ASIFMA VIRTUAL EVENT:

IBOR TRANSITION IN ASIA PACIFIC

Endorsers

Agenda:

Time	Session
10:00-10:15am	**Keynote: HKMA Deputy Chief Executive Arthur Yuen** • **Arthur Yuen**, Deputy Chief Executive, **Hong Kong Monetary Authority**
10:15-10:20am	**ASIFMA Regional Update** • **Rebecca Weinrauch**, Executive Director - Head of Fixed Income, **ASIFMA**
10:20-11:05am	**Updates by industry associations** • **Andrew Ferguson**, Chief Executive Officer, **APLMA** • **Jing Gu**, Head of Legal, Asia Pacific, **ISDA** • **Mushtaq Kapasi**, Managing Director – Chief Representative Asia Pacific, **ICMA**
11:05-11:15am	**Update by Bloomberg** • **Dennis To**, Regulatory Data Specialist, Enterprise Solutions, Asia Pacific, **Bloomberg L.P.**
11:15-11:30am	**Q&A**

Get involved by:

Asking a question anytime via the "Q&A" box on your tool bar

Keynote: HKMA Deputy Chief Executive Arthur Yuen

Arthur Yuen, JP
Deputy Chief Executive
Hong Kong Monetary Authority

FSB-BCBS Report on Supervisory Issues Associated with Benchmark Transition

Arthur Yuen | Deputy Chief Executive | Hong Kong Monetary Authority

23 July 2020

HONG KONG MONETARY AUTHORITY
香港金融管理局

Saudi Arabian G20 priorities on benchmark transition

1 **[NOV 2019] Saudi Arabian G20 priorities**

- G20 tasked FSB to conduct a questionnaire on supervisory issues related to LIBOR transition to:
  - **Improve collective understanding** of the progress of LIBOR transition
  - **Increase awareness** of the importance of ensuring a timely transition

2 **[DEC 2019] Distribution of questionnaire** to BCBS, FSB and non-FSB RCG members for completion

3 **[JUL 2020] Publication and submission of report to G20**

Timeline

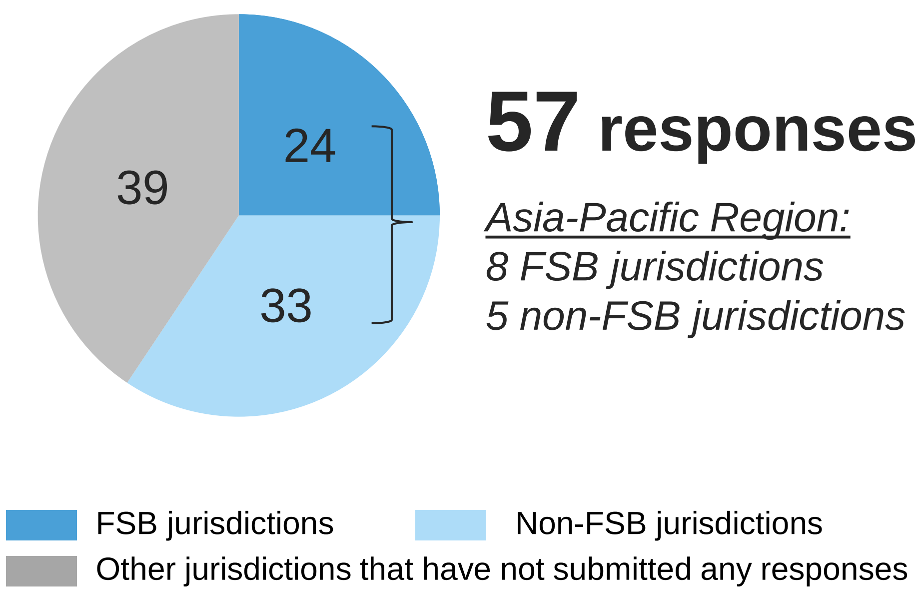
2019 Q4 | **2020 Q1** | **2020 Q2** | **2020 Q3**

A note of caution in interpreting the analysis

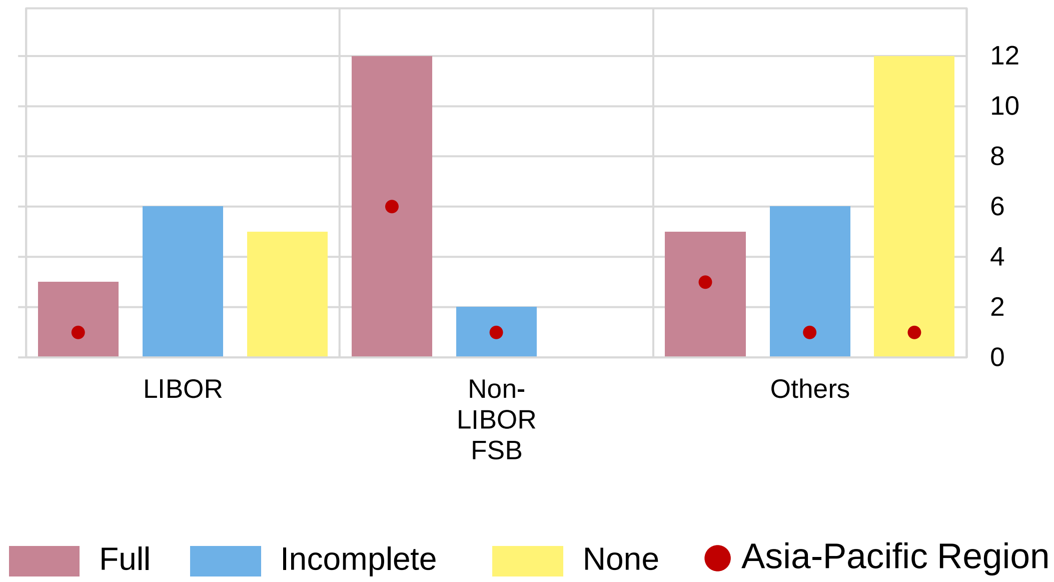
1 There were **57 responses** to the questionnaire, but with varying degrees of completeness and levels of details

