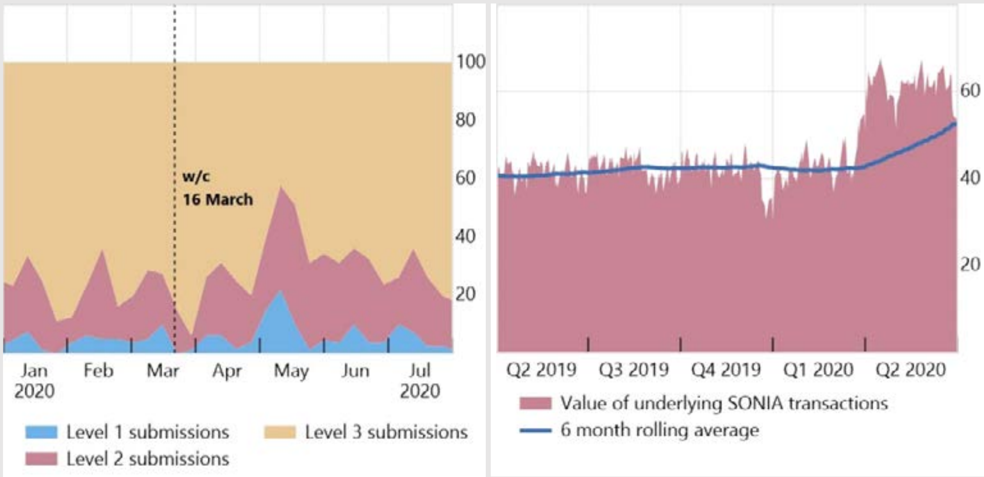
[11] FSB (2014) *Reforming Major Interest Rate Benchmarks*, 22 July

[12] Bank of England (BoE) (2020) *Interim Financial Stability Report*, May

LIBOR submissions and value of underlying SONIA transactions   Box 1 Graph 1

A. Proportion of 'Level 1', 'Level 2' and 'Level 3' submission underlying 3-month Sterling LIBOR[1]

B. Value of transactions used to produce SONIA



[1] Input data to LIBOR are categorised using a 'waterfall' with increasing levels of judgement, as summarised in footnote 2.

Source: IBA, Bank of England and Bank calculations

Similar dynamics occurred in US dollar funding markets, as shown in the table below. Even in normal times, issuance of commercial paper by banks is low, but during March 2020, the median number of trades and daily volumes declined by roughly three quarters (Table and Graph 2).

Summary Statistics for 3-month CP Trading Activity

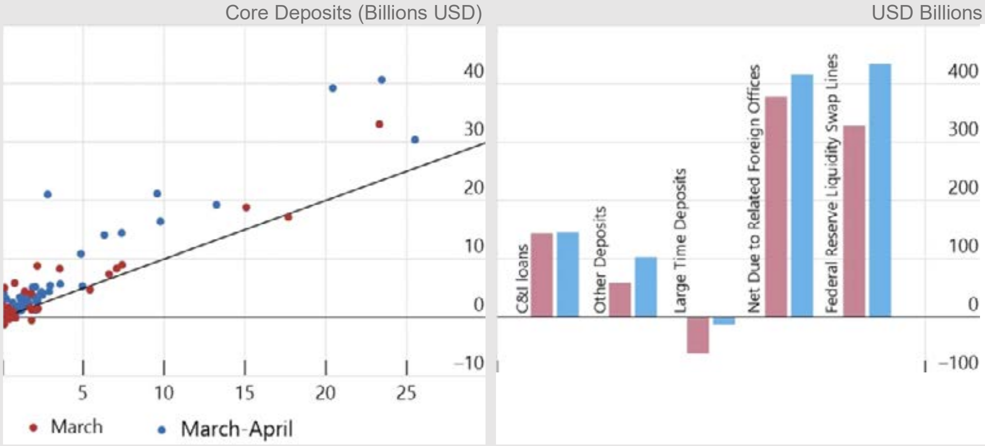
	Trades	Banks	Volume	Herfindahl Index
2020H1				
average	32	7	$1,009,412,110	0.30
median	21	7	$872,982,500	0.24
March 2020				
average	10	3	$434,803,235	0.60
median	5	3	$214,000,000	0.52

Source: DTCC CPCD data

Changes in selected assets and liabilities   Box 1 Graph 2

A. Changes for Domestic Banks (excl SIFIs)

B. Change in Selected Assets and Liabilities Foreign Banks

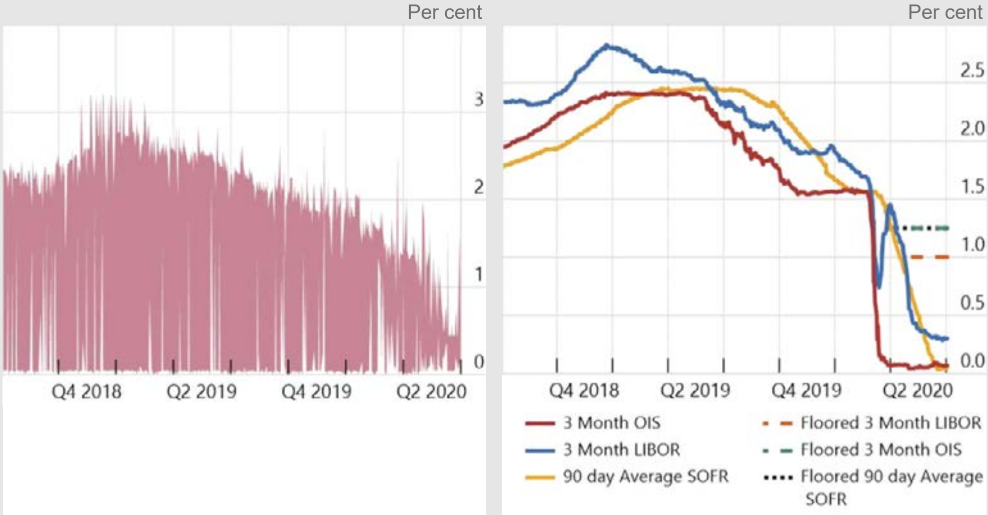


Source: H.8 data collection and Federal Reserve Board Staff Calculations; Assets and Liabilities of Commercial Banks in the United States – H.8.

Finally, in addition to being quite thin, wholesale-unsecured funding markets display a very wide range of rates even in normal times. Even rates paid by the *same* bank on the *same* day often differ by hundreds of basis points as demonstrated by the chart below.

Floored and Unfloored rates dynamics **Box 1 Graph 3**

A. Daily Largest Range of 3-Month CD Rates Observed for an *Individual Bank*   B.Floored and Unfloored Rates



Source: FR 2420; Federal Reserve Bank of New York, Ice Benchmark Administration, Refinitiv, and Federal Reserve Board staff calculations.

Further, with rates again declining, many new loans are instituting non-zero rate floors. With such floors, a lot of the difference between LIBOR rates and RFRs goes away in any case (see Graph 3).

Overview of progress

Development of new markets and outputs of national working groups (NWGs)

Despite the challenges arising from COVID-19, NWGs have remained strongly focused on LIBOR transition.

A number have now produced prominent roadmaps to guide transition in their relevant currencies, setting out the remaining steps required to mitigate risks from discontinuation or loss of representativeness of LIBOR, and expected or best practice timelines required to achieve this. Where necessary, these roadmaps have been updated to account for the impact of disruption from COVID by moving or adapting certain intermediate milestones, but all remain focused on making the necessary preparations ahead of the end of 2021.

Work on supporting infrastructure, market conventions and internal preparations at financial firms has also continued in many areas. In particular, system upgrades required to support new products based on RFRs are being developed and made available, and NWGs continue to release materials to support market participants' own planning and promote consensus across markets where necessary.

For some jurisdictions, further work is underway with regard to the development of forward looking term RFRs. However, it is acknowledged that transition can and should progress irrespective of the timeline for continuing work on term rates and, where possible, tools already available to support tangible steps to transition, such as compounded RFRs, should be utilised,

The most prominent outstanding area of LIBOR dependence is in global lending markets, where it remains the default benchmark for much new lending as well as in a large volume of legacy contracts. The foundational work required for transition in these markets has lagged the pace of progress in other areas for some time but has now been completed in many areas including, for example, the release of recommended conventions for use of RFRs in new products. Successful transition in these markets remains a significant challenge given the remaining time available, so market participants must now act quickly to move new business onto alternative rates. This will require banks to engage in detail with a wide range of customers to ensure they are appropriately informed, treated fairly, and understand any steps they will need to take themselves to be able to use alternative products.

Adoption of robust fallbacks for derivative contracts

At the international level, the FSB has continued to work in close collaboration with ISDA to improve contractual robustness to address risks of discontinuation of widely-used interest rate benchmarks in derivative contracts, which are the largest source of exposure to IBORs.

Since 2016, ISDA has undertaken a significant programme of work, culminating in the release in October 2020 of amendments to the 2006 ISDA Definitions and a related Protocol facilitating adoption of these changes into existing bilateral contracts. These changes will come into effect on 25 January 2021.[13] On 23 October ISDA launched the protocol and published the list of parties who had adhered during the escrow period, which demonstrates positive momentum.[14]

The FSB welcomes the release of ISDA's updated documentation and strongly encourages all market participants to consider adhering as soon as possible to the Protocol as a means to mitigate risks in legacy contracts. Widespread adoption of the Protocol by both financial and non-financial firms will be necessary to ensure it is effective in mitigating these risks at a system-wide level, and authorities and NWGs in a number of jurisdictions have encouraged adherence. The UK Working Group on Sterling Risk-Free Reference Rates (UK RFRWG) has encouraged widespread sign-up to the ISDA Protocol ahead of the effective date in its updated roadmap.[15] In the US, the ARRC Chair urged its members to be prepared to sign on to the Protocol.[16] In addition, the ARRC has recommended as a best practice that market participants adhere before the amendments take effect and for dealers and other firms with significant derivatives exposures to do so during the escrow period in order to promote timely adoption.[17]

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13 ISDA (2020) *ISDA Board Statement on the IBOR Fallbacks Supplement and Protocol*, 9 October

14 ISDA (2020) *ISDA 2020 IBOR Fallbacks Protocol*, 23 October

15 UK RFRWG (2020) *UK Working Group on Sterling Risk-Free Reference Rates (RFR WG) 2020-21 Top Level Priorities*, September

16 ARRC (2020) *Preparing to Adhere to ISDA's Protocol*, 10 August

17 ARRC (2020) *ARRC Recommended Best Practices for Completing the Transition from LIBOR*, 9 March

The Federal Reserve also issued Supervision and Regulation Letter (SR Letter) 20-22[18], which applies to all Federal Reserve-supervised institutions, encouraging adherence to the Protocol.

In addition to adoption of robust fallbacks, authorities have also continued to encourage active conversion by market participants, which remains the only way for parties to have full certainty and control over transition timing and contractual terms when LIBOR ceases or is no longer representative. In the UK, the FCA has stated that reducing the stock of outstanding LIBOR contracts referencing LIBOR, combined with wide adoption of ISDA's protocol for outstanding derivative contracts, will increase the prospects that the FCA could use its proposed powers to address tough legacy needs in a way that maximises market integrity (see below for more detail).[19] In Japan, the Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks issued the statement that strongly encourages early adherence to the ISDA Protocol by both financial and non-financial firms.[20]

Equivalent provisions are also needed in respect of cleared and exchange-traded derivative contracts, which are not governed by ISDA documentation and account for a large majority of the total outstanding notional value. The FSB therefore encourages all providers of cleared or exchange-traded LIBOR-linked derivatives to implement these measures as part of their rulebooks and ensure the outcomes are clearly understood by users, and welcomes the steps already taken to do so by some of the largest global clearing venues for LIBOR derivative contracts.

A global LIBOR transition roadmap for 2021

There is much more for both the private and public sector to do over the next year to increase awareness of, and preparedness for, LIBOR transition, and ensure proactive transition in all cases, by adhering to the best practices and standards appropriate for individual products.

In July, in response to the G20 request to identify remaining challenges to benchmark transition and to explore ways to address them, the FSB and the BCBS, together with the IAIS, published a report[21] on supervisory issues related to benchmark transition. The report noted that very few jurisdictions have dedicated roll-off timelines or targets to guide their local industry, although several jurisdictions reported supporting the private sector to develop their own targets. National authorities and NWGs in LIBOR jurisdictions have explicitly set transition timelines and best practices for a prompt transition away from LIBOR.[22] The report recommended that authorities establish and, where relevant, discuss with NWGs a formal LIBOR transition strategy. This might include interacting with NWGs with a view to set out

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[18] Board of Governors of the Federal Reserve System (2020) *SR 20-22: ISDA IBOR Fallback Protocol and IBOR Fallback Supplement*, 9 October

[19] FCA (2020) *FCA statement on planned amendments to the Benchmarks Regulation*, 23 June

[20] The Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks (2020) *Statement regarding Adherence to the IBOR Fallbacks Protocol Launched by ISDA*, 6 November

[21] FSB (2020) *Supervisory issues associated with benchmark transition*, 9 July

[22] In the US, the ARRC has recommended *more detailed USD LIBOR transition timelines*. In the UK, there are *recommended timelines for supporting the transition to SONIA*. In Japan, likewise, there are *recommended timelines*. The European Central Bank published *good practices guidelines* to assist banks in their preparation without a set timeline framework.

milestones and a transition roadmap with clearly specified actions market participants should take.

To support and facilitate transition, the FSB has developed a **global transition roadmap** setting out high-level steps to be taken ahead of end-2021 (see Appendix B).[23] While recognising that the transition timelines in different jurisdictions respond to the needs and specific institutional and legal conditions, this roadmap is intended to inform firms of some of the steps they should be taking now and over the remaining period to end-2021 to successfully mitigate risks to global financial stability. These are considered prudent steps to take to ensure an orderly transition by end-2021 and are intended to supplement existing timelines/milestones from industry working groups and regulators.

Considerations around LIBOR “end game”

Authorities have acknowledged for some time that there may be a narrow pool of tough legacy contracts that cannot transition away from LIBOR by the end of 2021 and have been keen to engage with the industry on how best to manage the potential market stability risks arising from those contracts.

There have been a number of proposals by authorities including in the US, UK and EU to help manage an orderly wind-down of LIBOR and, in particular, provide a legislative solution for tough legacy contracts that will enable market participants to achieve fair and effective outcomes for their contracts. Whilst differences in scope across jurisdictions may arise, tough legacy contracts are considered those contracts that have no or inappropriate fallbacks, and cannot realistically be renegotiated or amended.

Authorities across jurisdictions have stressed that the importance of active, market-led transition remains and work to substitute existing LIBOR references or to adopt sufficiently robust fallbacks should continue. Where contracts do not fall within the narrow pool of tough legacy contracts and, for example, can feasibly be converted by bilateral or multilateral agreement, market participants are expected to continue to progress their transition efforts and plans and to meet their regulatory obligations, particularly through active conversion and the insertion of robust and workable fallbacks. This is the only way for parties to have certainty about contractual continuity and control over their contractual terms when LIBOR ceases or is no longer representative.

Authorities will continue dialogue and cooperation internationally on proposed solutions across borders, taking account of international transition efforts and impacts.

Regulatory and supervisory oversight

A number of initiatives have been taken internationally to support an effective transition through consistency of regulatory and supervisory measures In February 2020 the BCBS published a newsletter outlining regulatory and supervisory implications related to benchmark rate

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[23] FSB (2020) Global Transition Roadmap for LIBOR, 16 October

reforms[24]. The newsletter clarified a number of points, including regarding the eligibility of regulatory capital instruments, and noted that the Committee is continuing to monitor and assess issues related to benchmark reform and will consider what additional steps may be necessary, including possible further clarifications. In June the BCBS published answers to a range of frequently asked questions, which include benchmark reform issues.[25]

The FSB and BCBS July report on supervisory issue related to benchmark transition followed a globally coordinated survey and quantitative data collection to help ensure that the appropriate supervisory and regulatory measures are taken across jurisdictions. The report highlighted gaps in quantifying LIBOR exposures and in the status of fallback adoption and that a considerable portion of FIs, particularly in non-LIBOR jurisdictions, have yet to start or are still planning their transition. The report laid out three sets of recommendations for supervisory authorities in particular:

- **Identification of transition risks and challenges** – authorities and standard-setting bodies to issue public statements to promote awareness and engage with trade associations, and authorities to undertake regular surveys of LIBOR exposure and to request updates from financial institutions.
- **Facilitation of LIBOR transition** – authorities to establish a formal transition strategy supported by adequate resources and industry dialogue. Supervisory authorities should consider increasing the intensity of supervisory actions when the preparatory work of individual banks is unsatisfactory.
- **Coordination** – authorities to promote industry-wide coordination, maintain dialogue on the adoption of fallback language, consider identifying legislative solutions where necessary, and exchange information on best practices and challenges.

