

IBOR TRANSITION SERIES:

A LOCAL MARKET PERSPECTIVE INDONESIA IBOR TRANSITION

(IN COLLABORATION WITH INDONESIA
FOREIGN EXCHANGE MARKET COMMITTEE)

Lead Sponsor



Endorser



Agenda:

Time (WIB)	Session
10:00 – 10:10	Welcome Remarks <ul style="list-style-type: none">• Mark Austen, CEO, ASIFMA• Darmawan Junaidi, Chairman, Indonesia Foreign Exchange Market Committee
10:10 – 10:30	Keynote Address <ul style="list-style-type: none">• Donny Hutabarat, Executive Director of Financial Market Development Department, Bank Indonesia
10:30 – 10:35	ASIFMA Regional Update <ul style="list-style-type: none">• Philippe Dirckx, Managing Director – Head of Fixed Income, ASIFMA
10:35 – 10:50	Impact of LIBOR Transition on Indonesian Banking Industry and Key Considerations for a Smooth Transition <ul style="list-style-type: none">• Sergey Volkov, Partner, Japan, PwC

Agenda:

Time (WIB)	Session
10:50 – 11:30	Product Presentations <ul style="list-style-type: none"> • Jing Gu, Head of Legal, Asia Pacific, ISDA • Mushtaq Kapasi, Managing Director – Chief Representative Asia Pacific, ICMA • Adrian Cheng, Partner, Finance Singapore, Herbert Smith Freehills • Adrianus Arditomo (Tommy), Partner, Hiswara Bunjamin & Tandjung
11:30 – 11:45	Data and Infrastructure Preparedness: Practical Challenges of IBOR Transition <ul style="list-style-type: none"> • Edmund Lee, OTC Data Strategy Manager, Asia Pacific Bloomberg L.P.
11:45 – 12:15	Banking Panel on Implementation/Conduct Issues <ul style="list-style-type: none"> • Branko Windoe, Senior Executive Vice President, Bank Central Asia • Tony, Deputy Director, Basel and International Banking, Banking Research and Regulation Department, Indonesian Financial Services Authority • Tiak-Peow Phua, Executive Director, Libor Transition, Conduct, Financial Crime and Compliance, Standard Chartered • Ryan Page, Proposition Specialist, Refinitiv (moderator)

Agenda:

Time (WIB)	Session
12:15– 12:25	Accounting and Taxation Issues • David Wake , Advisor – PwC Indonesia Financial Services Leader, PwC
12:25– 12:30	Closing Remarks • Steve Dean , President Director, Refinitiv Indonesia

Welcome Remarks:



Mark Austen
CEO
ASIFMA

IBOR TRANSITION SERIES:

A LOCAL MARKET PERSPECTIVE INDONESIA IBOR TRANSITION

(IN COLLABORATION WITH INDONESIA
FOREIGN EXCHANGE MARKET COMMITTEE)

Lead Sponsor



Endorser



Welcome Remarks:



Darmawan Junaidi
Chairman
Indonesia Foreign Exchange Market Committee

IBOR TRANSITION SERIES:

A LOCAL MARKET PERSPECTIVE INDONESIA IBOR TRANSITION

(IN COLLABORATION WITH INDONESIA
FOREIGN EXCHANGE MARKET COMMITTEE)

Lead Sponsor



Endorser



Keynote Address:



Donny Hutabarat

Executive Director of Financial Market Development
Bank Indonesia

IBOR TRANSITION SERIES:

A LOCAL MARKET PERSPECTIVE INDONESIA IBOR TRANSITION

(IN COLLABORATION WITH INDONESIA
FOREIGN EXCHANGE MARKET COMMITTEE)

Lead Sponsor



Endorser



ASIFMA Regional Update:



Philippe Dirckx

Managing Director – Head of Fixed Income
ASIFMA

Areas to cover:

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



IBOR TRANSITION SERIES:

A LOCAL MARKET PERSPECTIVE INDONESIA IBOR TRANSITION

(IN COLLABORATION WITH INDONESIA
FOREIGN EXCHANGE MARKET COMMITTEE)

Lead Sponsor



Endorser



Impact of LIBOR Transition on Indonesian Banking Industry and Key Considerations for a Smooth Transition:



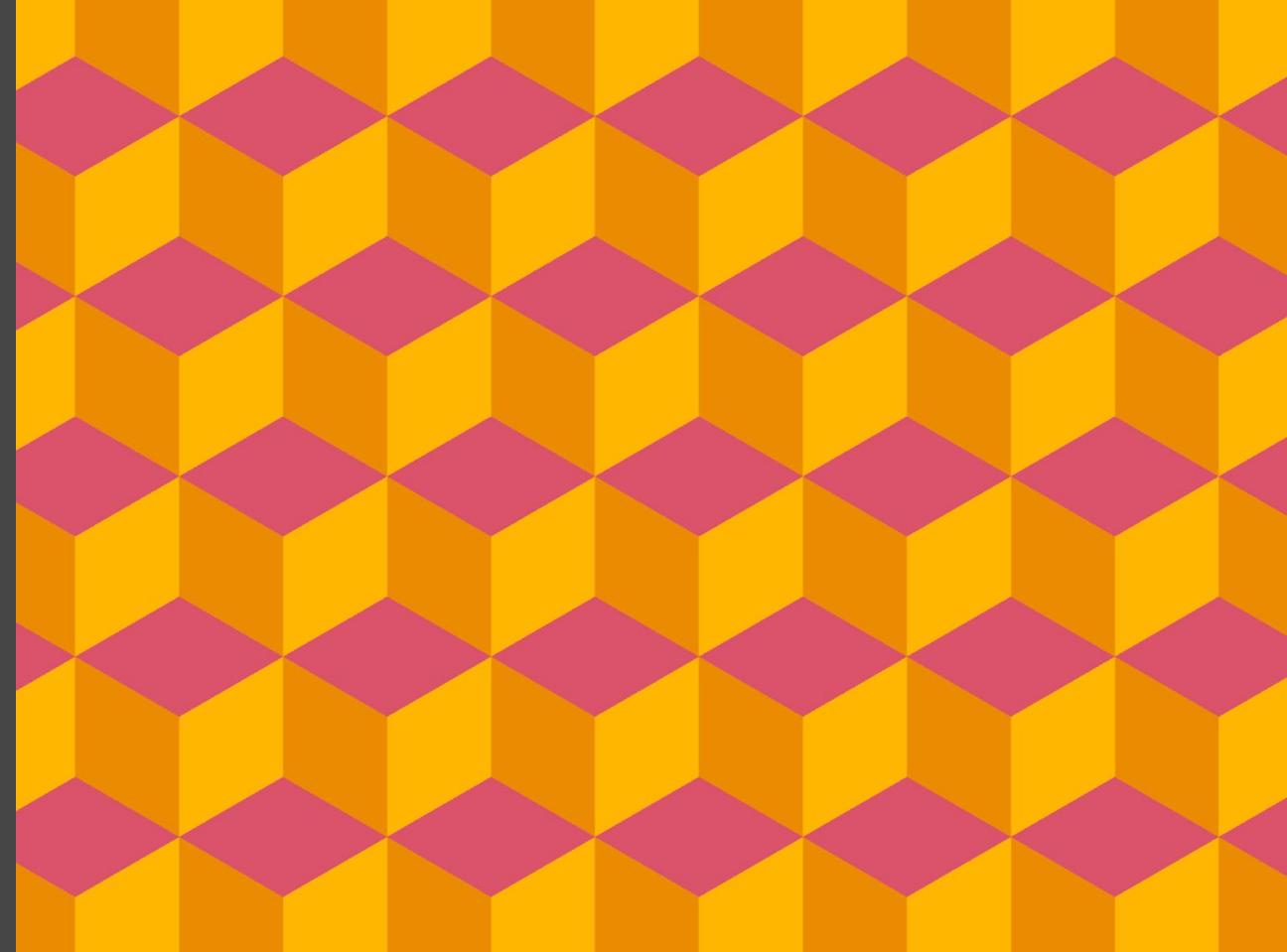
Sergey Volkov
Partner, Japan
PwC

Impact of LIBOR Transition on Indonesian Banking Industry

Key considerations for a
smooth transition

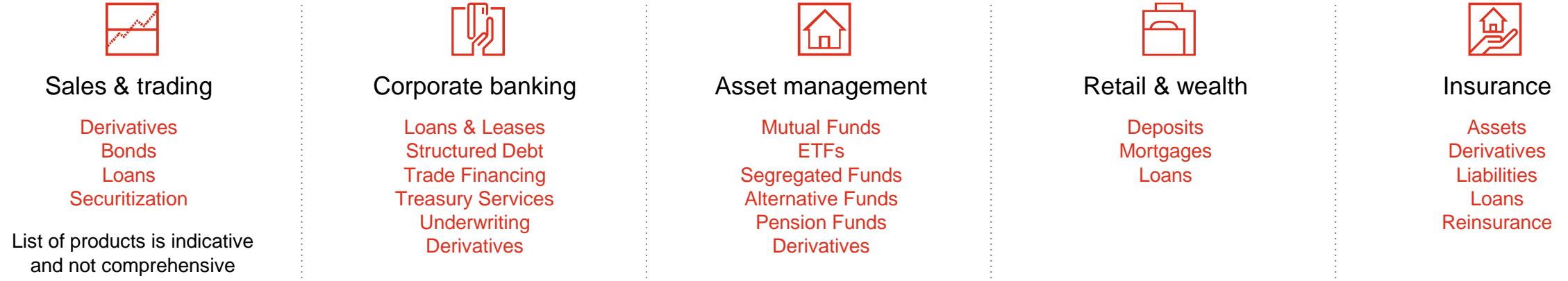
December 16, 2020

© 2020 PwC. All rights reserved. PwC refers to the PwC network member firms and/or their specified subsidiaries in Japan, and may sometimes refer to the PwC network. Each of such firms and subsidiaries is a separate legal entity. Please see www.pwc.com/structure for further details. This content is for general information purposes only, and should not be used as a substitute for consultation with professional advisors.

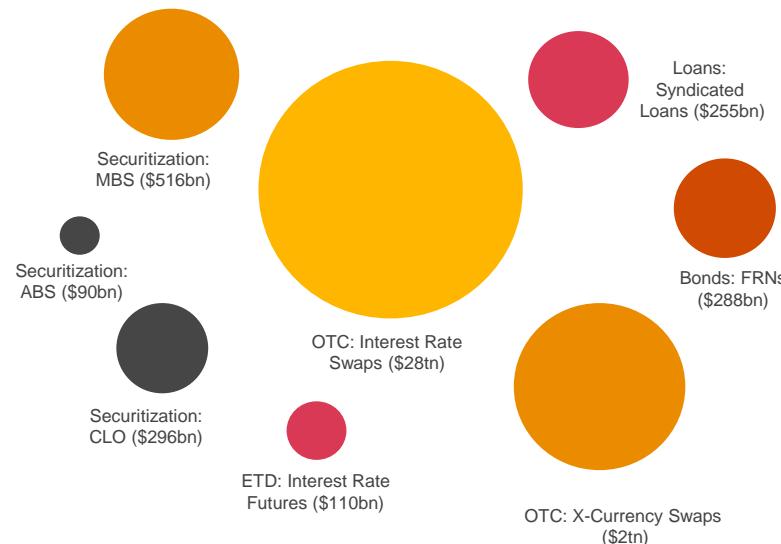


LIBOR reform affects a wide range of financial products

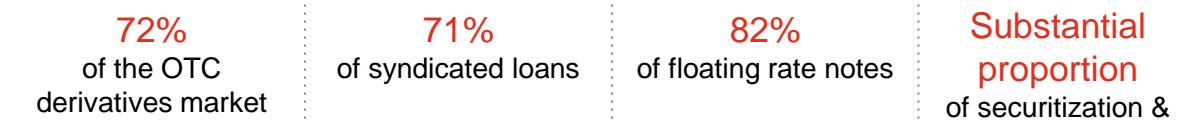
For financial institutions, LIBOR reform will affect a wide range of financial products across most business lines



Projected remaining USD notional linked to LIBOR after 2021



As of 2016, LIBOR referenced contracts accounted for:

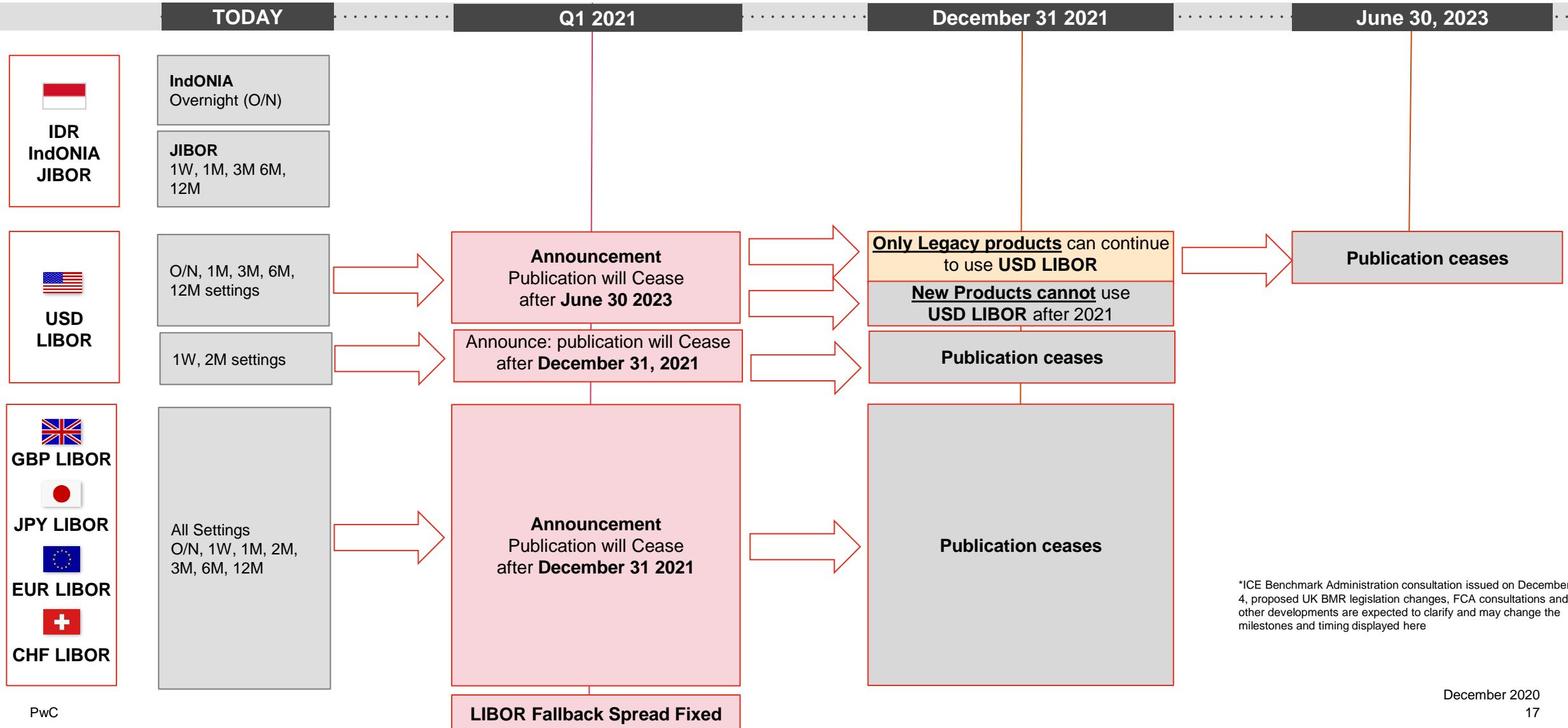


There are approximately **\$200 trillion USD in LIBOR linked contracts** (>\$35 trillion currently have maturities beyond the 2021 cut-off date), requiring **significant effort for remediation**

Source: NY FED – The Alternative Reference Rate Committee, Second Report (2018) and PwC analysis. Data as of year-end 2016

LIBOR's Last Days: How could it play out

Recent announcements from LIBOR administrator and UK and US regulators indicate a path forward for LIBOR cessation. Path forward is subject to change* and milestones and related timing described below remain uncertain.



Global IBOR transition programs at a glance

The IBOR transition programs have different levels of maturity across the globe. Most of the banks in North America and Europe have made significant progress on remediation, while progress is mixed across APAC.



Canada

Largest Banks

- Prep work done or nearly done
- Contract remediation well underway
- Detailed client negotiations to pick up in early 2021



United States

Majority FIs

- New product issuance - FRN
- RFR derivative trading capabilities
- System work complete or nearly complete
- Central query management
- Bilateral negotiations underway, expected to ramp up in early 2021
- Legacy contract remediation to ramp up Q2 2021-Q3 2021
- Treasury remediation well underway
- Model remediation complete or underway



Europe including UK

- FRN issuance entirely in SONIA
- Significant volume of derivative trading in SONIA
- Active push on SONIA and other RFR lending
- New RFR lending ramp up expected in Q1 2021
- Contract remediation well underway, analysis complete or nearly complete, transition rules and logic complete or nearly complete
- Central query management
- Active regulatory reporting of exposures



Singapore

- MAS letter issued in March 2019
- SOR (LIBOR based) to be discontinued
- SIBOR expected to be discontinued in the medium term
- Large local banks established programs
- Ongoing impact assessment
- New product development on RFRs
- Management of basis risks and ALM
- Proposed movement to a single rate SORA
- SORA-based instruments gaining momentum:
- Nov 19 OCBC and SCB completed SG's first OIS trade
- May 20 DBS priced the market's first SORA-referenced notes
- June 20 OCBC issued first SORA based loan



Hong Kong

- HKMA initial circular issued in March 2019
- Programs initiated across Financial Institutions
- Most have completed impact assessment and are preparing for AAR product launch and for contract remediation
- MNCs banks more advanced than local banks
- 1st SOFR Loan issued by BOC HK to a corporate



Indonesia

- IndONIA became effective overnight rate in January 2019
- JIBOR continues as the term rate (1W, 1M, 3M, 6M, 12M)



Thailand

- BOT issued Dear CEO letter in June 2020 to financial institutions in Thailand
- THBFIIX to be replaced (USD LIBOR input) with prohibition on new products by June 2021
- THOR, alternative reference rate adopted in April 2020
- BIBOR, the local IBOR, to coexist with THOR
- Institutions have mobilized to meet key BOT milestones



Vietnam

- No official communication yet
- Index admin is planning launch new benchmark VNOMIA by 2021Q2
- Planned discontinuation of VNIBOR and VNDFX
- Few large FIs have good amount of exposures against corporates, institutional investors
- High-level impact assessment done by few banks
- Most FIs are still waiting for an official announcement



India

- MIFOR (uses USD LIBOR as input) will be discontinued / reformed
- Dear CEO letter - August 2020, qualitative and quantitative
- Indian Bankers Association - work on MIFOR replacement, LIBOR transition and outreach



Philippines

- PHIREF uses USD LIBOR as an input and must be reformed
- Banks expected to have viable transition plans
- Quarterly reporting to BSP on LIBOR-related exposures for Sep 2020 to Mar 2022



Malaysia

- Pending the review of the status of KLIBOR as a benchmark rate.
- The Average Overnight Interbank Rate (AOIR) will be developed as a short-term alternative benchmark rate.
- The AOIR framework will be aligned with IOSCO



Japan

- Large domestic FIs and inbound banks have well progressed programs
- Remediation workstreams well underway
- RFR system capabilities expected by Q1 2021
- Significant transition expected by mid 2021
- RFR lending product development in progress



Taiwan

- Dear CEO Letter issued by Taiwan's FSC & Central Bank in early 2020
- A working group has been formed by Taiwan Bankers Association to assess exposure
- Most banks have initiated programs



Mainland China

- PBOC published a white paper on 31 Aug promoting the use of Depository-Institutions Repo Rate ("DR") for the transition from LIBOR
- The PBOC has constituted a high-level working group, and is developing a road map and a timetable to shift the benchmark



Australia

- ASIC issued a LIBOR-focused dear CEO letter in May 2019, update in 2020, another specific to large corporates in May 2020 and issued a "Managing Conduct Risk Information Sheet" in Nov 2020.
- Tier II FIs and Asset Managers standing up programs
- Larger FIs well progressed in program
- Increasing response focus inc. BBSW

Regulatory expectations on key milestones (by jurisdiction)

	US - ARRC	UK - RFRWG	Japan - BOJ CIC	HK - HKMA	SG - ABS	TH- BOT	MY - BNM
1	LIBOR sunset Stopping new LIBOR-referenced issuance (expiring/ maturing after 2021)*	Dec 2020: FRNs June 2021: Business loans, floating-rate securitizations (other than CLOs), and derivatives Sep 2021: CLOs	Q1 2021: Linear derivatives and cash products (other than risk management) Q2/Q3 2021: Non-linear/CCY derivatives	Q2 2021: Loans and bonds	Jun 2021: All products	April 2021: SOR Loans	July 2021: Loans, bonds and structured products
2	Issue RFR products	Dec 2020: Dealers to make markets in nonlinear RFR derivatives March 2021: Dealers to change market convention for quoting USD derivatives from LIBOR to SOFR	-	-	Jan 2021: FIs ready to offer RFR products	Feb 2021: D-SIBs to issue a full suite of SORA products April 2021: All banks to offer full suite of SORA products	April 2021: FIs ready to offer derivative products referencing THOR July 2021: FIs ready to offer loans referencing THOR
3	IT Readiness: IT Readiness to handle RFR average / compound average	Vendor readiness dates are as follows: June 2020: Floating rate notes Sept 2020: Business and consumer loans Dec 2020: Securitizations	Q3 2020: Key infrastructure available from Treasury systems /loan vendors Q4 2020: Operational readiness to support non-linear SONIA derivatives	Q4 2020: Manual workarounds to support new products Q1 2021: Systems/operations for new RFR products	Jan 2021: FIs ready to offer RFR products and are allowed manual workarounds		July 2021: All system modification completed to support the use of compound setting in arrears interest rates
4	Remediate Contracts Hardwired fallbacks required	Include ARRC recommended fallbacks: June 2020: New FRNs, ARMs, and securitisations Sept 2020: New syndicated business/ student loans Oct 2020: New bilateral business loans	Q3 2020: Include contractual mechanisms (Active Transition Clauses) in all new LIBOR-refinanced products	Q4 2020: Publish the amended definitions and protocol (ISDA)	Jan 2021: Fallback to be included in all new LIBOR-linked contracts (type of fallback unspecified)	Q2 2021: Incorporate fallbacks for legacy cash products	July 2021: Fallback to be included in all THBFIx, LIBOR and other IBOR contracts
5	Remediate contracts to reduce LIBOR exposure significantly on- / off-BS	Dec 2020: Dealers should amend interfirm CSAs	Q2/ Q3 2021: Complete active conversion of cash products. Actively convert linear derivatives where viable.	Q3 2020: Start negotiations among contracting parties Q3 2021: Significantly reduce LIBOR loans and bonds	-	Q3 2021: Banks to reduce exposure to SOR derivatives by 80% (from level in May 2020)	-
6	Contract remediation Sign ISDA protocol	Jan 2021 (3-4 months after publication)	Jan 2021 widespread sign up ahead of effective date		Jan 2021: HKMA advised to take early action to adhere	Sign up for the ISDA protocol for SOR derivatives	
							Q1 2021: Incorporate fallbacks provisions for all derivatives contracts

Eight areas banks globally are focusing on

Issue new products

- Establish transition strategy for new products
- Navigate new product approval
- Execute test trades and pilot issuances
- Shift to full-scale programs as soon as practicable