2 Submitted data on LIBOR exposures are sparse and of different degrees of granularity

Submitted responses



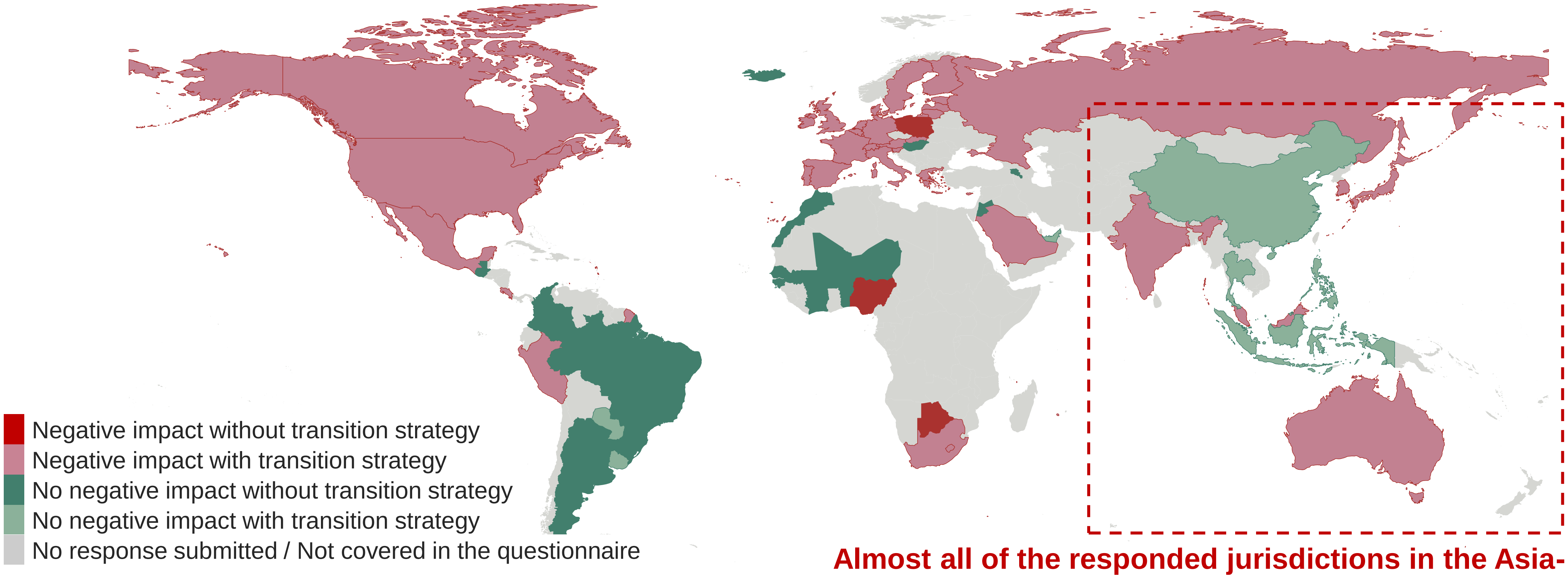
Submission status of exposure data



Note: Euro Area jurisdictions (which contain both FSB and non-FSB jurisdictions) are counted individually and included in the “LIBOR” category; 6 jurisdictions responded without submitting the questionnaire template

Transition impact and strategy

- Most **FSB jurisdictions** indicated significant negative impact of LIBOR transition and have a strategy in place for the transition
- By contrast, only half of the non-FSB jurisdictions indicated the same



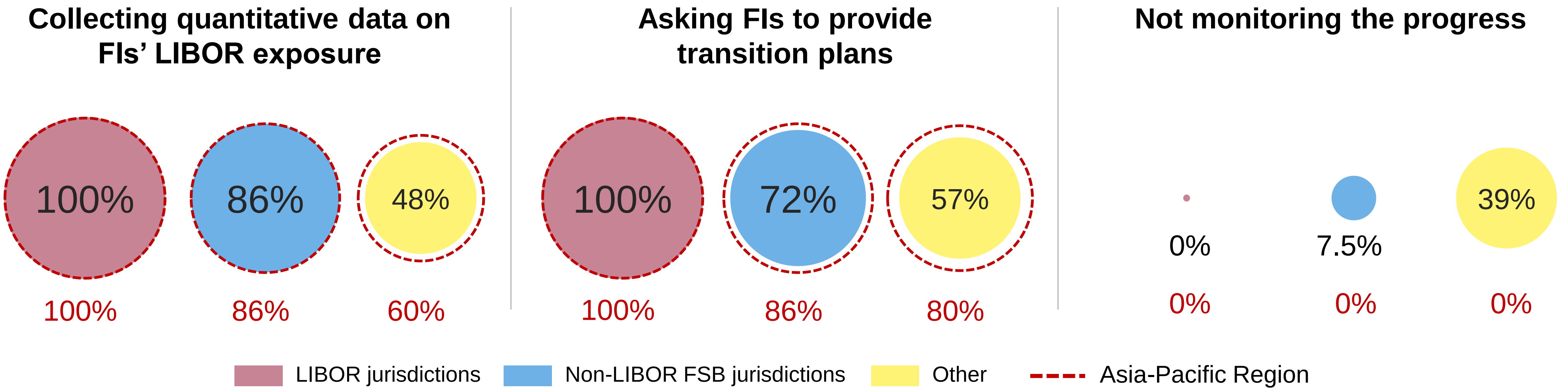
Almost all of the responded jurisdictions in the Asia-Pacific region have a transition strategy in place

Transition monitoring efforts

- **LIBOR jurisdictions** have adopted a more systematic approach to monitor LIBOR exposures of FIs, while **non-LIBOR jurisdictions** have taken a more ad-hoc approach
- **Both LIBOR and non-LIBOR jurisdictions** have significantly less monitoring of **non-FIs** than FIs

Monitoring status of the progress of FIs on LIBOR transition

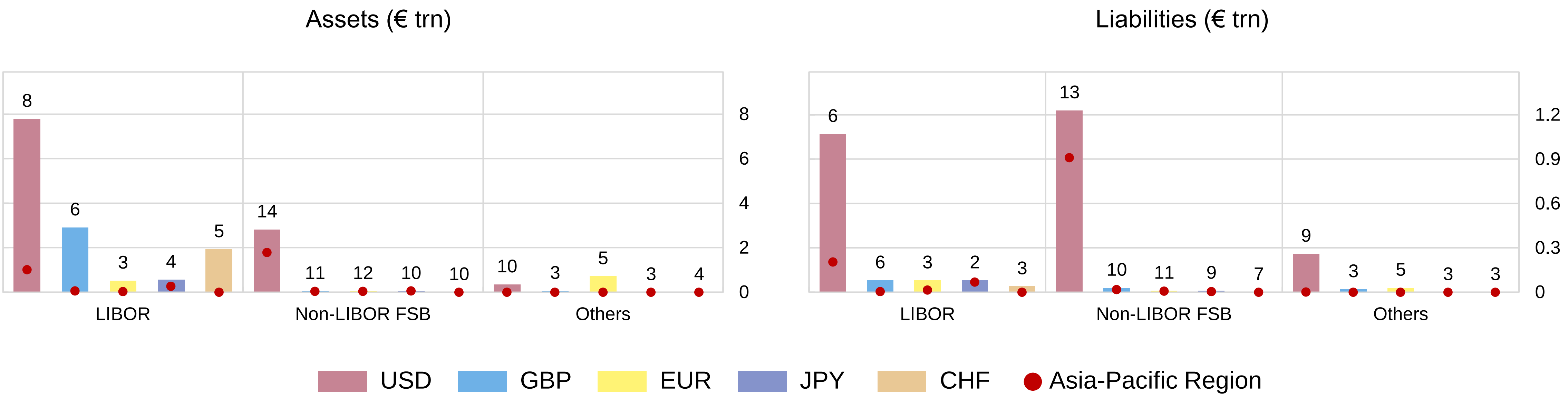
(As % of total number of respondents within their respective group)



LIBOR exposures

- LIBOR exposures are highest in **LIBOR jurisdictions**; USD LIBOR exposures are also fairly high in **non-LIBOR FSB jurisdictions**; and exposures to LIBORs are relatively smaller **outside of the FSB jurisdictions**
- On maturity, **roughly 40-50% of assets and derivatives exposures** are expected to mature after 2021