The next step for the FSB, in collaboration with other international bodies and standard setting bodies (SSBs), is to design key metrics to assess global LIBOR exposures and transition status over the coming period, and a list of qualitative questions to monitor progress in implementing the recommendations. An updated assessment of LIBOR transition progress will be provided by early next year.

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[24] BCBS (2020) *Benchmark rate reforms*, 27 February

[25] BCBS (2020) Basel Framework frequently asked questions, June

2. Progress reports from LIBOR, EURIBOR, and TIBOR currency areas

2.1. Reforms to LIBOR, EURIBOR, and TIBOR

2.1.1. LIBOR

The future of LIBOR

On 23 June 2020 the UK Government announced that it intends to develop an enhanced regulatory framework which will ensure that the FCA has the appropriate regulatory powers to manage and direct any wind-down of LIBOR in a way that protects consumers and/or ensures market integrity.[26] This follows the recommendations put forward by the UK RFRWG in its May 2020 paper on the identification of Tough Legacy issues.[27] The FCA published a statement welcoming the Government's announcement.[28]

Further to the announcement above, in October 2020, the Financial Services Bill[29], which contains the provisions to amend the Benchmarks Regulation (BMR), has been laid before the UK Parliament. The draft legislation proposes to give new regulatory powers that would enable the FCA to direct a methodology change for a critical benchmark where it has found that the benchmark's representativeness will not be restored. Although this would not make the benchmark representative again, it would allow the FCA to stabilise certain LIBOR rates during a wind-down period. Existing laws will be strengthened to prohibit the use of an individual critical benchmark where its representativeness will not be restored, whilst giving the regulator the ability to specify limited continued use in legacy contracts. The draft legislation also proposes to extend the maximum five-year period during which time the FCA may mandate the administrator to continue publishing the rate, to ten years.

On 18 November 2020 the administrator of LIBOR, IBA, announced that it will consult on its intention that the euro, sterling, Swiss franc and yen LIBOR panels would cease at end-2021 and that announcements in relation to US LIBOR are expected to follow. On the same day, the FCA published a statement setting out its potential approach to the use of proposed new powers under the Financial Services Bill to ensure an orderly wind down of LIBOR. Alongside this statement, the FCA published two consultations about its proposed policy in relation to some of the new powers that would be granted to the FCA under the BMR as amended by the Financial Services Bill.[30] One consultation proposed the FCA policy in relation to how it would use the proposed new power to require continued publication of critical benchmarks on the basis of a changed methodology in certain circumstances. The other sets out the FCA view on the circumstances in which those powers would potentially become relevant. At the conclusion of these consultations, the FCA will set out its approach in published Statements of Policy. The

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26 UK Parliament (2020) *Financial Services regulation: Statement made on 23 June 2020*

27 UK RFRWG (2020) *Paper on identification of Tough Legacy issues*, May

28 FCA (2020) *FCA statement on planned amendments to the Benchmarks Regulation*, 23 June

29 UK Parliament (2020) *Financial Services Bill*

30 FCA (2020) Benchmarks Regulation: our proposed new powers, policy and decision-making, 18 November

FCA will also continue to work closely with other UK authorities, market participants, and international counterparts including through the FSB's OSSG.

Regulatory action may not be able to address all issues, or be practicable in all circumstances, for example where the inputs necessary for an alternative methodology are not available in the relevant currency. Even if regulatory action to change the methodology enabled by the legislation is feasible, parties who rely on such action will not have control over the economic terms of that action. Therefore, market participants should continue to focus on active transition, as this is the only way for parties to have certainty about contractual continuity and control over their contractual terms when LIBOR ceases or is no longer representative. Reducing the stock of outstanding contracts referencing LIBOR, combined with wide adoption of ISDA's protocol for outstanding derivative contracts, will increase the prospects that the FCA could use these proposed powers to address tough legacy needs in a way that maximises market integrity.

2.1.2. EURIBOR

In relation to EURIBOR, its administrator, the European Money Market Institute (EMMI), has been authorised by the FSMA under the BMR regime in July 2019. The benchmark is computed on the basis of a hybrid methodology based on a waterfall approach: as a first step making use of real transactions in the unsecured money market (borrowing) when available, as a last step relying on information from related markets and expert judgement. The latter is subject to additional requirements for panel banks, requested by the European Money Market Institute to minimize the risk of manipulation and optimize representativeness of the methodology. The authorisation of EMMI implied that the FSMA considered the methodology with which EURIBOR is calculated as BMR compliant.

The BMR requires authorised administrators to comply with the applicable regulatory conditions "at all times".[31] For a benchmark like EURIBOR, this means that EMMI must obtain input data from a reliable and representative panel of contributors to ensure that EURIBOR itself is reliable and representative of its underlying interest. Although the current panel is representative, its stability remains an important element going forward. This, together with any structural shifts in the unsecured money market, will be key factors that EMMI's supervisory authority (FSMA until the end of 2021, ESMA afterwards) will have to monitor to ensure that EURIBOR remains BMR compliant.

During the outbreak of Covid-19, EURIBOR continued to be published on a daily basis, albeit the liquidity in the underlying market started to decrease and the eligible transactions became scarce. That was possible as the hybrid methodology relied extensively on additional layers of input data, including from related markets and expert judgement. Since May 2020, the liquidity in the underlying market has improved only marginally. The annual review, which is foreseen by the end of 2020, could serve to further evaluate the consequences of the crisis on the methodology.

[31] EU (2016) *Benchmark Regulation*, see Article 34(2)

The working group on euro risk free rates is expected to launch two public consultations on EURIBOR fallback rates by the end of 2020. The first consultation would cover the recommended €STR-based term rates, which could be suitable as EURIBOR fallback rates and the methodology of the credit spread adjustment to be added in the fallback; the second consultation will cover the trigger events whereby the fallback clause would be activated.

2.1.3. TIBOR

Since its implementation in July 2017, JBA TIBOR Administration ("JBATA") continues its efforts to enhance the integrity and clarify the calculation and determination processes of the reformed JBA TIBOR. The results of the annual review of the JBA TIBOR operational framework[32] and the self-assessment of compliance with IOSCO Principles[33] were published on 19 March 2020.

With respect to the outstanding challenges related to IOSCO Principle 13 (Transition), JBATA intends to undertake public consultation and other outreach activities regarding candidate benchmarks for the JBA TIBOR fallback rate in 2020 onwards, with a view to further enhancing the robustness of the JBA TIBOR.

In April 2020, the European Commission launched a public consultation on the draft equivalence decision[34] for the legal and supervisory framework in Japan. The decision would be applicable to specified financial benchmarks which include the Japanese Yen TIBOR and EUROYEN TIBOR.

2.2. US dollar (USD)

2.2.1. Progress in creating and transitioning to SOFR

The Alternative Reference Rates Committee (ARRC) is charged with helping to ensure the successful implementation of its Paced Transition Plan promoting the use of the Secured Overnight Financing Rate (SOFR), the alternative to U.S. Dollar (USD) LIBOR recommended by the ARRC. The ARRC also serves as a forum to coordinate and track planning across cash and derivatives products as market participants transition away from USD LIBOR and to address risks in legacy contracts language where robust, economically appropriate fallbacks to LIBOR have not been incorporated. The volume of overnight Treasury repo transactions underlying SOFR is near $1 trillion on a daily basis, representing the largest rates market at a given maturity in the United States.

The ARRC released best practice recommendations[35] in late May to support the industry transition. The recommended best practices set out general recommendations as well as

[32] JBA TIBOR (2020) *Result of a Periodic Review of the JBA TIBOR Operational Framework*, 19 March

[33] JBA TIBOR (2020) *Compliance with IOSCO Principles for Financial Benchmarks*, 19 March

[34] European Commission (2020) *Financial benchmarks – recognition of equivalence of Japan's legal and supervisory framework*

[35] See footnote 12

product specific timelines that firms can choose to adopt to support the transition including, but not limited to:

1. Incorporation of ARRC-recommended fallback language for newly issued FRNs, residential ARMs and securitizations with maturities beyond end 2021 by 30 June 2020 and incorporation of ARRC-recommended hardwired fallback language for syndicated business loans and bilateral business loans with maturities beyond end 2021 by 30 September 2020 and 31 October 2020, respectively.

2. Completion of all necessary enhancements by third-party technology and operations vendors relevant to the transition to support SOFR by 30 June 30 2020 for FRNs, by 30 September 2020 for business loans and residential ARMs, and by 31 December 2020 for securitizations

3. Adherence to the ISDA fallback protocol within the 3- to 4-month period after it is published and before the amendments to embed the fallbacks in legacy transactions take effect, encouraging dealers and firms with significant derivatives exposures to do so during the escrow period, and dealer offering of electronic market making in SOFR derivatives by 30 September 2020,

4. No new issuances of LIBOR-linked contracts maturing beyond end-2021 by 30September 2020 for new LIBOR ARMs, by 31December 2020 for new FRNs, by June 30, 2021for new business loans and new non-CLO securitizations and derivatives, and by 30September 2021 for CLO securitizations.

The ARRC has published a number of additional recommendations since the 2019 FSB Progress Report. These include recommended fallback language for new variable rate private student loans[36] and revised fallback language for syndicated business loans[37] and bilateral business loans.[38] The ARRC has also set out the details of the ARRC's recommended spread adjustments for those cash products using ARRC fallback language.[39] Consistent with its 2020 objectives, the ARRC launched two Requests for Proposals to select both an administrator to publish the ARRC's recommended spread adjustments (and the associated spread adjusted rates) for cash products[40] and a potential administrator of ARRC-recommended forward-looking SOFR term rates[41] to be published in the first half of 2021 if liquidity in SOFR derivatives markets has developed sufficiently.

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36 ARRC (2020) *ARRC Consultation Regarding More Robust Libor Fallback Contract Language For New Variable Rate Private Student Loans*, 30 June

37 ARRC (2020) *ARRC Recommendations Regarding More Robust Fallback Language For New Originations Of Libor Syndicated Loans*, 30 June

38 ARRC (2020) *ARRC Recommendations Regarding More Robust Fallback Language For New Originations Of Libor Bilateral Business Loans*, 27 August

39 ARRC (2020) *ARRC Announces Recommendation of a Spread Adjustment Methodology for Cash Products*, 8 April

40 ARRC (2020) *RFP for Vendor to Publish ARRC-Recommended LIBOR Fallback Spread Adjustments and Spread-Adjusted Rates*

41 ARRC (2020) *ARRC Releases Request for Proposals for the Publication of Forward-Looking SOFR Term Rates*, 10 September

The ARRC has also published a number of resources that market participants can choose to use to support their transition efforts, including suggested conventions for floating rate notes[42] and syndicated business loans;[43] practical implementation checklists for SOFR adoption;[44] transition guides for ARMs and private student loans[45], as well as a survey to support vendor readiness. In addition, the ARRC published draft New York state legislation as a potential approach to help address challenges surrounding tough legacy contracts governed by New York law.[46]

There have been significant SOFR-related announcements from the Federal Housing Finance Agency (FHFA), the SEC, and the US Treasury over the past year. In July 2019, the SEC released a key statement[47] on the LIBOR transition, highlighting steps institutions can take to support the transition across existing contracts, new contracts and other business risks. This was more recently followed up in June 2020 with the SEC's launch of an examination initiative[48] related to LIBOR transition preparedness. In February, the FHFA announced that the government sponsored enterprises (GSEs) Fannie Mae and Freddie Mac will stop accepting adjustable-rate mortgages (ARMs) based on LIBOR by the end of 2020, and the GSEs' announced that they plan to begin accepting ARMs based on the Secured Overnight Financing Rate (SOFR) later in 2020.

Amid COVID-19 related market stress and the remote-working environment, some market participants expected delays in transition efforts. However, after the Financial Conduct Authority reaffirmed the targeted LIBOR cessation timeframe of end 2021 and the Alternative Reference Rate Committee's recent publication of transition milestones, many have cited a reduction in uncertainty in light of more guidance. Additionally, the Chicago Mercantile Exchange and LCH's unchanged October 2020 timeline for the swaps and principal interest alignment change from the Effective Federal Funds Rate (EFFR) to SOFR has further reduced expectations of significant delays. Looking ahead, the cleared swaps discounting change from EFFR to SOFR is broadly expected to boost liquidity in SOFR derivatives though the development of the SOFR loan market remains the most broadly cited requirement for derivative market growth.[49]

SOFR liquidity has continued to increase, although it remains less liquid than U.S. dollar LIBOR. Both LIBOR and SOFR derivatives activity has declined since policy rates were cut to near zero in March, but the value of SOFR futures outstanding has grown to 10 percent of LIBOR futures. Activity in longer-dated SOFR swaps has grown in recent months, likely in

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42 ARRC (2019) *SOFR Floating Rate Notes Conventions Matrix*, August and ARRC (2029) *Appendix to SOFR Floating Rate Notes Conventions Matrix*, November

43 ARRC (2020) *SOFR "In Arrears" Conventions for Syndicated Business Loans*

44 ARRC (2029) *Practical Implementation Checklist for SOFR Adoption*, September and ARRC (2020) *Buy-Side/Asset Owner Checklist*, January

45 ARRC (2020) *ARRC Publishes Transition Resource Guides for Adjustable Rate Mortgages and Private Student Loans*, August

46 ARRC (2020) *ARRC Releases a Proposal for New York State Legislation for U.S. Dollar LIBOR Contracts*, 6 March

47 SEC (2019) *Staff Statement on LIBOR transition*, July

48 SEC (2020) *Examination initiative: LIBOR transition Preparedness*,

49 The ARRC issued recommendations regarding exchange of cash compensation between counterparties to legacy swaptions impacted by the CCP discounting transition to SOFR in October 2020.

anticipation of the move to SOFR discounting at CME and LCH in October 2020,[50] and CME now offers SOFR options, helping to establish a SOFR volatility curve. A clear jump in SOFR swap trading took place in the two weeks that preceded the SOFR discounting switch. The total amount of SOFR-based debt issued exceeds $750 billion, roughly double the amount at the start of the year. With the publication of recommended conventions, a number of banks are working to offer SOFR loans, with a handful of SOFR loans already having been offered, and Fannie Mae has begun to accept SOFR ARMs based on the 30-day SOFR averages published by the Federal Reserve Bank of New York. In March 2020, the Federal Reserve Bank of New York, as administrator of SOFR and in cooperation with the Treasury Department's Office of Financial Research (OFR), began to publish 30-, 90-, and 180-day SOFR Averages as well as a SOFR Index, in order to support a successful transition away from U.S. dollar (USD) LIBOR.[51]

2.2.2. Next steps

Looking ahead, the ARRC released its 2020 Objectives[52] to set out its priorities in light of the transition challenges ahead.

Prioritized ongoing areas of focus include: movement of legacy derivative positions from LIBOR to SOFR before end-2021; development of tools to support operational and infrastructure preparedness; work on potential legislative relief for legacy contracts that may be otherwise difficult to amend and that do not have economically appropriate fallbacks; continued work on tax, regulatory and accounting measures to support the transition; and finally broad outreach and education around transition work.

2.3. Euro (EUR)

2.3.1. Progress in creating and transitioning to €STR

The transition efforts in the euro area are led by an industry group, the working group on euro risk free rates, established in 2017 by the ECB, together with the Financial Services and Markets Authority (FSMA), the European Securities and Markets Authority (ESMA) and the European Commission.

The euro short-term rate (€STR), has been produced by the ECB since October 2019. Following a public consultation, the working group on euro risk free rates[53] recommended the €STR as the near risk-free rate for the euro area. The €STR is an unsecured rate, reflecting

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50 LCH (2020) *LCH successfully completes transition to SOFR discounting*, October; CME Group (2020) *ERIS Swap Future Transition to SOFR Discounting Complete*, October; CME Group (2020) *CME Group Swap Futures (MAC and Eris) Plan for Transition to SOFR Discounting*, July

51 Federal Reserve Bank of New York (2020) *Statement Regarding Publication of SOFR Averages and a SOFR Index*, February. The launch came following the release of a consultation on November 4, 2019, requesting public comment on the proposed calculation and publication of the SOFR Averages and Index.