Remediate infrastructure

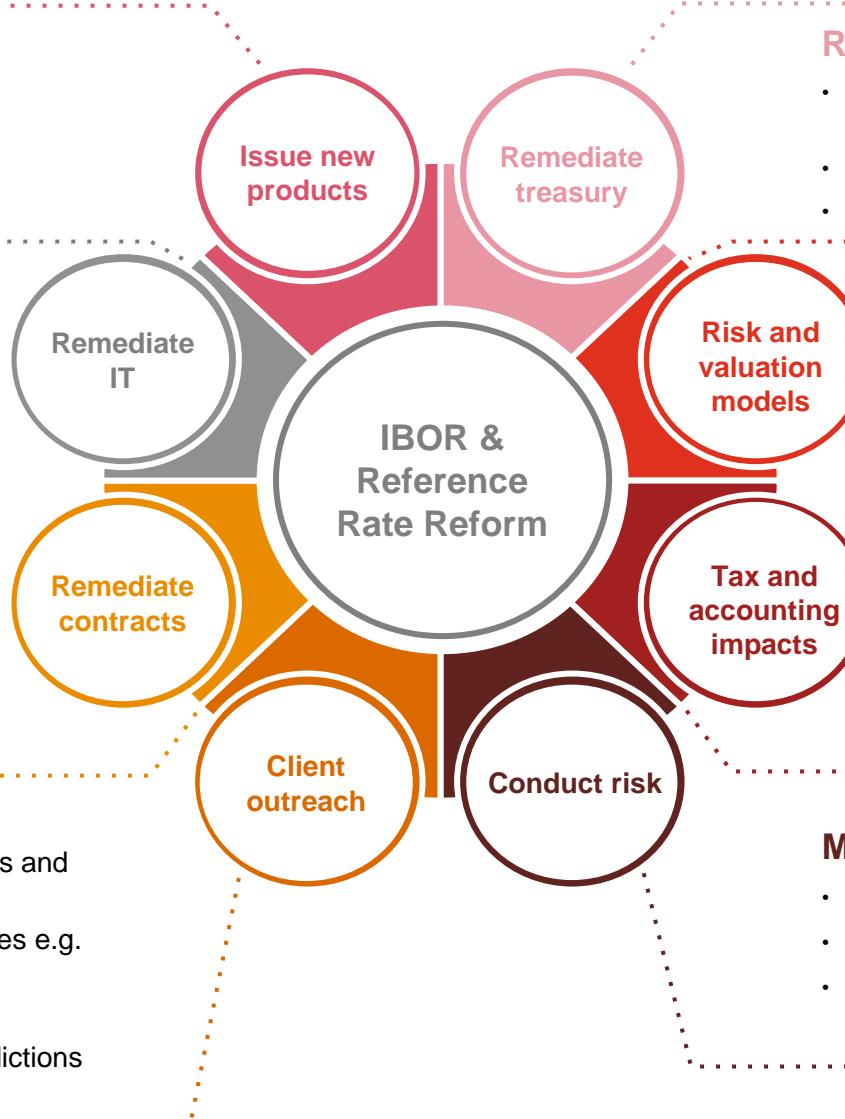
- Identify impacted business processes and systems and typical lead time required for changes
- Determine changes required and dependencies
- Remediate internal systems and manage remediation of vendor systems

Remediate contracts

- Perform contract discovery
- Analyze contracts
- Establish business rules, templates and playbooks for transition
- Execute repapering

Client outreach

- Determine engagement strategy with industry groups and trade associations
- Develop engagement approach with regulatory bodies e.g. consumer protection
- Coordinate customer outreach across businesses
- Evaluate impact of timeline differences across jurisdictions



Remediate treasury

- Manage of transition across cash instruments, debt and derivatives
- Manage transition of cross-currency positions
- Manage investment portfolios through transition

Risk and valuation models

- Identify, enhance and validate all models required to switch from IBOR to new rates
- Develop time series of data for risk and capital models
- Develop framework for simulation uncertainty of new rates for capital and funding requirements

Tax, accounting and other impacts

- Determine impact of new hedge accounting standards
- Evaluate operational approaches to contract modification and potential tax impact triggered by modifications

Manage conduct risk

- Define internal and external communication strategies
- Establish clear policies, procedures and controls
- Maintain transparent and open communication with regulators

LIBOR transition: How are firms approaching remediation?

Phase 1: Risk assessment and remediation plan

- | | | |
|--|---|--|
|  | Mobilize a LIBOR Transition program, governance structure, and workstreams. Draft overall transition roadmap and budgets. Define transition scenarios and develop risk mitigation strategies. | Program Structure, Governance and PMO |
|  | Conduct qualitative and quantitative impact assessments across all business areas and functions. Develop a transition plan and a transition strategy | Impact Assessment and Remediation Plan |

Phase 2: Remediate

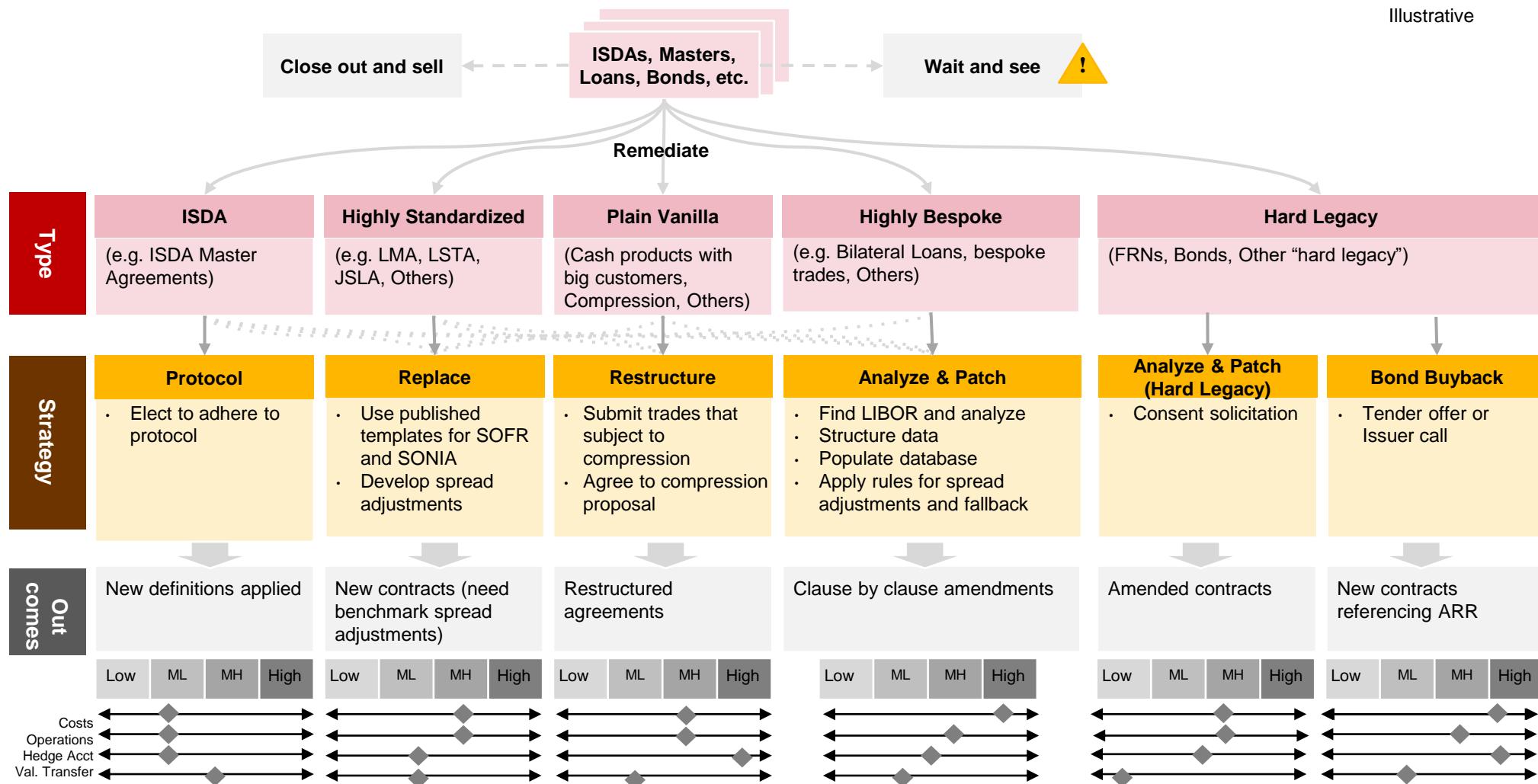
- | | | |
|--|---|--|
|  | Define business strategy for transitioning legacy products and developing new RFR products, including evaluation of economic impacts and new product approval processes. | New Benchmark Markets & Product Transition |
|  | Identify, inventory, and digitize affected contracts. Develop contract remediation strategy for different types of contracts & re-negotiate as appropriate. Update contract language for new deals. | Contract Remediation |
|  | Client Outreach, client strategy, including client segmentation, to take advantage of client and relationship opportunities. Manage internal and external outreach, education, and communications. | Client Strategy, Outreach and Communications |
|  | Define requirements for and implement changes to systems and processes, including vended solutions, market data feeds, and business processes to enable alternative RFR processing. | Systems & Process Changes |
|  | Update and re-validate pricing and risk management models, including curve construction, discounting, and valuation. | Risk & Valuation Models |
|  | Update financial reporting and accounting processes in accordance with industry guidance. Evaluate tax impacts and update strategy to mitigate impacts. | Financial Reporting & Tax |

LIBOR Transition - Regional and Local Progress

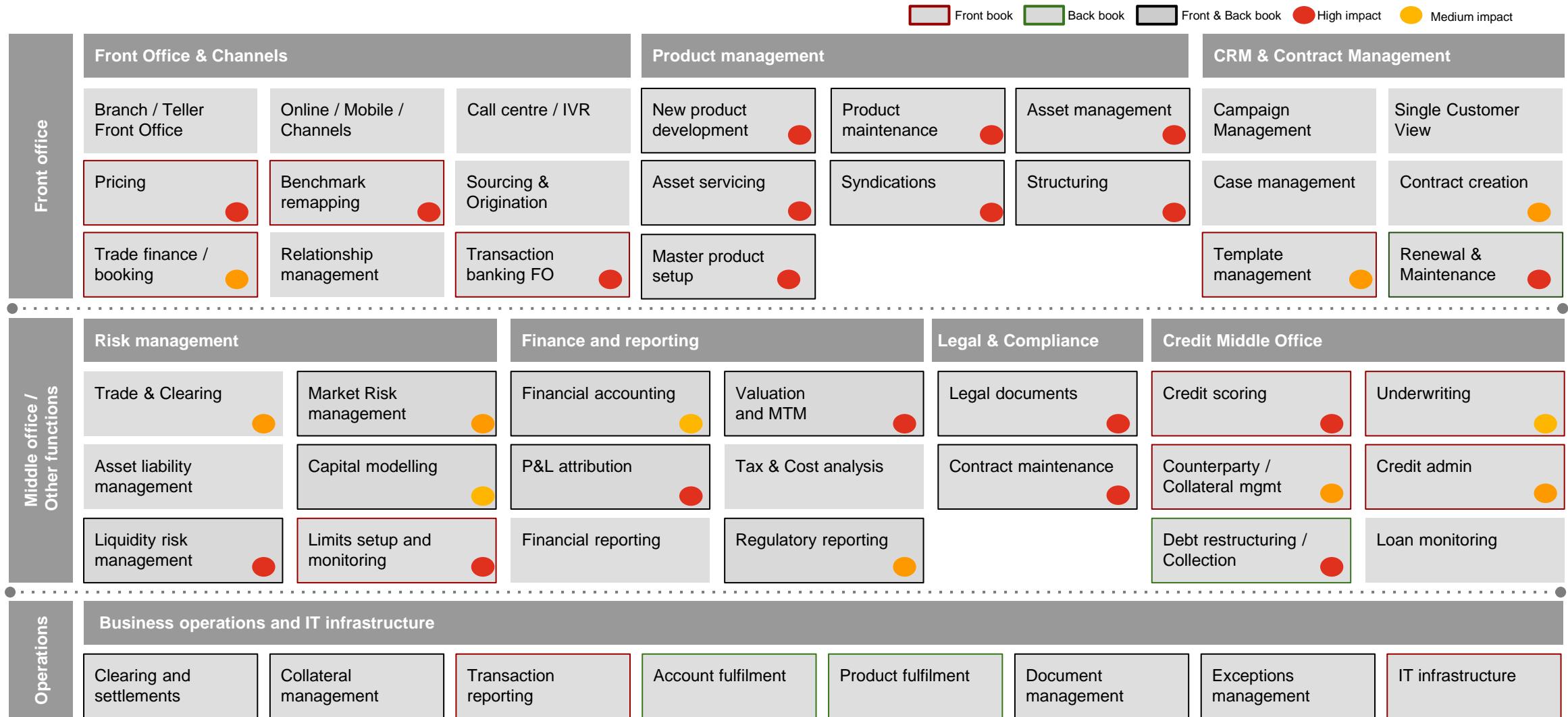
	Key Areas / Key Tasks	Regional Regulatory expectations	APAC Progress
LIBOR Exposure	Accurately measure LIBOR and RFR exposure (one time)	Periodic reporting to regulator	Completed
	Strong process to systematically measure LIBOR/RFR exposure		In progress
	Tracking of fallbacks linked to exposure on a systematic basis		In progress
	LIBOR exposure and RFR exposure targets	Targets established	In place or in progress
	Actual reduction of LIBOR exposure evident in a material way	By Q3 2021	Planned
IT	EUCs implemented to handle transactions (if system is not ready)	Develop systems and operations by late 2020 or first half 2021	Completed by some
	IT requirements		Completed
	Development (internal) implementation		In progress, late 2020, early 2021
	Testing		Late 2020, early 2021
	Go live		Late 2020, early 2021
New Products	Identify changes needed	Cease issuance of products referenced to LIBOR by Q2 2021 or sooner	Completed
	Conceptual design / business		In progress, some complete
	Operational readiness		In progress, some complete
	New product approval		In progress, some complete
	Launch		Some complete, target - early 2021
Client Outreach	Impacted client identification; segmentation; outreach strategy	LIBOR loan contracts to have fallback provisions, including test capability to execute fallbacks	Completed
	General communication - (eg LIBOR is going away)		Completed
	Central query management		In place for some; not for others
	Specific communication		Planned, Q3/Q4 2020- mid-2021
	Detailed negotiations (e.g. discuss transition policy with clients)		Planned, Q3/Q4 2020- mid-2021
Contract Remediation	Actual execution of legacy trade conversion		Planned, mid-late 2021
	LIBOR contract identification, inventory, repository	N/A - No specific expected timelines announced except derivatives (For derivatives, express the expectation to adhere ISDA by Q1 2021)	Completed
	Contract analysis		In progress, some complete
	Transition strategy (active transition, fallback, etc)		In progress, some complete
	Development of active transition language (conversion before cessation)		In progress
	Amendments (Hardwired)		Some peer banks completed

