THE INVESTMENT ASSOCIATION

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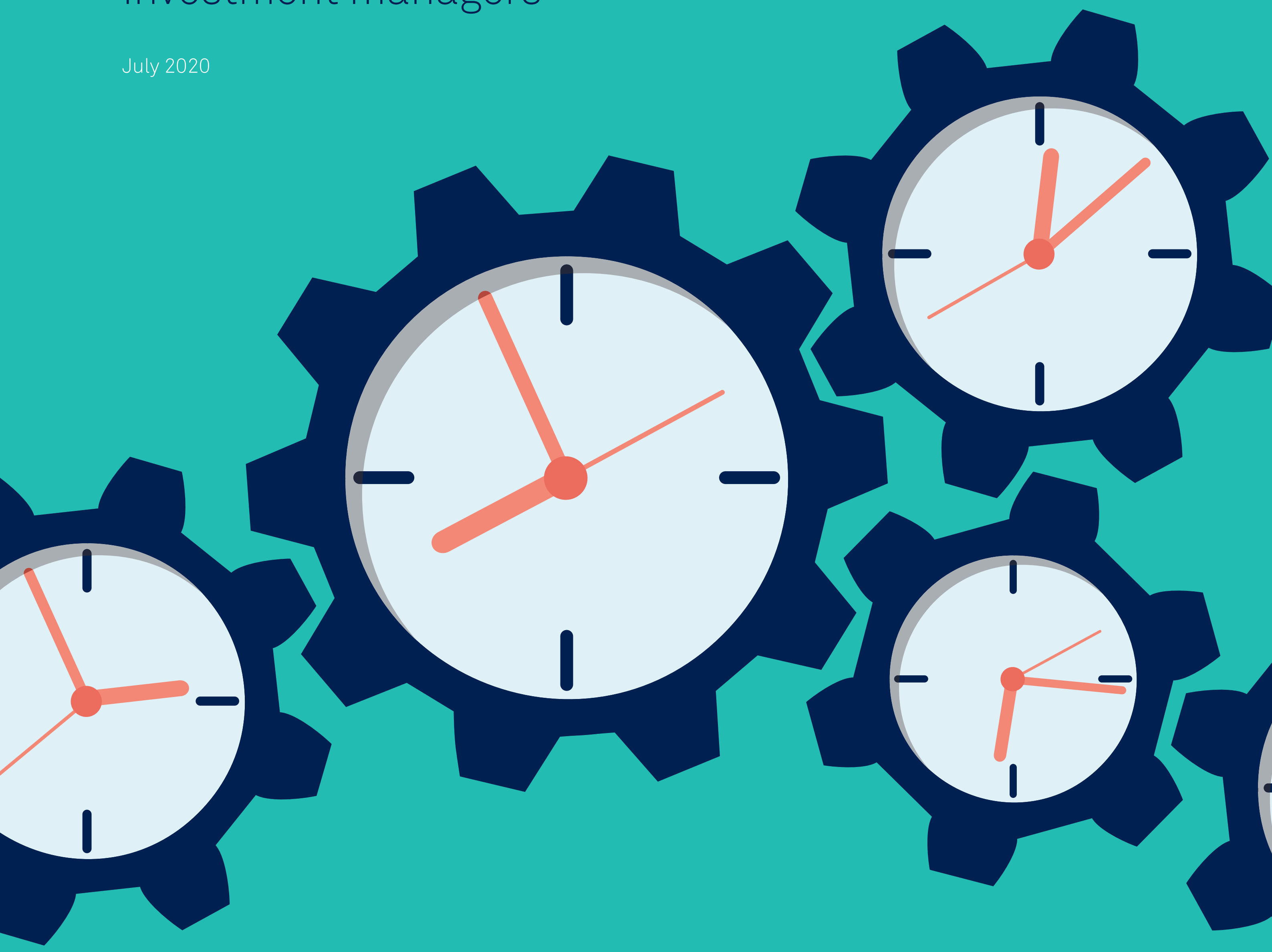
TIME TO ACT NOW

LIBOR transition for investment managers

July 2020



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July 2020

CONTENTS

INTRODUCTION AND EXECUTIVE SUMMARY

This is the second investment management industry guidance on the transition away from LIBOR. We are launching the guidance to assist investment management firms in the lead-up to the expected cessation of LIBOR at the end of 2021.

In February 2019, we produced the *LIBOR Transition Roadmap for Investment Managers*[1] to serve as a practical guide for IA members as they plan to transition away from LIBOR. The guidance was published at a time when firms were in the early stages of putting in place their LIBOR transition programmes, assessing their LIBOR exposures and key dependencies, and identifying their necessary governance processes to transition away from LIBOR by the end of 2021. At the time, our recommended timeline and actions focused on:

- Investments – trading new products and transitioning existing contracts
- Benchmarks – developing benchmarks and targets for new funds, and transitioning existing benchmarks and targets
- Operations and admin – building inventories of impacted systems, finance and risk models, and updating systems as required
- Communication and engagement – building client and internal communications plans, as well as engaging with and monitoring market developments

Since our recommendations were issued in 2019, significant progress has been made in the market and across the buy side in preparing for the end of 2021. By the end of 2019, based on our IA survey[2], 92% of firms had assessed their exposure to LIBOR, 70% had reduced their exposures to LIBOR, 75% had approved budgets and 65% had invested in SONIA-based instruments.

Now that we are in the final year before full transition must be achieved, we have revisited our guidance to assess the industry's progress and outline key outstanding challenges and next steps for investment managers to consider. Our findings are based on a survey of IA members,[3] as well as content developed by EY, our partner in this iteration.

This report depicts the latest **regulatory backdrop and transition progress to date** in the sterling market and other jurisdictions, **investment managers' current transition progress** and insights into their planning, **key industry challenges and dependencies**, and the **important next steps** for the industry to take into consideration. We conclude that the key areas to focus on now are:

- Carefully **monitoring liquidity and industry developments**
- **Analysing client opportunities and risks**, tracking firm and client-level exposures, assessing the financial impact and implementing a transition strategy
- **Managing conduct risk** across all transition-related activities, with effective governance updates
- **Communicating with clients**, counterparties and vendors, and evidencing safeguarding of client interests
- **Remediating contracts and documentation** across all products, investments and contracts
- **Ensuring operational readiness**

We recognise that, at the time of publication, we find ourselves in an unprecedented situation regarding the COVID-19 pandemic, which has been affecting financial markets and the wider world. The FCA made clear that the end of 2021 remains the date by which firms need to transition out of LIBOR exposures. Therefore, despite likely delays to short-term milestones for both industry working groups and firms, it is expected that the latter maintain a relentless focus on pragmatically pressing ahead with LIBOR transition activity across the market.

Following discussions with IA member firms, we understand that the impact of COVID-19 on firms' ability to transition by end of 2021 is limited. As expected, there have been several short 'speed bumps' caused by market volatility but, from an industry perspective, the end-2021 deadline remains unaffected, and firms are executing their transition programmes as planned.

[1] Source: LIBOR Transition Roadmap for Investment Managers (https://www.theia.org/sites/default/files/2019-04/20190221-liborroadmap.pdf
[2] The IA conducted a member LIBOR transition survey (completed February 2020) of 26 firms, representing 69% of the £7.7 trillion AUM managed by IA members.
[3] More survey insights in Appendix A.

1. REGULATORY BACKDROP AND TRANSITION PROGRESS TO DATE

OVERVIEW

LIBOR faces an uncertain future as an interest rate benchmark and is not guaranteed post-2021. Regulatory and advisory bodies have found LIBOR flawed, as it is not supported by transaction data, is judgement-based and presents potential for manipulation.

Globally, working groups have been set up in the US, the UK, the euro area, Japan, Switzerland and other jurisdictions, which are all working on reforms to move to Alternative Reference Rates (ARRs), which include Risk-Free Rates (RFRs) as a replacement to LIBOR.

While LIBOR is administered in the UK, it is quoted in several currencies. USD LIBOR and GBP LIBOR account for the largest volumes, followed by JPY LIBOR, CHF LIBOR and EUR LIBOR. USD LIBOR can be used in various jurisdictions across Asia-Pacific, the Middle East or Africa, and is not limited to the US, adding to the complexity of managing the transition. EURIBOR, administered separately out of Brussels, is similar in nature, and second only to USD LIBOR in scale.

ALTERNATIVE REFERENCE RATES ACROSS JURISDICTIONS

SONIA is a widely known and well-accepted overnight rate in the UK, with published rates available from March 1997. £7.8t, representing 68%, of sterling-denominated interest rate derivatives are based on SONIA.[4] Working groups convened by central banks and set up as public-private partnerships are driving activity in their respective jurisdictions.

The Bank of England's (BoE) Working Group on Sterling Risk-Free Rates (RFR WG) declared SONIA to be the preferred ARR to replace GBP LIBOR in April 2017. SONIA was reformed in April 2018 to be compliant with International Organization of Securities Commissions (IOSCO) principles for financial benchmarks.[5]

In the US, the Federal Reserve Bank of New York convened the Alternative Reference Rates Committee (ARRC), which has selected the Secured Overnight Financing Rate (SOFR) as an appropriate replacement for USD LIBOR. The ARRC found SOFR to be robust, IOSCO-compliant, and a transaction-based rate derived from a deep and liquid market. SOFR is a relatively new overnight rate, and market participants were initially unfamiliar with how to use it.

In Europe, the European Central Bank (ECB) convened the working group on euro risk-free rates, which selected the unsecured Euro Short-Term Rate (€STER) as the preferred alternative ARR and reformed the existing EONIA to be €STER + 8.5bps[6] from October 2019, when €STER futures were first published.

In Japan, the Bank of Japan (BoJ) convened a cross-industry committee on Japanese Yen Interest Rate Benchmarks (BoJ working group); it adopted a multi-rate approach with a preference for the Tokyo Overnight Average Rate (TONAR).[7]

The Swiss National Bank (SNB) convened the National Working Group on Swiss Franc Reference Rates (NWG), which adopted the unsecured Swiss Average Rate Overnight (SARON), and indices of compound rates have been made available[8] while conventions are being established[9].

[4] Source: Swapsinfo (http://analysis.swapsinfo.org/2020/03/interest-rate-and-credit-derivatives-weekly-trading-volume-week-ending-march-20-2020/)
[5] Source: SONIA reform implemented, BoE (https://www.bankofengland.co.uk/news/2018/april/sonia-interest-rate-benchmark-reform)
[6] Source: Report with the working group on euro risk-free rates (https://www.ecb.europa.eu/pub/pdf/other/ecb.wgeurorfr_impacttransitioneoniaeurostrcashderivativesproducts~d917dffb84.en.pdf)
[7] Source: BoJ report on public consultations of JPY interest rate benchmarks (https://www.boj.or.jp/en/paym/market/jpy_cmte/data/cmt191129a.pdf)
[8] Source: SARON Compound Rates (https://www.six-group.com/exchanges/indices/data_centre/swiss_reference_rates/compound_rates_en.html)
[9] Source: NWG Milestones (https://www.snb.ch/en/ifor/finmkt/fnmkt_benchm/id/finmkt_NWG_milestones)

REGULATORY EXPECTATIONS

The FCA issued a 'Dear CEO' letter to all UK-regulated asset management firms on 27 February 2020 to drive greater market activity to transition away from LIBOR to ARRs. All regulated firms are expected to produce a board-approved transition plan and define senior manager accountability. The FCA expects firms to take all reasonable steps to ensure the end of LIBOR does not lead to markets being disrupted or harm to consumers, and to support industry initiatives to ensure a smooth transition. This includes the following:

1. Products and services:

a. Assess the exposure of existing products and services to LIBOR and transition these to refer to ARRs

b. Ensure new product issuances with LIBOR exposure beyond 2021 comply with product governance rules, and that the charging structure is appropriately transparent and clear

2. Governance and planning:

a. Prepare operational processes (including valuation, performance measurement, portfolio management and relevant outsourced services) for the transition to ARRs

b. Complete a board-approved transition plan for material exposures to, or dependencies on, LIBOR, or perform periodical testing

c. Establish board oversight of the transition process with relevant challenges across the three lines of defence

d. Define senior manager accountability and roles and responsibilities in relation to managing each aspect of the transition plan

e. Complete a transition plan with quantified LIBOR exposures, a plan to reduce LIBOR exposures, and client communication plans

3. Investing on clients behalf: manage holdings and engage with issuers and counterparties to convert existing holdings from LIBOR to ARRs, and engage with third-party managers to ensure holdings in funds and mandates are transitioned from LIBOR

4. Managing conflicts of interest: identify conflicts and manage them to ensure clients are not exposed to unpredictable or unreasonable costs, losses or risks, and that clients are treated fairly

The FCA has reiterated that firms should take proactive steps where appropriate and not wait for instructions from clients, and that firms should not expect, or base their transition plans on, future regulatory relief or guidance, or legislative solutions.