52 ARRC (2020) *2020 Objectives*

53 More information on the working group on euro risk free rates, including its recommendations and public consultations, is available on the ECB website

the costs which a set of euro area banks incur for borrowing overnight funds from other banks and non-bank financial institutions[54].

The €STR will replace the previous widely used overnight benchmark, EONIA, which will be discontinued on 3 January 2022. In the interim, EONIA is computed as a spread of 8.5 basis points over the €STR. The €STR and €STR-based term rates are expected to apply as fallback rates for the widely used IBOR in the euro area, EURIBOR, to cater for a scenario in which the benchmark may cease to exist.

Transition efforts are focused on (i) completing the switchover from EONIA to the €STR and thus developing deeper €STR liquidity and (ii) adopting €STR-based fallback rates for EURIBOR to cater for a scenario in which the benchmark may cease to exist.

In the course of 2020, the progress on euro benchmarks reform was slowed down by roughly six months owing to the Covid-19 crisis and related market situation. The working group on risk free rates adjusted its planning for its upcoming deliverables, and notably for the work stream on EURIBOR fallbacks. Two Public Consultations on (i) EURIBOR fallback trigger events and (ii) EURIBOR fallback rates and spread adjustment will be launched at the end of 2020, instead of May 2020 as previously envisaged. This shift would imply that the related final recommendations would be scheduled for early 2021, instead of summer 2020.

The next step of the EONIA transition is now for market participants to actively use €STR in replacement to EONIA. For this, a key milestone was the switch of discounting curve by the CCPs from one based on EONIA to a €STR curve. The most relevant European CCPs performed the switch at the end of July 2020.[55]

This CCPs discounting switch is expected to encourage users to amend their bilateral Credit Support Annexes (CSAs) to replace EONIA with €STR, which should in turn give a boost to €STR-based OIS market activity. The €STR-OIS market activity remained fairly low; it comprised around 2% of the OIS market volume in August 2020 according to the LCH data publically available. Part of the slow development of the €STR-derivative market may have been the result of the market situation on the back of the Covid-19 crisis, whereby market participants seemed to show some preference for using the most liquid market which was the EONIA-based market.

Additionally, and in order to support market participants in the EONIA to the €STR transition, some additional working group recommendations were agreed upon regarding the swaptions market. On 16 June 2020, the working group endorsed a recommendation that counterparties voluntarily exchange compensation for legacy swaption contracts affected by the transition of central counterparty discounting from the EONIA to the €STR. The working group's recommendation was based on the feedback received from the public consultation on this matter launched in March 2020. It acknowledged that the modalities for implementing voluntary compensation may vary, as well as the scope of the swaption contracts to be compensated.

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54 Detailed information on the €STR methodology and governance is available in the €STR section of the ECB website.

55 EACH (2020) *Statement on the transition from EONIA to €STR discounting regime*, April

It is now important that all users of EONIA close out their positions by the planned discontinuation of the benchmark on 3 January 2022 or ensure that their contracts avail of robust fallback provisions that would cater for the cessation of the benchmark. Additionally, market participants need to ensure that IT systems and infrastructure as well as valuation, payment and collateral processes are adjusted as required to ensure a smooth transition.

In preparation for the EURIBOR fallback consultation, the working group conducted a survey among potential administrators of €STR-based forward-looking rates, i.e. term rates which could be based on the future €STR derivatives market. The envisaged methodologies largely relied on waterfall of inputs, with the main input being €STR OIS committed quotes or trades. In the absence of liquid €STR OIS market, it was difficult for providers to have a quantified view on data sufficiency policies, triggers for the waterfalls and for the contingencies, and on the representativeness of such a rate.

In the context of the forthcoming consultation, the working group is also looking into the use of backward-looking, compounded €STR rates as fallback rates in EURIBOR contracts. In order to support market participants in their fallback planning on EURIBOR and EUR Libor and also in order to encourage the wider use of the €STR, the ECB launched in July 2020 a public consultation on the possible publication of compounded €STR rates and indices.[56] The results of this consultation, supportive of publication of compounded €STR rates by the ECB, have been published by the ECB in October.[57]

In July 2020 the European Commission presented a legislative proposal to amend the EU Benchmark Regulation[58] in order to accompany the possible phase-out of benchmarks with systemic relevance in the Union including also new powers for the European Commission to designate a replacement benchmark. The proposal is currently being negotiated by the European co-legislators.

2.3.2. Next steps

The development of sufficient market activity linked to the €STR in cash and derivatives markets is key in achieving the overarching objective of benchmark reform: to reduce the risks related to the reliance on IBORs by making greater use of risk-free rates and adopting workable fallback provisions. This will allow for sufficient market preparedness for a scenario in which an IBOR ceases to be provided.[59] It will also allow for: (i) market standard and practices on how to trade €STR to evolve, and (ii) benchmark users to have robust written contingency plans.

In this context, the future availability of sufficiently robust forward-looking €STR rates remains uncertain and also depends on how liquidity of the €STR OIS market develops. Therefore, market reliance on such an option should be limited.

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56 ECB (2020) *Survey among potential administrators of €STR-based forward-looking rates*

57 ECB (2020) *Summary of responses to the ECB's public consultation on the publication of compounded term rates using the €STR*, October.

58 European Commission (2020) *Commission addresses risks of Libor cessation*, July.

59 The EU Benchmark regulation (EU 2016/1011) requires from supervised entities to have robust written plans in the event that a benchmark materially changes or ceases to be provided.

The working group on risk-free rates has made substantial progress in creating consensus for the €STR being the near risk-free rate for the euro. As a next step, the working group should support sufficient consensus also related to robust fallback provisions for contracts referencing EURIBOR and should promote and encourage the contingency planning across market participants and segments so that to reduce systemic dependence on EURIBOR and the related financial stability risks.

2.4. Japanese yen (JPY)

2.4.1. Progress in transitioning to TONA

The Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks (the Committee) was established in August 2018 for the necessary deliberations to facilitate market participants and interest rate benchmark users to appropriately choose Japanese yen interest rate benchmarks.

In July 2019, as a key milestone in the Committee's work, a public consultation was launched on the appropriate choice of alternative benchmarks to JPY LIBOR. The results of the public consultation, published by the Committee in November 2019, showed that "Term Reference Rates," the term structures based on JPY OIS, received the most support as an alternative benchmark to JPY LIBOR cash market products.

In line with the public consultation, several initiatives have been taken by the Committee to promote transition away from LIBOR.

First, significant efforts have been made to develop Term Reference Rates (see next section)

Second, there has been good progress in improving contractual robustness in cash market products (see later).

Finally, the Committee has deliberated on new key milestones for cash products to ensure smooth transition away from LIBOR before end-2021.

Based on the results of the 2019 public consultation, the Japanese Bankers Association (JBA) and the Discussion Group on Interest Rate Benchmark Transition comprising of major securities companies (convened by the Japan Securities Dealers Association (JSDA)) have discussed new key milestones for loans and bonds respectively.

In line with the deliberations made by these industry groups, the Committee has also discussed new key milestones (including stopping the flow of new LIBOR contracts) for loans and bonds and published the roadmap of JPY LIBOR transition in August 2020.[60]

To promote and ensure timely and smooth transition by each financial institution, the JFSA and the BOJ have undertaken supervisory initiatives. In March 2020, the JFSA and the BOJ

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60 Bank of Japan (BoJ) (2020) *Second Public Consultation on the Appropriate Choice and Usage of Japanese Yen Interest Rate Benchmarks*, August

jointly published “Summary of Survey Results on the Use of LIBOR and Main Actions Needed”.[61] The joint survey conducted in October 2019 asked 278 financial institutions about their quantitative LIBOR exposures and their qualitative LIBOR transition progress. Based on its findings, the main actions needed were described together with focus points in supervisory monitoring. Another survey is planned to follow up the progress and status of LIBOR transition.

In June 2020, the JFSA and the BOJ sent a joint letter to the CEOs of major financial institutions regarding LIBOR transition. The letters presented actions generally required for financial institutions along a timeline given that LIBOR will be ceased at the end of 2021 and requested submission of relevant materials to review the progress of preparedness in individual firms. While the letters have been sent to major financial institutions, the JFSA and the BOJ will also monitor preparedness of other financial institutions based on the contents of the letters in order to urge them to take actions for permanent cessation of LIBOR.[62]

Significant efforts have been made to develop Term Reference Rates. In October 2019, the Committee solicited entities that would calculate and publish prototype rates (which are not presumed to be used in actual transactions) for Term Rates.[63] As a result, it received applications from a number of entities that have experience in calculating and publishing benchmarks. The Task Force on Term Reference Rates received presentations by applicants and evaluated them while taking into account the opinions of such parties as data providers of JPY OIS and the supervisory authority of interest rate benchmarks in Japan.

In February 2020, the Committee determined that QUICK Corp. was suitable as a calculating and publishing entity of prototype rates for Term Reference Rates.[64]

In May 2020, the QUICK Corp.[65] began publishing prototype rates on a weekly basis, and in October 2020, it began publishing on a daily basis, which are available on the website of QUICK Corp., as well as on the BOJ's website.[66] The "production rates" of the Term Reference Rates are anticipated to be published no later than mid-2021, as is shown in the milestone for forward-looking term rates,[67] with an assumption that these will be used in actual transactions.

As for the progress in improving contractual robustness in cash market products, the Committee launched a public consultation on the fallback rates and spread adjustment methodologies in loans and bonds (see “4.2 Currency-specific work on contractual fallbacks”).

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61 Japan Financial Services Agency (JFSA) and Bank of Japan (2020) *Summary of Survey Results on the Use of LIBOR and Main Actions Needed*, March

62 BoJ (2020) *Letters to the CEOs of Major Financial Institutions regarding LIBOR Transition*, June

63 BoJ (2019) *Solicitation of the Calculating and Publishing Entities of Prototype Rates for Term Reference Rates (Swap)*, October

64 BoJ (2020) *Determination of the Calculating and Publishing Entity of Prototype Rates for Term Reference Rates*, February

65 Tokyo Term Risk Free Rate (TORF)

66 BoJ *Interest Rate Benchmark Reform (Preparedness for the Discontinuation of LIBOR)*

67 Bank of Japan (BoJ) (2020) *Second Public Consultation on the Appropriate Choice and Usage of Japanese Yen Interest Rate Benchmarks*, August, Appendix 2-b: Schedule for publication of production rates for term reference rates.

2.4.2. *Next steps*

Progress has been made to promote market-wide transition efforts amid the Covid-19 pandemic.

The Committee has progressed discussions on key challenges by utilizing telephone conferences and written resolutions. These included key milestones, fallback arrangements and enhancement of the liquidity of the JPY OIS to develop robust Term Reference Rates. The timeline has not been significantly affected.

As in other jurisdictions, Covid-19 is expected to affect individual firms' transition plans, in particular system upgrades and clients communications. While significant delays in their transition programme have not been observed so far, the JFSA and the BOJ are closely monitoring the Covid-19 impacts on a firm's transition plan when the situation has persisted further.

2.5. British Pound (GBP)

2.5.1. *Progress in transitioning to SONIA*

The Working Group on Sterling Risk-Free Reference Rates ('RFRWG') has continued work to catalyse a broad-based transition to SONIA by end-2021 across sterling bond, loan and derivative markets, in order to reduce the financial stability risks arising from widespread reliance on sterling LIBOR.

As in other jurisdictions, the outbreak of COVID-19 led some intermediate transition milestones to be revisited. However, in its statement published on 25 March 2020 regarding the impact of COVID-19 on firms' LIBOR transition plans, the RFRWG noted that the central assumption that firms cannot rely on LIBOR being published after the end of 2021 has not changed, and that end-2021 should remain the target date for all firms to meet. A further statement from the RFRWG setting out revised interim timelines for the transition in respect of LIBOR-linked loans was published on 29 April.

Market moves since the COVID-19 outbreak have also highlighted some advantages from the selection of SONIA as the successor to sterling LIBOR. Throughout the period of market volatility related to COVID-19, SONIA closely tracked the Bank Rate. Transaction volumes in the underlying overnight unsecured market increased from £43bn in the month prior to the market turbulence to over £60bn. LIBOR rates on the other hand increased in the second half of March 2020, while central bank policy rates were being reduced and underlying transactions were diminished. In its May 2020 *Interim Financial Stability Report*, the Bank of England stated: "*Recent market volatility has highlighted the long-standing weaknesses of LIBOR benchmarks, which remain in widespread use. LIBOR rates – and hence costs for borrowers – rose as central bank policy rates fell, and underlying market activity was low. This has reinforced the importance of completing the transition to alternative rates by end-2021*."[68]

[68] Bank of England (2020) *Interim Financial Stability Report*, May

In July 2020 the RFRWG published an updated version of its roadmap and top level priorities for 2020 in order to clarify actions market participants should take to reduce LIBOR exposure and transition to alternative rates.[69] The priorities are as follows:

- By end-Q1 2021, for lenders and borrowers take necessary steps to cease issuance of LIBOR linked loan products that expire after end of 2021, including by end-Q3 2020 making non-LIBOR alternatives available and including contractual conversion mechanisms in new or refinanced LIBOR products;
- To take steps throughout 2020 to promote & enable widespread use of SONIA compounded in arrears;
- To take steps to enable a further shift of volumes from GBP LIBOR to SONIA in derivative markets;
- To establish a clear framework to manage transition of legacy LIBOR products, to accelerate reduction of stock of GBP LIBOR referencing contracts by end-Q1 2021 and complete active conversion where viable by end-Q2/3 2021; and
- To provide market input on issues around 'tough legacy"'.[70]

The Bank of England and the Financial Conduct Authority ('FCA') have supported these objectives, notably through a joint January 2020 letter to responsible Senior Managers at the largest supervised firms setting out initial expectations of transition progress for 2020, including for 'all firms to play their part in meeting these [RFRWG] targets'.[71] In September 2020, the RFRWG, in collaboration with UK authorities and industry trade assiociations, held a virtual webinar focused on the corporate sector to raise awareness of the changes taking place in sterling loan markets and the impending milestones with regards to the loan market. The webinar provided an overview of actions corporates should take to prepare for the use of alternative rates and built on a series of educational videos released over the summer.

At the beginning of 2020, the RFRWG initiated three new task forces focusing on (i) enablers to moving new loans issuance away from GBP LIBOR; ii) frameworks to support transition of legacy cash products; and; iii) providing market input regarding the 'tough legacy' of products that may prove unable to be converted or amended to include robust fallbacks. A fourth new task force working to progress and raise awareness of conventions for new sterling RFR-based non-linear derivatives and support discussions on the transition of legacy LIBOR products in these markets was set up in July 2020.

The task force focusing on tough legacy delivered its mandate through the publication in May 2020 of a paper on the identification of Tough Legacy issues.[72] Foremost, this paper highlighted the ongoing importance for market participants of a focus on active transition as

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69 UK RFRWG (2020) *UK Working Group on Sterling Risk-Free Reference Rates (RFR WG) 2020-21 Top Level Priorities*, September

70 Defined by the UK government as *'those contracts that genuinely have no or inappropriate alternatives and no realistic ability to be renegotiated or amended'*

71 BOE & PRA (2020) *Next steps on LIBOR transition*, January

72 UK RFRWG (2020) *Paper on the identification of Tough Legacy issues*, May

the only way for parties to have certainty over the timing and substance of transition. The paper concluded that there was a case for action to address 'tough legacy' exposures in the UK. The case for action differed by asset class, depending on the contracts involved and the ability to amend the terms. To the extent that it was feasible, the Task Force proposed that the UK government consider legislation to address 'tough legacy' exposures, whilst recognising that there was no guarantee that such a solution will materialise, that it will materialise across all relevant legal jurisdictions, or that it would be available for all products and circumstances. On 23 of June 2020, the UK government announced plans for enhancing the FCA's powers to deal with the winding down of critical benchmarks. For more on this please refer to the sub-section titled 'the future of LIBOR'.

The work of the RFRWG's other two new task forces is ongoing, with considerable progress already having been made. The task force focusing on new loans produced a Frequently Asked Questions document in September 2020 clarifying several aspects of the RFRWG's 29 April statement on ceasing LIBOR-linked lending[73] and recommendations for SONIA loan market conventions.[74] The task force focusing on legacy cash products published two discussion papers intending to familiarise firms with the fundamentals of active conversion of GDP referencing bonds[75] and loans in September 2020.[76]

In June 2020, the Bank of England published a response to the feedback received on its discussion paper titled 'Supporting Risk Free Rate transition through the provision of compounded SONIA.[77] Given near-unanimous support, the Bank confirmed that it was to produce a daily, free to use, 'golden source' SONIA Compounded Index using the methodology described in the paper. The Bank commenced publication of the daily Index in August 2020.[78] The Bank also confirmed it was not to be producing 'period averages' at this time. This reflected a lack of consensus from respondents on both the usefulness of period averages and on the conventions underpinning such rates.