Total LIBOR exposures by jurisdiction grouping and by assets and liabilities



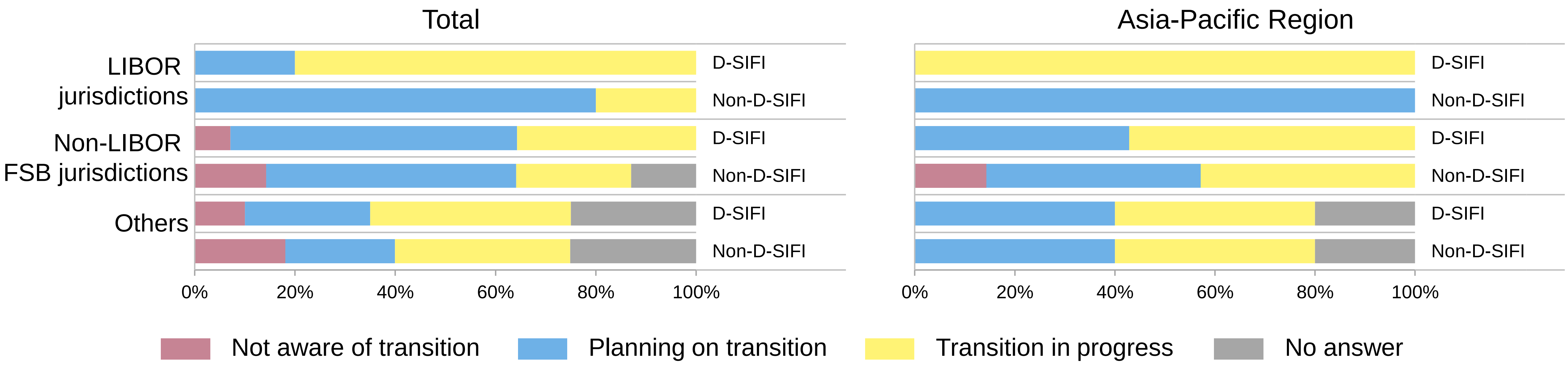
Note: Figure above each bar is the number of jurisdictions included in that group. Data were aggregated across jurisdictions without adjusting for double counting. For certain jurisdictions, total exposure was provided without a breakdown in currencies.

Awareness and readiness to transition

- **FIs in LIBOR jurisdictions** have shown better transition progress, while **those in non-LIBOR jurisdictions** presented a wider range in the level of preparedness
- **FIs viewed their clients to have demonstrated relatively slower progress** towards transition as compared to themselves
- FIs in most FSB jurisdictions have **started working with their non-FI clients**

Status of FIs' awareness of, and preparedness for, LIBOR transition

(Share of responses within their respective group)



Transition risks and challenges

Transition risks

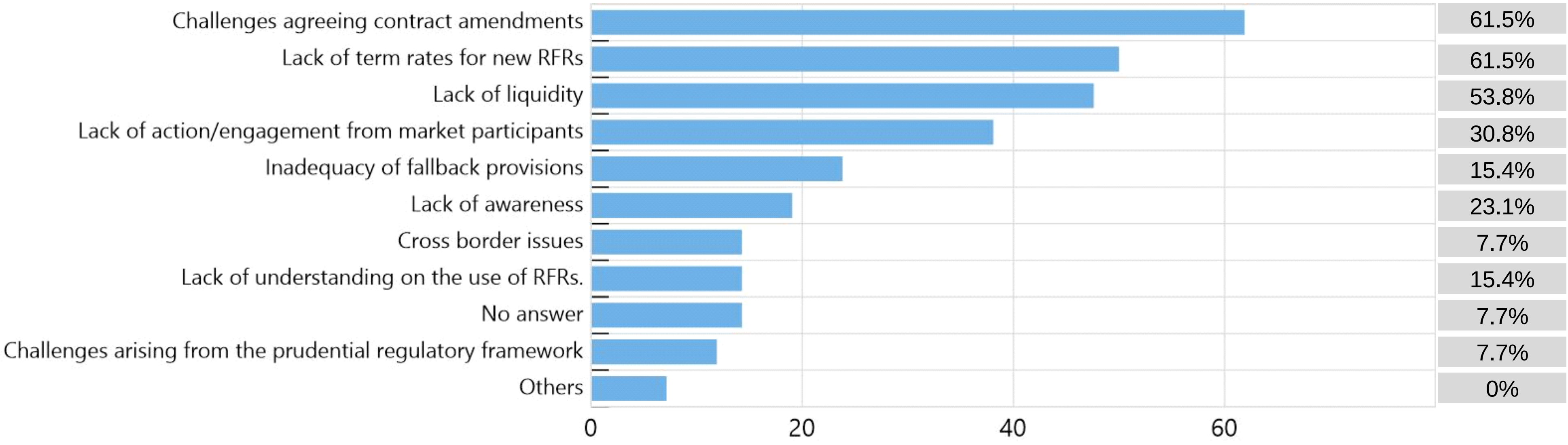
- Operational
- Legal
- Prudential
- Conduct, litigation, and reputational
- Hedging
- Accounting

Transition challenges

Main obstacles to a successful transition for FIs

(As % of total number of respondents)

Asia-Pacific Region



Supervisory actions and challenges

- Authorities in **LIBOR jurisdictions** have undertaken more **supervisory engagements** with banks:

  - Sending **“Dear CEO” letters** to enhance awareness and preparedness
  - Collecting **data on LIBOR exposures**
  - Encouraging banks to set **internal targets and deadlines**
  - Conducting **desktop reviews** or **on-site examinations**

- FSB jurisdictions also mentioned a number of **available tools to speed up transition**:

Initial stage

- Meeting with FIs’ senior management and board of directors
- Issuance of non-binding best practices

More intensive stage

- On-site inspections
- Request to improve operation capabilities
- Capital add-ons
- Restrictions on specific product offering
- Administrative sanctions or other legal actions

Supervisory challenges:

- **Engagement with FIs** have just begun
- **Resource intensive** for smaller FIs to prepare for transition
- Lack of insight into **non-regulated clients**
- Lack of clarity on **readiness of external systems**
- **Reliance on home supervisors** by host supervisors

Recommendations and next steps

Recommendations

Examples

Identification
of transition risk and challenges

- Issue public statements and Dear CEO letters
- Request updates from FIs on LIBOR exposures, key risks and action plans

Facilitation
of LIBOR transition

- Communicate on the timing of proposed change in market convention for new contracts
- Provide clarification on existing requirements
- Conduct desktop reviews and on-site examinations

Coordination
to foster LIBOR transition

- Promote industry-wide coordination
- Exchange views through international forums
- Work with national bodies to identify legislative solutions for tough legacy contracts

Next steps

1 **Continued assessment of transition progress**

2 **Monitor impact of Covid-19 on transition**

Be “**SMART**”

1. **S**tart preparing for transition now / Speed up the transition process
2. **M**onitor exposures, resources and progress
3. **A**ssess the transition risks and challenges
4. **R**espond to the risks and challenges
5. **T**ransition smoothly

Q&A Session for Mr. Arthur Yuen

ASIFMA Regional Update:

Rebecca Weinrauch
Executive Director - Head of Fixed Income
ASIFMA

Areas to cover:

- IBOR Transition Guide for Asia published by ASIFMA, ICMA, ISDA and ICMA
- Survey of ASIFMA Members on external frictions yet to be resolved
- Regional education program: Singapore, Malaysia, Philippines, Thailand, Vietnam, Indonesia, and India

Updates by industry associations:

Andrew Ferguson
Chief Executive Officer
APLMA

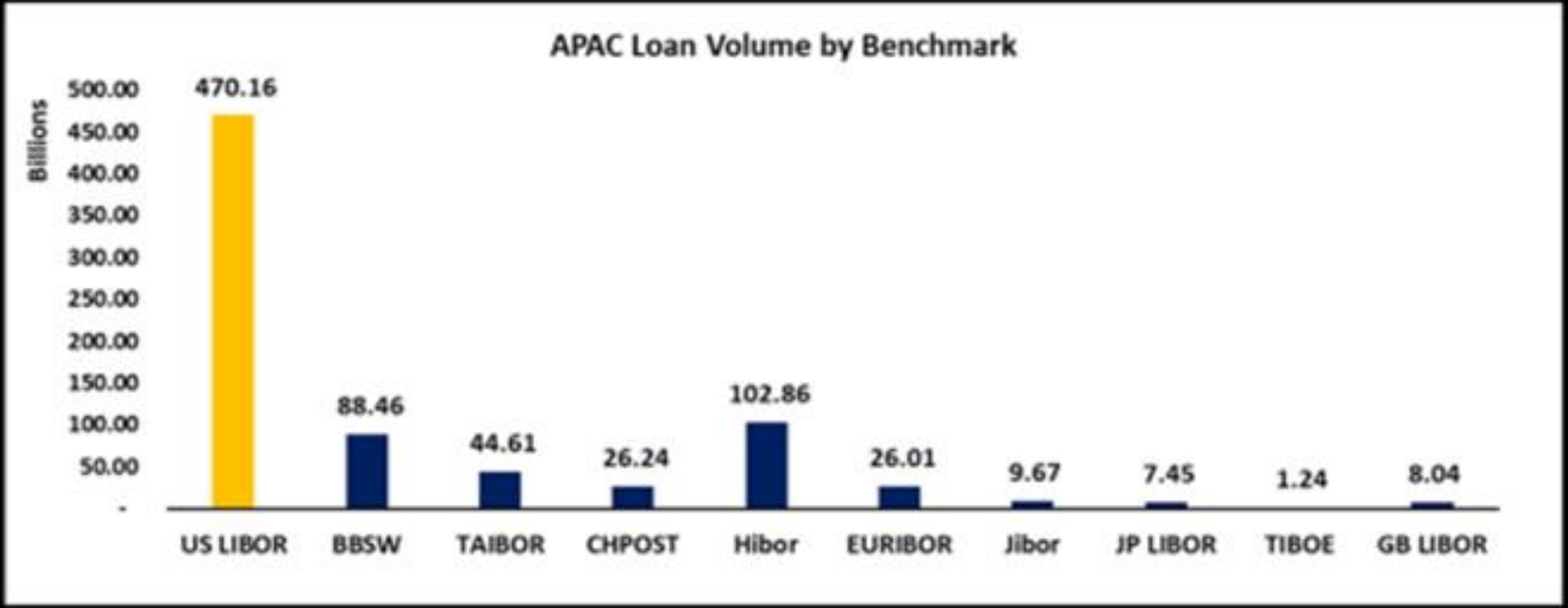
IBOR TRANSITION

Update on APAC loan markets

Andrew Ferguson
Chief Executive Officer
APLMA

23rd July 2020

Loan Volume by Benchmark (in USD Billions) - all active loans due from July 2020 onwards*

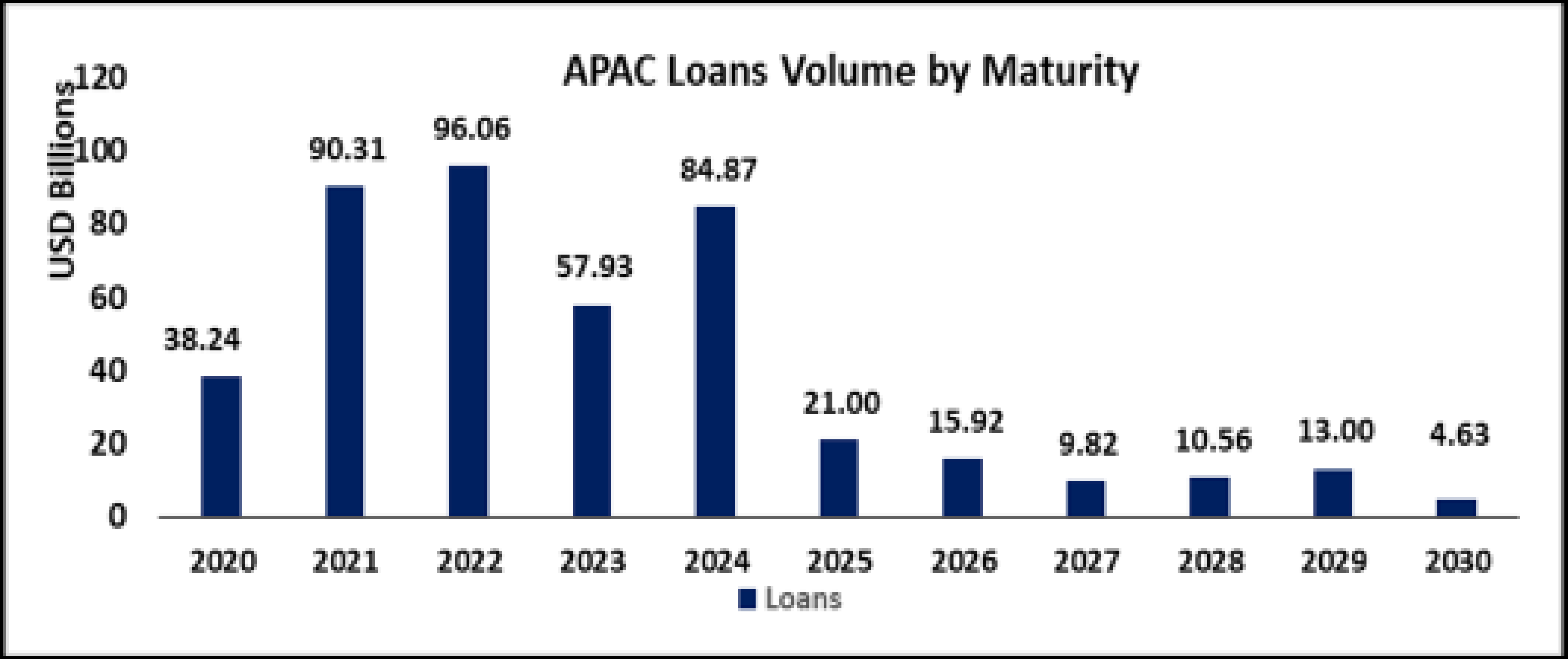


Source: Bloomberg

By "Active " loan volume, it refers to loans that are in signed status maturing later than June 30th 2020. This means that the search excludes loan transactions that are currently funged, retired, prepaid, restructured and refinanced, maturing after June 30th, at the tranche level. This way, the data will only include loan volumes are still active on the market, that have not yet been made inactive prior to reaching their maturity date.