COVID-19 AND MARKET VOLATILITY

Since the 'Dear CEO' letter was issued, the world has been taken over by the ongoing COVID-19 pandemic. In March 2020, the FCA, the BoE and RFR WG discussed the impact of the virus on firms' LIBOR transition plans. The FCA published a statement that the central assumption that firms cannot rely on LIBOR being published after the end of 2021 has not changed due to COVID-19, although a few interim transition milestones in some segments (e.g., the loan market) might be affected.[10]

For example, on 29 April 2020, the BoE RFR WG issued a statement that the deadline for ceasing new issuances of GBP LIBOR-based loans that expire after the end of 2021 has been pushed back from the end of Q3 2020 to the end of Q1 2021.[11] However, this was not a simple relief, as it introduced new requirements for lenders, such as:

- By the end of Q3 2020, lenders should be able to offer non-LIBOR-linked products.
- After the end of Q3 2020, all new and refinanced GBP LIBOR-referencing loans should include a switch mechanism (i.e., clear contractual arrangements to facilitate conversion ahead of end-2021) to SONIA or alternatives.

[10] Source: Impact of the coronavirus on firms' LIBOR transition plans, FCA (https://www.fca.org.uk/news/statements/impact-coronavirus-firms-libor-transition-plans)
[11] Source: BoE RFR WG (https://www.bankofengland.co.uk/-/media/boe/files/markets/benchmarks/rfr/rfrwg-further-statement-on-the-impact-of-coronavirus-on-timeline-for-firms-libor-transition-plans.pdf?la=en&hash=68299592AF83B04E3BF60BA3209AA9A73522E9D4)

Delays (if any at all) that have been announced by different bodies seemed to be for short periods, i.e., of a week to three months. For instance:

- On 17 April 2020, the London Clearing House (LCH)[12] and Eurex Exchange (EUREX)[13] delayed the switch to €STR, discounting for euro derivatives referencing EURIBOR / EONIA by five weeks to July 2020.
- The Federal Housing Finance Agency has extended the deadline for the Federal Home Loan Banks to cease entering into positions in LIBOR-based instruments that mature after 31 December 2021 by three months to 30 June 2020.

Overall, the market volatility of March 2020 has demonstrated how ARRs are different from LIBOR as they transparently reflect actual transactions, while LIBOR reflects expectations that may vary from historical transactions around market events such as rate cuts.

For example, overnight SOFR moved lower, with actual US dollar interest rate cuts by the Federal Reserve, while three-month USD LIBOR initially fell more (reflecting rate cut expectations) and then rose higher (reflecting higher perceptions of stress in the market). The difference or spread between SOFR and three-month USD LIBOR reflects the different basis (actual transactions versus expectations). In the UK, overnight SONIA tracked sterling interest rate cuts by the BoE, while overnight GBP LIBOR tracked expectations, and the difference between them moved largely in sync with exception on the day of the rate cut.

While at specific times of high operational stress (such as mid-March 2020), it may seem reasonable to request regulatory forbearance or additional time for LIBOR transition, **IA member firms have expressed limited concern about the end-2021 deadline in the sterling market. Investment managers recognise that continuing transition efforts with no-regrets steps, where possible, is a pragmatic approach during this period of market volatility, and they are maintaining the transition momentum.**

TRANSITION PROGRESS TO DATE

The RFR WG outlined its transition progress expectations and its 2020 top-level priorities:[14]

1. Ceasing issuance of GBP LIBOR-based cash products maturing beyond 2021 by the end of Q3 2020
2. Taking steps throughout 2020 to promote and enable widespread use of SONIA compounded in arrears
3. Taking steps to enable a further shift of volumes from GBP LIBOR to SONIA in derivative markets
4. Establishing a clear framework to manage transition of legacy LIBOR products, to significantly reduce the stock of GBP LIBOR referencing contracts by Q1 2021
5. Providing market input on issues around 'tough legacy'

Good progress has been observed to date, particularly in the derivatives spaces, where there has already been a significant uptake of SONIA-based contracts.

In other asset classes, such as bonds and loans, the transition is taking longer, as key industry conventions such as fallback language and interest calculation conventions become established and new product issuances by the sell-side take off.

To facilitate transition, various industry bodies and working groups and taskforces, such as the Loan Enablers Task Force, Cash Enablers Taskforce and Tough Legacy Taskforce, are progressing efforts in relation to different asset classes and to overcome any regulatory barriers.

[12] Source: LCH (https://www.lch.com/membership/ltd-membership/ltd-member-updates/transition-to-€STR-Discounting-Updated-Timing)
[13] Source: Postponement of EurexOTC Clear Release 10.1, Eurex (https://www.eurexclearing.com/clearing-en/resources/circulars/clearing-circular-1942440)
[14] Source: BoE RFR WG 2020 Priorities and milestones (https://www.bankofengland.co.uk/-/media/boe/files/markets/benchmarks/rfr/rfrwgs-2020-priorities-and-milestones.pdf?la=en&hash=653C6892CC68DAC968228AC677114FC37B7535EE)

KEY ASSET CLASS PROGRESS

Progress has been made across SONIA adoption in key asset classes:

Bonds and floating rate notes (FRNs):
In the SONIA bond market, more than 140 SONIA-linked FRNs and securitisations worth approximately £70 billion were issued by the end of January 2020, all following the same market conventions: overnight SONIA compounded daily in arrears over the interest period, with a five-day lag and using the lag approach to weighting, with the margin added to the rate (but not compounded).[15] The emergence of a clear set of industry conventions has been a core enabler for increasing LIBOR transition activity in the UK. The successful completion of consent solicitation for converting a bond issuance by Associated British Ports (ABP) from GBP LIBOR to SONIA was hailed by the FCA as 'a useful precedent and model that others can follow.'[16] Many IA survey respondents reported investing in SONIA-linked FRNs, with maturities before and after December 2021. IA survey respondents expect and require issuers to increasingly start amending their legacy bonds' terms from LIBOR to SONIA.

Loans:
A key priority for the RFR WG in 2020 is the target to cease issuance of sterling LIBOR-based cash products maturing beyond 2021 by the end of Q3. This includes bilateral loans, syndicated loans and multi-currency products. To facilitate this transition, the Loans Enablers Task Force published a roadmap in March 2020 to drive the development of relevant conventions and operational readiness across infrastructure providers, lenders and borrowers over 2020.[17] The FCA flagged the likelihood of some of these interim milestones being affected by COVID-19.[18] On 29 April, the RFR WG announced that, while lenders could take an additional six months to stop issuing new LIBOR-based loans that expire after the end of 2021, additional requirements were introduced for lenders (e.g., embedded optionality of contractual switches). The effect of these measures is two-fold: i) to allow market participants to transact in LIBOR-based loans while infrastructure readiness and system updates are being carried out to support ARR-based loan terms and product conventions (for compounding and payment); and ii) to drive efforts to refine contractual terms based on ARRs and simultaneously inform the discovery of market appetite for such loans.

Derivatives:
As of early March 2020, year-to-date notional values of SONIA interest rate derivatives were more than double those of GBP LIBOR-based contracts, indicating a clear strengthening dominance of SONIA in the sterling market.[19] The International Swaps and Derivatives Association (ISDA) has been leading efforts to drive industry and market conventions in the derivatives space by amending the 2006 ISDA Definitions.[20] Essentially, ISDA plans to amend certain floating rate options in the 2006 ISDA Definitions to include fallbacks that would apply upon the permanent discontinuation of certain key IBORs or upon the index becoming non-representative as per the pre-cessation consultation. As it has done from time to time, ISDA will amend the 2006 ISDA Definitions by publishing a 'Supplement' (or Supplements). On publication of the Supplement for the relevant IBOR, transactions incorporating the 2006 ISDA Definitions that are entered into on or after the date of the Supplement (i.e., the date that the 2006 ISDA Definitions are amended) will include the amended floating rate option (i.e., the floating rate option with the fallback). Transactions entered into prior to the date of the

[15] Source: Bond market conventions, BoE RFR WG (https://www.bankofengland.co.uk/-/media/boe/files/markets/benchmarks/rfr/rfrwgs-2020-priorities-and-milestones.pdf?la=en&hash=653C6892CC68DAC968228AC677114FC37B7535EE)
[16] Source: Speech by Andrew Bailey, Chief Executive of the FCA, published 15 July 2019 (https://www.fca.org.uk/news/speeches/libor-preparing-end)
[17] Source: Path to discontinuation of new GBP LIBOR lending by end-Q3 2020, Loans Enablers Task Force, BoE RFR WG (https://www.bankofengland.co.uk/-/media/boe/files/markets/benchmarks/rfr/path-for-discontinuation-of-new-sterling-libor-linked-lending-end-q3-2020.pdf?la=en&hash=E5B0DFBF3D410DF4FE9771F8B00141462104F16E)
[18] Source: Impact of the coronavirus on firms' LIBOR transition plans, FCA (https://www.fca.org.uk/news/statements/impact-coronavirus-firms-libor-transition-plans)
[19] Source: ISDA Interest Rate and Credit Derivatives 'Weekly Trading Volume: Week Ending March 06, 2020' (http://analysis.swapsinfo.org/2020/03/interest-rate-and-credit-derivatives-weekly-trading-volume-week-ending-march-06-2020/)
[20] Source: ISDA (http://assets.isda.org/media/f253b540-193/42c13663-pdf/)

Supplement (legacy derivative contracts) will continue to be based on the 2006 ISDA Definitions, as they existed before they were amended pursuant to the Supplement; therefore, they will not include the amended floating rate option with the fallback.

ISDA also expects to publish a protocol (or protocols) to facilitate multilateral amendments to include the amended floating rate options, and therefore the fallbacks, in legacy derivative contracts. By adhering to the protocol, market participants agree that their legacy derivative contracts with other adherents will include the amended floating rate option for the relevant IBOR and, therefore, the fallback. As always, any such protocol will be completely voluntary and amend contracts only between two adhering parties (i.e., it will not amend contracts between an adhering party and a non-adhering party or between two non-adhering parties). The fallbacks included in legacy derivative contracts by adherence to the protocol will be exactly the same as the fallbacks included in new transactions that incorporate the 2006 ISDA Definitions.

Separately, clearing houses acting as central counterparties (CCPs), such as the LCH, the Chicago Mercantile Exchange (CME) and the EUREX, are leading the development of futures and options instruments based on ARRs. In response to the call from the RGR WG in June 2020, the UK Government issued a statement setting out its intent to amend and strengthen the existing regulatory framework governing benchmarks in the UK, giving the FCA powers to allow LIBOR to be used for certain legacy contracts only beyond 2021 and power to ask administrators to amend benchmark methodology where this protects end-customer interests. The draft New York state legislation proposed by the ARRC aims to address such issues of dealing with tough legacy and is intended to minimise the legal uncertainty and adverse economic effects associated with LIBOR transition.[21] This proposed legislation would:

- Prohibit a party from refusing to perform its contractual obligations or declaring a breach of contract as a result of LIBOR discontinuance or the use of the legislation's recommended benchmark replacement

- Establish that the recommended benchmark replacement is a commercially reasonable substitute for, and a commercially substantial equivalent to, LIBOR

- Provide a safe harbour from litigation for the use of the recommended benchmark replacement

Specifically, the proposed legislation, on a mandatory basis, would:

- Override existing fallback language that references a LIBOR-based rate and, instead, require the use of the legislation's recommended benchmark replacement

- Nullify existing fallback language that requires polling for LIBOR or other interbank funding rates

- Insert the recommended benchmark replacement as the LIBOR fallback in contracts that do not have any existing fallback language

In Europe, the European Commission launched a public consultation[22] on the EU Benchmark Regulation that seeks views in relation to the orderly cessation of a critical benchmark, including cessation plans by benchmark administrators. This is being considered in meetings by the working group on euro risk-free rates,[23] which has discussed issues around orderly cessation of critical benchmarks.

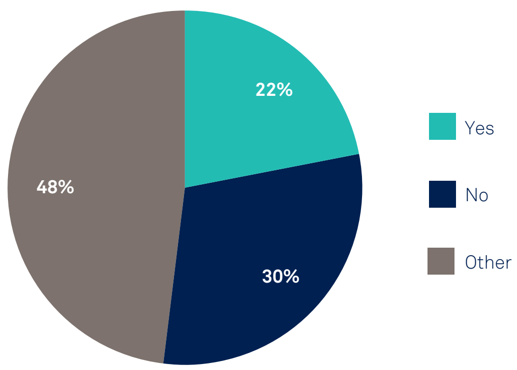
[21] Source: ARRC proposed legislative solution (https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2020/ARRC_Press_Release_Proposed_Legislative_Solution.pdf)

[22] Source: European Commission (https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/2019-benchmark-review-consultation-document_en.pdf)

[23] Source: WG on Euro RFR (https://www.ecb.europa.eu/paym/initiatives/interest_rate_benchmarks/WG_euro_risk-free_rates/shared/pdf/20191204/2019_12_04_WG_on_euro_RFR_meeting_Minutes.pdf)

22% of survey respondents still expected to have products that they likely could not transition to SONIA by the end of 2021.[24] Firms are yet to develop a clear strategy in relation to these products. Clarifying what constitutes tough legacy (if any), why it cannot be transitioned and what can be done to address the exposure (and mitigate any residual basis risk held) needs to be clarified imminently for this to progress.

ARE THERE ANY PRODUCTS YOU CAN'T TRANSITION TO SONIA BY THE END OF 2021?