In recognition of widespread demand from sterling loan market participants, on 1 September 2020 the RFRWG also released a recommendation on standard market conventions for sterling loans based on compounded in arrears SONIA to support the urgent transition away from the use of LIBOR, particularly with respect to the RFRWG's target for lenders to be able to offer non-LIBOR alternatives to customers by the end Q3 2020. The recommendation took into account the overall needs of the sterling loan market as well as a variety of system infrastructure implementation considerations.

Progress in market uptake

Despite the challenging environment, there has been continued momentum in building SONIA liquidity, supported by clear public messaging that the central assumption that firms cannot

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73 UK RFRWG (2020) *Questions and Answers on the Statement on Implications of COVID 19 on recommended milestones*

74 UK RFRWG (2020) *Statement on behalf of the Working Group on Sterling Risk-Free Reference Rates – Recommendations for SONIA Loan Market Conventions*, September

75 UK RFRWG (2020) *Active transition of GBP LIBOR referencing bonds*, September

76 UK RFRWG (2020) *Active transition of GBP LIBOR referencing loans*, September

77 BoE (2020) *Supporting Risk-Free Rate transition through the provision of compounded SONIA*, February

78 BoE (2020) Data Viewer

rely on LIBOR being published after the end of 2021 has not changed and should remain the target date for all firms to meet.

The market for SONIA derivatives is well established. The share of swaps traded using SONIA is already broadly equivalent to that linked to LIBOR, with SONIA dominating at shorter maturities. The share of futures referencing SONIA stands at around 5% of total sterling futures volumes in terms of open interest and averaged 6.5% in Q1 2020 (ahead of the COVID crisis). In January 2020, the FCA and Bank of England published a joint statement encouraging market makers to change market convention for sterling interest rate swaps from LIBOR to SONIA in Q1 2020. This change was intended to move the greater part of new sterling swaps trading to SONIA and reduce the risks from creating new LIBOR exposures. However this coincided with the market disruption of COVID-19 leading to a second endeavour to make SONIA the primary interest rate swap in sterling markets from 27 October 2020 onwards.

Excluding some CLOs, ABSs and private placements, all new sterling bond issues in the form of FRNs, and most securitisations, have been referencing SONIA rather than LIBOR since June 2018.

Since the beginning of 2020 and up until 15 June 2020, 29 different banks, sovereigns, and supranational agencies had issued 47 FRN deals referencing compounded SONIA, with a total value of over £17.7 billion. At the beginning of September 2020 the total estimated volume of outstanding SONIA-linked bonds stood at £62 billion in over 141 transactions. In August 2020, the first bond issue was completed referencing the Bank of England's SONIA compounded index.

Use of compounded SONIA is established as the market standard for sterling securitisations, with over £20 billion of publicly distributed issuance since the inaugural example in April 2019.

Up until September 2020, investor consent has been secured for conversion of a total of over £12 billion of legacy securities, across FRNs, securitisations and covered bonds from numerous major issuers. The interest rates payable on these securities are now directly based on SONIA rather than sterling LIBOR.

In March, the first multi-currency revolving credit facility to be linked to both SONIA and SOFR was signed by British American Tobacco, consisting of a £3bn 364-day facility and a £3bn 5-year facility. The British Riverside Group announced the UK housing sector's first SONIA loan facility had completed in April. Since markets have calmed, momentum has continued, with GlaxoSmithKline refinancing two revolving credit facilities provided by 12 banks, consisting of a $2.5 billion 364-day facility and £1.9 billion multi-currency 3-year facility. These agreements now include fixed spread adjustments for SOFR and SONIA respectively. More generally, a regularly updated list of RFR referencing syndicated and bilateral loans is available from the Loan Market Association,[79] highlighting conventions and terms used which could be replicated by other issuers going forward.

A consultation conducted by the RFRWG in 2018 identified demand for a forward-looking term rate from some participants in cash markets where usage of such rates had historically been

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[79] LMA (2020) *List of RFR referencing syndicated and bilateral loans*, July

common, and potentially also to support transition of certain legacy contracts. A new Term Rate Use Case Task Force was formed to identify where the usage of SONIA compounded in arrears is appropriate and provide guidance where the usage of alternative approaches, such as a Term SONIA Reference Rate (TSRR), may be necessary. The findings of this Task Force are set out in a January 2020 paper on use cases of benchmark rates including term rate. [80].

Key findings were as follows:

- The Task Force considered that use of SONIA compounded in arrears was appropriate and likely operationally achievable for approximately 90% by value of the sterling LIBOR loan market sampled and that the remaining 10% by total loan value would likely require alternative rates. The 10% requiring alternative rates consisted primarily of lower value loans to a wide range of smaller borrowers and therefore accounted for a somewhat greater proportion when measured by borrower numbers rather than total loan values.

- It was noted that smaller corporate and retail clients for whom simplicity and/or payment certainty is a key factor may wish to consider alternative rates such as a fixed rate, Bank Rate, or a SONIA term rate, if available.

- To continue with the current market practice, it was recognised that alternative rates should also be considered for trade and working capital, which use discounted cash flows and therefore require a forward-looking term rate with the ability to interpolate mid period dates, and Islamic finance which can pay variable rates of return so long as the variable element is pre-determined.

TSRRs are expected to be available for market participants to use in contracts by end Q1-2021. Following delays in publication primarily as a result of reduced liquidity in derivative markets used in the formation of the TSRRs as a result of COVID-19, three benchmark administrators (FTSE Russell, ICE Benchmark Administration, Refinitiv) have begun publishing TSRRs in 'beta' form, and are not to be used in contracts. The beta period of observation is expected to last for approximately 6 months to allow market participants to understand and assess the nature and behaviour of these rates before contractual usage in products can commence. Removal of the 'beta' tag will be determined by the official sector and the RFRWG.

In order to assist market participants and vendors in considering whether any amendments may be required to their systems or products should they choose to adopt SONIA compounding methods or transition to TSRRs, the RFRWG has published two papers: i) a summary of the freely available independent RFR calculators on the market;[81] and ii) a summary of the key attributes of beta versions of TSRRs published by independent benchmark administrators.[82]

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80 UK RFRWG (2020) Use Cases of Benchmark Rates: Compounded in Arrears, Term Rate and Further Alternatives, January

81 UK RFRWG (2020) *Freely Available Independent RFR Calculator Summary*, September

82 UK RFRWG (2020) *Term SONIA Reference Rate Publication Summary,* October

2.5.2. Next steps

The RFRWG will continue to work on delivering its top-level priorities for 2020-21.

In terms of market progress, key areas of ongoing focus are delivering transition in the GBP loan market, encouraging broad adoption of the ISDA protocol, engineering a further shift in derivatives volumes, and engagement on the approach for dealing with tough legacy exposures.

2.6. Swiss franc (CHF)

2.6.1. Progress in transitioning to SARON

In October 2017, the Swiss National Working Group (Swiss NWG)[83] on Swiss Franc Reference Rates recommended the Swiss Average Rate Overnight (SARON) as the alternative to the CHF LIBOR.[84] Two sub-working groups focus on the loan and deposit market[85] and the derivatives and capital market.[86]

In October 2018, the Swiss NWG recommended to use compounded SARON as a term rate and stated that a forward-looking SARON term rate is not feasible. Several options for using compounded SARON in cash products were proposed in February 2019. Furthermore, in November 2019, the Swiss NWG gave guidance and stated that the three options 'plain', 'lookback' and 'last reset' are in focus.

During 2020, several small and large banks launched SARON based mortgages and corporate loans by using one of the three mentioned options for compounded SARON. Banks reported that the customer take-up is positive and that no issues arose with an interest rate payment known at the end of the interest period. It is expected that further banks will launch SARON based cash products and that remaining LIBOR based mortgages will be converted to SARON based mortgages until the end of 2021.

Liquidity in the SARON based derivatives market slightly increased over the year but remained far lower than in the CHF LIBOR based derivatives market. However, this is not considered as a main concern. With the expected discontinuation of CHF LIBOR only the SARON based derivatives market will remain. Legacy trades are expected to be converted after 2021, which will further contribute to a liquid market for SARON based derivatives.

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83 The National Working Group (NWG) on Swiss Franc Reference Rates is the key forum to foster the transition to SARON and to discuss the latest international developments. The NWG is co-chaired by a representative of the private sector and a representative of the Swiss National Bank (SNB). The NWG publishes recommendations based on consensus. Recommendations are not legally binding. The SNB acts as a moderator and runs the NWG's technical secretariat, facilitates the organisation of the meetings and publishes on its webpage documents discussed by the NWG. The NWG will cease to exist once the transition to SARON is materially completed.

84 *SARON* is calculated on the basis of data (transactions and binding quotes) posted on SIX Repo Ltd's electronic trading platform. SARON is administered by SIX. It is provided since 2009 and was developed in cooperation with the SNB.

85 NWG (2017) *Sub-Working Group "Loan and Deposit Market": Terms of Reference*

86 NWG (2017) *Sub-Working Group "Derivatives and Capital Market": Terms of Reference*

The Swiss NWG had two meetings in 2020. The first meeting was in May 2020 where developments in the SARON based markets and LIBOR end scenarios were discussed. Furthermore, the NWG recommended to use the lookback option with an offset of five business days for CHF syndicated loans and released a term sheet for a SARON / SOFR cross currency basis swap. The Swiss Financial Market Supervisory Authority (FINMA) reiterated its expectation that market participants undertake all necessary steps to ensure CHF LIBOR is replaced, latest until year-end 2021. The Swiss NWG also reported, based on the results of a webinar conducted in February 2020, that the majority of software providers for banks had implemented the options for compounded SARON.

The Swiss NWG had a second meeting in September 2020, where it underlined its expectation that CHF LIBOR will be discontinued by the end of 2021. Clarity on a discontinuation will come from respective statements by FCA or by IBA. FINMA, based on the results of the self-assessment conducted by selected supervised institutions, reported that though legacies in Swiss francs are small and not an existential problem. The Swiss NWG also stated that a CHF “synthetic LIBOR” is not expected. The Swiss NWG recommended, together with FINMA and the SNB, to adhere to ISDA’s protocol as soon as possible, by its effective date at the latest. Additionally, it was recommended to incorporate similar contract amendments, such as, for example for the Swiss Master Agreement, in order to ensure robust fallback languages in all other contracts. In addition, the NWG gave further guidance on the fallback language of cash products. The guidance was that compounded SARON plus ISDA’s spread adjustment can be used as a fallback rate. The spread can be neglected for simplification if it is beneficial for the customer. The fallback language proposed for mortgages can also be used for bilateral loans to corporates or SMEs. The Swiss NWG also reviewed its recommendation on syndicated loans from the May 2020 meeting and concluded that in cases where international consistency is important, the ‘lag’ methodology and flooring individual SARON values are viable alternatives. However, the NWG repeated the recommendation to use the “shift” methodology and to floor the compounded SARON, as long as the domestic market is in the focus.

The administrator of SARON, the SIX Swiss Exchange (SIX), launched in March 2020 the so-called SARON Compound Rates. The SARON Compound Rates are standardised term rates published each business day, e.g. “SARON 3 months Compound Rate”. Furthermore, SIX launched in September a free to use web-based calculator, which can for instance be used by retail clients to verify the compounded SARON charged by the lender.

2.6.2. Next steps

Several banks started to offer SARON based cash products, in particular retail mortgages, during 2020. It is expected that SARON will establish itself as the key reference rate in the cash market. Trading activity in SARON swaps is also increasing, but remains smaller than the CHF LIBOR-based trading activity so far. As soon as more banks start offering SARON based cash products and market participants start using the SARON swap curve as price reference a further shift towards SARON is expected. Once CHF LIBOR has been discontinued, only the SARON-based derivative market will remain.

COVID-19 has not led to major or insurmountable delays in the LIBOR transition in Switzerland. FINMA expects that market participants undertake all necessary steps to ensure LIBOR is replaced, at the latest until year-end 2021. In April 2020, FINMA sent a second “Dear

CEO letter” to those banks and securities firms that have the most material post-2021 LIBOR exposures on their books. These "Dear CEO letters" included a request for a quarterly self-assessment by these firms, which FINMA uses to monitor the transition. The letters also communicated FINMA's expectations for 2020. These expectations include in particular a substantial progress in replacing CHF LIBOR-based by SARON-based cash products by the end of 2020, proactive action towards issuing new products based on alternative reference rates, and testing of IT systems, models and tools. In the NWG meeting, FINMA recommended that each bank and securities firm impacted by the LIBOR transition works to comply with FINMA’s expectations, even if not in the selection of firms that received a “Dear CEO letter”.

The Swiss NWG recommends to transition LIBOR exposures prior to the end of 2021 wherever possible. The NWG will continue to monitor and foster national and international developments regarding implementation and usage of compounded term rates in cash products and the adoption of SARON in derivatives markets. Sub-working groups of the Swiss NWG will continue to liaise with other international working groups to align and coordinate efforts, in particular in areas where alignment is beneficial. The next Swiss NWG meeting will be in early 2021.

3. Progress reports from other currency areas

3.1. Australia

3.1.1. LIBOR transition

In April 2020, the Australian Securities and Investments Commission (ASIC), together with the Australian Prudential Regulation Authority (APRA) and the RBA, released the feedback on industry’s responses to the letters sent in 2019 to the CEOs of several major Australian financial institutions regarding their preparations for the end of LIBOR. The responses reflected various levels of preparedness between different segments of the industry. While some respondents demonstrated that significant planning was under way for LIBOR transition, in other cases this work was yet to commence in earnest. Industry has subsequently continued to make progress, but much remains to be done.

Respondents cited various key dependencies to the success of the transition, many of which relate to the outcome of industry consultations and work of various international working groups, as well as the evolving liquidity of the alternative reference rate markets. Institutions were provided with individual feedback from ASIC and APRA, including a plan for ongoing direct engagement on these issues. Best practice examples of prudential and conduct risk mitigation measures were also published. Client outreach is a key focus for financial institutions in the period ahead. ASIC has also subsequently sent a letter to the largest 100 corporations to highlight the need to plan for LIBOR transition and to encourage entities to start the transition early.

Some investors have expressed interest in term RFRs with similar tenors to LIBOR and BBSW (the Australian dollar credit-based benchmark), and in credit-sensitive spreads to RFRs for use as alternative benchmarks. While it may be possible to generate such rates, the RBA has made clear that waiting for the emergence of potential future reference rates is not a viable transition plan.

The work being done by various industry groups – including the Australian IBOR Transformation Working Group and the Australian Securitisation Forum – to raise awareness of benchmark transition issues and develop industry conventions is very helpful in supporting transition.

In the period ahead, ASIC and APRA will continue to monitor industry developments and, where appropriate, engage with relevant stakeholders to seek assurance that appropriate progress in LIBOR transition is being made. RBA, ASIC and APRA will also continue to raise industry awareness of the importance and urgency of transitioning to alternative rates where possible and the inclusion of robust fallback provisions in all contracts where feasible. Australian financial and corporate institutions using LIBOR-referenced derivatives contracts are strongly encouraged to adhere to the new ISDA IBOR fallbacks protocol before its effective date. Although some aspects of institutions' transition plans have been affected, the impact of COVID-19 has not caused major disruption to project timelines and deliverables for the major Australian banks, and LIBOR transition remains a key project.

3.1.2. The domestic multiple-rate approach

Domestically, Australia has adopted a multiple-rate approach, with the credit-based benchmark for the Australian dollar, BBSW, remaining robust following extensive and ongoing work by its administrator, ASX, to strengthen its methodology.

Market participants in Australia are expected to use a robust reference rate that is most appropriate for their product.

In some cases, it continues to make sense to reference BBSW, which measures banks' short-term wholesale funding costs. This is particularly the case for products issued by banks, such as FRNs and corporate loans. However, it should be noted that not all BBSW tenors are as robust as others. In particular, the 1-month BBSW is largely a buy-back market and volumes traded during the rate set window are often quite low. Users of 1-month BBSW should be preparing to use alternative benchmarks given the lack of liquidity in this market.