Transition strategy

Business strategy drives transition path, including whether and how exposure should be remediated

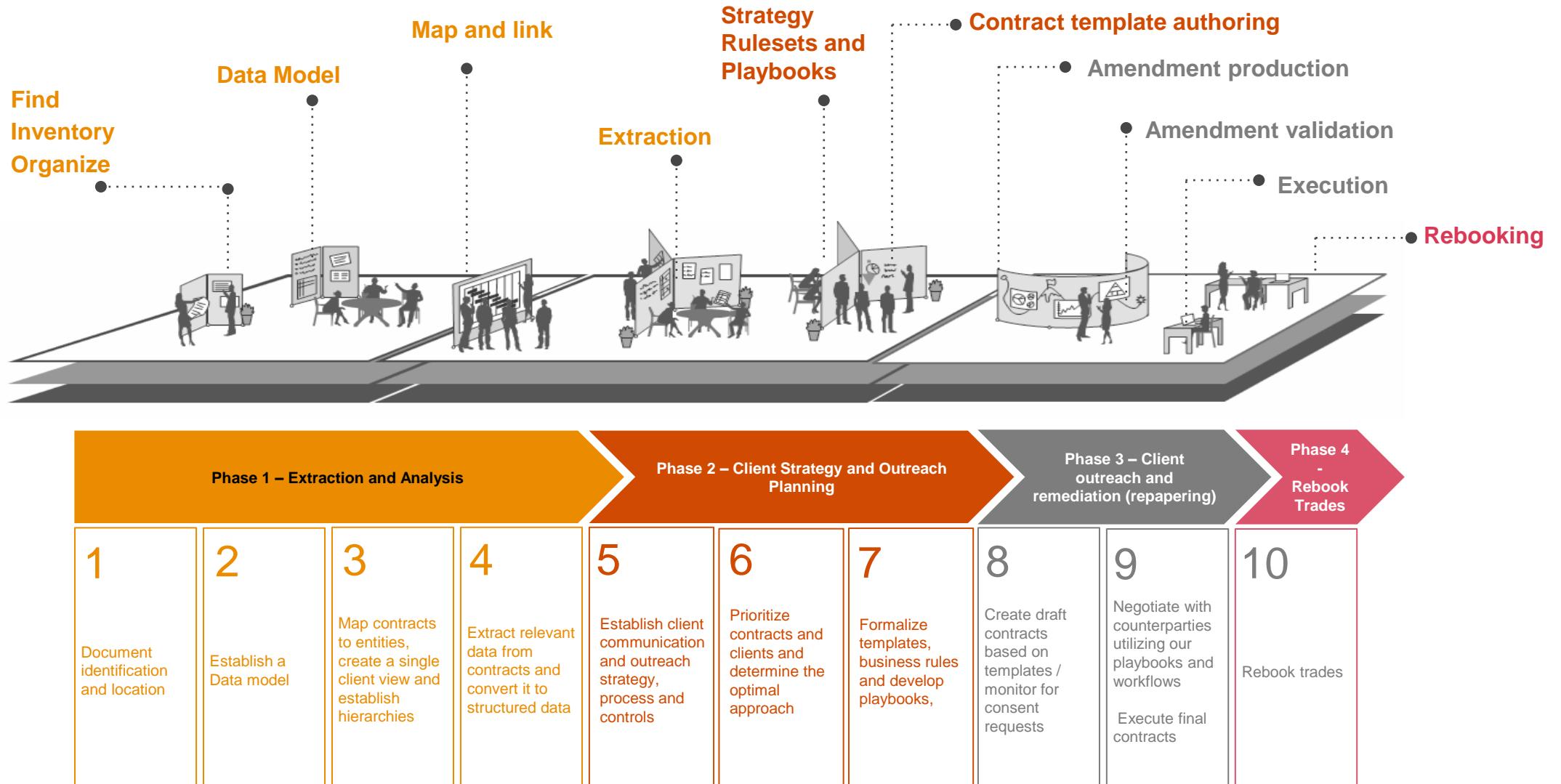


Business & systems change impact across banking



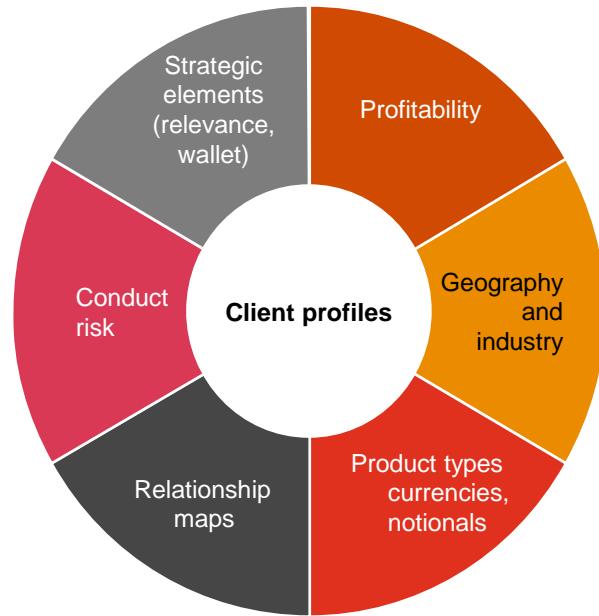
Phase 2: Remediate

Contract remediation



Developing a client engagement strategy

Begin with identifying your clients and segmenting them into clusters....



Drive engagement plans according to the client groupings you have identified across the clusters



It's important you're not hearing the following messages from your clients

"Do you speak to each other? It's like working with different firms"

"Multiple people have spoken to me or my colleagues this week about IBOR"

"This is the fifth time I've been contacted this week on some Regulation"

"How come no one has called me about IBOR"

"Didn't we just amend this same agreement?"

Conduct risk: regulatory focus

There are a wide range of conduct obligations that firms need to map

Mis-selling	Clients believe they have been misinformed of a LIBOR or RFR linked product prior to the purchase of that product through advisory or non-advisory channels.	Data Protection & Confidentiality	The risk of sharing client confidential information or a contract with someone inside/ outside the company who does not have the authority when renewing a contract.
Market disruption and Investor protection	Market disruption caused through LIBOR transition where the firm continued to issue long dated products that directly or indirectly reference LIBOR.	Market manipulation	Manipulation of alternative interest rates either directly/ indirectly through market trading or price offering.
Economic value transfer	Client disputes due to the change of rate and subsequent value transfer in legacy positions which are not in favour of the client.	Market Trading/ Insider Trading	Use of non-public information related to RFR and/or LIBOR to benefit themselves leading to an increase of market manipulation.
Best execution and fiduciary role	A firm is unable to adhere to their best execution obligations and/or their wider fiduciary duties due to switching to RFRs or diminishing liquidity LIBOR linked products.	Competition law	Risk of Competition Law violations including conduction of work within working groups or the exchange of information with competitor firms in the same industry.
Misleading, inadequate client comms	Disputes in advisory, non-advisory services where client feels they received misrepresentative or inadequate information on levels of liquidity, sustainability of LIBOR.	Conflicts of Interest	Risk of the firm's interests being in conflict with the clients and the firm taking advantage of the information asymmetries or powers.

PwC APAC LIBOR Team

Reach out to PwC's industry-leading LIBOR professionals for the knowledge, guidance, holistic digital solutions and support you need across all aspects of your business.

Japan (Japan LIBOR website)	India (India LIBOR website)	Singapore	Hong Kong (HK LIBOR website)	New Zealand	Indonesia
Sergey Volkov APAC LIBOR Leader, Partner, Japan sergey.volkov@pwc.com	Kuntal Sur India LIBOR co-Leader kuntal.sur@pwc.com	Yura Mahindroo Singapore LIBOR Leader Partner, Singapore yura.k.mahindroo@pwc.com	Ilka Vázquez Partner, HK LIBOR co-Leader ilka.t.vazquez@hk.pwc.com	Andy Symons New Zealand LIBOR Leader Partner, New Zealand andy.d.symons@pwc.com	Samuel Ong Partner, Indonesia Samuel.ong@id.pwc.com
Tetsuya Adachi Partner, Japan tetsuya.adachi@pwc.com	Ruchi Sharma India LIBOR Leader Executive Director, India ruchi.sharma@pwc.com	Irene Liu Partner, Singapore Irene.l.liu@pwc.com	Amy Yeung Partner, HK LIBOR co-Leader amy.yk.yeung@hk.pwc.com	Andrew Bowen Partner, New Zealand andrew.r.bowen@pwc.com	David Wake Partner, Indonesia david.wake@id.pwc.com
Hideki Ishii Partner, Japan hideki.ishii@pwc.com	Sandeep Agrawal Managing Director, India Sandeep.agrawal@pwc.com	Denise Lim Partner, Singapore denise.ll_lim@pwc.com	Michelle A Taylor HK LIBOR Legal Lead Partner, Tiang and Partners michelle.a.taylor@tiangandpartners.com	Stephen Hogg Partner, New Zealand stephen.c.hogg@pwc.com	Vietnam
Ryuichi Nagano Partner, Japan ryuichi.nagano@pwc.com	Ankur Jain Partner, India Ankur.a.jain@pwc.com	Johnathan Tay Director, Singapore johnathan.m.tay@sg.pwc.com	Taiwan	China	Dinh Hong Hanh Vietnam LIBOR Leader Partner, Vietnam dinh.hong.hanh@pwc.com
Australia (AU LIBOR website)		Malaysia	Eric Lin Taiwan LIBOR Leader Managing Director, Taiwan eric.h.lin@tw.pwc.com	Jimmy Leung China LIBOR Leader Partner, China jimmy.leung@cn.pwc.com	Visit us online at: www.pwc.com/LIBOR
Alfredo Martinez Australia LIBOR co-Leader Partner, Australia alfredo.martinez@pwc.com	William Mah Partner, Malaysia wiliam.mah@pwc.com	Carl J Dunton Partner, Singapore Legal carl.j.dunton@pwclegal.com.sg	Hung-lieh Liang Partner, Taiwan Hung-lieh.liang@tw.pwc.com	Xing Zhou Partner, China xing.zhou@cn.pwc.com	
Alastair Findlay Australia LIBOR co-Leader Partner, Australia alastair.findlay@pwc.com	Ching Chuan Ong Partner, Malaysia Ching.chuan.ong@pwc.com	Philippines	Ellen Kuo Partner, Taiwan Ellen.kuo@tw.pwc.com	Yan Hu Partner, China Yan.y.hu@cn.pwc.com	
Korea	Thailand, Laos, Cambodia	Alvin Dave Pusing Philippines LIBOR Co-Lead Director, Philippines alvin.dave.pusing@pwc.com	Zaldy Aguirre Philippines LIBOR Co-Lead Partner, Philippines zaldy.aguirre@pwc.com	Song (David) Hu Senior Manager, China david.s.hu@cn.pwc.com	
Bum Hong Korea LIBOR Leader Partner, Korea bum.hong@pwc.com	Sinsiri Thangsombat Thailand, Cambodia, Laos LIBOR Leader, Partner, Thailand sinsiri.thangsombat@pwc.com				



Thank you

www.pwc.com/

© 2020 PwC. All rights reserved. PwC refers to the PwC network member firms and/or their specified subsidiaries in Japan, and may sometimes refer to the PwC network. Each of such firms and subsidiaries is a separate legal entity. Please see www.pwc.com/structure for further details.
This content is for general information purposes only, and should not be used as a substitute for consultation with professional advisors.