*Data as at 7 July 2020

APAC Loans & Bonds Volume by Year



Source: Bloomberg

*Data as at 7 July 2020

Compounded Average RFR

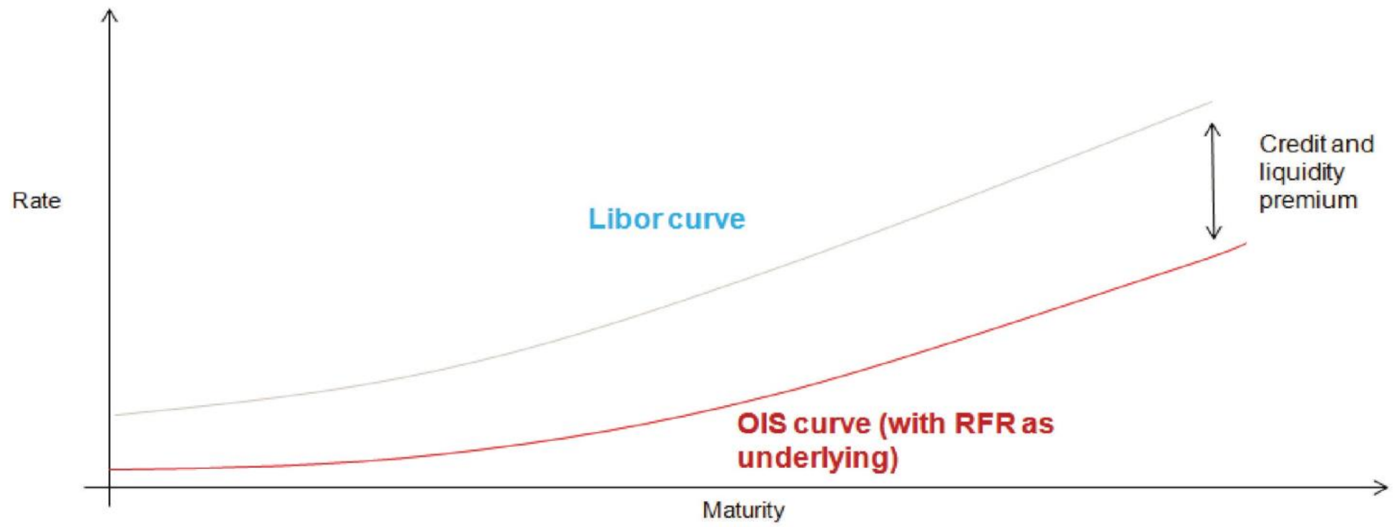
- Complicated mathematical formula required to calculate compounded average of historical O/N RFR’s at end of interest period
- Bank and borrower systems are typically not set up to calculate and process interest based on historic overnight rates
- Indices don’t help much in the loan markets
- US institutions gravitating back to simplified average rates?
- Note: LSTA Concept Document uses simple SOFR

Forward Looking Rates

APLMA and LMA are still committed to the development of forward-looking rates

Derived from RFR's or some other accepted source

Credit Adjustment Spreads



Source: Bank of England

– **Term benchmarks:** LIBOR is a forward-looking term rate published for 7 tenors (e.g. 1, 3, 6 months); *RFRs are backward-looking overnight rates*
– **Credit premium:** LIBOR includes term bank credit risk; *RFRs are near risk-free*
– **Term liquidity premium:** LIBOR will include the premium paid on longer-dated funds; *RFRs will not include a premium for term*

10

Observation Shifts and Lag Periods

Strange and unnatural in loan markets

Virtually untested

5-business day lag likely to become the norm

Fallbacks

- If the published screen rate is not available, what should the fallbacks be?
  - Bank Rate?
  - Fed Funds
  - Treasuries
  - Cost of funds?

Additional Responsibilities for the Agent Bank

- No screen rate to refer to?
- Manual calculations for compounded averages?
- Unplanned prepayment and secondary trades
- Appointment a calculation agent?

Pilot Transactions

- There have been insufficiently few to establish consensus on appropriate market practice
  - National Express (bilateral)
  - BAT (switch)
  - Capital Land in Singapore (bilateral)
- One swallow doesn't make a summer

Legacy Deals

- Many thousands of extant loan contracts will have to be amended or re-documented
- Or completely refinanced
- Work can only start when there is consensus on calculation methodology and other conventions
- Have banks engaged their clients?

Milestones and Timetables

Bank of England Working Group

ARRC

HKMA

Accelerate Transition in Loan Markets?

1) Consensus on calculation methodology and other loan market conventions

2) Significant investment in operating systems

3) More “pilot deals”

4) Focus on legacy deals with post 2021 maturities

5) More regulator involvement? – leading the way to consensus and best practice

Updates by industry associations:

Jing Gu
Head of Legal, Asia Pacific
ISDA

July 23, 2020

Implementation of Fallbacks in Derivative Contracts

Jing Gu
Head of Legal, Asia Pacific
ISDA

Preparing for IBOR transition
Overview of alternative RFR identification

Working Groups in each jurisdiction have recommended robust, alternative RFRs to transition away from existing IBORs, the alternative RFR benchmarks are overnight, whereas the current use of IBORs is largely in term rates.

Jurisdiction	Working Group	Alternative RFR	Rate administration	Characteristics		
				Secured vs. unsecured	Anticipated publication date	Description
UK	Working Group on Sterling Risk-Free Reference Rates	Reformed Sterling Overnight Index Average (SONIA)	Bank of England	Unsecured	**Currently being published**	• Fully transaction-based • Encompasses a robust underlying market • Overnight, nearly risk-free reference rate • Includes an expanded scope of transactions to incorporate overnight unsecured transactions negotiated bilaterally and those arranged with brokers • Includes a volume-weighted trimmed mean
US	Alternative Reference Rates Committee	Secured Overnight Financing Rate (SOFR)	Federal Reserve Bank of New York	Secured	**Currently being published**	• Fully transaction-based • Encompasses a robust underlying market • Overnight, nearly risk-free reference rate that correlates closely with other money market rates • Covers multiple repo market segments, allowing for future market evolution
Europe	Working Group on Risk-Free Reference Rates for the Euro Area	European Short Term Rate (€STR)	European Central Bank	Unsecured	**Currently being published**	• Fully transaction-based • Encompasses a robust underlying market • Overnight, nearly risk-free reference rate • Includes a volume-weighted trimmed mean
Switzerland	The National Working Group on CHF Reference Rates	Swiss Average Rate Overnight (SARON)	SIX Swiss Exchange	Secured	Currently being published	• Became the reference interbank overnight repo on 25 August 2009 • Secured rate that reflects interest paid on interbank overnight repo
Japan	Study Group on Risk-Free Reference Rates	Tokyo Overnight Average Rate (TONA)	Bank of Japan	Unsecured	Currently being published	• Fully transaction-based benchmark for the robust uncollateralized overnight call rate market • The Bank of Japan calculates and publishes the rate on a daily basis, using information provided by money market brokers known as Tanshi • As an average, weighted by the volume of transactions corresponding to the rate

IBOR Fallbacks: ISDA's Work – Fallback Rates (1)

Relevant IBOR and corresponding floating rate options in 2006 ISDA Definitions		Fallback rate
GBP LIBOR	GBP-LIBOR-BBA GBP-LIBOR-BBA-Bloomberg	SONIA
CHF LIBOR	CHF-LIBOR-BBA CHF-LIBOR-BBA-Bloomberg	SARON
JPY LIBOR	JPY-LIBOR-FRASETT JPY-LIBOR-BBA JPY-LIBOR-BBA-Bloomberg	TONA
TIBOR	JPY-TIBOR-TIBM JPY-TIBOR-17096 JPY-TIBOR-17097 JPY-TIBOR-TIBM (All Banks)-Bloomberg	TONA
Euroyen TIBOR	JPY-TIBOR-ZTIBOR	TONA
BBSW	AUD-BBR-AUBBSW AUD-BBR-BBSW AUD-BBR-BBSW-Bloomberg	RBA Cash Rate
USD LIBOR	USD-LIBOR-BBA USD-LIBOR-BBA-Bloomberg	SOFR
HIBOR	HKD-HIBOR-HKAB HKD-HIBOR-HKAB-Bloomberg	HONIA
CDOR	CAD-BA-CDOR CAD-BA-CDOR-Bloomberg	CORRA
EUR LIBOR	EUR-LIBOR-BBA EUR-LIBOR-BBA-Bloomberg	€STR
EURIBOR	EUR-EURIBOR-Reuters	€STR

IBOR Fallbacks: ISDA's Work – Fallback Rate (2)

- A number of key Asian benchmarks are synthetic benchmarks derived by applying a forward FX curve to the USD LIBOR curve. When USD LIBOR is no longer available after the end of 2021, the sustainability of these benchmarks is in doubt:

- Key benchmarks are: **SOR** (Singapore); **THBFIX** (Thailand); **MIFOR** (India) and **PHIREF** (Philippines).