For other products, the RFR – the interbank overnight cash rate, also referred to as AONIA – may be a more appropriate reference rate; floating rate notes issued by governments, non-financial corporations and securitisation trusts are possible examples. In 2019, issuance commenced of cash-rate referenced FRNs (by the South Australian Government Financing Authority) and residential mortgage-backed securities (RMBS) (by the Commonwealth Bank of Australia).

In addition to these considerations, as market participants globally transition from referencing LIBOR to RFRs, there may be some corresponding migration away from BBSW towards the cash rate.

Robust fallbacks are incorporated in the calculation methodology for the cash rate and BBSW so that they continue to be published as appropriate in a wide range of circumstances. It is also important that robust fallbacks are included in all financial contracts given the future is uncertain. Accordingly, the RBA will be:

- requiring all new FRNs referencing BBSW to include the ISDA fallback provisions in order to be eligible for use as collateral in RBA operations; and
- expecting all users of BBSW to adopt the fall-back provisions where possible.

The RBA is consulting industry before determining the scope and timing of implementation of these requirements.

3.2. Brazil

The risk free benchmark rate for the Brazilian financial system is the Selic rate, an overnight secured rate, based on repos transactions collateralized by Government debt securities. In 2019, Central Bank of Brazil (BCB), responsible for the Selic rate methodology and disclosure, launched a working group to review and enhance the existing Selic RFR benchmark compliant with the IOSCO principles. Enhancements would focus on daily Selic estimation to increase interest rate's reliability, robustness and representativeness.

The overnight secured repo market, without repo operations performed by the BCB, comprises, on average, almost eight thousand daily transactions and more than BRL 1.3 trillion (USD 240 billion) of daily traded financial volume.

Previously, Brazil was following a multiple-rate approach, which would allow four potential benchmarks to co-exist in Brazilian market:

- Overnight Unsecured Interbank Rate – DI;
- Overnight RFR – Selic;
- Term DI – based on the One-day Interbank Deposit Futures contracts; and
- Term RFR – based on the Average Rate of One-Day Repurchase Agreements Futures.

Because of the low liquidity of DI underlying market and its large use as reference rate, since October 2018, the DI is set equal to the Selic rate, as a fallback rule, unless the two following conditions are simultaneously fulfilled: (i) The number of eligible unsecured interbank transactions is equal or higher than 100; and (ii) The total amount of eligible unsecured interbank transactions is equal or higher than BRL 30 billion.

Only if both conditions are met, the DI rate for the given day is calculated based on actual transactions at the unsecured interbank market. As a consequence, at the moment, money market in Brazil is based on the Selic rate. However, the interest rate derivatives market is still based on the DI rate.

The Brazilian interest rate future market is the key market to price and manage risks. This market is deep, liquid and has comprehensive infrastructure such Central Counterparties (CCPs) to clear transactions.

The adoption of appropriately revised fallback mechanisms **in the Brazilian** overnight money market has been strengthening contracts in derivatives and cash market products. In Brazil, the LIBOR-linked instruments are largely interest rate swaps corresponding to 1.4% of total derivatives market, meaning that LIBOR transition is not expected to affect local markets. These swaps represent only 11.6% of the total notional swap contracts. As rule, such contracts refer to the hedge of exposures in foreign currency debt. In addition, there are no loans (business, syndicated, retail or mortgages), notes, deposits or securitized instruments indexed to LIBOR.

3.3. Canada

The Canadian Alternative Reference Rate (CARR) Working Group,[87] established in 2018, continues to review Canadian dollar risk-free rates. In July 2018, CARR identified[88] an enhanced version of the Canadian Overnight Repo Rate Average as the best candidate for Canada's primary RFR. In February 2019, CARR published a consultation paper[89] for a new methodology to calculate the Canadian Overnight Repo Rate Average (CORRA). The results of the consultation and the final methodology were published in July 2019[90] and enacted by the Bank of Canada when it became the administrator of CORRA in June 2020.[91] CORRA is now computed as the daily trimmed volume-weighted median of eligible transactions, which includes all repo transactions that:

- are between any two unaffiliated counterparties where data can be sourced.
- are for an overnight term for same-day settlement.
- involve only Government of Canada bonds or treasury bill collateral and are settled in Canadian dollars.

Each CORRA setting now reflects approximately $10-20 billion worth of overnight transactions (vs $1-5 billion previously). In addition to the CORRA rate, the Bank of Canada publishes the total nominal volume of transactions (before and after trimming the bottom 25% of transactions, by rate), the number of submitters, and the rates at different volume-weighted percentiles of trimmed volume.

While Canada currently operates under a multi-rate approach, with both the Canadian Dollar Offered Rate (CDOR), and CORRA co-existing as interest rate benchmarks, it is expected that over time CORRA will become the predominant Canadian interest-rate benchmark, especially for derivatives and floating-rate notes.

To facilitate these efforts CARR has established a "Transition" subgroup to provide the underlying framework to help transition toward the widespread use of CORRA in Canadian

87 *Canadian Alternative Reference Rate Working Group*

88 CARR (2018) *Update From Carr Alternative Rate Subgroup On Potential Alternatives To CORRA*, July

89 Bank of Canada (BoC) (2019) *Bank of Canada publishes the Canadian Alternative Reference Rate Working Group's Consultation Paper on Proposed Enhancements to the Canadian Dollar Overnight Repo Rate Average (CORRA)*, February

90 BoC (2019) *Results from the CARR Consultation on Enhancements to the Canadian Overnight Repo Rate Average*

91 BoC (2020) *Bank of Canada becomes administrator of Canadian Overnight Repo Rate Average*, June

dollar financial products. This subgroup is also reviewing conventions for cash products and swap markets. It has also been in dialogue with systems providers to assess and encourage their efforts to prepare their systems for benchmark transition. The subgroup also worked on designing a CORRA 3-month futures contract, which was launched by the Montreal Exchange, a Canadian derivatives exchange, in June 2020 in conjunction with the Bank taking over the administration of CORRA.

CARR's mandate was expanded[92] in 2020 to include an analysis of the current status of the CDOR and its efficacy as a benchmark, as well as to make recommendations based on the analysis to ensure Canada's benchmark regime is robust, relevant and effective in the years ahead. This will include an analysis of the architectural underpinnings of CDOR, including funding through Bankers' Acceptances (BAs) which form an important input into the CDOR submission. Post-crisis reforms to banking regulation have adversely impacted the effectiveness of BAs as a short-term funding instrument for banks. A new subgroup was established to undertake this work.

Refinitiv, the CDOR administrator, held a consultation in September 2020 on the viability of the 6- and 12-month CDOR tenors, as well as a 3-month publication delay of the individual bank CDOR submissions.[93] Refinitiv announced in November 2020 that, with a six-month notice period, it would discontinue the 6- and 12-month CDOR tenors, and would deliberate further on whether to delay the individual bank CDOR submissions.[94]

Currently, the Canadian financial system does not have any specific benchmark regulation. In March 2019, the Canadian Securities Administrators (CSA) published proposed draft rules[95] intended to implement a comprehensive regime for the designation and regulation of benchmarks and those that administer them.

The proposed new rule would provide a comprehensive regime for:

- the designation and regulation of benchmarks,
- the designation and regulation of persons or companies that administer designated benchmarks,
- the regulation of persons or companies that contribute certain data used to determine a designated benchmark, and
- the regulation of certain users of designated benchmarks.

Subject to necessary approvals, securities regulators in Canada are currently targeting to publish the final Canadian rule on financial benchmarks in early 2021. After the rule comes

[92] BoC (2020) *CARR's mandate expanded to include analysis of CDOR*, October

[93] Refinitiv (2020) *Consultation: Canadian Dollar Offered Rate (CDOR)*, September

[94] Refinitiv (2020) *Announcement Following Public Consultation (CDOR),* 12 November

[95] Ontario Securities Commission (2019) *Proposed National Instrument 25-102. Designated Benchmarks and Benchmark Administrators and Companion Policy*, March

into force, securities regulators in Canada plan to designate CDOR and its administrator as a designated benchmark and a designated benchmark administrator, respectively.

While the largest Canadian banks are expected to meet the end-2021 LIBOR deadline, there are concerns about the ability of some of the small and medium-sized market participants to make adequate preparations on a timely basis given the impact of COVID-19.

3.4. Hong Kong

The Hong Kong Dollar Overnight Index Average (HONIA) has been identified as an alternative RFR for the Hong Kong dollar (HKD). As part of the ongoing effort to enhance the robustness of HONIA, the Treasury Markets Association (TMA) has completed an industry consultation on some technical refinements to the benchmark. Taking into account the feedback received from the consultation, the TMA published the consultation outcome in December 2019.

The Hong Kong Monetary Authority (HKMA) and the TMA are working together to engage different stakeholders with a view to promoting market awareness of and readiness for the LIBOR transition. In light of the potential discontinuation of LIBOR, the HKMA has completed a survey to collect information on banks' exposures referencing IBORs, including LIBOR, and the progress of their preparatory work for the transition. At the same time, the HKMA is considering setting recommended target dates for banks to stop the use of LIBOR in new transactions. Meanwhile, the TMA Working Group on Alternative Reference Rates (WGARR) has continued to broaden its outreach efforts and convene regular meetings to discuss the challenges faced by the industry in the LIBOR transition.

In Hong Kong, HIBOR is widely recognised by market participants as a credible and reliable benchmark. While HONIA serves as an alternative to HIBOR, Hong Kong will adopt a multiple-rate approach, whereby HIBOR and HONIA will co-exist and market participants are free to choose between them. On HONIA, the HKMA has been working closely with the TMA to encourage wider adoption of HONIA in the local market. In this regard, the TMA has started publishing 30-, 90-, and 180-day HONIA compounded averages and HONIA index. To facilitate the adoption of HONIA, the TMA has also been engaging with local market participants with a view to developing potential market conventions for HONIA-based products.

As part of the ongoing initiative to enhance the robustness of its benchmarks, the TMA is planning to conduct its regular review on the tenor structure of HIBOR in due course, having regard to local market conditions. The TMA will gather industry feedback and take into account other jurisdictions' experience when conducting the review.

In light of the potential discontinuation of LIBOR after end-2021, the WGARR has been engaging local stakeholders to discuss the transition challenges faced by the industry. Despite the ongoing industry efforts to prepare for the adoption of RFRs, challenges remain in many areas, for examples, uncertainty around the availability of forward-looking term rates, dealing with various accounting and tax issues, etc.

In particular, the WGARR noted that with the global spread of COVID-19, market participants have focused on maintaining critical operations in the past few months, and there were concerns about the system readiness for the LIBOR transition. As jurisdictions gradually relax the social distancing measures, we expect that the industry will regain momentum in preparing for the transition. The HKMA will continue to work closely with the TMA to engage different market participants with a view to promoting market readiness for the transition from LIBOR.

3.5. Indonesia

Bank Indonesia have introduced IndONIA (Indonesia Overnight Index Average) since 1 August 2018 as the new index of interest rate for unsecured overnight interbank rupiah lending transactions in Indonesia. IndONIA has effectively replaced JIBOR Overnight tenor since 1 January 2019. Publication and information dissemination were held to ensure effective transition.

In the future, for tenor more than overnight, Overnight Index Swap (OIS), which is considered to be near as risk free rate, is expected to develop and become a substitute for JIBOR as a benchmark. Now, we are on the piloting stage of OIS development by involving banks.

A joint dissemination will be conducted involving Financial Services Authority (OJK) and banking association (IFEMC) to build awareness of market participants affected by LIBOR discontinuity. The socialization will cover several aspects, including: legal (especially fall-back language), accounting, taxation, and operations.

Authorities and banking association will prepare several reference rate replacement scenarios so that the affected variables can be described to see the complexity of the changes operationally.

As a next step, Bank Indonesia and OJK will hold a public dissemination on how to best anticipate LIBOR for both FIs and non-FIs. BI & OJK will work on creating transition guidelines to help ensure a smooth transition, involving Ministry of Finance to seek potential tax resolutions.

3.6. Mexico

Banco de México (BdM) has developed a new RFR named Overnight Interbank Equilibrium Interest Rate (Overnight TIIE). This RFR is based on overnight repo transactions. The new Overnight TIIE is defined as the volume weighted median (the 50th percentile of the volume-weighted distribution of interest rates registered) of wholesale overnight repurchase agreement (repo) transactions denominated in Mexican pesos, settled by banks and brokerage firms. These repo transactions are secured by debt instruments issued by the Federal Government, the Mexican Bank Savings Protection Institute (IPAB) and the Central Bank. After receiving the final approval of BdM's Board and the corresponding preparation of technical and legal documentation, as well as IT requirements, BdM started publishing the new RFR in Mexican pesos on 16 January 2020. This Overnight TIIE fully complies with the IOSCO principles and it will be supported by BdM to become the main reference in the Mexican pesos' money market.

During the development of the new Overnight TIIE funding rate, BdM held methodological discussions with a group of commercial banks' specialists and traders, regarding the pros and cons of different implementation strategies. The discussions focused on methodological issues of the new rate, publication procedures and how widespread would be the use of the new

Overnight TIIE funding rate. These meetings were a preamble of the creation of an official National Working Group.

In this context, BdM has established a new Mexican Alternative Reference Rates Working Group that started working in September 2020. The Working Group comprises of members that represent the main participants within the Mexican money and fixed income markets. Members may include banks, brokerage houses, inter-dealer electronic brokers, non-banking financial entities, corporations, among others.

Furthermore, BdM has also created an internal Oversight Committee for all the reference interest rates and FX fixing rates. The Committee, integrated by BdM's staff, will strengthen the existing control framework of the rates and will conduct periodic revisions to the Benchmark rates design, quality and integrity. In this context, the Oversight Committee will also supervise the new Overnight TIIE, as well as term TIIEs (the Mexican IBORs).[96]

3.7. Saudi Arabia

SAMA continues to support measures to improve and enhance the domestic interbank interest rate benchmark. The Saudi Arabian Interbank Offered Rate (SAIBOR) is the main interest rate benchmark in the Kingdom. The calculation of individual contributors of the benchmark takes into account the USD yield curve, given that SAR is pegged with USD, and USD/SAR SWAP points. SAIBOR is the main interest rate benchmark, representing unsecured interbank lending. However, market participants and regulatory bodies are currently working to develop the infrastructure to strengthen and enhance the local repo market, in order to develop the RFR. A Repo Working Group has been established under SAMA's direction and the support of market participants, including banks and regulatory representative. The working group has finalized the Repo Master Agreement and is working with The Saudi Stock Exchange (Tadawul) to finalize the operational framework. The development of the Repo secondary market would support the production of the RFR benchmark

In efforts to accelerate the LIBOR transition process, SAMA has established a LIBOR Migration Working Group (WG) under the Treasurers Committee to prepare for the cessation of LIBOR. The Bank-led committee will comprise senior representative from the banking sector and SAMA. The WG aims to provide the banking sector with an appropriate forum in which LIBOR migration issues/risks faced by members of the Saudi Banking Sector can be discussed openly and facilitate the transfer of experience, best practices, and updates on global developments between WG members in particular and TC members in general. It is worth noting that in addition to the market's LIBOR Migration WG, banks also mobilized internal committees composed of relevant senior management personnel to oversee bank's migration process.

To ensure a timely transition, banks have conducted a comprehensive impact assessment analysis, which included different products, legal contractual, risk, model, pricing, and business infrastructure. They also reviewed their current portfolio to set a transition plan, which included amending documentation, transition risk disclosure to borrowers or investors affected by the

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[96] The objective of the creation of the Committee is that Overnight TIIE and TIIE rates will fulfil IOSCO Principle 5 of Internal Oversight.

discontinuation of benchmarks, developing new products and financial instruments. Moreover, as part of SAMA's migration monitoring process, banks' are required to submit standardized Bi-monthly LIBOR benchmark migration preparation updates which showcases banks' exposure to LIBOR benchmarks in addition to providing updates on banks' overall migration process. Moreover, Banks' direct exposure to international interest rate benchmarks do not represent a significant portion of their overall exposure.

Additionally, banks are required to increase awareness by explaining the transition process to internal and external stockholders in line with the client outreach plan, in order to ensure a full understanding of the transition plan objectives and goals. Under SAMA's direction, and with the support of the Treasurer's Committee, the SAIBOR Advisory Group created a Technical Working Group with a mandate to develop a framework and workflow to enhance and strengthen current benchmark. During various meetings throughout 2018 and 2019, the working group took into consideration the dynamics of the Saudi market, specifically as it relates to Saudi banks' liability portfolios, derivative activities and other wholesale financial instruments that also rely upon SAIBOR as a benchmark. As a result, the group has proposed the implementation of a waterfall methodology giving higher priority to actual transaction in the underlying market and related market while minimizing the expert judgment component.[97] An enhanced benchmark will have enough by way of actual transaction data to formulate a viable enhanced benchmark.