IBOR TRANSITION SERIES:

A LOCAL MARKET PERSPECTIVE INDONESIA IBOR TRANSITION

(IN COLLABORATION WITH INDONESIA
FOREIGN EXCHANGE MARKET COMMITTEE)

Lead Sponsor



Endorser



Product Presentations



Jing Gu
Head of Legal, Asia Pacific
ISDA



Mushtaq Kapasi
Managing Director –
Chief Representative Asia
Pacific
ICMA



Adrian Cheng
Partner, Finance
Singapore
Herbert Smith Freehills



**Adrianus Arditomo (Tommy)
Hiswara Bunjamin &
Tandjung**

Product Presentations on Derivatives:



Jing Gu
Head of Legal, Asia Pacific
ISDA

December 16, 2020

Implementation of Fallbacks in Derivative Contracts

Jing Gu
Head of Legal, Asia Pacific
ISDA

®ISDA is a registered trademark of the International Swaps and Derivatives Association, Inc.
Copyright © 2020 International Swaps and Derivatives Association, Inc.

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			Description
				Secured vs. unsecured	Anticipated publication date		
UK	Working Group on Sterling Risk-Free Reference Rates	Reformed Sterling Overnight Index Average (SONIA)	Bank of England	Unsecured	Currently being published	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 	

ISDA IBOR Fallbacks Supplement and Protocol

- ISDA published the Protocol and finalised the Supplement to the 2006 ISDA Definitions (the **Supplement**) on 23 October 2020. <https://www.isda.org/2020/10/23/isda-launches-ibor-fallbacks-supplement-and-protocol/>
- The Protocol will be effective three months later on **25 January 2021** (the **Protocol Effective Date**) and the Supplement will be deemed published and effective on the same date.
- The Supplement updates the Rate Options set out in the 2006 ISDA Definitions for certain interbank offered rates (**IBORs**) to:
 - include new **triggers and fallbacks** in the event of a **permanent cessation** of those IBORs (and, for LIBOR Rate Option, in the event of a ‘pre-cessation’ of LIBOR Rate Option). Each Rate Option will first fall back to a term adjusted risk-free rate for the relevant currency plus a spread and then to further specific fallbacks for each currency;
 - include **discontinued rates maturities provisions**, which contemplate interpolation if one or more IBOR tenors are withdrawn or, in respect of LIBOR, become non-representative; and
 - provide specific adjustments for Calculation Periods to which ‘**Linear Interpolation**’ is specified to apply.
- **New** derivative contracts that incorporate the 2006 ISDA Definitions from 25 January 2021 onwards will incorporate the 2006 ISDA Definitions as amended by the Supplement.
- The Protocol allows parties to include the terms of the Supplement in their **existing** Protocol Covered Documents.

Rate Options amended by the Supplement

Currency	Relevant IBOR and Rate Options	Underlying Rate for Fallback Rate
GBP	Sterling LIBOR GBP-LIBOR-BBA; GBP-LIBOR-BBA-Bloomberg	Reformed SONIA
CHF	Swiss Franc LIBOR CHF-LIBOR-BBA; CHF-LIBOR-BBA-Bloomberg	SARON
USD	U.S. Dollar LIBOR USD-LIBOR-BBA; USD-LIBOR-BBA-Bloomberg	SOFR
EUR	EUR LIBOR and EURIBOR EUR-LIBOR-BBA; EUR-LIBOR-BBA-Bloomberg; EUR-EURIBOR-Reuters	€STR
JPY	JPY LIBOR, Yen TIBOR and Euroyen TIBOR JPY-LIBOR-FRASETT; JPY-LIBOR-BBA; JPY-LIBOR-BBA-Bloomberg; JPY-TIBOR-17097; JPY-TIBOR-TIBM (All Banks)-Bloomberg; JPY-TIBOR-ZTIBOR	TONA
AUD	BBSW AUD-BBR-AUBBSW; AUD-BBR-BBSW; AUD-BBR-BBSW-Bloomberg	AONIA
CAD	CDOR CAD-BA-CDOR; CAD-BA-CDOR-Bloomberg	CORRA
HKD	HIBOR HKD-HIBOR-HKAB; HKD-HIBOR-HKAB-Bloomberg	HONIA
SGD	SOR SGD-SOR-VWAP	Fallback to be based on USD/SGD FX transactions and SOFR
THB	THBFIX THB-THBFIX-Reuters	Fallback to be based on USD/THB FX transactions and SOFR

IBOR Fallbacks: ISDA's Work – Fallback Rate

- 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
- 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/

Scope of the Supplement

- The Supplement is a Supplement to the 2006 ISDA Definitions that:
 - updates the **Rate Options to include new triggers and fallbacks** in the event of a **permanent cessation** and, for **LIBOR Rate Options, non-representativeness** of the relevant rate. Each Rate Option will first fall back to a published fallback rate calculated based on a term adjusted risk-free rate (“**RFR**”) for the relevant currency plus a spread and then to further specific fallbacks if that published fallback rate is discontinued. The Supplement amends the following Sections in the 2006 ISDA Definitions:
 - 7.1(w)(i) (“[GBP-LIBOR-BBA](#)”); 7.1(w)(ii) (“[GBP-LIBOR-BBA-Bloomberg](#)”); 7.1(y)(i) (“[CHF-LIBOR-BBA](#)”); 7.1(y)(ii) (“[CHF-LIBOR-BBA-Bloomberg](#)”); 7.1(ab)(xxii) (“[USD-LIBOR-BBA](#)”); 7.1(ab)(xxiii) (“[USD-LIBOR-BBA-Bloomberg](#)”); 7.1(f)(v) (“[EUR-LIBOR-BBA](#)”); 7.1(f)(vi) (“[EUR-LIBOR-BBA-Bloomberg](#)”); 7.1(f)(i) (“[EUR-EURIBOR-Reuters](#)”); 7.1(l)(iii) (“[JPY-LIBOR-FRASETT](#)”); 7.1(l)(iv) (“[JPY-LIBOR-BBA](#)”); 7.1(l)(v) (“[JPY-LIBOR-BBA-Bloomberg](#)”); 7.1(l)(xviii) (“[JPY-TIBOR-17097](#)”); 7.1(l)(viii) (“[JPY-TIBOR-TIBM \(All Banks\)-Bloomberg](#)”); 7.1(l)(ix) (“[JPY-TIBOR-ZTIBOR](#)”); 7.1(a)(iii) (“[AUD-BBR-AUBBSW](#)”); 7.1(a)(iv) (“[AUD-BBR-BBSW](#)”); 7.1(a)(v) (“[AUD-BBR-BBSW-Bloomberg](#)”); 7.1(b)(i) (“[CAD-BA-CDOR](#)”); 7.1(b)(ii) (“[CAD-BA-CDOR-Bloomberg](#)”); 7.1(g)(iii) (“[HKD-HIBOR-HKAB](#)”); 7.1(g)(iv) (“[HKD-HIBOR-HKAB-Bloomberg](#)”); 7.1(t)(iii) (“[SGD-SOR-VWAP](#)”); and 7.1(aa)(i) (“[THB-THBFIX-Reuters](#)”).
 - a statement identifying the objective triggers that would activate the selected fallbacks (the trigger defined as ‘Index Cessation Event’). 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”.
 - a description of the fallbacks that would apply upon the occurrence of that trigger, which will be:
 - i. 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
 - ii. if the relevant RFR is permanently discontinued, one or more further fallbacks.

How the new fallbacks work in practice

- The RFRs for each currency are adjusted (1) to reflect the fact that the interbank offered rate (“IBOR”) is a term rate and (2) to factor in the bank credit risk premia and other factors embedded in the IBOR.
 - The RFRs are term-adjusted using the **compounded setting in arrears rate approach** and the spread adjustment is calculated using the **five-year historical median approach**.
 - The **compounded setting in arrears rate** is the RFR observed over a period (generally equivalent to the relevant IBOR tenor) and compounded daily. The period over which the RFR is observed is backward-shifted to allow for the rate to generally be known prior to the relevant payment date.
 - The **five-year historical median approach to the spread adjustment** is based on the median of the differences between the IBOR and the compounded RFR for that tenor 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).
- **Bloomberg Index Services Limited (“BISL”)** is producing and publishing the compounded setting in arrears rate, the spread adjustment and the “all in” fallback rate (i.e. the compounded setting in arrears rate plus the spread adjustment) for all relevant IBORs except for SOR and THBFIX. BISL currently publishes this information on an “indicative” basis and will continue to publish the information on an ongoing basis after a trigger event occurs (although the spread adjustment will be frozen after that date). The fallbacks for SOR and THBFIX are published by **ABS** and **Bank of Thailand** respectively.

SOR and THBFIx Fallbacks

SOR and **THBFIx** Rate Options are also updated pursuant to the Supplement. USD LIBOR is a component in the calculation of SOR and THBFIx and therefore a permanent cessation or non-representativeness of USD LIBOR will impact the calculation of these Rate Options. The new fallbacks for these rates are based on actual transactions in the USD/SGD or USD/THB FX swap market and a USD interest rate calculated by reference to the fallback rate produced for USD LIBOR, i.e., . Fallback Rate (SOFR)

- each is a “LIBOR Rate Option” as defined in the Supplement
 - Index Cessation Event (Permanent cessation and pre-cessation of USD LIBOR) and Index Cessation Event Effective Date (i.e., the first date on which SOR/THBFIx is no longer provided)
- Fallback Rate (SOR) is published by ABS and Fallback Rate (THBFIx) is published by Bank of Thailand
- Fallback to Fallback Rate (THBFIx) – BOT Recommended Rate
- a new Section 7.10 and 7.11 are added for SOR and THBFIx
- Section 8.5 (*Application of Discontinued Rates Maturities Provisions*) is disapplied for SOR and THBFIx

“Fallback Rate (THBFIx)” means the rate based on actual transactions in the U.S. Dollar/Thai Baht foreign exchange swap market and a U.S. Dollar interest rate calculated by reference to “Fallback Rate (SOFR)” (as set out in the definition of “USD-LIBORBBA”) including any fallback rate that may apply pursuant to that definition for a period of the Designated Maturity provided by the Bank of Thailand (or a successor provider), as the provider of Fallback Rate (THBFIx), on the Fallback Rate (THBFIx) Screen (or by other means) or provided to, and published by, authorized distributors.