KEY TAKEAWAYS

Investments in SONIA-based derivatives are ahead of those in cash instruments. Issuances of FRNs have picked up, while activity in the loans market has been catalysed by the finalisation of conventions and system updates.

Usage of SONIA instead of LIBOR in investment managers' products (and mandates) is increasing as activity progresses in relation to updating benchmarks, documentation for new launches and existing products/offerings, performance presentation, compensation and corresponding investments, especially for Asset Liability Management (ALM)/ Liability Driven Investing (LDI) and hedging.

The need for term rates is expected to be minimal, and half of survey respondents already seem to have similar views. Loan deals for SMEs and discounting for trade finance are the last two areas, where definition and acceptance of conventions might alleviate the need for term rates. For term loans and revolving credit facilities based on SONIA and SOFR, firms may consider exposure drafts[25] published by the Loan Market Association (LMA). For trade finance, and where a forward-looking rate is used for discounting at a point in time, use cases and conventions are being clarified – and this is an area in which to watch out for developments. Overall, initiatives by the BoE RFR WG and other national working groups are expected to drive convergence in industry conventions in relation to the use of term rates.

Tough (to transition) legacy products (limited only to a subset of legacy holdings) are expected to diminish. The UK Government issued a statement in June 2020 intending to legislate to provide the FCA with powers to allow LIBOR to be used for certain legacy contracts only beyond 2021 (possibly for a period of six months) and power to ask administrators to amend the benchmark methodology to protect end-customer interests. The ARRC has also published draft proposed legislation to address this. In Europe, regulators are considering issues in relation to orderly cessation of critical benchmarks.

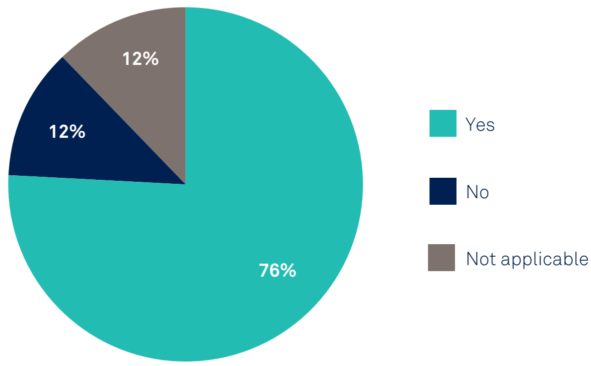
[24] Responses were received between November 2019 and February 2020, which are prior to COVID-19 developments.
[25] Source: LMA (https://www.lma.eu.com/libor/documents#rfr-facility-documentation--commentary143)

2. INVESTMENT MANAGEMENT INDUSTRY PROGRESS TO DATE

OVERVIEW

The IA LIBOR Transition survey[26] , which covered 26 firms accounting for 69% of the £7.7 trillion assets under management, has been instrumental in learning about progress to date at member firms. It appears that IA member firms are on track in taking the necessary expected steps to transition away from LIBOR by the end of 2021. Compared with the survey that was conducted in 2018, when less than half of the respondents had a transition programme in place, by the end of 2019, 100% of respondents had set up a transition programme and were able to identify their milestones, governance processes and transition challenges. This section uses survey results to highlight the industry progress that has been made to date, with insights into the components of member firms' transition programmes and progress.

APPROVED BUDGET FOR YOUR FIRM'S TRANSITION PROGRAMME

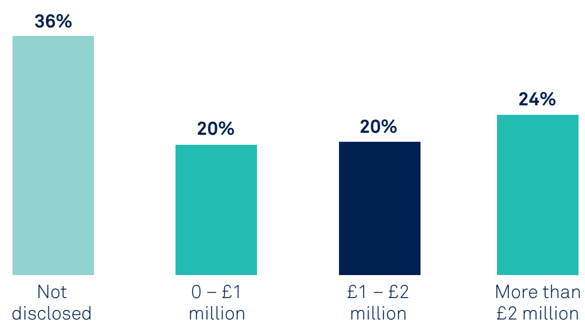


TRANSITION PROGRAMMES

By the end of 2019, 100% of IA survey respondents had set up a programme for implementation with the following key steps in place:

- **Programme structure and internal governance forums set up,** including steering committees, project management resources and working groups. In some cases, there is additional reporting to boards, regulatory and risk committees, and other senior committees.
- **Governance forums and working groups are meeting regularly** – steering committees usually meet monthly, working groups fortnightly to monthly, and project workstreams on a weekly basis.
- **Budget spend estimates are prepared and shared with management at most firms:** compared with 2018, when just 50% of survey respondents had a budget, by the end of 2019, more than **75%** had an approved budget in place, while approximately **39% OF THOSE WHO DISCLOSED THEIR BUDGET** had a budget exceeding £2mn.

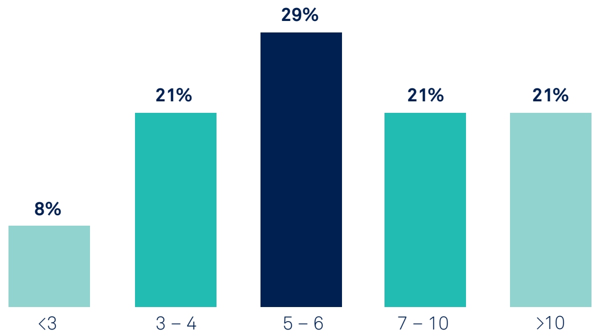
HOW MUCH IS YOUR 2020 BUDGET FOR THE CURRENT TRANSITION PROJECT?



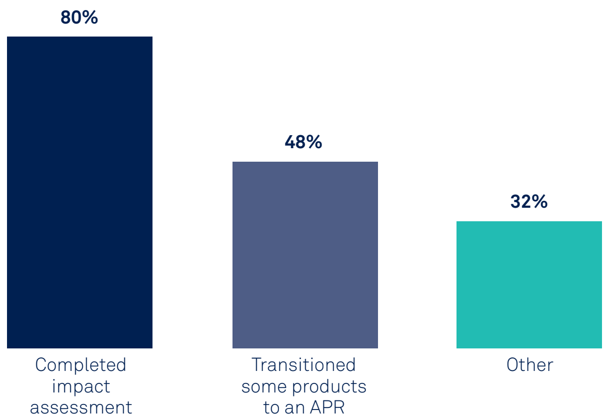
[26] For further details of the survey methodology and respondent profile, please refer to Appendix A.

- **Resources have been assigned to programmes both at project and SME levels** based on high-level impact assessments, with responses commonly indicating five or six full-time employees (FTEs).

FTE ALLOCATED TO THE TRANSITION PROGRAMME



WHAT PROGRESS DID YOU MAKE IN 2019?



- Some firms have commenced initial work on moving to non-LIBOR products, amendments to contractual documentation and initialisation of client outreach workstreams.

Top transition priorities for 2020 according to members

IA survey respondents highlighted their priority goals for 2020 – unsurprisingly, the urgent need to repaper/ remediate contracts was the top priority, together with client communication and outreach, followed by the need to have an exposure transition plan in place. The need to demonstrate operational readiness and transition to ARR benchmarks were next in terms of overall priorities.

Therefore, the top five most frequent milestones identified by firms in their transition plans were:

1. Client communication and outreach
2. Contract remediation
3. Exposure transition plan (instruments)
4. Oversight of end-to-end operational readiness
5. Transition to ARR for benchmarks

Oversight of end-to-end operational readiness: what best practice looks like

The firms with the most established programmes had performed the following:

- Executed high-level LIBOR migration plans across all business divisions, business lines and workstreams
- Carried out impact assessments based on asset, benchmark, fund product, metrics such as duration (e.g., DV01) and valuation scores
- Categorised most contract groups as warranting low- to high-level remediation actions
- Agreed budget estimations for contracts and performed early modelling of them under various scenarios
- Started planning their IT application strategies and remediations

The investment managers that seemed to be 'intermediate' in their transition plans had identified product- and client-related artefacts that would require updates, developed instrument capability delivery plans, implemented document content analytics tools, and developed standard communication artefacts for both client 'outreach' and 'in-reach.'

TRANSITION PROGRESS

In 2019, more than **65%** of IA survey respondents had already invested in SONIA-based instruments, which reflects the broad acceptance of SONIA as the replacement rate in the UK market. Qualitative comments from survey respondents indicated the following:

- **Transitioning existing products:** some firms are developing plans to update product documentation and transition existing products, while others have already switched benchmarks for existing products from GBP LIBOR to SONIA to calculate PRIIPs performance scenarios, performance fees and portfolio manager compensation.

- **Transitioning by trading out of LIBOR-linked instruments:** some firms had transitioned all LIBOR swaps maturing after 2021 with SONIA swaps. Updates and expectations vary by asset class:

  - **Derivatives:** SONIA swaps traded include interest rate swaps, cross-currency swaps and asset swaps referencing SONIA. Some survey respondents found that the market infrastructure and liquidity for SONIA overnight swaps was robust and didn't perceive any challenges or marginal costs in moving from GBP LIBOR to SONIA in this asset class, while others reported technology issues with buy-side order management systems (OMSs).

  - **Cash products:** investment managers have been investing in SONIA-linked FRNs and expect FRN issuers to start to amend their legacy bonds' terms from LIBOR to SONIA, which would enhance liquidity. Other firms have invested in medium-term notes and certificates of deposits linked to ARRs.

In general, SONIA is expected to replace LIBOR usage across several fixed-income and derivatives asset classes where a floating interest rate is required as a reference rate.

Measuring transition progress

IA survey respondents also highlighted how they measured their transition progress. Items that stood out or occurred most frequently were:

1. Reduction of LIBOR exposures

2. Operational readiness (internal and third party)

3. Contract remediation

4. Liquidity of their ARR-based products

5. Assessment of conduct risk metrics for the firm through transition

There is relative consistency in the items in that appear as the top programme milestones and monitoring of the transition progress, except for conduct risk exposure. Regulators expect firms to undertake an assessment of conduct risk in relation to LIBOR transition and thereafter create a plan for whether this will be managed within the existing conduct risk framework or through a separate dedicated programme.

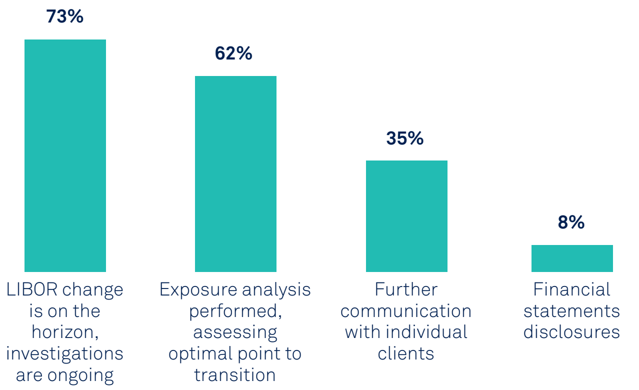
Communicating with clients

73% of firms reported that they are generally informing clients that LIBOR change is on the horizon and that investigations are ongoing, while **62%** reported providing client communications in relation to exposure analysis. However, only **35%** of firms reported performing client-specific communications, and only **8%** reported analysing the impact to financial statement disclosures, which shows that significant work needs to be undertaken by firms in this area in order to inform client communications and transition activity.

IA survey respondents reported that they were updating clients on their LIBOR transition programmes with simple messages. Firms are undertaking various channels of communication with their clients; consistent features of these strategies are holding notes and direct responses to ad hoc conversations with clients.

Several firms had distributed a holding note either directly to clients or via their websites. These communications transmit the message that firms are developing plans and analysing their exposure to LIBORs, with transition strategies under development. Firms are communicating with clients via holding notes, Q&A responses, etc. At least **40%** of survey respondents have sent a holding note of some form to clients.

WHAT ARE YOU COMMUNICATING WITH CLIENTS (SELECT ALL THAT APPLY)?



KEY TAKEAWAYS

In summary, most firms have established transition programmes with governance and resources, and a majority have completed impact assessments. Nearly half of the surveyed firms were progressing on transition of some products (while the other half had not transitioned any), which they measure by their LIBOR exposures, operational readiness and contract remediation.

The FCA has reiterated that the central assumption that firms cannot rely on LIBOR being published after the end of 2021 has not changed due to COVID-19, and it should remain the target date for all firms to meet. Only a few interim deadlines have moved by five weeks to three months at most. The market volatility of March 2020 has shown how LIBOR is different from risk-free interest rates and, as expected, given the stress in the market, the difference or spread between the two has increased, which could be partly attributed to the low levels of borrowing and low transaction levels occurring due to COVID-19.[27]

Broadly, firms' plans seem aligned to FCA expectations, and firms should continue to ramp up governance, controls and reporting to ensure that all transition-related activity is performed in a consistent manner in relation to managing conduct risk and conflicts of interest. In the near term, it is expected that firms will identify and progress 'no-regrets' steps, including – most importantly – producing a board-approved transition plan and defining senior manager accountability.

[27] Source: ARRC Office Hours call on 3 April 2020.