SAIBOR submissions are currently computed for 6 tenors: overnight, 1-week, 1-month, 3-months, 6-months and 12-months. Although the vast majority of interbank transactions are up to 3 months, a significant amount of traditional and derivative transactions in the wholesale and retail market explicitly reference longer SAIBOR tenors.

The working group started a 3-month parallel run on July 2020, which will provide a clear assessment of the new enhanced SAIBOR methodology.

The progress of benchmark reforms was slowed down on the back of COVID-19 developments and strict containment measures. As a result, several key deadlines have been pushed back such as the testing for the enhanced SAIBOR methodology and the publication of the consultation paper.

Looking ahead, as part of the ongoing work to facilitate the transition , the LIBOR migration working group will take into consideration and the recommendation of the joint Basel Committee on Banking Supervision and the FSB on "Supervisory issues associated with benchmark transition" to address key relevant transition challenges

3.8. Singapore

The Singapore Overnight Rate Average (SORA) is the identified RFR in Singapore. It will replace the SGD Swap Offer Rate (SOR), which relies on USD LIBOR in its computation methodology and would be discontinued when the USD LIBOR is discontinued after end-2021.

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[97] The new waterfall methodology is based on three levels, Level 1 and 2 inputs will only apply if a submitting bank does not have eligible transactions to apply to Level 1 input and will be based upon transactions in related markets.

The transition from SOR to SORA is overseen by a MAS-established Steering Committee for SOR Transition to SORA (SC-STS). The SC-STS provides strategic direction to develop new products and markets based on SORA, recommends measures to transition SOR-based legacy financial contracts, and serves as a coordinating platform to engage relevant stakeholders on the transition from SOR to SORA. This industry-led committee comprises senior representatives from key banks in Singapore, relevant industry associations, and MAS.

Since the formation of the SC-STS in August 2019, work has focused in the five key areas.

- **Establishing market conventions and infrastructure**

  On 3 Feb 2020, ISDA published "SGD-SORA-COMPOUND" in Supplement number 62 of the 2006 ISDA Definitions. Templates for SORA derivatives (Overnight Index Swaps, Cross-Currency Swaps, SOR-SORA Basis Swap)[98] were published by the SC-STS to enable broader adoption by market participants. In May LCH launched central clearing of SORA derivatives.[99] To facilitate an industry-wide transition to SORA, SC-STS published in October 2020 a SORA Market Compendium[100] covering market conventions across all key asset classes, including capital market products, retail and corporate loans..

  In support of the industry-led effort, MAS started publishing on a daily basis key statistics involving SORA, compounded SORA averages for 1-month, 3-month and 6-month tenors, and a SORA Index. MAS also issued a Statement of Compliance with the IOSCO Principles for Financial Benchmarks (IOSCO Principles) for SORA. This followed enhancements to the SORA methodology to broaden its representativeness. MAS also started issuing SORA-based floating rate notes on a monthly basis, starting from 21 August 2020.

- **Building liquidity in SORA markets**

  There has been an uptick in SORA derivatives volumes across the months, although SORA volumes still remain small compared to SOR derivatives volumes. Since the start of 2020, there were also a slew of SORA-based cash-market products launched, including FRNs, bilateral and syndicated business loans, SME loans, and commercial and retail mortgages based on SORA. However, these remain small in scale and a key objective for the SC-STS in the coming quarters is to foster greater use of SORA in financial products.

  An MAS-facilitated SORA derivatives auction was launched in June 2020 to bring together key dealers daily, to facilitate price discovery in a nascent SORA derivatives market. MAS acts as an intermediary and does not transact. The auction results are not benchmarks, and cannot be referenced in financial contracts. The auction is

98 ABS *Publications*

99 ABS (2020) *SC-STS Welcomes Launch Of Central Clearing For SORA Derivatives*, May

100 SC-STS (2020) *SORA Market Compendium*, October

intended as an interim arrangement and will cease once price discovery and market development objectives are met.

- **Transitioning out of legacy SOR positions**

  In December 2019 SC-STS supported adoption of Fallback SOR as contractual fallback for SOR derivatives.[101] In May 2020, SC-STS supported incorporation of pre-cessation triggers in SORA derivatives. SC-STS has also set out its recommendations on contractual fallbacks for other key asset classes (capital market products, corporate loans) in the SORA Market Compendium, and published market guidance on a cessation date for new SOR originations.[102] SC-STS targets to publish market guidance on transition mechanisms by 4Q 2020.

- **Industry readiness**

  In February 2020 SC-STS hosted a workshop on SOR-to-SORA transition for ABS member banks and large corporates. In June 2020, SC-STS worked with Bloomberg and the Association of Corporate Treasurers (Singapore) on a webinar for corporates and non-bank end-users.

  In September 2020, a SOR Transition to SORA Roundtable on Interest Rate Landscape, and a Masterclass on Tax and Accounting were held. SC-STS published in October 2020, a customer segmentation study[103] outlining how SORA loans can meet the needs of various customer segments, and an end-user checklist[104] to guide firms in making preparations for the SOR to SORA transition.

- **Customer engagement**

  In March 2020 SC- STS published a transition approach[105] and roadmap as well as FAQs[106] for issuers, corporates and retail borrowers. In September 2020 the SC-STS transition roadmap was updated.[107]

As the overall end-2021 timeline for LIBOR transition remains unchanged, preparations for SOR transition to SORA in Singapore have proceeded on the basis that SOR (which relies on USD LIBOR as an input) would cease by end-2021. SC-STS has structured the SOR to SORA transition work on this basis, albeit with minor adjustments to some interim timelines given Covid-19 disruptions.

Separately, on 29 July 2020, the Association of Banks in Singapore (ABS), the Singapore

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[101] SC-STS (2019) *Enhancing Contractual Robustness for Derivatives Referencing the Singapore Dollar Swap Offer Rate (SOR)*, December

[102] SC-STS (2020) *Timelines to Cease Issuance of SGD Swap Offer Rate (SOR) Linked Financial Products*, October

[103] SC-STS (2020) *Overview on the Usage of SORA in Loans*, October

[104] SC-STS (2020) *SC-STS End-user Checklist on Benchmark Transition*, October

[105] ABS (2020) *Response to Feedback Received on Proposed Roadmap for Transition from SOR to SORA*, March

[106] ABS *Frequently Asked Questions*

[107] ABS (2020) *SC - STS Transition Roadmap: Key Priorities*, September

Foreign Exchange Market Committee (SFEMC) and the SC-STS jointly issued a consultation report on SIBOR Reform and the Future Landscape of SGD Interest Rate Benchmarks.[108] The report recommended the discontinuation of the SGD Singapore Interbank Offered Rate (SIBOR) in three to four years, and a shift to the use of the SORA as the main interest rate benchmarks. The report noted that the shift would support the deepening of SORA markets, result in more transparent loan market pricing for borrowers, and more efficient risk management for lenders. The consultation closed on 30 September 2020. Findings from this public consultation are expected in Q4 2020.

3.9. South Africa

The Market Practitioners Group on Interest Rate Reforms in South Africa (MPG), the public-private sector working group entrusted with the mandate to make final decisions on the choice of alternative reference rates task and the management of reference interest rates reforms, established the Risk-free Reference Rate Work Stream (MPG-RFRWS) to make final recommendations on the choice and design of a RFR. The MPG-RFRWS has identified and recommended two RFR for consideration by the MPG, namely an Unsecured Overnight Rate and a Secured Overnight Reference Rate. These recommendations are contained in the MPG's position paper on Risk-Free Rates in South Africa.

The proposed Unsecured Overnight Reference Rate aims to measure South African bank' cost of borrowing unsecured wholesale funds. It is a near risk-free rate by virtue of design. The methodology for calculating the rate is aligned with the methodology that has been specified for the South African Rand Overnight Index Average (ZARONIA). ZARONIA form part of the suite of benchmark interest rates that the SARB intends on administering. The SARB published a technical specification paper that details the salient benchmark determination and administration aspects for a suite of benchmarks. The paper is entitled Draft statement of methodology and the policies governing the South African Reserve Bank-administered interest rate benchmarks.

The proposed Secured Overnight Reference Rate is designed to capture the cost of raising secured overnight funding using eligible collateralised transactions such classic repurchase transactions or sell buy-back transactions traded between commercial banks. The design of this RFR is closely aligned with the South African Secured Overnight Financing Rate (ZASFR), which is included in the suite of SARB-administered rates.

The MPG is in the process of back-testing the design of the proposed RFRs and determining the architectural implications for the data collection infrastructure. It is envisaged that the MPG will make its final decision on the choice of RFR once it has observed the performance of these rates and satisfied itself that the operational capabilities to calculate and disseminate the reference rate on a daily basis are adequate.

The SARB has published the draft technical specification paper detailing the suite of SARB-administered interest rate benchmarks for comment by the public. The suite of interest rate

[108] ABS (2020) *Joint Industry Consultation On The SIBOR Reform And A Shift To A Sora-centered SGD Interest Rate Market*, July

benchmarks serve the broader purpose of the SARB, i.e. to produce credible and reliable benchmarks that may be used to monitor the transmission of monetary policy and the development of financial stability risks. Nonetheless, some of the rates contained in the technical specification paper are closely aligned with the MPG's proposed reference rates such that they could serve the purpose of the MPG.

While Johannesburg Interbank Average Rate (JIBAR) remains resilient and continues to underpin financial contracts and the valuation of financial assets for the foreseeable future, the SARB and the MPG have underlined that JIBAR will cease to exist at some point. The roadmap outlining the cessation of JIBAR and adoption of an alternative RFR will be communicated in due course. The Transition Work Stream of the MPG (MPG-TWS) has commenced with its preliminary work of researching transition frameworks and delineating the appropriate transition path for South Africa.

In the meantime, the MPG has adopted recommendations to strengthen governance mechanisms for JIBAR and enhance the transparency of the primary and secondary market activity that underpin JIBAR. Once implemented, these measures would bolster the resilience and reliability of JIBAR, and hence, allow the MPG the time to facilitate the transition to an alternative RFR. The recommendations are contained in an MPG position paper on Risk Based Reference Rates.

3.10. Turkey

Turkish money markets introduced TRLIBOR with eight different maturities in 2002 as a Turkish lira reference rate. In 2019, parallel to the global IBOR transition efforts as well as ineffective use of TRLIBOR by banks, the TLREF (Turkish Lira Overnight Reference Rate) was introduced as a new reference rate. The TLREF is calculated based on overnight repo transactions that are secured by TL denominated government debt securities and executed in Borsa İstanbul Repo Reverse Repo Market.

TLREF rules are determined by the TLREF Committee, which comprises representatives of the Central Bank of the Republic of Turkey, Republic of Turkey Ministry of Treasury and Finance, Banks Association of Turkey, Turkish Capital Markets Association, İstanbul Settlement and Custody Bank (Takasbank) and Borsa İstanbul. The TLREF Committee under the Banks Association of Turkey plans to recommend banks to start using TLREF instead of TRLIBOR in parallel with global transition calendars of new RFRs.

Borsa Istanbul has been calculating, announcing and publishing daily TLREF index and TLREF rate since 17 June 2019. TLREF has been intact since June 2019, and the derivatives market has been active since December 2019. In addition, the TLREF index is widely used and has replaced legacy index of TRLIBOR. Different products such as securities, derivatives, loans, deposits and issued bonds are priced by the Turkish banking sector with reference to TLREF. In terms of underlying assets, the TLREF markets are sound and rich in volume, as well.

Accordingly,

- 1-month TLREF futures were launched at the beginning of August 2019.

- The first TLREF linked corporate bond was issued at the end of August 2019. Since then, Turkey has stepped ahead among peers with substantial increase in volume and maturity profile up to 10 years in terms of corporate bond issuance.

- Banks started to extend TLREF based loans at the beginning of September 2019.

- Banks started to publish bid and offer quotes for TLREF based-OIS (overnight indexed swaps) products in December 2019.

- The first TLREF linked government bond was issued at the end of January 2020. This is the first issue of its kind globally, indicating relevant authorities' high willingness in actively engaging in the transition period.

- Turkish banks are in the process of building an overnight index swap curve of up to 10 years, and they are being published by Refinitiv and Bloomberg.

TRLIBOR Committee and TLREF Committee, which were working as two separate committees, merged and a new National Working Committee (NWC) was established on 22 January 2020 in order to manage the transition processes more effectively not only for TLREF, but also for global IBOR transition. Afterwards, Banking Regulation and Supervision Agency and Capital Markets Board have been included as the new members of the NWC, as well. The NWC aims to raise awareness of the benchmark transition in the market and the industry. In order to ensure that the transition process is completed smoothly, timely and properly, critical milestones have been determined. Moreover, under the NWC, six Working Groups (WG) have been formed: Law and Regulations, Compliance with International Standards, Communication, Financial Coordination (accounting, operation, and reporting), Quantitative Analysis and TLREF Products.

NWC had its meetings in June, August and September 2020 to prepare a transition roadmap and discuss possible challenges of IBOR transition. The NWC analysed the yield curves of TLREF and TRLIBOR in order to decide the fair level for basis spread between these two rates, and concluded that given the extraordinary circumstances based on the pandemic, there is a need for further analysis of the yield curves. The finalisation of this study is expected to be in June 2021. In July and October, the NWC informed regulatory authorities regarding the progress on transition.

NWC also monitors data on IBOR-related transactions of banks and their preparedness for IBOR transition. Although liquidity of TLREF OIS transactions has temporarily diminished due to COVID-19, it has showed a rapid recovery afterwards.

Moreover, a survey was prepared and sent to the banks by the Central Bank of the Republic of Turkey and the Banking Regulation and Supervision Agency. The aim of the survey was to raise awareness during the global IBOR transition period and guide the authorities with the possible regulatory responses. At the meeting held in October 2020, findings of the questionnaires were discussed by the NWC and regulatory authorities.

The NWC and its working groups will continue to meet regularly and share their future findings with regulatory authorities in the upcoming period. NWG recommends to follow the global transition and take similar actions in the industry.

NWG decided at the last meeting held in October 2020 that the target deadline for TLREF transition would be at the end of 2021. In line with the international transition plan, the NWG decided that the same timeframe to be pursued in Turkey for TRLIBOR to TLREF transition, as well.

4. Enhancing contractual robustness

4.1. ISDA's Definition Amendments and Protocols for Derivatives

In the months since the publication of the 2019 report the FSB has stepped up its engagement with the International Swaps and Derivatives Association (ISDA) and with other stakeholders with a view to their taking action to enhance contractual robustness in derivatives products.

Since July 2016, ISDA has undertaken work, at the request of the OSSG, to strengthen the robustness of derivatives markets to manage the discontinuation of widely-used interest rate benchmarks. Following consultation with industry participants, regulators and the FSB OSSG, ISDA determined that the fallbacks for derivatives will be the RFRs identified by the relevant public-/private-sector working groups as an alternative to the IBORs. A spread adjustment will be added to these RFRs when a fallback is triggered to ensure legacy derivatives contracts referenced to an IBOR continue to function as close as possible to what was intended. The adjustments reflect the fact that the IBORs are available in multiple tenors and incorporate bank credit premiums and other factors that the overnight RFRs do not.

ISDA consulted in September last year on the final parameters of the adjustments ("Final Parameters Consultation") that would be incorporated into its fallbacks[109] and published a report summarising the responses it received.[110] In December 2019 ISDA published a supplemental consultation on the adjustments for fallbacks in derivatives referencing euro rates, i.e. euro LIBOR and EURIBOR.[111] The responses to the Euro Consultation were largely consistent with the outcome of the earlier consultations and hence ISDA implemented fallbacks for those rates in line with fallbacks for nine other currencies covered by the earlier consultations.[112]

In November 2019 the OSSG asked ISDA to include a pre-cessation trigger (i.e. a pre-cessation 'non-representativeness' determination by the UK FCA) alongside the cessation

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[109] ISDA (2019) *ISDA Publishes Consultation on Final Parameters for Benchmark Fallback Adjustments*, September

[110] ISDA (2019) *ISDA Publishes Results of Consultation on Final Parameters for Benchmark Fallback Adjustments*, November. The report shows that a majority of participants supported a historical median approach over a five-year lookback period for the spread adjustment. For the compounded setting in arrears rate, a clear majority favoured a two banking day backward shift adjustment for operational and payment purposes.