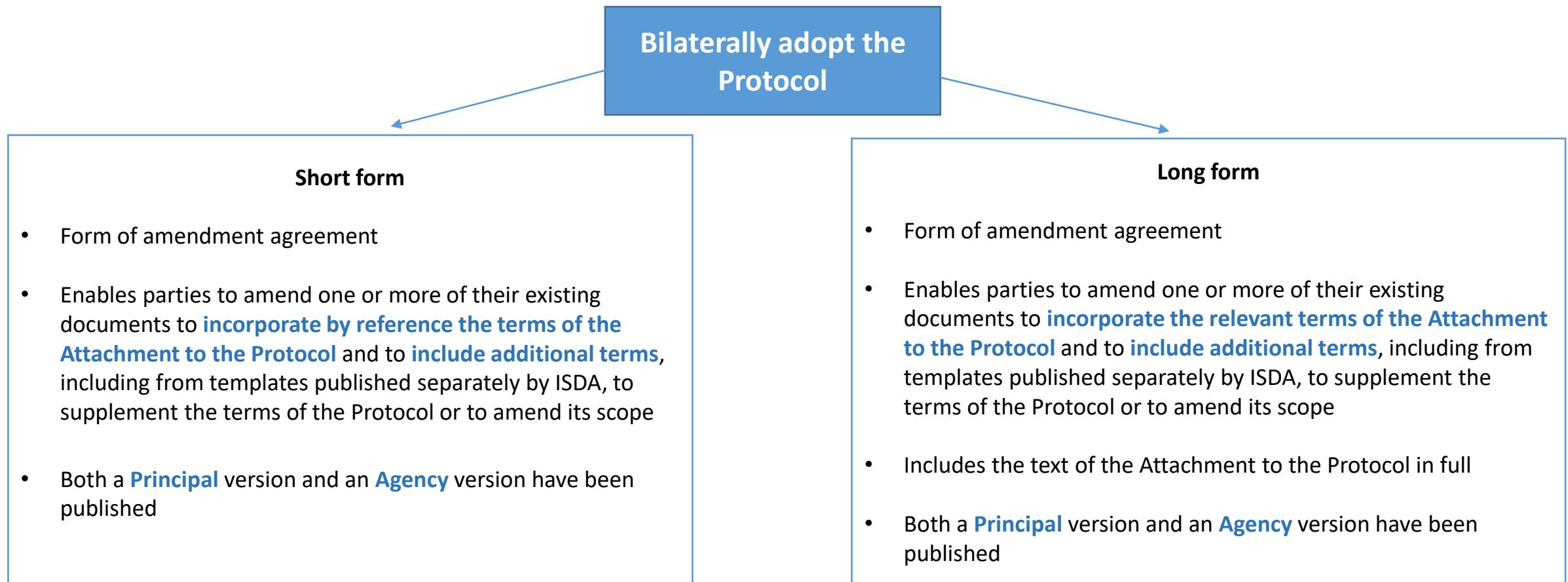
What documents are within the scope of the Protocol?

- The **amendments** contemplated by the Protocol are actually made to Protocol Covered Documents on the later of the (i) the **Implementation Date** and (ii) the **Protocol Effective Date (January 25, 2021)**.
- The Protocol enables parties to introduce the new fallbacks included in the Supplement in existing ISDA Master Agreements, ISDA Credit Support Documents and Confirmations, provided they are **Protocol Covered Documents**. Protocol Covered Documents are documents which fulfil the below criteria for Protocol Covered Master Agreements, Protocol Covered Credit Support Documents or Protocol Covered Confirmations.
- The Protocol also applies to certain **non-ISDA master agreements** and **non-ISDA credit support documents** between adhering parties, provided they satisfy the criteria in the definition of Protocol Covered Documents. Such documents are listed in the Protocol as **Additional Master Agreements** and **Additional Credit Support Documents**.

Protocol Covered Master Agreement	Protocol Covered Credit Support Document	Protocol Covered Confirmation
<p>An ISDA Master Agreement or Additional Master Agreement entered into by adhering parties that is dated before the Protocol Effective Date or, if later, the date of acceptance by ISDA of an Adherence Letter from the later of the two adhering parties to adhere, that:</p> <ol style="list-style-type: none">incorporates a Covered ISDA Definitions Booklet (e.g. the 2006 ISDA Definitions);references an IBOR “as defined” in or otherwise provides that the IBOR has the meaning given in a Covered ISDA Definitions Booklet (e.g. GBP-LIBOR-BBA, as defined in the 2000 ISDA Definitions); and/orreferences an IBOR howsoever defined (e.g. LIBOR).	<p>An ISDA Credit Support Document or Additional Credit Support Document entered into by adhering parties that is dated before the Protocol Effective Date or, if later, the date of acceptance by ISDA of an Adherence Letter from the later of the two adhering parties to adhere, that:</p> <ol style="list-style-type: none">incorporates a Covered ISDA Definitions Booklet;references an IBOR “as defined” in, or otherwise provides that the IBOR has the meaning given in, a Covered ISDA Definitions Booklet; and/orreferences an IBOR howsoever defined.	<p>A confirmation entered into by adhering parties that is dated before the Protocol Effective Date or, if later, the date of acceptance by ISDA of an Adherence Letter from the later of the two adhering parties to adhere, that:</p> <ol style="list-style-type: none">supplements, forms part of and is subject to, or is otherwise governed by, a Master Agreement and incorporates a Covered ISDA Definitions Booklet;supplements, forms part of and is subject to, or is otherwise governed by a Master Agreement and references an IBOR “as defined” in, or otherwise provides that the IBOR has the meaning given in, a Covered ISDA Definitions Booklet; and/orsupplements, forms part of and is subject to, or is otherwise governed by, a Master Agreement and references an IBOR howsoever defined.

Bilateral Templates

ISDA has published the following templates relating to the application of the Protocol, which allow parties to:

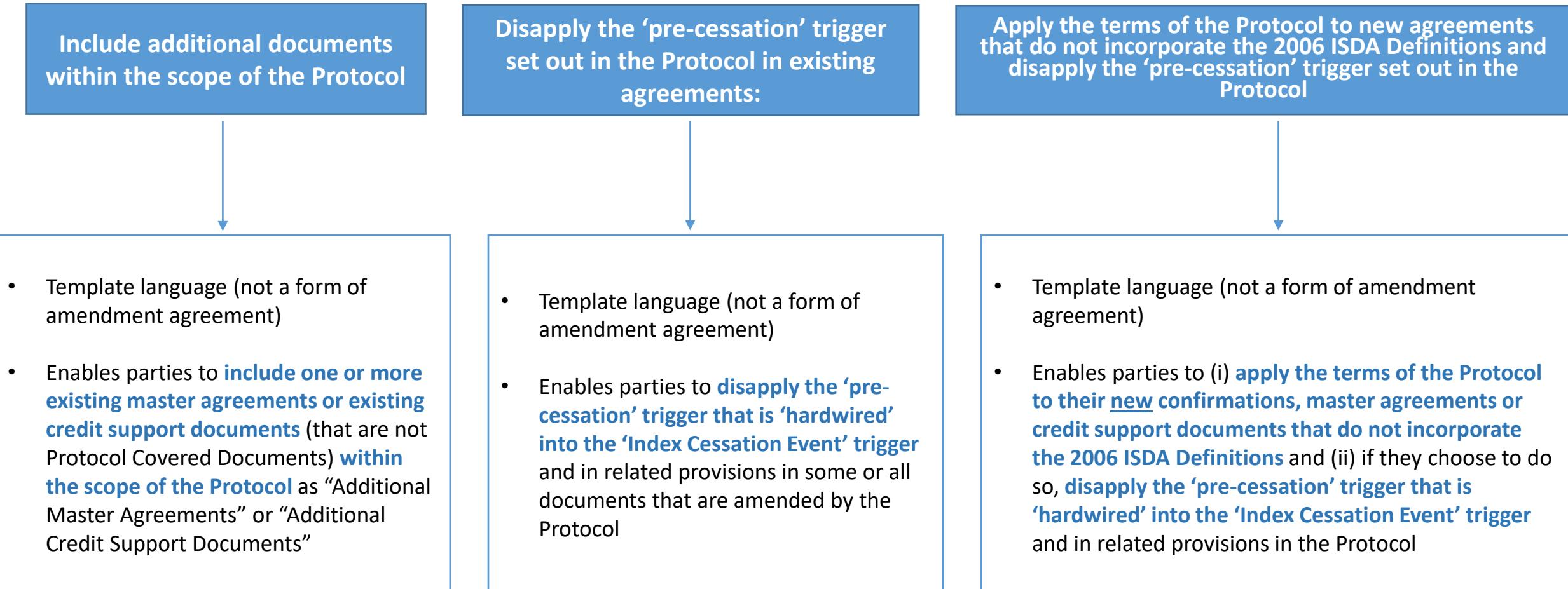


Amend the terms of the Protocol in existing agreements



- Form of amendment agreement
- Enables parties who have adhered to the Protocol to **amend the scope and terms of the Protocol in relation to one or more existing confirmations, existing master agreements or existing credit support documents** that are Protocol Covered Documents by **including additional template language published separately by ISDA** in the form of amendment agreement
- Both a Principal version and an Agency version have been published

Bilateral Templates (cont.)



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/>

Product Presentations on Bonds:



Mushtaq Kapasi

Managing Director –
Chief Representative Asia Pacific
ICMA



International Capital Market Association
ICMA



Adoption of risk-free rates in bond markets

A lot of progress has already been made with the adoption of new RFRs in bond markets:

US Dollar:

- Over US\$650 billion of SOFR-linked FRNs
- Mainly SSAs, financial institutions
- Conventions are evolving
- SOFR Index now available

UK Sterling:

- Approx. 190 SONIA-linked FRNs and securitisations totalling approx. £90 billion
- Mainly SSAs, banks and building societies, with a broadening base of investors
- Same market conventions so far – “lag” approach to weighting, also favoured by the loan market
- SONIA Index made available in early August – but only compatible with “shift” approach to weighting
- Work still to be done on conventions

New contracts referencing IBORs : fallbacks

The official sector in the US and the UK encourage use of risk-free rates instead of LIBOR in 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. (It has been announced that, subject to consultation, the liquid USD-LIBOR tenors will continue until mid-2023, but the US authorities have stated that they would only expect them to be used for legacy deals.)
- For new USD LIBOR FRN contracts, the ARRC (*Alternative Reference Rates Committee*) in the US has produced a hardwired waterfall of fallbacks
- In the UK, fallbacks which address a permanent cessation or pre-cessation of IBORs have been used since mid-2017. These are typically benchmark and currency agnostic
- GBP LIBOR-referencing FRN and securitisation transactions have all but ceased

The conversion of Legacy Bonds

"Legacy Bonds" are bonds which reference LIBOR and are due to mature beyond the end of 2021, when LIBOR may no longer be available:

- It has been estimated that the **global total** of Legacy Bonds is more than US\$800 billion equivalent
- Around 80% of that total references USD LIBOR
- In the UK market, estimates suggest around 700 ISINs for GBP LIBOR Legacy Bonds across approx. 430 deals
- 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 may be commercially unpalatable

Options for Legacy Bonds – consent solicitation

The official sector in the US and the UK have continually stressed the increasing importance of transitioning Legacy Bonds away from LIBOR:

- 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 *consent solicitation*
- **Depending on the governing law of the bond, the consent threshold required 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 a voluntary process, with no guarantee of success. It is also time-consuming and administratively burdensome for issuers and bondholders
- But in the UK, a number of consent solicitations have been successfully undertaken by financial and corporate issuers

Options for Legacy Bonds - UK 'tough legacy' proposals

Some Legacy Bonds may fall into a 'tough legacy' bucket (i.e. cannot remove their reliance on LIBOR ahead of its anticipated discontinuation):

- The UK Government put forward draft legislation in October 2020
- The FCA would be empowered to direct LIBOR's administrator to change the methodology for LIBOR in certain circumstances (so-called "synthetic LIBOR")
- There would be a general prohibition on the use of "synthetic LIBOR" by UK supervised entities, subject to specific exemptions granted by the FCA
- Some details still unknown, including what "synthetic LIBOR" will be and how long "synthetic LIBOR" will continue to exist
- There is no guarantee that the FCA can or will exercise these powers, or that they will suit all Legacy Bonds. So the FCA and Bank of England are urging parties to continue with "active transition" in order to retain control of the economic outcome