3. KEY CHALLENGES AND DEPENDENCIES

While momentum is being maintained and good transition progress is being achieved across the industry, there are a number of challenges and key dependencies where investment managers welcome engagement from other market participants, including regulators, to achieve the necessary adoption of ARRs and transition away from LIBOR within the expected timeline.

Significant external dependencies exist, and investment managers are looking to industry groups to establish and align industry conventions, to issuers and the sell side for new product availability to convert existing instruments/contracts, and to vendors for updates to systems and processes.

The extent of, and potential impact/risks from, dependency on third-party vendors and technology providers seems significant, and firms need to actively manage these alongside the transition plans for product offerings and investments on behalf of clients.

Overall, it is important to see clearer communications across market participants, coupled with regulatory initiatives to help facilitate standards and convergence where necessary.

TRANSITION CHALLENGES

Industry conventions – lack of consistency across asset classes

While cash products and derivatives are moving in the same direction, they may not be completely aligned. One example of this is in relation to fallback language, which describes terms and conditions applicable (and associated parameters for calculations) when specific trigger events occur. Trigger events could result in the permanent cessation of LIBOR (i.e., when LIBOR is no longer available as a market rate) or consist of pre-cessation trigger events (i.e., causing LIBOR to become no longer representative as a market rate).

In relation to this, suggested fallback language published by the ARRC for cash products such as FRNs,[28] bilateral business loans,[29] syndicated loans,[30] securitisations[31] and ARMs[32] include both permanent cessation triggers and a pre-cessation trigger (related to announcement by regulators that the benchmark is no longer representative).[33] For derivatives, as announced on 15 April 2020[34] after a second consultation,[35] ISDA expects to move forward on the basis that fallback language (i.e., amendments to the 2006 ISDA Definitions for LIBOR) and the ISDA protocol will include pre-cessation triggers (fallbacks based on a 'non-representativeness' determination) and permanent cessation fallbacks for contracts referencing LIBOR (providing consistency with similar cash products), but not for contracts referencing other IBORs.

These fallback terms effectively define the valuation of an existing position if they are triggered; therefore, investment managers need to monitor such updates closely and factor conventions into valuations, financial impact calculations, investment strategies and controls/principles to manage conduct risk (treat clients fairly/discharge fiduciary duties).

Investment managers indicated that, given the significant impact of these triggers, buy-side firms are looking for consistent approaches across asset classes so that basis risks are minimised. If this does not materialise, IA member firms expect the regulator to step in and facilitate collaboration by bringing both the buy side and sell side together in collaborative forums to facilitate a consistency of approach and agree on terms that leave both sides whole.

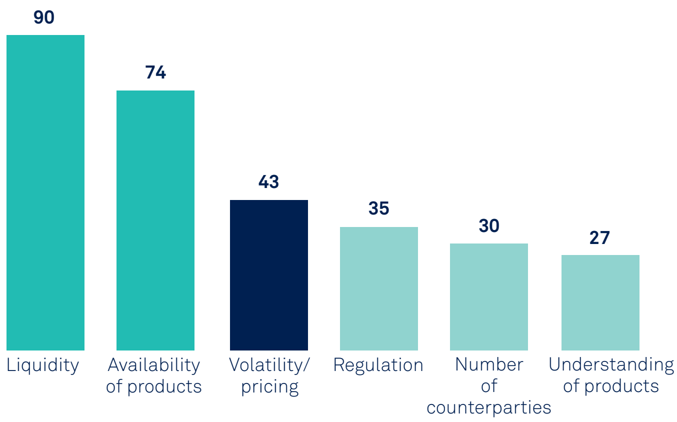
[28] Source: ARRC's FRN recommended fallback language (https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2019/FRN_Fallback_Language.pdf)
[29] Source: ARRC's bilateral business loans recommended fallback language (https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2019/Bilateral_Business_Loans_Fallback.pdf)
[30] Source: ARRC's syndicated loans recommended fallback language (https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2019/Syndicated_Loan_Fallback_Language.pdf)
[31] Source: ARRC's securitisations recommended fallback language (https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2019/Securitization_Fallback_Language.pdf)
[32] Source: ARRC's adjustable rate mortgages recommended fallback language (https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2019/ARM_Fallback_Language.pdf)
[33] Source: See page 4 of the ARRC's LIBOR fallback language summary (https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2019/LIBOR_Fallback_Language_Summary)
[34] Source: ISDA Announces Preliminary Results of Consultation on Pre-cessation Fallbacks for LIBOR (https://www.isda.org/2020/04/15/isda-announces-preliminary-results-of-consultation-on-pre-cessation-fallbacks-for-libor/)
[35] Source: ISDA Benchmark Reform and Transition from LIBOR (https://www.isda.org/2020/05/11/benchmark-reform-and-transition-from-libor/)

Business challenges in transitioning to SONIA-based instruments

Liquidity and market conventions (methodology for compounding in arrears, fallback language, term rates, etc.) stand out as the dominant themes in relation to transitioning to SONIA-based instruments.

A key relevant challenge, especially for larger firms, is achieving operational readiness to trade in ARR instruments, including updates to internal policies, procedures and systems to deal with overnight compounding. As depicted in the graph below, the top challenge in buying SONIA-based instruments is liquidity, followed by availability of products, then volatility/pricing of SONIA.

WHAT ARE THE TOP THREE CHALLENGES IN BUYING SONIA-BASED INSTRUMENTS?



Note: score based on number of responses and ranking (from one to three) associated to response.

Business challenges in transitioning to SONIA-based products

Firms are clarifying internal thinking as they seek to remove transition bottlenecks to offering SONIA products. IA survey respondents highlighted:

- **External challenges:** in general, survey respondents referred to market conventions, availability and liquidity of ARR products, operational readiness (especially that of third-party vendors) and external issuer dependency as the top challenges in relation to adoption of SONIA for products offered to clients.
- **Internal challenges:** firms either said that there were no internal hurdles or that operational readiness was an internal hurdle to overcome.

TRANSITION DEPENDENCIES

The majority of IA survey respondents are only too aware of their status as part of a financial services ecosystem and, as such, they are aware of a number of risks and actions that are dependent on others in the financial services value chain performing their duties.

Reliance on industry efforts, industry associations and the BoE RFR WG is heavy, and there is also strong awareness that buy-side firms face uphill dependencies from sell-side banks, issuers, financial market infrastructure providers and vendors.

Key issues out of the buy side's control could be grouped into three contexts:

1. **Regulators and working groups:** firms expect regulators to be more aligned and remove uncertainties, articulate expectations clearly (what needs to be done by when), and progress recommended fallbacks and mechanisms for mass conversion of LIBOR contracts. Survey respondents also recommended more global coordination (e.g., as achieved under the G20 after the global financial crisis) on key measures surrounding market conventions (particularly concerning regulatory alignment around loan conventions), the treatment of legacy assets and appropriate guidance on how to manage 'tough' legacy assets.

   Investment managers are keen to see regulatory clarity to encourage more suppliers to enter the market. Specifically, greater clarity is welcomed in the following areas:

   a. Regulatory relief statement/announcement on uncleared margin rules

   b. Regulatory and market-led solutions on transitioning of tough legacy areas

2. **Sell-side banks:** greater liquidity in SONIA instruments is necessary for the buy side to adopt SONIA. The industry would like banks on the sell side (and the wider market in general) to provide greater market colour on how ARR liquidity could be enabled. Firms expect greater issuer-initiated consent solicitation and sell-side communication on new product development timelines.

3. **Vendors and technology providers:** technology and vendor dependencies across OMSs, risk analytics and valuation systems are a key concern for buy-side firms. Firms expect vendors to communicate transition plans and support transition activities (e.g., consent solicitation). They also expect significant impact arising not only from internal systems but also from third-party vendor systems. Various vendors expect to roll out product upgrades to enhance or add new functionality for working with the new ARR-based products, as well as for updates to risk, pricing and valuation methodologies. A key issue pertains to the management of these dependencies, including the timely completion of rollout and end-to-end testing of changes (e.g., to vendor systems and any associated changes to internal systems for interfacing or downstream systems that rely on the data or outputs).

   Therefore, the major challenge is understanding multiple vendors' timelines and working on the knock-on effects internally, be it connectivity and interfacing or regression testing of downstream uses across firms' other systems and models. Some investment managers may face inconsistencies across legacy solutions in different parts of the business, while others may face operational issues due to conflicting timelines of vendor upgrades. As system constraints have longer lead times and not all solutions may have perfect upgrades by the transition deadline, firms may be forced to adopt tactical fixes (and enhanced governance to address the related potential operational risks of such fixes) in the interim.

Firms are seeking greater clarity in vendors' transition plans to ensure they are able to update operations and infrastructure in time to support investments in new ARR-based products, as well as transitioning legacy investments.

KEY TAKEAWAYS

All parties – corporate issuers, the sell side and the buy side – have their respective roles to play in transitioning markets from LIBOR to ARRs. Sell-side participants depend on corporate issuer interest and buy-side investor appetite to step up issuances across various product ranges in ARRs instead of LIBOR, which has its own operational, commercial and pricing challenge for the sell side. Corporate issuers look to assess the costs and benefits of funding alternatives, which would require the sell side to perform pricing and underwriting estimates. On the other hand, the buy side is looking for markets in ARR-based products with significant liquidity. Furthermore, a full suite of SONIA-based products that compare with existing LIBOR-based products is not available.

The biggest challenges have been settle on industry conventions that allow for standardised adoption of the new ARR-based products. While working groups have been driving activity across different jurisdictions and have made significant progress, there are several areas to achieve consensus on, such as conventions in relation to cash markets (e.g., bilateral and syndicated loans, bonds and consumer loans).

The regulators took on the responsibility of catalysing activity with 'Dear CEO' letters to banks and insurers in late 2018, then to UK-regulated asset management firms in February 2020. The BoE announced that it will progressively increase penalties on LIBOR-linked collateral (loan portfolios) from October 2020 across all currencies. The ARRC announced a proposal for draft legislation to minimise legal uncertainty and drive greater adoption of transition from LIBOR to SOFR.[36]

[36] Source: ARRC proposed legislative solution (https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2020/ARRC_Press_Release_Proposed_Legislative_Solution.pdf)

4. KEY NEXT STEPS

NEXT STEPS FOR FIRMS PLANNING

Since the 2018 publication of the LIBOR Transition Roadmap for Investment Managers, survey results have demonstrated that firms have made significant progress in mobilising their projects with dedicated resources to address transition, building inventories of exposures, transitioning investment activity where there is sufficient liquidity, and improving their internal and external communication.

Building on detailed impact assessments and implementation plans with clarity on action owners and timelines, there are a number of key areas where firms need to keep momentum in their transition planning. More specifically, firms need to focus on:

1. Market monitoring
2. Client opportunities and risks
3. Conduct risk
4. Communication
5. Contract remediation
6. Operational readiness

A. MARKET MONITORING

It is critical for firms to monitor liquidity and industry developments to ensure their programmes are up to date, meet regulatory expectations and align with the rest of the market across jurisdictions. This includes keeping track of:

- Updates to ARRs by currency, and the characteristics of these ARRs, such as their volatility and difference in basis (i.e., spreads) to LIBOR
- Updates to ARR-based product conventions by asset class and currency, including compounding conventions and payment conventions
- Updates to fallback language by jurisdiction and asset class, for new issuances and legacy contracts
- Updates to industry conventions, such as the ISDA protocol for derivatives
- Updates to market conditions by asset class, including liquidity and dealing costs in relation to both LIBOR- and ARR-based instruments across derivatives and cash products
- Updates by regulatory jurisdiction, in terms of timelines, transition expectations applicable to regulated entities, capital requirements and reporting requirements

B. CLIENT OPPORTUNITIES AND RISKS

It is critical for firms to track exposures to LIBOR and ARRs (at product/service offering and instrument levels) to the firm and by client as they evolve. It is also critical to identify possible courses of action on behalf of the client and potential client benefit/detriment to inform transition strategy to act in the best interests of clients.

Firms' transition strategies need to include:

- Clear sets of principles and approach (e.g., in relation to new and existing holdings by asset classes, and updating benchmarks for funds, share classes or mandates)
- Clear considerations for decision-making (e.g., in relation to transition strategy of instruments by asset class, which could include market liquidity, client considerations and operational readiness in relation to new and existing positions)
- Clear methodology (e.g., in relation to defining benchmarks based on ARRs, or triggers and thresholds in relation to transitioning instruments by asset class)

A key tool for firms is monitoring exposures and setting up dashboards to address information requirements by information consumer, be it for oversight, governance or prioritising actions. The complexity of managing these dashboards is compounded by the different dimensions of data to be tracked: market data, client data and contract data.

Understanding specific requirements, constraints or considerations by client group as they evolve is also critical. For example, insurers may give importance to the need for LIBOR-based valuations (of liabilities and derivatives) and credit rate adjustments for consistent RFR term structures used in regulatory reporting under Solvency II (which is now being reviewed as the subject of a discussion paper by the European Insurance and Occupational Pensions Authority) in relation to decisions on transition strategy and optimising the timing of the transition.