- Planning for the cessation of LIBOR is led by the respective administrators and regulators of these benchmarks. Some have replacement rates for new transactions identified and transition timelines in place (**SOR** and **THBFIX**), whereas others are yet to identify the replacement rates.

- ISDA IBOR Fallback Protocol and Supplement cover SOR and THBFIX
    - Index cessation event is triggered by the occurrence of an "Index Cessation Event" applicable to USD LIBOR
- Links to the National RFR Working Groups in the APAC region
    - https://www.bot.or.th/Thai/FinancialMarkets/Pages/ReferenceInterestAndEndOfUseLIBOR.aspx
    - https://www.abs.org.sg/benchmark-rates/about-sora
    - https://www.tma.org.hk/en_market_LIBOR.aspx
    - https://afma.com.au/ibor_transformation_working_grouphttps://www.isda.org/2020/05/11/benchmark-reform-and-transition-from-libor/
    - https://www.boj.or.jp/en/paym/market/jpy_cmte/index.htm/

IBOR Fallbacks: ISDA's Work – Implementation of Fallbacks in Supplement

Form of Amendments

- **Supplement to the 2006 ISDA Definitions**: To account for any permanent discontinuation of a relevant IBOR, amendments to the floating rate options in Section 7.1 of the 2006 ISDA Definitions for the relevant IBORs will take the form of:
  - a statement identifying the objective triggers that would activate the selected fallbacks (the trigger defined as 'Index Cessation Event'); and
  - a description of the fallbacks that would apply upon the occurrence of that trigger, which will be:
    1. the relevant RFR adjusted using methodologies to account for (A) the fact that the RFR is an overnight rate and (B) the various premia included within the IBOR; and
    2. if the relevant RFR is permanently discontinued, one or more further fallbacks.

  Upon publication of the Supplement, all **new** derivative transactions entered into on or after the date of the amendments that incorporate the 2006 ISDA Definitions will include the fallbacks (counterparties will **not** have to take any additional steps).

IBOR Fallbacks: ISDA's Work – Implementation of Fallbacks in Protocol

Form of Amendments

- **ISDA 2020 IBOR Fallbacks Protocol:** ISDA will also publish a protocol to facilitate inclusion of the amended floating rate options (*i.e.,* the definitions with fallbacks) into **existing** derivative contracts entered into prior to publication of the Supplement.
  - Adherents to the Protocol will agree that derivative transactions that they have entered into *with other adherents* prior to publication of the Supplement will be based on the relevant amended floating rate options in the 2006 ISDA Definitions, notwithstanding when the transactions were entered into.
  - The Protocol will cover those ISDA master agreements, ISDA credit support documents and confirmations that:
    i. incorporate one of several ISDA definitional booklets;
    ii. reference an IBOR as defined in or has the meaning in one of several ISDA definitional booklets; or
    iii. reference an IBOR howsoever defined.
  - The Protocol will also extend to additional non-ISDA master agreements and credit support documents.
  - ISDA will also provide translation of the IBOR Fallbacks Supplement and Protocol for certain jurisdictions

IBOR Fallbacks: ISDA's Work – Triggers

- The fallbacks apply upon the ***permanent discontinuation*** of the relevant IBOR (based on pre-determined, objective triggers) and will be to the relevant alternative risk-free rate (RFR), subject to term and spread adjustments. The ***permanent discontinuation*** trigger is defined as "Index Cessation Event" in the non-LIBOR Rate Options.

- The fallbacks will not apply until the actual discontinuation of the relevant IBOR (if that is after the announcement date). This date is defined as the "Index Cessation Effective Date".

- For **LIBOR** in **GBP/CHF/USD/EUR/JPY**, the fallbacks apply upon the ***earlier to occur of (i) the permanent discontinuation or (ii) the non-representativeness (as determined by the UK FCA) (a so-called "pre-cessation" trigger)*** of LIBOR in the relevant currency (based on pre-determined, objective triggers) and will be to the relevant alternative RFR, subject to term and spread adjustments. The combined ***permanent discontinuation*** and ***pre-cessation*** trigger is also defined as "Index Cessation Event" in the LIBOR Rate Options.
    - The Index Cessation Effective Date for the pre-cessation trigger will be the date on which LIBOR in the relevant currency 'is no longer representative', which may either coincide with or be after the date of an announcement that it is 'no longer capable of being representative'.
    - Statement from the UK FCA regarding announcement of contractual triggers for LIBOR available at https://www.fca.org.uk/markets/transition-libor/libor-contractual-triggers

IBOR Fallbacks: Adjustments to Fallback Rates

Form of Adjustments

- The RFRs are adjusted (1) to reflect the fact that the IBOR is a term rate and (2) to factor in the embedded bank credit spread element of the IBOR.
- The current methodology is:
  - RFRs are based on the **compounded setting in arrears rate** and the **five year historical median approach to the spread adjustment**.
  - The **compounded setting in arrears rate** is the RFR observed over a period (generally equivalent to the relevant IBOR tenor) and compounded daily. The rate is adjusted whereby the observation period is backward-shifted to allow for the rate to be known prior to the relevant payment date.
  - The **five-year historical median approach to the spread adjustment** is based on the median spot spread between the IBOR and the term-adjusted RFR calculated over a static lookback period of five years prior to the Index Cessation Event. The spread adjustment will be added to the compounded setting in arrears rate (but will not be compounded itself).

Information about the relevant consultations and results, as well as test data and example calculations from Bloomberg, are available at **ISDA Benchmark Reform and Transition from LIBOR webpage** https://www.isda.org/2020/05/11/benchmark-reform-and-transition-from-libor/

IBOR Fallbacks: Adjustments to Fallback Rates

- **Bloomberg will publish (i) the compounded setting in arrears rate, (2) the spread adjustment and (3) the 'all in' fallback rate on a daily basis**
  - Publication will be on an indicative basis (i.e., 'as if' the fallbacks were triggered on the publication date)
    - Upon the occurrence of an 'Index Cessation Event' for the relevant IBOR, the spread adjustment will be fixed (but the indicative compounded setting in arrears rate and 'all in' fallback rate will continue to change on a daily basis). Contracts will continue to reference the relevant IBOR until the 'Index Cessation Effective Date' occurs.
    - Upon the occurrence of an 'Index Cessation Effective Date' for the relevant IBOR, contracts that continue to reference the relevant IBOR will reference the 'all in' fallback rate (which will include the spread adjustment that was set on the date of the 'Index Cessation Event' but with a changing compounded setting in arrears rate).
  - Rulebook for final methodology published April 22, 2020. Available at http://assets.isda.org/media/34b2ba47/c5347611-pdf/.
  - FAQs (to be updated from time-to-time) available at http://assets.isda.org/media/ddcb20e0/76dd3ab8-pdf/