[111] ISDA (2019) Supplemental Consultation on Spread and Term Adjustments, including Final Parameters thereof, for Fallbacks in Derivatives Referencing EUR LIBOR and EURIBOR, as well as other less widely used IBORs, December. The Euro Consultation built on the framework established by the earlier consultations and focused on the term and spread adjustments for fallbacks in derivatives referencing EUR LIBOR and EURIBOR, including the final parameters for these adjustments. The Euro Consultation also sought feedback on the adjustments appropriate for lesser-used IBORs if ISDA implements fallbacks for those benchmarks in the future.

[112] An overwhelming majority of respondents indicated that they would prefer an implementation based on the compounded setting in arrears rate approach with a backward-shift adjustment and a spread adjustment based on a historical median over a five-year lookback period for fallbacks in derivatives referencing EUR LIBOR and EURIBOR.

triggers as standard language in the definitions for new derivatives and in a single protocol, without embedded optionality, for outstanding derivative contracts.[113]

ISDA launched a second consultation on this issue in February 2020, following statements from the UK Financial Conduct Authority (FCA), ICE Benchmark Administration (IBA) and LCH that provided additional information to the market on this topic.[114] The results of the consultation indicated that a significant majority of respondents support including pre-cessation and permanent cessation fallbacks without optionality or flexibility in the amended 2006 ISDA Definitions for LIBOR and in a single protocol for including the updated definitions in legacy trades.[115]

In October 2020 ISDA published the Supplement to the 2006 ISDA Definitions[116] to incorporate new fallbacks for derivatives that reference certain key IBORs. Simultaneously, ISDA published an IBOR Fallbacks Protocol that allows market participants to choose to incorporate the revisions into their legacy derivatives trades if they choose to.[117] The FSB published a statement encouraging broad and timely adherence to the ISDA IBOR Fallback Protocol and Supplement.[118]

As announced in July 2019, Bloomberg Index Services Limited (BISL) was selected to calculate and publish adjustments related to fallbacks that ISDA intends to implement for certain interest rate benchmarks in its 2006 ISDA Definitions. In July 2020 Bloomberg began calculating and publishing ISDA Fallbacks.[119]

4.2. Currency-specific work on contractual fallbacks

In the United States meaningful progress has been made towards the adoption of the Secured Overnight Financing Rate (SOFR) across cash and derivative products over the last year. Market contacts, however, cite several challenges that have limited transition progress, particularly the slow growth of SOFR loan markets. Issuance of SOFR FRNs, in excess of $220 billion since June 2019, has been characterised as progressing at a healthy pace. Still,

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[113] FSB (2019) *FSB Letter to ISDA on pre-cessation triggers*, November. In response to an OSSG request, ISDA issued a first consultation on this issue in May 2019 (https://www.isda.org/a/md6ME/FINAL-Pre-cessation-issues-Consultation.pdf). A majority of respondents to that consultation stated that generally they would not want to continue referencing LIBOR in derivatives contracts following a public statement by the UK FCA that LIBOR was no longer representative. However, the respondents expressed a wide variety of views regarding whether and how to implement a pre-cessation fallback trigger related to non-representativeness in derivatives and therefore was unable to find market consensus on how to implement pre-cessation fallbacks in derivatives contracts.

[114] ISDA (2020) *2020 Consultation on How to Implement Pre-Cessation Fallbacks in Derivatives*, January. In January, the UK FCA sent a letter to ISDA providing additional information to the market on a 'non-representative' LIBOR scenario. Also in January LCH launched a consultation on rulebook changes to implement fallbacks following the occurrence of a pre-cessation trigger. IBA sent a letter to ISDA explaining how it would respond to a determination by the UK FCA that LIBOR is no longer representative.

[115] The Brattle Group (2020) *Summary of Responses to the ISDA 2020 Consultation on How to Implement Pre-Cessation Fallbacks in Derivatives*, May

[116] The 2006 ISDA Definitions are intended for use in confirmations of individual transactions governed by ISDA Master Agreements. The 2006 Definitions are an update of the 2000 ISDA Definitions. The purpose of the 2006 Definitions is to provide the basic framework for the documentation of privately negotiated interest rate and currency derivative transactions.

[117] For more information, see the ISDA website.

[118] FSB (2020) *FSB encourages broad and timely adherence to the ISDA IBOR Fallbacks Protocol*, October

[119] ISDA (2020) *Bloomberg: Fallback Spread Vendor*

issuance has been predominantly from the Government Sponsored Enterprises (GSEs) while issuance from banks, insurance companies, and other institutions that regularly issue LIBOR FRNs, has been minimal. The GSEs have made significant efforts to transition products from LIBOR to SOFR, including the recent publication of playbooks and timelines outlining targets to discontinue LIBOR-indexed products. With the publication of recommended conventions, a number of banks are working to offer SOFR loans, with a handful of SOFR loans already having been offered. However, overall progress in the loan market has been slow, as some lenders may be waiting for a potential term rate and some regional banks have expressed a preference for a credit-sensitive rate or spread to SOFR.[120] In consumer loans, Fannie Mae has begun to accept SOFR ARMs based on the 30-day SOFR averages published by the Federal Reserve Bank of New York. In derivatives, usage of futures and swaps to hedge SOFR exposures and speculate on rate movements has grown steadily, with over 600 thousand SOFR futures contracts and around $750 billion of swap volumes since last June. Nonetheless, as most of this activity has been in short-tenors, some contacts note that liquidity across the curve is hindered by lack of broader loan issuance. Market contacts also cite a reluctance by many market participants to transition away from LIBOR futures and swaps given the vast liquidity in LIBOR-linked instruments.

In the euro area the working group on euro risk-free rates, in parallel to the consultation on fallback rates, is expected to release a public consultation on fallback triggers, exploring cessation and pre-cessation events to apply to all asset classes.

Once the two consultations, on fallback triggers and on fallback rates, are completed, the working group on euro risk-free rates will issue a recommendation on the most appropriate fallback rate per asset class, whereby applying the same set of triggers. These recommendations are expected for the beginning of 2021.

Finally, the working group on euro risk-free rates has also started to work on an issue note on the private means to amend legacy contracts in order to introduce fallback provisions, to be published in the first quarter of 2021. This work aims at raising awareness on the means and ways to achieve the incorporation of fallback provisions in legacy contracts and thus aims at promoting broader contingency planning.

In Japan there has been good progress in improving contractual robustness in cash market products. The JBA has published sample fallback provisions for bilateral and syndicated business loans (available only in Japanese), following the extensive communication with a wide range of market participants including the members of the Committee.

Based on the results of the 2019 public consultation, the JBA and the Discussion Group on Interest Rate Benchmark Transition have discussed fallback options including spread adjustment as well as potential conventions for bilateral business loans and bonds respectively.

In line with the deliberations made by these industry groups, the Committee has discussed measures to improve contractual robustness for loans and bonds. In August 2020, the Committee launched a public consultation on the fallback rates and spread adjustment

[120] Federal Reserve Bank of New York (2020) *Transition from LIBOR: Credit Sensitivity Group Workshops*, October

methodologies in bonds and loans including their waterfall structure. The Committee is in the process of making the final report based on the responses to the consultation received by September 30.

In the UK the RFRWG published a consultation paper, in December 2019, considering four methodologies that could be used to calculate the credit adjustment spread for fallback language in sterling cash instruments.[121] The consultation produced a strong consensus in favour of the historical 5-year median approach, in line with the approach adopted by ISDA, as the most appropriate methodology for credit adjustment spreads in both cessation and pre-cessation fallbacks for sterling LIBOR linked cash products maturing beyond end 2021[122]. In September 2020 the RFRWG published a statement on its work on giving effect to the result of the consultation, recommending the use of the historical five-year median spread adjustment methodology when calculating the credit adjustment spread for use across both cessation and pre-cessation triggers for cash instruments maturing beyond end-2021.[123]

In Switzerland, derivatives are also traded under the Swiss Master Agreement (SMA) for OTC derivative instruments (comparable to the ISDA Master Agreement). The Swiss Bankers Association (SBA) has tasked a working group to work on a fallback language. The goal is to align the language with the ISDA workstream, i.e. apply the same methodologies and triggers. SBA has reported at the Swiss NWG meeting in September 2020 that it intends to publish its fallback language as soon as possible after ISDA publishes its documents. Furthermore, the Swiss NWG gave additional guidance for fallback language used in cash products such as retail mortgages and corporate loans.

The **Australian** financial regulators have been working with ISDA to strengthen the contractual fallbacks for BBSW at the same time as LIBOR. This culminated in BBSW being included in ISDA's Consultation on Benchmark Fallbacks, with the Cash Rate plus spread identified as the fallback rate. The Australian financial regulators expect all users of BBSW to adopt the ISDA fallback provisions where possible. For new securities referencing BBSW, the RBA will make it a requirement that these fallback provisions be adopted before the securities can be eligible in the RBA's market operations. This would affect FRNs issued by banks, securitisation trusts and governments. The timing and details of implementation of this requirement will be determined following consultation with industry.

In Canada, CARR proposed in April 2019 draft fallback language[124] for floating-rate notes that reference CDOR. A consultative document on a revised version of this draft language is expected to be published before end-2020.

In Hong Kong, to facilitate a smooth transition from LIBOR and avoid any potential market disruption, the HKMA has encouraged banks to put in place robust fallbacks in their financial

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[121] UK RFRWG (2019) *Consultation on credit adjustment spread methodologies for fallbacks in cash products referencing GBP LIBOR*, December

[122] UK RFRWG (2020) *Consultation on credit adjustment spread methodologies for fallbacks in cash products referencing GBP LIBOR - Summary of Responses*, March

[123] UK RFRWG (2020) *Statement on behalf of the Working Group on Sterling Risk-Free Reference Rates – Recommendation of Credit Adjustment Spread Methodology for fallbacks in cash market products referencing GBP LIBOR*, September

[124] BoC (2019) *Bank of Canada publishes the Canadian Alternative Reference Rate Working Group principles for enhancements to fallback language*, January

contracts. For the cash markets, the development of transition plans is gathering pace globally. The WGARR will further engage with local market participants to discuss and address issues related to the transition of cash products.

In Indonesia, Bank Indonesia along with Otoritas Jasa Keuangan (financial services authority) have held ongoing discussions with IFEMC (Indonesia Foreign Exchange Market Committee) to gather market insights and challenges on LIBOR transition. FIs proposed that authority shall publish a transition guideline along with proposed fall-back language, as well as applying changes on PIDI (Perjanjian Induk Derivatif Indonesia/Master Agreement on Indonesian Derivatives), in order to minimize potential customer complaints that would support a smooth transition.

In Mexico, the BdM will develop the Overnight TIIE's derivative markets. One of the first steps will be to promote the migration of widely used contracts from the existing TIIE 28 days to the new Overnight TIIE, particularly for IRS contracts. BdM has been in talks with Chicago Mercantile Exchange and MexDer (the Mexican derivatives exchange) about the development of new derivatives linked to the Overnight TIIE. In this context BdM and price vendors have been analysing Overnight TIIE curves to evaluate new future contracts. Also, it will be important to develop the OIS market in Mexico to facilitate the use of new derivatives linked to the new RFR.

One objective of BdM in creating the Overnight TIIE is to promote it to become a key reference in the Mexican pesos' money market. In this sense, the Overnight TIIE should be the reference interest in cash market products. Thus, one of the first steps of the Mexican Alternative Reference Rates Working Group mentioned before will be to promote its usage in this market as well as to promote the migration of widely used cash products from the existing TIIE 28 days to the new Overnight TIIE.

In Saudi Arabia, contracts that are governed by ISDA will be amended based on ISDA's protocol and banks will communicate the amendments of their contracts according to the client outreach process. As for the Non-ISDA contracts, Banks are reviewing their customer contracts and identifying whether or not they currently have any fallback language in addition to identifying contracts which will span beyond 2021. Banks, where necessary, will be updating and including adequate fallback provisions which will address the potential risks associated with IR benchmark migration.

In Singapore, Fallback Rate (SOR) was identified as the appropriate fallback rate for SOR derivatives contracts, in the event of a permanent discontinuation of USD LIBOR (which would result in discontinuation of SOR). This was reviewed in ISDA's May 2019 consultation, and supported by SC-STS following a review on the relative merits of Fallback Rate (SOR) and fallback rates based on SORA.[125] SC-STS has also supported ISDA's February 2020 consultation to incorporate pre-cessation fallback triggers in SOR derivatives. SC-STS' recommendations on contractual fallbacks for capital market products and corporate loans are set out in the SORA Market Compendium, which was published in October 2020.

ABS Co., the administrator of SOR, started to publish Fallback Rate (SOR) rates in September

[125] See letter by Chair of SC-STS, Mr Samuel Tsien, to ISDA (11 December 2019)

2020.

5. Accounting, tax, and regulatory issues

5.1. Public sector actions on regulatory impediments to transition

Work continues both domestically and internationally to identify and address regulatory impediments to transition. As part of this effort, there is close coordination with IOSCO, which is also a member of the OSSG, and with BCBS, and substantial progress has been made.

The BCBS has published clarifications to help facilitate the transition to new reference rates and these are to be added to the Consolidated Basel Framework. In February the BCBS published a newsletter to clarify some prudential issues and in June a set of answer to frequently asked questions. In particular, the BCBS clarified that, under the Basel Framework, amendments to capital instruments pursued solely for the purpose of implementing benchmark rate reforms will not result in them being treated as new instruments for the purpose of assessing the minimum maturity and call date requirements or affect their eligibility for transitional arrangements of Basel III.

IOSCO continued its efforts in line with its comprehensive communication and outreach project launched in 2019 to inform stakeholders about the primary transition steps planned in the benchmark reform and increase awareness among end-users and the financial services industry. Work continues to consider further outstanding issues.

At its July 2020 meeting, the OSSG hosted a session with trade associations to discuss remaining issues that need to be addressed before LIBOR ends and to facilitate other IBORS' transition, including any remaining accounting, tax, or regulatory concerns. Again, participants raised the need for local relief for tax and regulatory reporting to happen in a timely manner, noting that in absence of this there may be a difference in pace in the ability to re-paper between counterparties. It was suggested that, to the extent the major jurisdictions are taking action, transparent explanations of how they got to their conclusions and the steps taken would likely be helpful for smaller jurisdictions.

From a corporate perspective, it was also noted that further clarity on how to ensure any internal re-papering, e.g. transfer pricing within a parent company, is done on an arms-length basis would be helpful.

Participants noted the continued importance of cross-border coordination, and ensuring that any relief considers all relevant benchmark rates, rather than just the local currency-rate, as appropriate.

As a more general point, it was noted that certain market segments continued to have low awareness of IBOR transition, including in the corporate sector and in the Asia region. A focus over the coming year will therefore be more targeted and stronger outreach in these market segments. Trade association participants noted that definitive statements from local authorities on the importance of transition and the actions needed are helpful reference points for firms in their conversations with customers across different regions.

5.2. Progress on international accounting standards

Progress is well underway in addressing the accounting consequences of transition to alternative benchmarks or RFRs. The relevant accounting standard setting boards have finalised amendments to standards. Many of the reporting implications relate to the effect of IBOR replacement on hedge accounting (an optional presentation treatment to recognise in the same accounting period the gains and losses of hedging instruments and hedged items that are part of a particular risk management strategy) and contract modification.

In September 2019, the International Accounting Standards Board (IASB) finalised its phase 1 amendments to IFRS 9, IAS 39 and IFRS 7, effective 1 January 2020 addressing "pre-replacement" issues related to the IBOR reform. These amendments provided relief from potential effects of the uncertainty caused by the IBOR reform, and imposed additional disclosures about hedging relationships directly affected by these uncertainties. In particular, the amendments modified specific hedge accounting requirements, requiring to: disregard potential transition to RFRs in the context of prospectively assessing whether a hedged forecast transaction is "highly probable", or whether a hedge is expected to remain effective; and assess whether non-contractually specified components of interest rate risk are separately identifiable only at inception of the hedging relationship.