IA survey respondents noted how end investors were also increasingly aware of the main points arising from the ARRC buy-side checklist (published in January 2020),[37] particularly:

1. Developing strategies for redesigning or transitioning the existing portfolio of LIBOR products where needed (including the launch of new products based on ARRs)

2. For portfolios tied to LIBOR as a benchmark or investment guideline, understanding the implications for the forward portfolio and considerations to optimise the timing of the transition

3. Understanding the financial, customer and legal impacts resulting from transitioning from LIBOR, the possible options available via trading out, renegotiation/repapering or fallback, and planning mechanisms for implementing fallback provisions

In the context of client expectations, it is important to consider the following risks when managing the transition:

1. The consequences of **legal risks** associated with legal agreements such as distribution agreements, service level agreements (SLAs), non-disclosure agreements (NDAs), supplier agreements, prospectuses, key information documents (KIDs), investment management agreements (IMAs) and ISDA Master Agreements.

2. **Conflict risks** arising from the availability of price sensitive information and/or competing interests (e.g., conflict between different funds, or the fund portfolio manager and the corporate, must be identified and appropriately managed)

3. The continued **availability of resources** when it comes to transition over the 2020–21 timeframe; the pool of skilled resources required for LIBOR transition needs to be maintained while the firm allocates resource to satisfy other regulatory priorities (e.g., effective contract analysis requires skilled and experienced resources that understand key contract terms (and what any proposed changes to them mean), which is likely to be limited)

Firms should plan to address regulatory expectations in relation to the use of ARRs instead of LIBOR in swaps for new positions, in new investments in cash products maturing beyond 2021, and as benchmarks or performance fees in new product/fund launches.

C. CONDUCT RISK

During transition-related situations, conduct risk means any action by a firm or an individual that has the potential to cause harm to consumers or market integrity. Firms must prioritise conduct risk management and embed relevant controls to evidence governance that all transition-related activity is in clients' best interests.

Several asset managers are being challenged by clients on how they perceive conduct risk vis-a-vis the transition of holdings in their portfolio to non-LIBOR instruments. The management of conduct risk specifically in relation to the LIBOR transition, and in a manner consistent with the firms' overall conduct risk framework, is key, and this is expected to come under scrutiny from regulators and clients.

Conduct risk varies by firm. The FCA has stated: "We consider it is essential for firms to put in the effort to create a definition of conduct risk tailored to their own history and circumstances, rather than adopt a standard definition ... Our discussion has evolved to focus on conduct more broadly on the whole curve of behaviour, good and bad." [38]

[37] Source: ARR Committee, Buy-Side/Asset Owner Checklist (https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2020/ARRC_Buy_Side_Checklist.pdf)

[38] Source: 'Defining conduct risk' (page 14) within 'Progress and challenges' 5 Conduct Questions, FCA (https://www.fca.org.uk/publication/market-studies/5-conduct-questions-industry-feedback-2018-19.pdf)

In relation to the LIBOR transition and conduct risk, the FCA[39] expects all UK-regulated asset management firms[40] to:

- "Exercise skill, care and diligence"
- Identify and "manage conflicts of interest" and put in place controls to address risks
- "ensure clients are not misled and are treated fairly"
- "act in the best interests of clients" when managing the transition and associated costs, and take proactive steps instead of waiting for client instruction

The FCA expects firms investing on customers' behalf and LIBOR transition to take steps to[41]:

1. **Identify firm and client exposures to LIBOR** – identify the extent of the firm's and its clients' exposures to LIBOR because of LIBOR-referencing instruments in asset portfolios
2. **Plan transition** – consider and plan how the firm will manage the impact of transition ahead of the end of 2021, including risk management and engagement with sell side, issuers and borrowers
3. **Manage costs of transition (including investment strategy and best execution)** – if concerned about incurring costs, particularly those on behalf of customers, consider the likely increase in costs of dealing for LIBOR-linked products as the transition to SONIA-linked or alternative rate products progresses and liquidity in LIBOR products begins to diminish compared with alternatives (firms should have a plan in place for their investment strategy and best execution that considers the costs and implications of transition to deliver in the best interests of customers)

Survey respondents identified their conduct risks and provided examples of how they are addressing them, including:

- Addressing information asymmetries
- Treating clients fairly with equitable replacement benchmarks
- Modelling economic value transfers
- Managing 'roll points'
- Ensuring the timing of transition activities does not conflict with protecting clients' interests
- Striving for consistency of approach across markets

Therefore, firms are expected to assess whether their existing conduct risk frameworks are adequate to address conduct risks arising from activity in relation to LIBOR transition, and enhance their control frameworks where required. In order to do so, firms would be expected to consider at least the following:

1. **Customer segmentation** – identify firm and client exposures to LIBOR, define client cohorts and consistent criteria considering services (e.g., discretionary portfolios, sub-delegations and advice) and instruments (e.g., funds) offered, define client transition objectives and identify drivers of client detriment (or not acting in the best interests of clients)
2. **Transition conduct risk framework** – identify the customer journey and potential scenarios for conflicts of interest arising from LIBOR transition-related activities and the associated conduct risks at a granular level; assess changes to business-as-usual (BAU) processes, and identify and assess the effectiveness of relevant controls; enhance conduct risk framework, leveraging existing frameworks for conflicts; and conduct and enhance policies, processes, controls and management information, where relevant

[39] The BoE RFR WG has also sent an open letter to the European Commission in relation to the removal of pan-European regulatory barriers to transition away from LIBOR and other IBORs, which includes specific reference to conduct issues applicable throughout the sector, such as issues in relation to EMIR clearing and margining obligations, practical issues arising from EMIR and MiFIR requirements, disclosure using KIDs, market abuse and conflicts of interest .

[40] Source: 'Dear CEO' letter to asset managers dated Thursday, 27 February 2020, FCA (https://www.fca.org.uk/publication/correspondence/dear-ceo-asset-management-libor.pdf)

[41] Source: 'Firms investing on customers' behalf and LIBOR transition' within 'Conduct risk during LIBOR transition,' FCA (https://www.fca.org.uk/markets/libor/conduct-risk-during-libor-transition)

3. **Process updates** – enhance processes to manage transition costs incurred on behalf of clients (including conduct risk considerations to investment strategy and best execution), develop staff training and communication strategies, and define controls for counterparty engagement and contract renegotiation for legacy contracts

Therefore, immediate next steps to consider include assessing whether existing conduct risk frameworks are adequate and enhancing them where necessary, identifying client detriment across various scenarios arising from the transition, and putting in place relevant controls to ensure clients are treated fairly and actions are performed in their best interests.

Firms should look more holistically at their conduct risk frameworks and identify existing controls that can aid the transition to non-LIBOR products and, where required, enhance this framework to ensure due consideration is given to client interests as firms make product- and operational-level decisions to transition to new products.

Regulatory guidance and/or market practice recommendations by industry trade associations would also help drive standards in implementation of conduct risk frameworks.

D. COMMUNICATION

Regulators expect firms to provide fair and clear communications that are not misleading to clients in a timely manner regarding exposure, commercial impact and transition costs. This leads to the need for auditability of client and counterparty communications to provide documentary evidence that the firm can rely on in case of future regulatory reviews or client litigation in relation to conduct risk or the transition overall.

A key impact on client-facing teams and other external-facing parts of firms would be to track and document all conversations with clients and counterparties, to mitigate against any future conduct risk-related regulatory reviews or client litigation.

A key concern of the regulator is the information differential between large firms and their less sophisticated customers: for example, for investment managers, one extreme case could be long-short funds with LIBOR as a cash-plus benchmark offered to retail clients. Asset managers need to consider any implications carefully when dealing with retail clients and SMEs, and communicate and act proactively to prevent client detriment.

Given the commercial and regulatory nature of potential 'small print' about LIBOR cessation in contracts, where firms are concerned about not straying into personal recommendations, they can provide an objective overview of the benefits, costs and risks of a range of alternatives to a client's existing LIBOR-linked exposure, without inferring a recommendation.[42]

Firms need to remain mindful of FCA regulations regarding the timing and content of customer communications, and it is important that firms with less sophisticated investors (e.g., retail or small enterprises) are clear about the risks faced by clients' portfolios regarding the transition. The FCA has issued specific guidelines in relation to client communications.[43]

Therefore, firms need to establish their communication strategies and communicate with clients, counterparties and vendors proactively, beyond any generic communications, to understand and address client-specific concerns, and to document the appropriate governance to demonstrate that all activities performed and decisions taken are in clients' best interests. As highlighted in the 'Dear CEO' letter, firms should also be communicating with their FCA supervisor as soon as possible if they identify any transition issues.

[42] Source: 'Conduct risk during LIBOR transition', FCA (https://www.fca.org.uk/markets/libor/conduct-risk-during-libor-transition)
[43] Communicating with customers about LIBOR and alternative rates/products' within 'Conduct risk during LIBOR transition', FCA (https://www.fca.org.uk/markets/libor/conduct-risk-during-libor-transition)

E. CONTRACT REMEDIATION

Firms should be remediating contracts and documentation across products, investments, commercial contracts across the firm and client disclosures. This includes a comprehensive review of existing legal/product documentation and the quality and strength of any existing fallback language.

A starting point for most firms is to establish what types of documents need to be tracked in relation to product/service offerings or instrument-level holdings. This can be reasonably complicated in the case of alternatives, where a variety of contractual documentation may exist at the fund and holding levels.

In relation to identified document types, firms should create a live repository of digitised documents (which is updated as positions or product offerings evolve) from which metadata can be extracted into a live central contract inventory using fact-extraction tools. Scoping techniques and transition strategies can help prioritise efforts and reduce the number of documents to be managed in relation to contract remediation.

Identifying what metadata needs to be extracted and maintained, such as applicable law and whether consent is required to change the contract, or the strength of fallback language, is critical and needs to be shaped properly to streamline contract remediation efforts subsequently.

Managing the process of contract remediation and reaching out or responding to counterparties may involve mobilising resources for significant internal coordination, in order to consider all relevant aspects and implications of revised legal terms fully (across investments, valuation, risk, accounting and tax – both at a firm and at a client level) before making a decision and responding.

F. OPERATIONAL READINESS

While investment managers depend on issuers, borrowers and sell-side activity for product availability, and on third-party vendors for systems and outsourced processes, they have to progress their own transition plans to meet regulatory expectations in relation to safeguarding client interests and transition progress.

Firms should be updating all their internal models, processes and systems, as well as ensuring readiness with their third-party providers and interfacing in relation to vendor system and process updates.

Systems across the operating model, from front office to back office, that are used by the sell side and the buy side need upgrading to deal with compounding in arrears based on overnight rates. Curves used for discounting and valuation must be built, and time series data was not always available for the new ARRs, leading to challenges in reconstructing this data in a manner compliant with applicable financial markets' regulatory requirements. Where firms are reliant on TPAs for valuations, these may need to be updated alongside their own transition plans by asset class.

Given the lead time for technology build, a key decision that could affect the overall spend of firms relates to how well they sequence systems changes to align with transition timelines by asset class and product/service offering. Where there is a significant risks that builds may not be ready in time to support transition strategy, a cost-benefit assessment of alternative tactical fixes or manual processes (including the additional operational risk associated with such work-arounds) is critical.

The robustness and design of BAU processes (e.g., in relation to client communications, controls or conduct risks) can alleviate the volume of effort put into the programme.

FCA EXPECTATIONS

Firms should also be playing close attention to regulatory expectations that have been communicated to the market.

The appearance of operational readiness strongly resonates with the direction of regulators' expectations in relation to boosting operational resilience (see FCA papers DP18/04 and CP19/32). Regulators will wish to gain a better understanding of firms' readiness regarding:

- Availability of resources – the pool of skilled resources for LIBOR transition may be under scrutiny, particularly regarding 'substance' (numbers x skillset range)
- Legal contracts – ensuring that contract analysis is nearing completion or complete
- Economic gain/loss exposures – regulators will expect to see evidence that exposures are monitored and mitigated (e.g., via contract renegotiation, risk mitigation techniques and/or exit strategies where necessary)
- Communication – regulators will wish to see evidence of concrete communication strategies for investors and shareholders alike
- Training – firms will need to take all reasonable steps to ensure that training is conducted and reinforced, both 'on the job' and periodically

From the survey responses, firms' plans seem aligned, except on the topic of conduct risk (and related documentation), which is relatively new. The general level of progress in transitioning products and holdings may be constrained by the progress on industry conventions and operational readiness.

5. CONCLUSIONS AND TAKEAWAYS

KEY THEMES

Survey results and engagement with the buy side indicate that transition activity is well underway and gaining momentum, and investment managers have already started to reduce their LIBOR exposures. As the sell side manufactures new ARR product issuances based off front-book plans established in 2019, monitoring liquidity is key to optimising the cost and timing of the transition.

With near-term developments such as the publication of the ISDA protocol or establishment of conventions for cash products, and the sell side focusing on back-book strategies in 2020, contract remediation and repapering activity is expected to increase.

Investment managers are dealing with prioritising technology change to handle new instruments and functionality, given the operational impact of near-term developments, such as the change in CCP discounting of all US dollar- and euro-denominated derivatives to ARRs.