IBOR Fallbacks: Key Dates

Bloomberg begins publication of indicative fallback rates via: • Bloomberg Terminal • Bloomberg Data License • Bloomberg's LIBOR Transition website (on a delayed basis)	Live as of July 17th
Launch of IBOR Fallback Supplement and IBOR Fallback Protocol	Documents final by end of July Launch after receive positive Business Review Letter from the US DoJ and similar comfort from other relevant competition law authorities (market will receive approximately two weeks' notice of launch date)
Effectiveness of IBOR Fallback Supplement and IBOR Fallback Protocol	Approximately four months after publication (date to be set upon launch)

ISDA Safe, Efficient Markets

IBOR Fallbacks: Other Templates and Materials

- ‘Short form’ language for bilaterally incorporating the terms of the ISDA IBOR Fallbacks Protocol into agreements on a wholesale basis for purposes of bilateral adherence
- ‘Long form’ language setting out the language from the Attachment to the ISDA IBOR Fallbacks Protocol in full for purposes of bilateral adherence
- Template acknowledgment language for transactions entered into prior to publication of the IBOR Fallbacks Protocol
- Template wording for inclusion in (i) confirmations for new transactions or (ii) amendments to legacy transactions (on a counterparty-by-counterparty or transaction-by-transaction basis) between counterparties who adhered to the IBOR Fallbacks Protocol and/or bilaterally adopted the terms of the IBOR Fallback Protocols using either ‘short form’ or ‘long form’ language
  - Exclude transactions and agree to different fallbacks (e.g., to ‘perfectly match’ hedges)
  - Include enhanced Calculation Agent dispute provisions
  - Include additional documents and/or transactions
  - Exclude the pre-cessation fallbacks for LIBOR
  - Other templates as required/requested
- Potential supplemental amendments to fallbacks for non-linear derivatives (e.g., in arrears swaps, caps/floors, swaptions) – *currently seeking feedback on approaches*

CCPs – Transition to €STR and SOFR Discounting

€STR

> CCPs to switch discounting on all EUR-denominated products from EONIA to **€STR flat**.

> CCP Transition Date: 24 July 2020.

> CCPs to apply **cash compensation** payments to all accounts containing open EUR-denominated positions on the transition date.

SOFR

> CCPs to switch discounting on all USD-denominated products from Fed Funds to **SOFR**.

> CCP Transition Date: 16 October 2020 *

> CCPs to offer a combination of **cash compensation** (in respect of valuation change) and **swap compensation** (in respect of risk profile change) to all accounts containing open USD-denominated positions on the transition date.

> At certain CCPs, including LCH, client accounts will be able to elect for **cash-only compensation**, in lieu of swap compensation.

> An auction process will be used to close out unwanted compensating swaps and provide a reference for cash compensation calculations.

**subject to regulatory approval*

ISDA Collateral Agreement Interest Rate Definitions

- ISDA has published the Collateral Agreement Interest Rate Definitions.
- Incorporation of these into ISDA collateral agreements will enable parties to include standardised definitions (including triggers and fallbacks) relating to overnight interest rates.
- The triggers and fallbacks are designed to mirror those used in derivative transactions which reference the relevant overnight interest rates included in the Definitions.
- The first version contains collateral rate definitions of EONIA (Collateral Rate) and EuroSTR (Collateral Rate). Subsequent versions to contain SOFR (Collateral Rate) and other RFR definitions.
- Parties can:
  - (i) incorporate the most recent version of the Definitions prior to entry into the relevant agreement, or
  - (ii) incorporate the Definitions as amended from time to time, and elect to apply Interest Rate Override. Option to override the definition of either a specified interest rate benchmark (eg Interest Rate Override (EONIA)), or all benchmarks (Interest Rate Override (All Rates)), already included in the relevant agreement with the definition of that interest rate benchmark from the Collateral Definitions.

ISDA's 2018 IBOR Global Benchmark Transition Report – Steps Market Participants Can Take to Prepare for Transition

Assessment of IBOR Exposures	Assess Impact of Permanent Cessation
• Inventory of products linked to IBORs • Dynamic quantification of net and gross exposure on and off balance sheet • Calculate roll-off profiles ahead of 2019, 2020, 2021	• Review existing contracts and assess fallbacks • Determine re-papering/client outreach • Engage with industry working groups to enhance fallbacks • Mobilize efforts to implement fallbacks
Transition Route Map	**Mobilization of an IBOR Transition Program**
• Contribute to demand for, design of and trading in new RFR products • Review relevant RFR WG publications, roadmaps etc • Apply to participate in RFR WGs • Determine required infrastructure and process changes • Develop an implementation route map of key projects, milestones and ownership	• Allocate responsibility to senior executive • Federate governance structure • Budget & resourcing • Project objectives • Stakeholder education

IBOR Fallbacks: Additional Information

- ISDA/Bloomberg/Linklaters IBOR Fallbacks Fact Sheet
- Understanding IBOR Benchmark Fallbacks
- Benchmark Reform at a Glance
- IBOR Transition Guide for Asia co-published by ISDA, ASIFMA, ICMA and APLMA.

All of these materials, as well as additional information about ISDA's work to implement IBOR fallbacks and other benchmark reform initiatives, are available on the **ISDA Benchmark Reform and Transition from LIBOR webpage** at https://www.isda.org/2020/05/11/benchmark-reform-and-transition-from-libor/

Updates by industry associations:

Mushtaq Kapasi
Managing Director –
Chief Representative Asia Pacific
ICMA

International Capital Market Association

ICMA

Adoption of risk-free rates in the bond market

A lot of progress is already being made with the adoption of new RFRs in bond markets:

US Dollar:

- Over US$300 billion of SOFR-linked FRNs
- Mainly SSAs, financial institutions
- Conventions are evolving
- SOFR Index now available

UK Sterling:

- Approx. £60 billion of SONIA-linked FRNs
- Approx. £27 billion of SONIA-linked securitisations
- Mainly SSAs, banks and building societies, with a broadening base of investors
- 180+ transactions
- Same market conventions
- SONIA Index to be available from early August

New contracts referencing IBORs : fallbacks

The official sector in the US and the UK has encouraged alternatives to LIBOR for new bond issuance

- If this is not possible, any *new contracts* referencing LIBOR and maturing beyond 2021 should contain robust fallbacks to risk-free rates
- For new USD LIBOR FRN contracts, the ARRC (*Alternative Reference Rates Committee*) in the US has produced fallback language – this hardwires a waterfall of fallbacks
- In the UK, issuers have included alternative fallback language to address a permanent cessation of IBORs since mid-2017. This is typically benchmark and currency agnostic
- GBP LIBOR-referencing transactions have all but ceased

The conversion of legacy bonds

Legacy bonds referencing LIBOR are due to mature beyond the end of 2021, when LIBOR may no longer be available.