Based on the input received and work to address those "pre-replacement" issues, in August 2019 the IASB launched phase 2 of the project, aimed at considering potential financial reporting issues arising from actual reform or replacement of the interest rate benchmark rates ("replacement issues"). These include hedge accounting considerations as well as other aspects such as classification and measurement issues related to contract modifications, or the assessment of whether a financial instrument meets the criteria to be measured at amortised cost. The IASB published a related Exposure Draft on 9 April 2020, and feedback received during the comment period closed on 25 May 2020 expressed overwhelming support for the proposals. On 25 June, the IASB tentatively decided to finalise without substantial changes the proposals related to modifications of financial assets and financial liabilities, changes required to hedging relationships, designation of risk components, classification of financial assets, embedded derivatives and disclosures. Additionally, the IASB tentatively decided to clarify (i) that changes to the hedging relationships have to be made by the end of the reporting period during which a change required by interest rate benchmark reform is made to the hedged risk, hedged item or hedging instrument; and (ii) that such an amendment to the formal designation of a hedging relationship constitutes neither the discontinuation of the hedging relationship nor the designation of a new hedging relationship. In August 2020, the IASB finalised its phase 2 work by issuing amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 where the IASB confirmed these decisions. The amendments will be effective for annual periods beginning on or after 1 January 2021, with earlier application permitted.

On 12 March 2020, the US Financial Accounting Standards Board (FASB) issued Update 2020-04 to ease the potential burden to financial reporting related to reference rate reform. This offers relief connected to hedge accounting requirements that will be affected by transition, and also regarding the effects of contract modifications – either those affecting debt instruments, the prospective recognition of which will be allowed, or modifications of other contracts, which will not require subsequent reassessment or re-measurement. An entity may apply the amendments from the beginning of an interim period that includes or is subsequent to 12 March 2020 or after, and entities may apply the amendments prospectively through 31 December 2022.

5.3. Currency-area specific work

In the US, in addition to the update provided by the FASB, the Securities and Exchange Commission has offered clarifying guidance on several accounting issues related to the transition, including that use of certain specific SOFR averages as the reference rate in a contract will not be treated as an embedded derivative

In June 2020, the U.S. regulatory agencies amended their swap margin rules to permit swaps entered into prior to an applicable compliance date (legacy swaps) to retain their legacy status in the event that they are amended to replace a discontinued reference rate, such as LIBOR. This relief will apply both to counterparties who adhere to the ISDA protocol and also to those who mutually agree to move to another reference rate before LIBOR ceases.

In August, the CFTC issued revised no-action letters providing additional relief to swap dealers and other market participants related IBOR transition, following its original no-action letters published in December 2019.[126] Each revised letter outlines conditions under which counterparties will qualify for relief in connection with amending swaps to update provisions referencing LIBOR, or other IBORs. The revised letters also provide relief for additional types of amendments and refine relief previously provided based on feedback from market participants.

In October 2019, the U.S. Treasury proposed regulatory changes to deal with the possibility that modifying a debt instrument, derivative, or other financial contract to replace a reference rate based on an IBOR could be a taxable transaction for federal income tax purposes or could result in other tax consequences. The proposed regulations apply to changes to affected contracts made upon the finalization of the proposed regulations. Taxpayers and their related parties have the option to apply the proposed regulations to changes that occur before then, provided that they apply the proposed regulations consistently. The comment period for the proposal has ended and final rules are pending.

In the euro area, the working group on euro risk-free rates published several recommendations regarding the risk management and the financial accounting issues in relation to both the EONIA to the €STR transition and the introduction of €STR-based fallbacks for EURIBOR[127] at the end of 2019. The working group also approached the IASB in July 2019 to discuss the modification of contracts, the derecognition of hedged items or hedging instrument, the replacement of hedging instruments, the documentation of hedging relationship and risk of ineffectiveness of hedging relationships, in the context of the benchmark reform. [128]

[126] CFTC (2020) *CFTC Provides Additional Relief to Market Participants Transitioning from LIBOR*, August

[127] ECB (2019) *Report by the working group on euro risk-free rates on the risk management implications of the transition from EONIA to the €STR and the introduction of €STR-based fallbacks for EURIBOR*, October; ECB (2019) *Report from the working group on euro risk-free rates on the financial accounting implications of the transition from EONIA to the €STR and the introduction of €STR-based fallbacks for EURIBOR*, November

[128] See *Letter from the working group on euro risk-free rates to the IASB*, July 2019.

The working group also enquired about potential hedge accounting implications of the different EURIBOR fallback measures and potential IFRS 9 SPPI testing of EURIBOR fallback measures based on €STR backward-looking last rest and lookback period term structure methodologies.[129] The intention was to facilitate the transitions to RFRs by minimising the accounting impacts and impediments, to the extent possible.

In the public consultation on EURIBOR fallbacks to be published later in 2020, the working group on euro risk-free rates would inform market participants about these issues and possible solutions to be envisaged, including the IASB response. The European Supervisory Authorities have also confirmed their position that new requirements around bilateral margin requirements for non-cleared derivatives are not intended to apply to legacy contracts where they were amended solely to deal with interest rate benchmark reforms.[130]

In line with the international guidance from BCBS and IOSCO, an amendment to EMIR (Regulation (EU) No 648/2012) is to be introduced in order clarify that transactions entered into or novated before the entry into application of the clearing or margin requirements to OTC derivative transactions referencing an interest rate benchmark ('legacy trades') will not be subject to these the requirements as provided for in Regulation (EU) No 648/2012 when they are novated for the sole purpose of implementing or preparing for the implementation of the interest rate benchmark reform. This amendment to EMIR will be included in the CCP Recovery & Resolution Regulation which is to be published in the coming months.

In the UK, following correspondence from the UK RFRWG on regulatory barriers, the PRA responded with a letter regarding the prudential regulatory framework and LIBOR transition.[131] It has since issued a statement outlining its views on the implications of LIBOR transition for contracts within scope of the Contractual Recognition of Bail-In and Stay in Resolution parts of the PRA Rulebook.[132]

In line with similar statements made by BCBS/IOSCO and the ESA's, the FCA confirmed its position on margin requirements. The FCA's view is that amending a reference rate or adding a fall-back rate would not trigger the application of margin or clearing requirements under EMIR, where this relates to the treatment of legacy LIBOR trades.[133]

HM Revenue & Customs (HMRC) consulted on the taxation impacts arising from the withdrawal of LIBOR. The purpose of the consultation was to ensure tax legislation which references LIBOR continues to operate effectively, but also to ensure HMRC fully understands the significant tax impacts that could arise from the reform of LIBOR and other benchmark

[129] See *Letter from the working group on euro risk-free rates to the IASB*, July 2020.

[130] EBA (2019) *EMIR RTS on various amendments to the bilateral margin requirements and joint statement on the introduction of fall-backs in view of the international framework*, December

[131] BoE Prudential Regulation Authority (PRA) (2019) *Prudential regulatory Framework and LIBOR transition*, December

[132] BoE PRA (2020) *PRA statement on Libor transition and PRA resolution-related rules*, July

[133] UK RFRWG (2019) *Minutes of the WG on Sterling Risk-Free Reference Rates*, November (para. 23)

rates.[134] Alongside this consultation, HMRC also published draft guidance explaining its view on the main taxation impacts for businesses resulting from LIBOR transition.[135]

In September 2020 the UK RFRWG submitted a response[136] to the Financial Reporting Council's invitation to comment on the International Accounting Standard Board's Interest Rate Benchmark Reform — Phase 2 amendment (Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16) in the UK.

In Japan, the Accounting Standards Board of Japan (ASBJ) released for public comment the Exposure Draft of Practical Solution on the Treatment of Hedge Accounting for Financial Instruments that Reference LIBOR under the Japanese GAAP[137] in June 2020. Then, in September 2020, ASBJ finalized the Practical Solution[138] based on the public comment obtained.

In Switzerland, FINMA has published its endorsement of two BCBS statements to reduce regulatory impediments in the Swiss jurisdiction.

In a supervisory guidance published in January 2020, FINMA endorsed the BCBS statement dated 5 March 2019 regarding the application of margin requirements when amending legacy derivative contracts to address benchmark rate reforms.

In a publically available presentation at the NWG in May 2020, FINMA endorsed the BCBS statement dated 27 February 2020 regarding amendments to capital instruments pursued solely for the purpose of implementing benchmark rate.

In Canada, CARR established in 2019 a new subgroup charged with investigating the impact of accounting, tax, and regulatory frameworks on the transition from IBORs to RFRs as well as implications for the steady state functioning of the market. This subgroup has liaised frequently with Canadian industry groups focused on these issues in the Canadian context.

In Hong Kong, the WGARR has been reaching out to different stakeholders with a view to raising their awareness of the critical issues that may arise from the LIBOR transition, including the implications on accounting, tax and regulatory treatments. The WGARR will continue to closely monitor the development, and actively engage local market participants to support an orderly transition.

In Singapore, the SC-STS has set up a dedicated Subgroup (SG) on accounting and tax matters. The SG comprises accounting and tax experts from the industry. The SG is tasked to identify and address accounting and tax issues that could be impediments to the transition. To achieve this, the SG engages with and provides inputs to accounting standard setters and tax

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[134] HM Revenue & Customs (2020) *Taxation impacts arising from the withdrawal of LIBOR*, March

[135] HM Revenue & Customs (2020) *Draft guidance on the taxation impacts arising from the withdrawal of LIBOR and other benchmark rate reform*, March

[136] UK Endorsement Board (2020) Invitation to Comment: Draft Endorsement Criteria Assessment: Interest Rate Benchmark Reform—Phase 2 (Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16)

[137] ABS (2020) ASBJ releases the Exposure Draft of Practical Solution on the Treatment of Hedge Accounting for Financial Instruments that Reference LIBOR, June

[138] ABS (2020) ASBJ releases the Practical Solution on the Treatment of Hedge Accounting for Financial Instruments that Reference LIBOR, September

authorities. In this regard, the SG had recently submitted a comment letter to IASB in response to IASB's Exposure Draft (ED) on Phase 2 IBOR reform amendments, expressing its support of the main proposals of the ED.

The SG has worked with the local trade associations to conduct workshops, webinars and masterclasses to raise awareness amongst industry stakeholders, including banks and corporates. This includes educating the stakeholders on accounting and tax issues arising from the transition and ways to manage or mitigate the accounting impediments, such as synchronizing the transition of the hedged loan and derivative used for hedging to minimize hedge breakage and resultant earnings impact.

The SG has also engaged the local accounting firms and accounting bodies on initiatives to raise corporate awareness and preparedness for the SORA transition. These initiatives include having auditors incorporate a section on SORA-transition in the auditor communications to corporate boards, and encourage corporates to perform a self-assessment on their preparation for SORA transition.

Appendix A – Mapping of major interest rate benchmarks to alternative reference rates

Currency	IBOR benchmark	Alternative reference rate	Administrator	Type of alternative reference rate	Remarks
AUD	BBSW	Interbank Overnight Cash Rate (AONIA)	Reserve Bank of Australia	Unsecured	Multiple-rate approach
BRL	DI rate	Selic	Central Bank of Brazil	Secured	Multiple-rate approach has been adopted
CAD	CDOR	Canadian Overnight Repo Rate Average (CORRA)	Bank of Canada	Secured	Multiple-rate approach Need for a term RFR under consideration CDOR review
CHF	LIBOR	Swiss Average Rate Overnight (SARON)	SIX Swiss Exchange	Secured	Transition is necessary. A forward-looking term rate seems not feasible.[139]
EUR	LIBOR	€STR	European Central Bank	Unsecured	Transition is necessary EUR LIBOR is not in scope of the working group on euro RFR owing to its limited market usage as compared to EURIBOR.
EUR	EONIA	€STR	European Central Bank	Unsecured	Transition is necessary EONIA to be computed each day as the €STR plus a spread of 8.5 basis points until EONIA's discontinuation on 3 January 2022
EUR	EURIBOR	€STR[140]	European Central Bank	Unsecured	Term RFRs as fallbacks under consideration, meanwhile EURIBOR has been reformed to meet BMR requirements, which allows its continued use under the EURIBOR hybrid methodology

[139] See minutes of the 20th NWG meeting.

[140] Still under consideration, see chapter 2.1.2

Currency	IBOR benchmark	Alternative reference rate	Administrator	Type of alternative reference rate	Remarks
GBP	LIBOR	SONIA	Bank of England	Unsecured	Transition is necessary Proposals for a forward-looking term rate under development.
HKD	HIBOR	HONIA	Treasury Market Association	Unsecured	Multiple-rate approach has been adopted
JPY	LIBOR	TONA or TIBOR	Japan's Bankers Association	Unsecured	Transition is necessary Term RFR under development
JPY	TIBOR	TONA		Unsecured	Multiple-rate approach has been adopted
JPY	Euroyen TIBOR	TONA		Unsecured	Multiple-rate approach has been adopted
SGD	SIBOR	N/A		N/A	Rate not used in SGD derivatives
SGD	SOR	SORA	ABS Association of Banks in Singapore	Unsecured	Derivatives will transition to SORA. A public consultation recommending a shift of cash markets to a single-rate approach based on SORA is ongoing.
USD	LIBOR	SOFR	FED of NY	Secured	Transition is necessary Aiming to create a forward-looking term reference rate based on futures, OIS
TRY	TRLIBOR	TLREF	Borsa Istanbul	Secured	Transition is necessary On process of building an overnight index swap curve of up to 10 years
ZAR	JIBAR	Preferred alternative rate is ZARONIA		Unsecured	JIBAR framework is being enhanced to secure transition period Multiple-rate approach recommended, , to include unsecured term rates

Appendix B – A Global Transition Roadmap for LIBOR

Firms should already have at a minimum (and if not, should promptly):	• Identified and assessed all existing LIBOR exposures, including an understanding of: – Which LIBOR settings they have a continuing reliance on after end-2021, by currency and tenor. – What fallback arrangements those contracts currently have in place. • Identified other dependencies on LIBOR outside of its use in financial contracts – for example, use in financial modelling, discounting and performance metrics, accounting practices, infrastructure, or non-financial contracts (e.g. in late-payment clauses). • Agreed a project plan, including specific timelines and resources to address or remove any LIBOR reliance identified, to transition in advance of the end of 2021 including clear governance arrangements. • Understood industry or regulator recommended best practices in relevant jurisdictions, including timelines for intermediate steps in transition ahead of end-2021, and built these into their plans. • Assessed what changes may be needed to supporting systems and processes in order to enable use of alternative reference rates in new and existing contracts, including through fallbacks. This may include, for example, treasury management systems and accounting processes. – Those who currently provide clients with this infrastructure should have developed alternative solutions/offerings to ensure continuity of provision. • Those who currently provide clients with products that reference LIBOR should have begun to implement a plan for communicating with end-users of LIBOR referencing products maturing beyond end-2021 to ensure they are aware of the transition and the steps being taken to support moving those products to alternative rates.
By the effective date of the ISDA Fallbacks Protocol[141]	• Adhere to the ISDA protocol, subject to individual firms' usual governance procedures and negotiations with counterparties as necessary. Adherence to the protocol is strongly encouraged and where the protocol is not used, other appropriate arrangements will need to be considered to mitigate risks. • Providers of cleared and exchange-traded products linked to LIBOR should also ensure that these incorporate equivalent fallback provisions as appropriate.
By the end of 2020, at a minimum:	• Lenders should be in a position to offer non-LIBOR linked loan products to their customers. This could be done either in terms of giving borrowers a choice in terms of the reference rate underlying their loans, or through working with borrowers to include language for conversion by end-2021

[141] For more information on these fallbacks for IBOR-linked derivative contracts, see the ISDA website and the FSB's statement encouraging broad and timely adherence.

	for any new, or refinanced, LIBOR referencing loans, for example if systems are not currently ready.
By mid-2021, firms should	• On the basis of a full assessment of their stock of legacy contracts, have determined which can be amended in advance of end-2021 and establish formalised plans to do so in cases where counterparties agree. • Where LIBOR linked exposure extends beyond end-2021, make contact with the other parties to discuss how existing contracts may be affected and what steps firms may need to take to prepare for use of alternative rates. • Have implemented the necessary system and process changes to enable transition to robust alternative rates. • Aim to use robust alternative reference rates to LIBOR in new contracts wherever possible. • Take steps to execute formalised plans, where realistic, to convert legacy LIBOR-linked contracts to alternative reference rates in advance of end-2021.
By end-2021, firms should	• Be prepared for LIBOR to cease. – All new business should either be conducted in alternative rates or be capable of switching at limited notice. – For any legacy contracts for which it has not been possible to make these amendments, the implications of cessation or lack of representativeness should have been considered and discussed between the parties, and steps taken to prepare for this outcome as needed. The scope and impact of any steps taken by authorities to support tough legacy contracts, if available, should have been clearly understood and taken into account. – All business critical systems and processes should either be conducted without reliance on LIBOR, or be capable of being changed to run on this basis at limited notice.