Having overarching governance in place to defend actions taken against subsequent scrutiny by the regulator and clients is a key no-regret step to managing conduct risk. It includes defining information requirements and preparing management information to demonstrate how the investment manager acted in the best interests of clients. This ideally needs to be in place prior to proactive client communication and investment strategies so they are documented to be consistent with the firm's framework and governance.

Separately, investment managers are moving towards proactive client communications. Clients such as pension funds and corporates must also respond to the LIBOR transition challenge in good time in line with their investment policies and strategies

The complexity and dependencies at work mean that investment managers may depend on actions by third parties but cannot pause activities until then. For example, if data feed providers fail to provide swap curves or data in the right formats and at affordable price ranges in time, investment managers could feel the knock-on impact.

LIBOR transition could encourage developments in disruptive technologies, cloud computing and artificial intelligence to help with valuations or enable more flow-driven or algorithmic trading. EY estimates that upwards of 10%–15% of the larger investment managers and asset servicers are considering providing solutions in the LIBOR space, as well as adjusting their own investment and hedging models.

CONCLUDING REMARKS – KEY NEXT STEPS FOR INVESTMENT MANAGERS

In conclusion, the transition is ongoing, and the buy side needs to do everything within its control to progress its transition activities and operational readiness while monitoring industry conventions and market liquidity, managing dependencies on vendors, managing conflicts, and proactively acting on behalf of clients to optimise the timing and cost of transition.

In the UK, the BoE has set out some important milestones and priorities by focus area. It has also issued roadmaps for transition.

Whatever transition pathway investment managers choose to follow, it needs to be one that's future-flexible – and that allows them to make the most of all the opportunities available to them, while addressing the best interests of clients and mitigating any potential client detriment. Please refer to Appendix D for key external milestones.

In practice, this means that, keeping external dependencies and deadlines in mind, investment managers need to drive concerted effort across their firms in relation to exposures to LIBOR, which include:

1. **Market monitoring** – monitoring industry conventions and market liquidity (including issuer and sell-side activity) by asset class and jurisdiction

2. **Assessing client opportunities and risks**, including:

   a. Exposures and financial impact – tracking firm- and client-level exposures to LIBOR, and assessing the financial impact of exposures across risk, valuation, accounting and tax from both the investment manager and client perspectives

   b. Transition strategy – strategising and implementing transition possibilities for:

      i. Products (e.g., updating benchmarks, agreements, product documentation and client reporting)

      ii. Financial instruments or holdings (e.g., investment strategy)

3. **Conduct risk** – embedding conduct risk and controls across all transition-related activity in line with regulatory expectations, such as by including taxonomies, frameworks, controls and management information

4. **Client communications** – communicating with clients, counterparties and vendors, understanding any specific concerns and evidencing how the firm resolved them in the best interests of clients

5. **Contract remediation** – remediating and updating contracts and documentation across the firm where relevant, including product documentation, contracts related to existing investments and any other LIBOR-based contracts across the firm

6. **Operational readiness (internal and vendors)** – enhancing relevant operations and infrastructure (both internal and vendor or third-party provided), including processes, systems, models and end-user computing (e.g., to handle operations such as settlements, interest payments and collateral management, and to support analytics such as compounding of overnight rates and conventions, for interest calculations, discounting, risk monitoring and regulatory capital requirements)

APPENDIX A
IA SURVEY AND RESPONDENT PROFILE

The IA conducted a survey of investment managers in relation to the LIBOR transition (the survey). A total of 26 unique responses were received from **26 firms**, representing **69%** of the **£7.7 trillion assets under management** (AUM) managed by IA members.

The survey was comprised of 31 questions and was open for completion from 17 December 2019 to 28 February 2020. The response rate differed across questions, as not all respondents were able to provide a response to all questions.

The survey questions were a mix of quantitative and qualitative, allowing for statistical and trend analysis. Anonymised survey responses are included within relevant parts of this document.

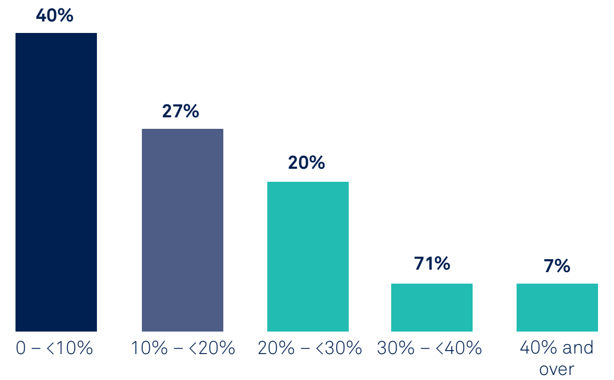
SUMMARY OF RESPONDENTS' EXPOSURE TO LIBOR:

- **92%** of respondents had assessed their exposure to LIBOR.
- **Two-thirds** of firms surveyed had LIBOR exposures in less than 20% of their AUM.
- By currency, high exposures to LIBOR were most reported in relation to **USD LIBOR** followed by **GBP LIBOR**.
- The asset class with the most 'high' exposures was **DERIVATIVES**.
- **70%** of respondents reduced their exposure to LIBOR in 2019.
- **65%** of survey respondents reported investing in some SONIA-based instruments in 2019.
- **22%** of survey respondents expected to still have products that they likely could not transition to SONIA by the end of 2021.[44]

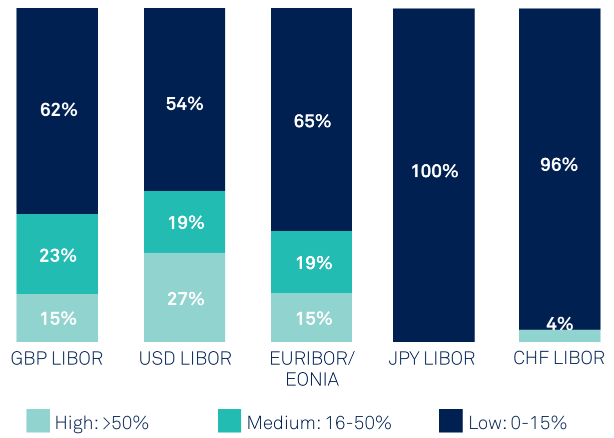
Overall, **92%** of the firms surveyed had assessed their exposure to LIBOR, and **75%** expected their LIBOR transition programmes to finish by the end of 2021. Separately, from anecdotal evidence, most firms had performed their exposure assessment in 2018 or 2019 initially. Investment managers may have exposure to LIBOR in several areas, including the use of LIBOR-referencing interest rate derivatives to hedge interest rate risk, and investments in bonds or other securities in which interest payments reference LIBOR. While it is not clear whether all investment managers have repeatable processes to track their exposure on a daily or periodic basis, this is known to be a challenge for sell-side firms.

EXPOSURE TO LIBOR – OVERALL, BY CURRENCY AND ASSET CLASS

APPROXIMATE EXPOSURE TO LIBOR (AS % OF AUM)



FIRMS EXPOSURE TO IBORs



[44] Responses were received between November 2019 and February 2020, i.e., prior to COVID-19 developments.

Two-thirds of the firms surveyed had LIBOR exposures in **less than 20%** of their AUM. When viewed by currency, high exposures to LIBOR were most reported in relation to **USD LIBOR**, while nearly all the respondents reported low exposures to JPY LIBOR and CHF LIBOR.

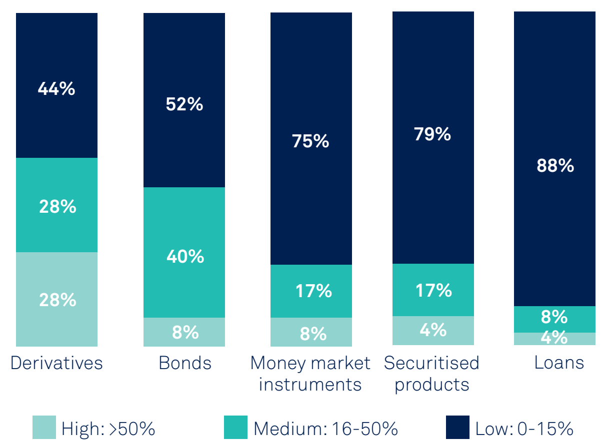
From a transition planning perspective, this highlights the relative importance of the following to investment manager LIBOR transition programmes:

1. US updates and conventions led by the ARRC

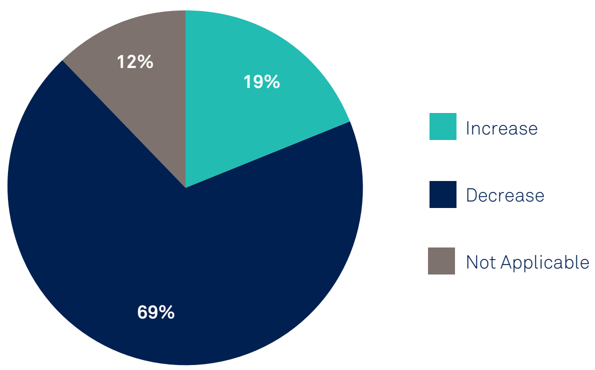
2. Any differences in timelines between US and UK calendars for transition

The asset class with the most 'high' exposures was derivatives, given the extent to which LIBOR is embedded within the valuation and pricing of derivatives contracts (**28%** of firms that have an exposure to derivatives regard it as high). As derivatives are valued at their notional value, but the P&L impact can be much lower, the relative significance of cash products (compared with derivatives) may be underestimated here.

EXPOSURE TO LIBOR BY FINANCIAL INSTRUMENTS



CHANGE IN EXPOSURE TO LIBOR INSTRUMENTS OVER 2019



While the sell-side perspectives and overall market statistics show an increasing trend in the absolute levels of LIBOR-linked products, approximately. **70%** of 29 survey respondents seem to have reduced their exposure over 2019.

The key drivers of increasing LIBOR exposure, by approximately **20%** of survey respondents who reported this, were:

- **Liquidity** – lack of liquidity of ARR-based products/ market issuance
- **Availability** – relative lack of availability of ARR-based instruments (versus legacy LIBOR instruments)
- **Conventions** – uncertainty around product conventions such as acceptable fallback
- **Asset class differences** – increases in some asset classes (such as EURIBOR CLOs and USD LIBOR-FRNs) outweighed the reduction in derivatives such as GBP LIBOR swaps
- **Overall AUM** – overall higher volumes (AUM).

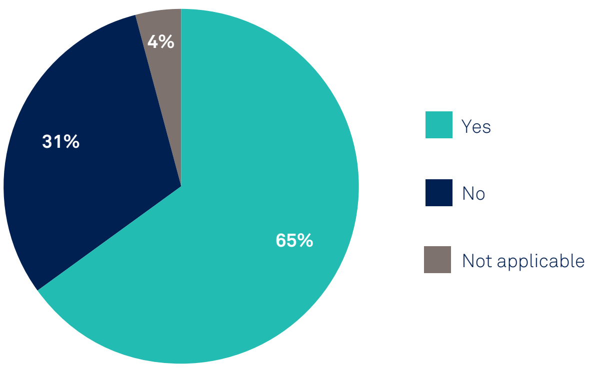
SONIA USE AT THE INSTRUMENT LEVEL

65% of survey respondents reported investing in some SONIA-based instruments in 2019.

Many reported investing in SONIA-linked FRNs, with maturities before and after December 2021. IA survey respondents expect and require issuers to increasingly start amending their legacy bonds' terms from LIBOR to SONIA. Others mentioned specifically holding Euro Medium Term Notes and Euro Certificates of Deposit.

Derivatives seem the most straightforward for adoption, with several IA survey respondents trading SONIA swaps, including interest rate swaps, cross-currency swaps, total return swaps, equity swaps, asset swaps and asset-backed securities that reference SONIA. Some firms mentioned that issues with buy-side front-office order management and trading systems were holding them back.

EXPOSURE TO SONIA-BASED INSTRUMENTS IN 2019



SONIA USE AT THE PRODUCT LEVEL

In relation to how firms use SONIA at the product level, responses covered a variety of areas from no usage to usage within product governance, as benchmarks for performance presentation, and as investments within products.

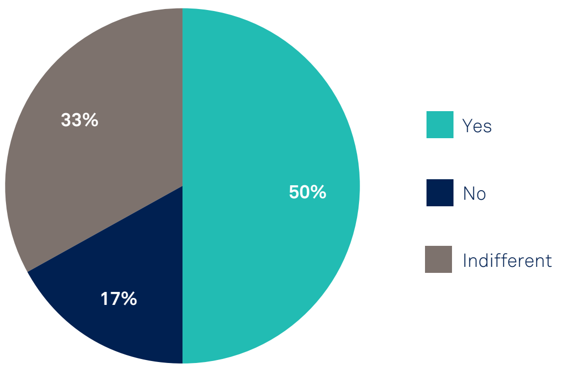
Items that stood out or occurred most frequently are grouped and described below:

- **No usage** – some firms responded 'not yet' to using SONIA in their products. One firm had conducted test trades in SONIA but was not trading it generally.
- **Product issuance** – some firms reported they were updating fallback language for their existing LIBOR referencing products and developing a process (or plans) to incorporate SONIA in benchmarks and performance fees, establish robust fallback language in new product launch documentation and transition existing LIBOR-based products to SONIA.
- **Benchmark for funds** – responses were mixed, with the leaders already using SONIA as the official benchmark for a number of their firms' own funds, while the laggards are currently not reporting SONIA as the performance benchmark at product level for funds. Some of these firms were in the process of reviewing their plans to switching over LIBOR-based benchmark funds to SONIA, or a version of, in 2020.
- **Performance presentation and compensation** – four firms reported using SONIA in some form of performance benchmark or performance measurement. Some firms were using SONIA to calculate performance fees for some funds, while others mentioned using SONIA to calculate portfolio manager compensation and performance scenarios under the PRIIPs regulation.
- **Investments** – nearly a quarter of survey respondents reported the use of SONIA-based products as investment generally:
  - **General use** – firms have used SONIA products as investments in specific portfolios and for replacing LIBOR cash instruments.
  - **ALM or LDI and hedging** – some firms have been using SONIA overnight indexed swaps since 2018 for interest rate hedging of clients' pensions liabilities.