- By way of illustration, it has been estimated that the global total of legacy bonds referencing LIBOR with a maturity beyond the end of 2021 is more than US$800 billion equivalent
- Around 80% of that total references USD LIBOR
- If LIBOR is discontinued, many legacy bonds will *fall back to a fixed rate,* in accordance with the fallbacks drafted into the documentation at a time when permanent discontinuation of the rate would not have been anticipated
- This is unlikely to be aligned with the commercial intention of the counterparties at the time of the transaction

Options for legacy bonds

- Unlike derivatives, bonds are contracts between multiple parties and are freely tradeable, meaning the identity of the parties can change
- Bonds cannot be amended by way of adherence to an industry protocol
- Bonds usually contain provisions allowing the terms of the contract to be amended - this requires consent from bondholders by way of a process known as *consent solicitation*
- **Depending on the governing law of the bond and relevant market practice, the consent threshold require for amendments of interest rate provisions may be high (e.g. 75% under English law, and 100% under NY law)**
- Amending bonds by way of consent solicitation is time-consuming and administratively burdensome for issuers and bondholders. It is a voluntary process with no guarantee of success

Consent solicitation in practice

- In the UK, a number of consent solicitations have been successfully undertaken by financial and corporate issuers
- Some transactions may be too difficult to amend, and may fall into a ‘tough legacy’ bucket (i.e. contracts which cannot remove their reliance on LIBOR ahead of its anticipated discontinuation)
- Market estimates suggest that that there are around 700 ISINs for GBP LIBOR bonds across approx. 430 deals.

UK ‘tough legacy’ proposals

- A ‘Tough Legacy Task Force’ in the UK recommended that the UK Government consider legislation in May
- In June, the UK Government said that it would propose an amendment to the UK’s benchmark legislation to strengthen the FCA’s powers
- The FCA would be empowered to direct LIBOR’s administrator to change the methodology for LIBOR in certain circumstances
- But there is no guarantee that the FCA can or will exercise these powers, and the FCA and Bank of England have urged parties to continue with “active transition”

Possible US legislative proposal

In the US, where consent solicitation is more problematic, the ARRC has set out a summary of possible NY state legislation for USD-LIBOR contracts

The possible US legislative proposal operates as follows:

- For contracts with no fallbacks, ARRC-recommended SOFR fallback rate and spread adjustment would apply
- For contracts which fall back to a LIBOR-based rate, ARRC-recommended SOFR fallback rate and spread adjustment would apply
- For contracts where an agent has discretion to choose the new benchmark rate, the agent would have protection under a “safe harbour” if the ARRC-recommended SOFR fallback rate and spread adjustment is chosen
- Counterparties making conforming changes to documentation to accommodate the transition would also benefit from the safe harbour
- Parties would be able to mutually opt out
- Not yet clear whether this will be enacted in NY law and how this would interact in practice with the UK ‘tough legacy’ proposals

Options for legacy LIBOR bonds

Other options for legacy LIBOR bonds include:

- Buy-backs or other **liability management exercises**
- **Allowing existing fallbacks to operate** without amendment (as a result of which, many FRNs will become fixed rate unless the FCA is given, and exercises, powers to amend LIBOR methodology as outlined above)

Update by Bloomberg:

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Practical Challenges of LIBOR Transition

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July 23 2020

Impact Assessment – Where to Begin?

Benchmark transition impact various work streams simultaneously.

Challenges arises as market participants take time to identify gaps in new data sets, analytics, valuation and impacts on in-house system as transition gradually takes place.

1. Business and Front Office

Bloomberg support:

- Position/product inventory
- New curve construction & risk management change
- Repapering legacy contracts

Other considerations:

- Identify business lines in scope
- Economic sensitivities
- Client outreach and communications

2. Operations

Bloomberg support:

- Collateralization/ management
- PAI
- Settlement/ cash flow
- Confirmations

3. Contracts

Bloomberg support:

- Identification of all contracts
- Fall-back provisions

Other considerations:

- Renegotiating/ rewriting legacy contracts
- Legal consent & legal/ statutory obligations
- Standard documentation (e.g. ISDA and FIA)

4. Compliance

Bloomberg support:

- Different regulatory requirements/ treatment of RFRs across jurisdictions

Other considerations:

- Regulatory tracking and impact

Impact Assessment – Where to Begin?

Benchmark transition impact various work streams simultaneously.

Challenges arises as market participants take time to identify gaps in new data sets, analytics, valuation and impacts on in-house system as transition gradually takes place.

5. Treasury

Bloomberg support:

- ALM Internal funding
- Changes to issuance and hedging programs
- Transfer pricing implications

6. Valuations and Market Risk

Bloomberg support:

- Valuation impacts (e.g. term structure curves/ market value/ secured vs unsecured)
- Risk management (hedging)
- Models' review & market risk sensitives
- Price testing

Other considerations:

- Assurance & QA of risk systems

7. Accounting and Finance

Bloomberg support:

- Hedge accounting/ effectiveness
- Forecast transactions
- Impact on discounting

Other considerations:

- Differences in tax treatment/ payments due
- Modification accounting

8. IT and Infrastructure

Bloomberg support:

- Adjusting relevant support systems (e.g. trade capture, payment systems & inter-company funding arrangements)

Other considerations:

- Technology enhancements
- Infrastructure impact mapping

Identify New Data Requirements in Libor Transition

Data-sets specific questions

- ***What new data sets are required as we transition to the new RFRs?***

Assess readiness by considering

- **Official ISDA IBOR Fallback Rates, calculated by Bloomberg Index Services Limited. Visit FBAK<GO> or https://www.bloomberg.com/professional/solution/libor-transition/**

- **For trades referencing the new RFRs: capturing all necessary attributes related to the new RFRs (e.g. compounding conventions, index lag / lockout), hence ensuring all front-line pricers can properly price these new trades**

Identify New Data Requirements in Libor Transition

Data-sets specific questions

- ***Where can we locate more information on various types of fallback, especially for cash products?***

Assess readiness by considering

- **For legacy Libor trades: automate the identification of existing fallback language provisions written in cash securities, and determine the practicality of such fallbacks.**

- **Both investors and banks / issuers should identify susceptible fallback provisions as they will likely change in the future. They should also proactively monitor fallback languages incorporated in similar bond issuance for references.**

Identify New Data Requirements in Libor Transition

Data-sets specific questions

- ***How can we construct new interest rate curves that references the new RFRs?***

Assess readiness by considering

- **Evaluate if your existing system infrastructure can handle calculation conventions of the new RFRs (e.g. daily compounding in arrears).**

- **Ensure your system has flexibility on the composition of new RFR curves. As liquidity on new RFR trades improves, these curves should be updated to reflect the new market data available.**

- **Recognize system dependency on these new curves.**

Quantify Valuation Impacts in Libor Transition

Analytics and valuation-specific questions

- ***How can we quantify the valuation impact of my existing Libor-linked positions when we adopt the new RFR curves for discounting?***

Assess readiness by considering

- **Ascertain if your incumbent systems (e.g. pricing tools, risk management system) are ready for various Libor cessation scenarios and timeline, as well as contingency plan for other product types such as options, cross currency swaps and structured products.**

- **Evaluate if your systems could concurrently handle Libor and RFR-based discounting, attribute differences in valuation and manage your interest rate exposures risk under a multi-curve regime.**

Quantify Valuation Impacts in Libor Transition

Analytics and valuation-specific questions

- ***How do we assess the repapering terms? When should I begin negotiating with my counterparties for repapering?***

Assess readiness by considering

- **Perform scenario analysis based on various curves, spread adjustment and time horizon assumptions, before the actual repapering negotiation takes place.**

- **Appraise if your incumbent systems could assess repapering terms as presented by your counterparties on a timely fashion.**

- **Identify if contracts that have fallback languages defined would require updating.**

Bloomberg

Thank You

Q&A Session

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Thank you for attending!

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