Options for Legacy Bonds - Possible US legislative proposal

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

- For contracts with *no fallbacks*, ARRC-recommended SOFR fallback rate + spread adjustment would apply
- For contracts which *fall back to a LIBOR-based rate*, ARRC-recommended SOFR fallback rate + 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 + 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
- It is not yet clear whether or when this will be enacted in NY law and how this would interact in practice with the UK ‘tough legacy’ proposals and EU proposals

Options for Legacy Bonds - EU Benchmarks Regulation proposals

The EU co-legislators have reached a political agreement on proposed amendments to the EU Benchmarks Regulation to address cessation of important benchmarks

- The proposal will empower the European Commission to designate a *statutory replacement rate and credit adjustment spread* (taking account of relevant industry working group recommendations) to ensure that when a widely used reference rate (such as LIBOR) is phased out, it does not cause disruption to the economy or harm financial stability in the EU
- The statutory replacement rate will apply as a matter of law to certain contracts and securities
- It would seem that bonds governed by New York law or English law are likely to be out-of-scope, depending on the implementation of the New York and UK legislative proposals

Other options for Legacy Bonds

Other options for Legacy Bonds include:

- Buy-backs, exchange offers 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)

Product Presentations:



Adrian Cheng
Partner, Finance
Singapore
Herbert Smith Freehills

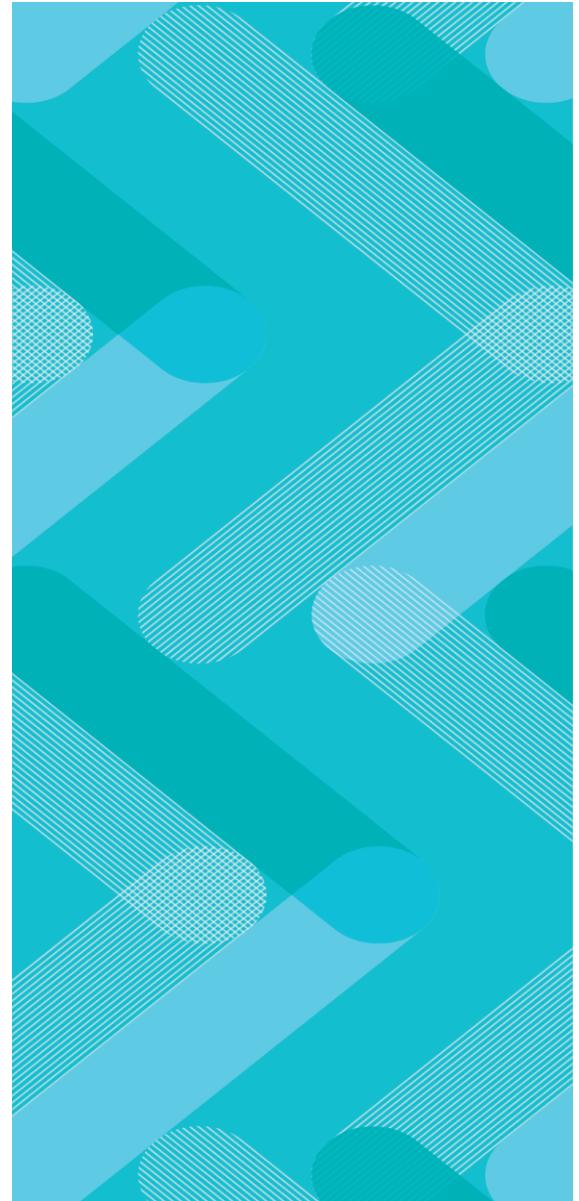


Adrianus Arditomo (Tommy)
Partner
Hiswara Bunjamin &
Tandjung



HERBERT
SMITH
FREEHILLS

HISWARA
BUNJAMIN &
TANDJUNG



LIBOR Discontinuation

16 December 2020

Adrian Cheng, Partner, +65 6868 8029, adrian.cheng@hsf.com

Adrianus Adritomo (Tommy), Partner, +62 21 3973 6188, adrianus.adritomo@hbtlaw.com

Agenda

- Indonesian market update
- Loans markets documentation
 - Focus on LMA RFR Exposure Drafts
 - APLMA update
- Derivatives markets documentation
 - Focus on the ISDA Supplement and Protocol
- Bond documentation
 - Market conventions for interest rate and consent solicitations



Indonesian market update



IBOR Transition in Indonesian Loan Market

- No specific laws/regulation in Indonesia
- Other reference rates for Indonesian Rupiah published by Bank Indonesia are Jakarta IBOR (JIBOR) and Indonesia Overnight Index Average (IndONIA)
- Documentation



Loan markets documentation



Existing loan contracts: existing fallbacks and replacement of screen rate provisions

Existing fallbacks:

- Whatever the applicable fallback, likely to have “winners” and “losers” as a result of transition from LIBOR
- Advisable to amend legacy contracts, but complicated by absence of an acceptable alternative and the fact that amendment clauses often require unanimous consent of syndicate lenders and borrower

Replacement of Screen Rate provisions: an “agreement to agree”:

- Provides a mechanism for parties to a syndicated facility agreement to agree a replacement benchmark rate using a lower consent threshold (i.e. typically Majority Lenders rather than all Lenders)

New loan contracts: LMA Exposure Drafts

LMA published two Exposure Drafts in September 2019

- (1) Sterling loans and (2) USD loans
- The referenced floating rates are derived from the respective RFRs that are to replace sterling LIBOR (SONIA) and USD LIBOR (SOFR)
- RFR quotations relating to an interest period are compounded and averaged in arrear

APLMA Updates

- Exposure drafts
 - USD SOFR
 - Compounded methodology
 - Simple methodology
 - Guidance note
- Comments from market participants by early December
- Drafting rate switching documents

Amending legacy loans

LMA rate selection agreement

- Standard form
- Sets commercial terms
- Signed by requisite lenders and obligors
- Allows company and agent to document the amendment agreement to the relevant loan

Amendment and restatement of original loan agreement

- Documents terms agreed in rate selection agreement (a dual-step process)
- Alternatively could go straight to this stage (a single step process)

Amendment considerations

Amendment considerations	<p>Costs</p>
	<p>Legal opinions</p>
	<p>Effect on security and guarantees</p>
	<p>Timing, particularly where there is a linked swap</p>



Derivate markets documentation



ISDA Protocol and Supplement

ISDA will soon publish*:

- Supplement no. 70 to the 2006 Definitions
 - to make amendments to 2006 ISDA Definitions to incorporate the fallbacks which will take effect from a future effective date; and
- ISDA 2020 Fallbacks Protocol
 - which will facilitate incorporating those amendments into legacy derivative contracts if both parties elect to do so.

*Publication expected following approval from US DoJ and competition approval in other jurisdictions

Protocol and Supplement will become effective several months after launch to encourage adoption, likely to be January 2021

- Impact on pre-cessation trigger

The Supplement – for new contracts

- Will amend the 2006 ISDA Definitions.
- Introduces robust fallbacks to the existing LIBOR rates by deleting references to those rates and replacing them with references to the relevant LIBOR rate until the occurrence of an Index Cessation Event, with an active transition to the Adjusted RFR (and further fallbacks)

The Protocol – for legacy contracts

- Intended to facilitate amendments to include the fallbacks in legacy derivatives contracts.
- Adherence will amend a wide range of documents, including master agreements, credit support documents, confirmations, Global Master Repurchase Agreements and Global Master Securities Lending Agreements.
- Will be completely voluntary and only amend contracts between two adhering parties.
- Soft pressure from regulators to adhere “in escrow” in the initial period between announcement of the Protocol and official launch to provide momentum at launch.



ISDA Protocol and Supplement

Triggers for fallbacks to apply : Cessation and pre-cessation

The fallbacks will apply upon either:

- the actual date that the relevant LIBOR rate ceases to be published (the “**cessation trigger**”); or
- an announcement by the relevant regulator of the benchmark administrator that the LIBOR rate has ceased (or will at some specified future date cease) to be representative (the “**pre-cessation trigger**”).

Adjustment spread fixed on Index Cessation Event

Transactions continue on IBOR terms until Index Cessation Event for Relevant IBOR

- ISDA documents include hardwired switch by referencing new definition for IBOR in 2006 Definitions (with hardwired fallback to RFR published on Bloomberg Screen)
- Non-ISDA documents achieve same outcome by incorporating equivalent fallbacks in longhand

RFRs subject to further fallbacks

- Other official published RFR rates
- Ultimate end point of central banks base rate

Potential issues with the Protocol

Are there issues with the Protocol?

- Not a perfect fix - the spread adjustment, for instance, is unlikely to mitigate entirely the value transfer which will occur upon the fallbacks being triggered
- Adherence voluntary – many counterparts will not adhere for logistical or other reasons
- Protocol not appropriate for products linked to, or hedging, products in other markets where different fallback mechanisms are available or may be pursued
 - ISDA Bilateral Templates / Publication of rates for cash products
- Protocol will make amendments to transactions – consents required
- Protocol not appropriate for “non-linear” products (swaptions/x-ccy swaps/options)
 - ISDA non-linear products publication / ARRC guidance
- Some contracts will need to be amended other than through the Protocol (eg CSAs referencing EONIA).

What is the alternative?

- ISDA have produced some bilateral templates which will assist with this process by facilitating bilateral amendments to contracts between non-adhering parties.
 - Excluding certain transactions and agreements
 - Removing pre-cessation triggers



Bond documentation



Debt Capital Markets: New Issues

New Issues

- All new sterling bond issues in the form of floating rate notes have for some time been referencing SONIA rather than LIBOR.
- £21 billion in 56 transaction in the first half of 2020.
- There are still some USD LIBOR issuances but SOFR volumes are increasing.

Calculating interest (shift v lag)

- **Lag:** SONIA compounded in arrears over an interest period, with a margin added, and a “lag” (or “lookback”) in respect of each interest period, so that the SONIA rate used to calculate a rate for each day in an interest period is based on the SONIA rate for 5 days prior
- **Shift:** Similar to lag but compounding formula in the “shift” approach weights the SONIA rate to account for calendar days when the SONIA rate is not published according to the number of days that apply in the observation period (whereas the “lag” approach weights the SONIA rate according to the number of days that apply in the interest period)

SONIA Compounded Index

- SONIA index (published by the BoE in August) will be compatible with the shift method rather than the lag method.
- It is expected that new SONIA bond issues will increasingly reference the SONIA Compounded Index because it should standardise and simplify the method of calculating SONIA-linked instruments and could be referenced in documentation.
- Two recent issues (Sept) from EIB and RBC using the Compounded Index.

DCM: Fallback provisions

Previous fallbacks: Often a variation on “reference banks” methodology found in LMA and ISDA documentation. Would default to a fixed rate on permanent cessation of LIBOR.

Current fallbacks: Post 2017, benchmark discontinuation language included. Usual language envisages the issuer appointing an independent adviser to select a replacement rate and an adjustment spread to be applied to such rate, in each case, on the basis of (a) any recommendations made by relevant official bodies or (b) if no such recommendations have been made, customary market practice. More recently, some clauses have a pre-cessation trigger event, being a statement of unrepresentativeness of the original benchmark by the regulator of the benchmark administrator.

For the adjustment spread, the Sterling RFR Working Group issued a statement this year recommending the use of the historical five-year median spread adjustment methodology when calculating the credit adjustment spread which should then be applied to the SONIA rate.

Debt Capital Markets: Tough Legacy Bonds

Tough legacy

- The latest estimates of legacy sterling LIBOR bonds maturing after the end of 2021 are of the order of 315 FRNs and 170 securitisations with 560 tranches, with a total value of around £110 billion.
- Maturing bonds will reduce the scale of the problem in time, but it has been estimated that only around 30% of legacy bonds by value fall due for maturity in 2022 and 2023. A significant proportion of legacy bonds mature beyond 2030.