TERM RATE USES

50% of IA survey respondents[45] indicated that forward-looking term rates were important for their business, while a third were indifferent.

IS THE DEVELOPMENT OF FORWARD-LOOKING TERM RATES IMPORTANT TO YOUR BUSINESS?



Qualitative responses in relation to the identified use cases for term rates included the following:

- **Calculating interest payments for loans** – although this is not necessarily an issue, as SONIA conventions allow firms to calculate interest coupons sufficiently in advance to execute the operational aspects of paying the interest.

- **Medium and smaller corporate (SME) loan deals** – although this is not necessarily an issue, as the ability to estimate interest payments is facilitated by the conventions on SONIA-based interest calculations. Historical index averages published by the BoE can help issuers estimate rates. Transparency of the rate at each reset is relatively high with SONIA (based on actual transactions) compared with an estimated rate from a panel.

- **Discounting trade finance deals** – conventions are yet to be established in relation to using ARRs for discounting in trade finance deals. This seems to be a gap, as market participants need to figure out product conventions to discount using overnight rates.

CONTENT OF CLIENT COMMUNICATIONS

Although firms are starting to reach out to clients, there is a wide variation in the content provided in their communications. Client exposure to LIBOR is common and the most basic information is provided in most cases.

From qualitative responses, communications include:

- Generic standard information – such as descriptive explanations of the impacts and challenges of the transition, and the firm's preparations for it

- Exposure analysis – quantitative information specific to clients, such as fund-level exposure details

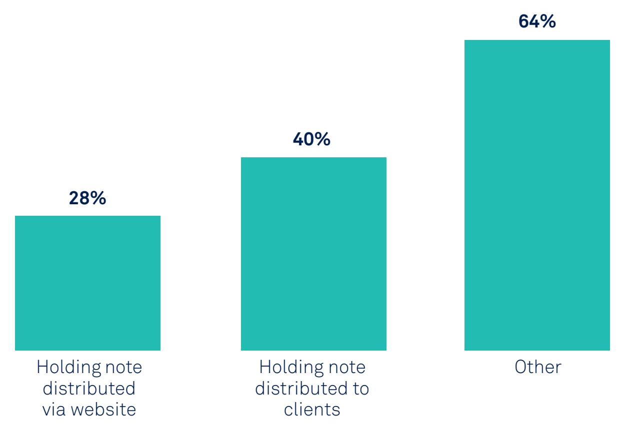
- Investor communications regarding transition – varying in line with investor awareness and may include responses to specific questions, transition support on a case-by-case basis or generic information about approach (such as whether all LIBOR referencing swaps with maturities post-2021 are transitioned to SONIA-referencing swaps)

[45] The IA conducted a member LIBOR transition survey (completed February 2020) of 26 firms, representing 69% of the £7.7 trillion AUM managed by IA members.

CLIENT COMMUNICATION STRATEGIES AND APPROACH

Firms are communicating with clients via holding notes, Q&A responses, etc. At least **40%** of survey respondents have sent a holding note of some form to clients.

HOW ARE YOU COMMUNICATING WITH CLIENTS (SELECT ALL THAT APPLY)?



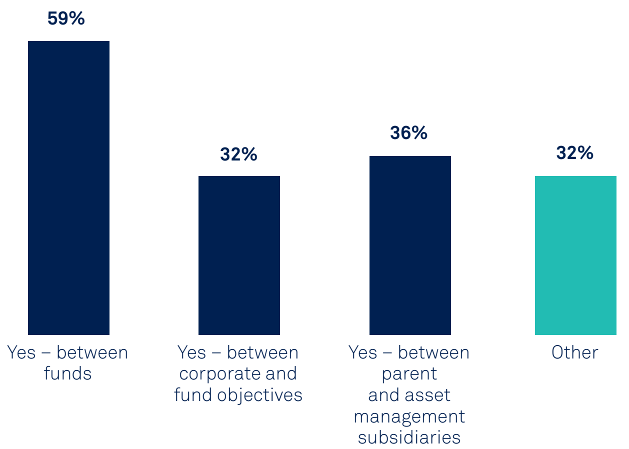
From qualitative responses, client communication approaches can be categorised into:

- **Reactive** – most firms in the early stages of their communication planning have remained reactive, providing ad hoc responses to client queries, with some providing generic holding statements and limited responses as they get ready internally. Client queries are usually about exposures, with bespoke questionnaires or specific questions that require significant efforts to respond. Some firms have pulled together a Q&A pack for front-office teams; others have augmented reactive Q&A with detailed materials on how they are responding. Some of the reactive firms are now enhancing their approach to be more proactive.
- **Generic communications** – most firms that have started proactive communication have distributed some form of basic or generic holding note to clients describing the transition and the firm's approach. Other respondents had plans to send holding notes in Q1 2020. A few clients have used other communications channels to engage with clients, such as a blog by their fixed income team. Others plan to publish their holding notes on relevant websites, such as those for funds businesses.
- **Proactive outreach** – some of the more advanced firms had established client outreach strategies and programmes, which included:
  - Direct engagement with clients to understand their approach to the transition and how the investment manager can facilitate this
  - Targeted communications, such as meetings with trustees and fund boards
  - Client panel sessions
  - Conference call briefings for clients
  - FAQ distribution to clients

Firms were also asked whether they had considered the conflicts of interest in the current 'dual-rate' environment. The results were distributed as follows:

1. A majority of **59%** answered 'yes, between funds, e.g., pooled and segregated mandates.'
2. **36%** answered 'yes, between parent and asset management subsidiaries.'
3. **32%** answered 'yes, between corporate and fund management objectives.'

HAVE YOU CONSIDERED CONFLICTS OF INTEREST IN THE CURRENT 'DUAL-RATE' ENVIRONMENT (SELECT ALL THAT APPLY)?



Some examples of conflicts of interest include 'scenarios where different clients choose different benchmarks for broadly the same portfolios'; 'competing interests of clients'; and 'interplay between products.'

CLIENT EXPECTATIONS AND CONCERNS

Only **31%** of survey respondents indicated that their clients (i.e., the end investors) had expressed concerns about their exposure to LIBOR.

Client concerns were varied and included:

- General concerns (e.g., clients asking what is happening with LIBOR and whether firms had a transition programme in place)
- Clients wanting to understand their exposures to LIBOR-based products
- Clients asking how investment managers planned to mitigate any associated risks
- Clients expressing concerns about legacy assets with insufficient or weak fallback language
- Clients written to by the PRA and actively looking to manage their exposure and transition at the optimal time

APPENDIX B
INDUSTRY CONTEXT

Currency	Legacy rate	ARR	Working group
	USD LIBOR	Secured Overnight Financing Rate (SOFR)	The New York Federal Reserve Alternative Reference Rates Committee (ARRC) https://www.newyorkfed.org/arrc
	GBP LIBOR	Reformed Sterling Overnight Index Average (SONIA)	The Bank of England (BoE) Risk-Free Rates Working Group (RFR WG) https://www.bankofengland.co.uk/markets/transition-to-sterling-risk-free-rates-from-libor
	EUR LIBOR/ EURIBOR[46]/ EONIA	Euro Short-Term Rate (€STER)	The ECB working group on euro risk-free rates https://www.ecb.europa.eu/paym/initiatives/interest_rate_benchmarks/WG_euro_risk-free_rates/html/index.en.html
	JPY LIBOR	Tokyo Overnight Average rate (TONA)	Bank of Japan (BoJ) Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks https://www.boj.or.jp/en/paym/market/jpy_cmte/index.htm/
	CHF LIBOR	Swiss Average Rate Overnight (SARON)	Swiss National Bank (SNB) National Working Group on Swiss Franc Reference Rates (NWG) https://www.snb.ch/en/ifor/finmkt/fnmkt_benchm/id/finmkt_reformrates

[46] EURIBOR has been reformed (https://www.emmi-benchmarks.eu/assets/files/D0417A-2019%20-%20EURIBOR_phase_in_completion.pdf) to be BMR compliant (https://www.emmi-benchmarks.eu/euribor-org/euribor-reform.html) and is expected to remain so post-2021.

ISSUANCES USING ARRs BY ASSET CLASS

Asset class	UK	US
Floating rate notes	First issuance in June 2018 First issuance in February 2019 using the new shift methodology in line with the BoE's new daily SONIA Compounded Index (also announced in February 2019)	First issuance in July 2018
Bonds	Bond consent solicitation to convert from LIBOR to SONIA completed in June 2019	
Bilateral loans	Issuances and LIBOR to ARR conversions from H2 2019	Issuances and LIBOR to ARR conversions from H2 2019
Syndicated loans	First issuance in March 2020	First issuance in December 2019
Adjustable rate mortgages (ARM)	First issuance expected in H1 2020	After, 30 June 2020, Federal Home Loan Banks (FHLB) will securitise only ARR-based ARMs maturing post-2021
Commercial Mortgage Backed Securities	First issuance in March 2020	First issuance in late 2019

APPENDIX C
PRODUCT SHEET

Note: data is subject to change, and is up to date as of 16 April 2020.

Conventions

SOFR Term Rate Indicative Instrument Convention Matrix Based on Overnight Rates

The table below compares SOFR conventions and indicates certain conventions that are expected to be adopted in the industry. Note: the accuracy of the criteria detailed is subject to change as the market for each instrument develops. This table is up to date as of 16 April 2020.

Instrument applicability	Commercial Lending	Consumer Lending	FRNs	Securitizations
Instrument conventions				
1. Averaging method	Simple average Compound average *Note: expected to use compound average*	Simple average (30- or 90-day) Compound average	Simple average Compound average *Note: though simple average FRNs have been issued, many believe the market is migrating to compound avgerage in arrears*	Simple average Compound average *Note: will generally be driven by underlying assets (e.g., CLOs will likely adopt compounded average, given underlying assets will do so)*
2. Averaging method timing	In advance In arrears *Note: expected to use In arrears*	In advance *Note: expected to use in advance*	In arrears *Note: the ARRC recommended in arrears*	In advance In arrears
3.–6. Adjustments for advance notice of payment				
3.–5. May be used in combination				
3. Payment date (if delayed)	*T+0* *T+2*	*T+0*	*T+0* *T+2*	T+0 T+2
4. Lockout period	*None* *1 day* *2 days*	*None*	*None* *2 days*	None 1 day
5. Lookback structure	None *1 business day to* *5 business days*	None to 45 calendar days *Note: 45 days is standard for ARMs*	None 1 business day to 5 business days	None 1 business day to 5 business days
6. Observation period shift	None *1 business day to* *5 business days*	None *Note: Expected to be N/A for ARMs*	None 1 business day to 5 business days	None 1 business day to 5 business days
7. Day count convention	Actual/360	Actual/360	Actual/360 *Note: the ARRC recommended actual/360*	Actual/360
Additional instrument conventions				
8. Business day convention	Modified following business day			
9. Interest payment date adjustment (compound average)	Interest payment date adjusted to next available business day (if date originally fell on a non-business day) No adjustment (interest payment date may fall on a non-business day)			
10. Margin treatment (compound average)	Margin exclusive compounding (margin added at the end of compounding period) Margin added to daily SOFR prior to compounding			
11. Negative rates treatment	SOFR for the interest period + margin floored at zero SOFR for the interest period floored at zero Individual daily SOFR reset floored at zero Individual daily SOFR reset + margin floored at zero (simple average only)			

Note:
1. Derivatives will predominantly use the compound average in arrears. Thus, counterparties looking for a 'perfect' hedge will prefer the cash instrument to align to this methodology. This preference should be taken into account when considering the averaging method for redesigned products.
2. 'In advance' could refer to a system having the ability to use either an averaged overnight SOFR in advance or a forward-term SOFR (if available at a later date).

SONIA Term Rate Indicative Instrument Convention Matrix Based on Overnight Rates

The table below compares SONIA conventions and indicates certain conventions that are expected to be adopted in the industry.

Note: the accuracy of the criteria detailed is subject to change as the market for each instrument develops. This table is up to date as of 16 April 2020.

		Instrument Applicability	Loans (term loans, RCFs), incl. consumer lending (mortgages)	FRNs	Syndicated loans	Bilateral loans
Instrument conventions		1.Averaging method	Compound average Note: though simple average instruments have been issued, the market is largely migrating to compound average in arrears			
Instrument conventions		2. Averaging method timing	In arrears		In arrears	In arrears
Instrument conventions	3.–6. Adjustments for advance notice of payment; 3.–5. May be used in combination	3. Payment date (if delayed)	T+0		T+0	T+0
Instrument conventions	3.–6. Adjustments for advance notice of payment; 3.–5. May be used in combination	4. Lockout period	None			
Instrument conventions	3.–6. Adjustments for advance notice of payment; 3.–5. May be used in combination	5. Lookback structure	None 5 business days		None 5 business days	None 5 business days
Instrument conventions	3.–6. Adjustments for advance notice of payment	6. Observation period shift	None 5 business days		None 5 business days	None 5 business days
Instrument conventions		7. Day count convention[1]	Actual/365			
Additional instrument conventions		8. Business day convention	Modified following business day		Next business day post-interest period (i.e., 5 days after reference rate compounding period)	
Additional instrument conventions		9. Interest payment date adjustment (compound average)	If the next working day crosses over to the following month, the payment date will not be carried forward, but instead will be the prior day to the end of the interest accumulation period	Interest payment date adjusted to next available business day		
Additional instrument conventions		10. Margin treatment (compound average)	Not included in compounding calculation (i.e., margin is not included when compounding and is added after the calculation is complete)			Market convention that is likely followed (i.e., margin is not included when compounding and is added after the calculation is complete)
Additional instrument conventions		11. Negative rates treatment	N/A		Zero floor provision optional wording included for ARR (compounded RFR rate) in LMA exposure documents	N/A

Note:
1. Derivatives will predominantly use the compound average in arrears. Thus, counterparties looking for a 'perfect' hedge will prefer the cash instrument to align to this methodology. This preference should be taken into account when considering the averaging method for redesigned products.
2. 'In advance' could refer to a system having the ability to use either an averaged overnight SOFR in advance or a forward-term SOFR (if available at a later date).

Product-wise fallback language

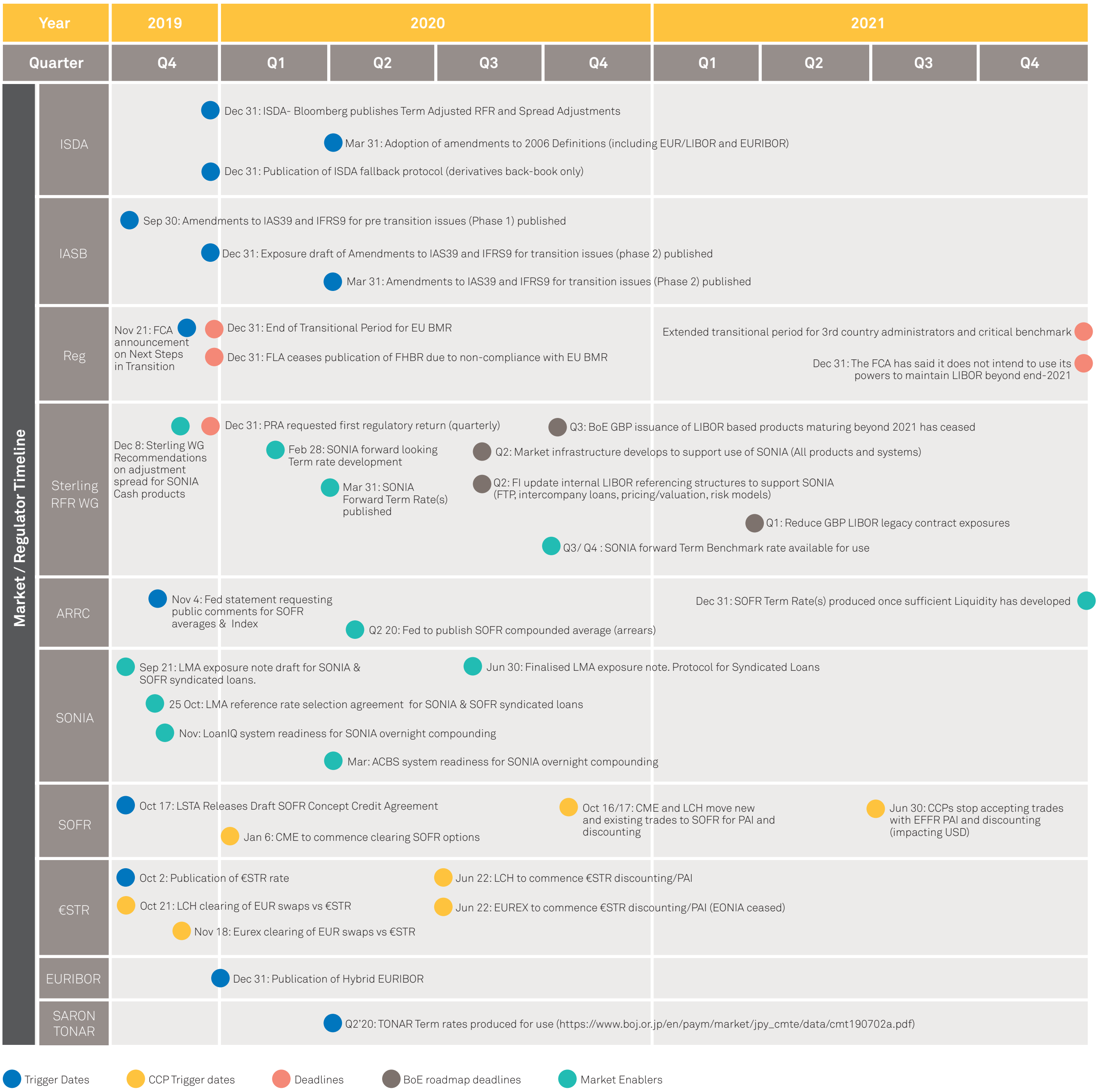
Note: the accuracy of the information below is subject to change as the market and fallback language for each instrument develops. This table is up to date as of 16 April 2020.

Asset class	Fallback language
1. FRNs	ARRC recommended terms (https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2019/FRN_Fallback_Language.pdf)
2. Bilateral loans	ARRC recommended terms (https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2019/Bilateral_Business_Loans_Fallback.pdf)
3. Syndicated loans	ARRC recommended terms (https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2019/Syndicated_Loan_Fallback_Language.pdf)
4. Adjustable rate mortgages	ARRC recommended terms (https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2019/ARM_Fallback_Language.pdf)
5. Securitisations	ARRC recommended terms (https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2019/Securitization_Fallback_Language.pdf)
6. Term and revolving RCF	LMA exposure drafts – SONIA (https://www.lma.eu.com/application/files/6615/8289/7161/Exposure_draft_of_a_compounded_SONIA_based_sterling_term_and_revolving_facilities_agreement.docx) and SOFR (https://www.lma.eu.com/application/files/7315/8289/6923/Exposure_draft_of_a_compounded_SOFR_based_US_dollar_term_and_revolving_facilities_agreement.docx)
7. All derivatives	ISDA protocol awaited (https://www.isda.org/2020/01/10/benchmark-fallback-consultations/)

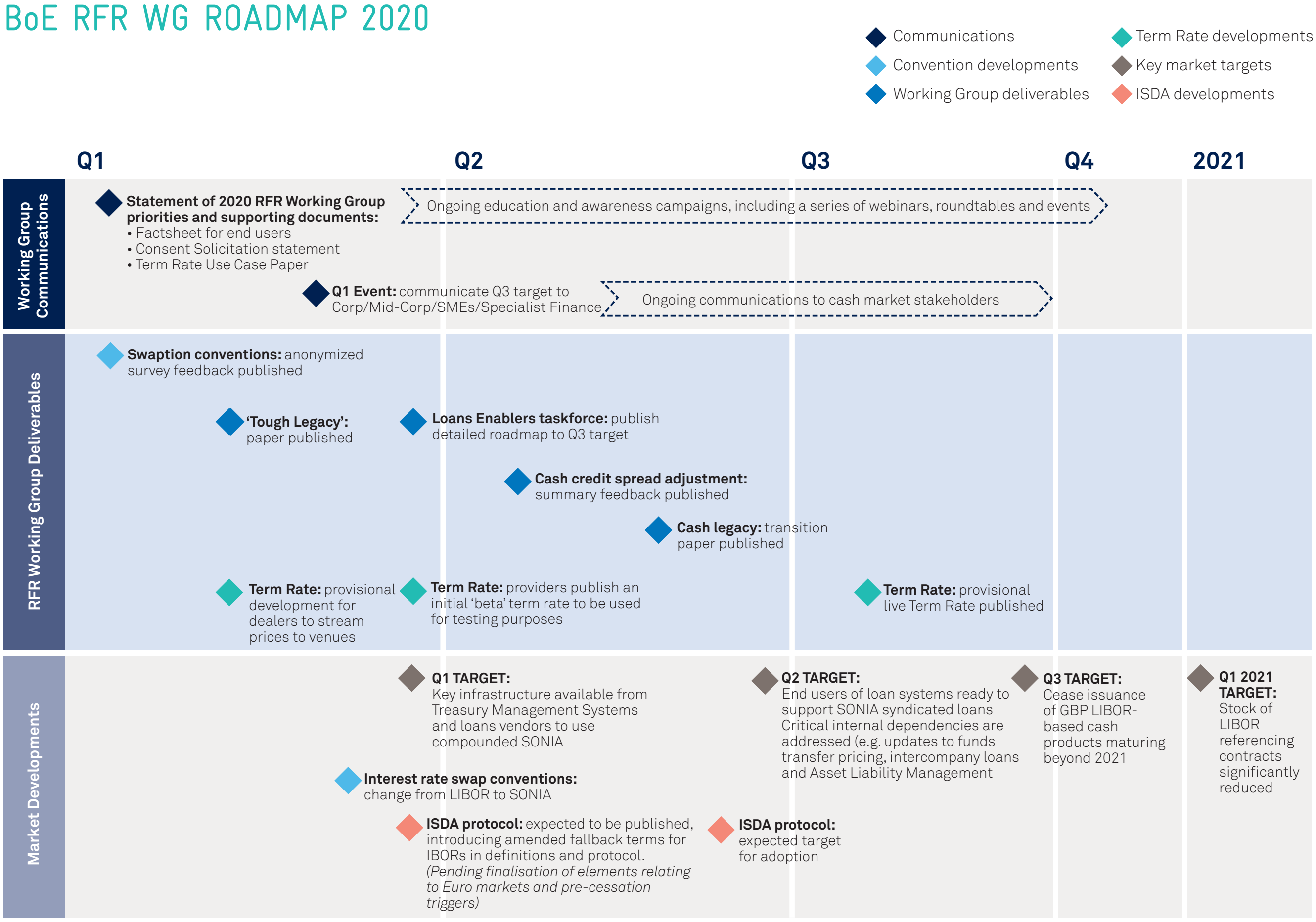
APPENDIX D
KEY EVENTS AND MILESTONES

KEY EXTERNAL MILESTONES

Note: data is subject to change and is up to date as of 16 April 2020.



BoE RFR WG ROADMAP 2020



Updated January 2020

Source: The BoE RFR Working Group's priorities and roadmap for 2020 (https://www.bankofengland.co.uk/-/media/boe/files/markets/benchmarks/rfr/rfrwgs-2020-priorities-and-milestones.pdf?la=en&hash=653C6892CC68DAC968228AC677114FC37B7535EE)

APPENDIX E
GLOSSARY

TERM	DEFINITION
ARM	Adjustable rate mortgage
ARR	Alternative Reference Rates
ARRC	Alternative Reference Rates Committee – Federal Reserve's working group on alternative RFRs
AUM	Assets under management
BAU	Business as usual
BoE	Bank of England
BOJ	Bank of Japan
CCP	Central counterparty
CLO	Collateralised loan obligation
CME	Chicago Mercantile Exchange
ECB	European Central Bank
EIOPA	European Insurance and Occupational Pensions Authority
EONIA	Euro Overnight Index Average – existing euro overnight reference rate
€STER	Euro Short-Term Rate – planned new euro overnight reference rate
EURIBOR	Euro Interbank Offered Rate
FCA	Financial Conduct Authority
FHFA	Federal Housing Finance Agency
FRN	Floating rate note
IA	Investment Association
ISDA	International Swaps and Derivatives Association
KID	Key information document
(L)IBOR	(London) Interbank Offered Rate
LCH	London Clearing House
LMA	Loan Market Association
NDA	Non-disclosure agreement
OMS	Order management system
P&L	Profit and loss
PRA	Prudential Regulation Authority
PRIIPs	Packaged Retail and Insurance-based Investment Products
RFR	Risk-free rate
SARON	Swiss Average Rate Overnight – CHF overnight rate
SLA	Service-level agreement
SME	Subject matter expert
SOFR	Secured Overnight Financing Rate – new USD ARR
Solvency II	Solvency II Directive (2009/138/EC) – an EU directive harmonising insurance regulation
SONIA	Sterling Overnight Index Average – GBP unsecured overnight reference rate
TPA	Third Party Administrators
TONAR	Tokyo Overnight Average Rate – JPY overnight reference rate
WG	Working group

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July 2020

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