Consent solicitations

- Consent solicitations facilitate the move away from LIBOR by an issuer seeking bondholder consent in order to amend terms and conditions.
- Can be a time consuming, costly and in some cases unsuccessful process.
- So far we haven't seen that many in the vanilla DCM space but this is changing. For example, in September, Lloyds sought consent to transition its additional tier 1 (AT1) securities to SONIA

Legislative fix vs. Active transition

- Some hope that legislative fix will be a solution **however** authorities have made clear that legislation should not be viewed as a substitute for negotiated amendments: "*The Government agrees with the RFRWG's Tough Legacy Taskforce that active transition of legacy contracts remains of key importance and provides the best route to certainty for parties to contracts referencing LIBOR. Parties who rely on regulatory action, enabled by the legislation the Government plans to bring forward, will not have control over the economic terms of that action. Moreover regulatory action may not be able to address all issues or be practicable in all circumstances, for example where a methodology change is not feasible, or would not protect consumers or market integrity. This reinforces the importance of parties who can transition away from LIBOR doing so on terms that they themselves agree with their counterparties.*"

HERBERTSMITHFREEHILLS.COM

BANGKOK

Herbert Smith Freehills (Thailand) Ltd

BEIJING

Herbert Smith Freehills LLP
Beijing Representative Office (UK)

BELFAST

Herbert Smith Freehills LLP

BERLIN

Herbert Smith Freehills Germany LLP

BRISBANE

Herbert Smith Freehills

BRUSSELS

Herbert Smith Freehills LLP

DUBAI

Herbert Smith Freehills LLP

DÜSSELDORF

Herbert Smith Freehills Germany LLP

FRANKFURT

Herbert Smith Freehills Germany LLP

HONG KONG

Herbert Smith Freehills

JAKARTA

Hiswara Bunjamin and Tandjung
Herbert Smith Freehills LLP associated firm

JOHANNESBURG

Herbert Smith Freehills South Africa LLP

KUALA LUMPUR

Herbert Smith Freehills LLP
LLP0010119-FGN

LONDON

Herbert Smith Freehills LLP

MADRID

Herbert Smith Freehills Spain LLP

MELBOURNE

Herbert Smith Freehills

MILAN

Studio Legale Associato in association with
Herbert Smith Freehills LLP

MOSCOW

Herbert Smith Freehills CIS LLP

NEW YORK

Herbert Smith Freehills New York LLP

PARIS

Herbert Smith Freehills Paris LLP

PERTH

Herbert Smith Freehills

RIYADH

The Law Office of Mohammed Altammami
Herbert Smith Freehills LLP associated firm

SEOUL

Herbert Smith Freehills LLP
Foreign Legal Consultant Office

SHANGHAI

Herbert Smith Freehills LLP
Shanghai Representative Office (UK)

SINGAPORE

Herbert Smith Freehills LLP

SYDNEY

Herbert Smith Freehills

TOKYO

Herbert Smith Freehills

Disclaimer

The contents of this publication, current at the date of publication set out in this document, are for reference purposes only. They do not constitute legal advice and should not be relied upon as such. Specific legal advice about your specific circumstances should always be sought separately before taking any action based on this publication.

Herbert Smith Freehills LLP and its affiliated and subsidiary businesses and firms and Herbert Smith Freehills, an Australian Partnership, are separate member firms of the international legal practice known as Herbert Smith Freehills.

© Herbert Smith Freehills 2020

IBOR TRANSITION SERIES:

A LOCAL MARKET PERSPECTIVE INDONESIA IBOR TRANSITION

(IN COLLABORATION WITH INDONESIA
FOREIGN EXCHANGE MARKET COMMITTEE)

Lead Sponsor



Endorser



Data and Infrastructure Preparedness: Practical Challenges of IBOR Transition:



Edmund Lee

OTC Data Strategy Manager, Asia Pacific
Bloomberg L.P

Data and Infrastructure Preparedness: Practical Challenges on IBOR Transition

Edmund Lee
Data Strategy
Asia Pacific, Bloomberg L.P.
echlee@Bloomberg.net

16th December 2020

Impact Across Firms' Workflows - The LIBOR Transition Lifecycle

After LIBOR cessation 4

- ❖ All fallbacks triggered, **fallback calculations** needed
- ❖ Flexible rate calculation
- ❖ **Pricing, execution, valuation, and risk for new rates supported** for business as usual activity
- ❖ All securities fallback, use **fallback data** to manage and track



Transition phase 3

- ❖ Fallbacks may be triggered, **fallback calculations** needed
- ❖ Understand **actual and potential risk/valuation impacts** as transition scenarios crystallise
- ❖ Securities may fallback, use **fallback data** to manage and track



Interest calculations, product pricing, valuation and scenarios

New rates curves fully embedded, flexibility to support portfolio calculation and analytics



Fallback calculations

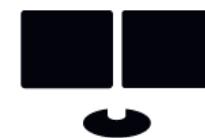
ISDA® Safe, Efficient Markets
Market reliance on the calculations

1 Understand alternative rates, analyse and prepare

- ❖ Accurate and extensive **sources of information** on new rates, transition activity and data
- ❖ For many bond/loan securities, varied fallback, need to understand **fallback data**
- ❖ Understand and analyse **current and future exposure**, apply transition scenarios



Market information and trade execution



Pricing, liquidity (and other relevant up-to-date info), and execution capability



Fallback data

Large universe of existing securities for which clear understanding of fallback required

2 Trade / manage new products

- ❖ **Pricing, execution, valuation, risk and scenarios supported** through the eco-system
- ❖ Compounding methodologies can vary, **flexible bespoke calculation tools** may be needed



Data Analytics for IBOR Transition

Deal Level Analysis

The screenshot shows the Swap Manager interface with the following deal details:

- Counterparty:** SWAP CNTRPARTY
- Trade Date:** 03/15/2020
- Valuation Settings:** Arrears
- Leg 1: Fixed** Receive 10MM USD 8D 03/17/2020 Maturity SY 03/17/2025 Coupon 2.000000 % Index 1D SOFR RATE
- Leg 2: Float** Pay 10MM USD 8D 03/17/2020 Maturity SY 03/17/2025 Coupon 24.202 bp Spread 1D SOFR RATE
- Market:** Dscnt 42 M USD OIS (ICVS I) Fwd 490 M USD SOFR (vs. Fix)
- Valuation Results:**

Par Cpn	0.560378	Premium	7.14926	PV01	4,966.07
Principal	714.925.95	BP Value	714.92595	DV01	5,230.91
Accrued	0.00			Gamma (1bp)	3.16
NPV	714.925.95				

A green oval highlights the "Index 1D SOFR RATE" field under Leg 1.

Custom Applications
via MARS API

The screenshot shows the Swap Manager interface with the following deal details:

- Counterparty:** SWAP CNTRPARTY
- Trade Date:** 12/09/2020
- Valuation Settings:** Arrears
- Leg 1: Fixed** Receive 10MM IDR 0D 12/11/2020 Maturity 1Y6M 06/11/2022 Coupon 4.302112 % Index 1D JSORON
- Leg 2: Float** Pay 10MM IDR 0D 12/11/2020 Maturity 1Y6M 06/11/2022 Coupon 0.0000 % Index 3.03915
- Market:** Dscnt 380 M IDR (vs. 3M JIBOR) Fwd 158 M IDR OIS (ICVS I)
- Valuation Results:**

Par Cpn	3.050538	Premium	1.83374	PV01	1,465.00
Principal	183,374.00	BP Value	183,37422	DV01	1,492.00
Accrued	0.00			Gamma (1bp)	0.22
NPV	183,374.00				

A green oval highlights the "Index 1D JSORON" field under Leg 1.

Portfolio Level Analysis

RFR TRANSITION SCENARIO ANALYSIS																																																																																																																																																																																											
Context		Workflow:																																																																																																																																																																																									
Client	Corporate A	Portfolio Name	Portfolio 1	Valuation Date	1/6/2020	Currency	USD	Transition Date	3m	Spread at Date (Bp)	40																																																																																																																																																																																
Calculate		Generate Report																																																																																																																																																																																									
<table border="1"> <thead> <tr> <th>Deal ID</th><th>Asset Type</th><th>Notional</th><th>Deal Currency</th><th>Maturity</th><th>Market Value</th><th>Market Value What If</th><th>Diff Market Value</th><th>DV01</th><th>DV01 What If</th><th>Diff DV01</th><th>Error</th></tr> </thead> <tbody> <tr> <td>SL325A6Z Corp</td><td>OIS Swap</td><td>10,000,000</td><td>USD</td><td>4/12/2021</td><td>-202,258.02</td><td>-202,281.09</td><td>-23.07</td><td>-1,648.66</td><td>-1,649.04</td><td>-0.38</td></tr> <tr> <td>SL325A6W Corp</td><td>US 6M Libor</td><td>25,000,000</td><td>USD</td><td>4/2/2030</td><td>327,981.52</td><td>328,059.03</td><td>77.52</td><td>181.31</td><td>181.39</td><td>0.08</td></tr> <tr> <td>SL325A6T Corp</td><td>US 1M Libor</td><td>10,000,000</td><td>USD</td><td>4/2/2025</td><td>9,843.39</td><td>9,842.34</td><td>-1.05</td><td>-0.06</td><td>-0.06</td><td>-0.00</td></tr> <tr> <td>SLM4038G Corp</td><td>Rec Fix/Pay Flt</td><td>20,000,000</td><td>USD</td><td>15/7/2039</td><td>5,636,479.17</td><td>5,603,500.53</td><td>-32,978.65</td><td>42,579.15</td><td>42,366.49</td><td>-212.66</td></tr> <tr> <td>SLM4038P Corp</td><td>Pay Fix/Rec Flt</td><td>10,000,000</td><td>USD</td><td>10/9/2026</td><td>-710,200.83</td><td>-710,318.78</td><td>-117.95</td><td>-6,719.85</td><td>-6,721.49</td><td>-1.63</td></tr> <tr> <td>SLM4038A Corp</td><td>Pay Fix/Rec Flt</td><td>25,000,000</td><td>USD</td><td>24/5/2048</td><td>-14,622,023.40</td><td>-14,388,044.85</td><td>233,978.55</td><td>-86,804.12</td><td>-85,887.59</td><td>916.53</td></tr> <tr> <td>SLM4038J Corp</td><td>Rec Fix/Pay Flt</td><td>20,000,000</td><td>USD</td><td>19/7/2022</td><td>801,229.51</td><td>801,308.22</td><td>78.71</td><td>4,611.01</td><td>4,612.14</td><td>1.13</td></tr> <tr> <td>SLM4038M Corp</td><td>Pay Fix/Rec Flt</td><td>10,000,000</td><td>USD</td><td>19/8/2024</td><td>-652,215.40</td><td>-652,330.37</td><td>-114.97</td><td>-4,660.15</td><td>-4,661.51</td><td>-1.36</td></tr> <tr> <td>SLM4038D Corp</td><td>Pay Fix/Rec Flt</td><td>15,000,000</td><td>USD</td><td>15/3/2024</td><td>-790,332.62</td><td>-790,464.08</td><td>-131.46</td><td>-6,172.37</td><td>-6,174.10</td><td>-1.73</td></tr> <tr> <td>SLM4038I Corp</td><td>Pay Fix/Rec Flt</td><td>25,000,000</td><td>USD</td><td>17/7/2025</td><td>-2,592,985.77</td><td>-2,593,501.26</td><td>-515.49</td><td>-13,868.86</td><td>-13,873.63</td><td>-4.77</td></tr> <tr> <td>SLM4037V Corp</td><td>Rec Fix/Pay Flt</td><td>10,000,000</td><td>USD</td><td>17/7/2029</td><td>1,157,412.99</td><td>1,157,608.10</td><td>195.11</td><td>9,699.68</td><td>9,701.49</td><td>1.81</td></tr> <tr> <td>SLM4038A Corp</td><td>Pay Fix/Rec Flt</td><td>15,000,000</td><td>USD</td><td>15/1/2027</td><td>-1,700,958.70</td><td>-1,701,207.07</td><td>-248.37</td><td>-10,677.75</td><td>-10,680.28</td><td>-2.54</td></tr> <tr> <td>SLM4038T Corp</td><td>Rec Fix/Pay Flt</td><td>25,000,000</td><td>USD</td><td>24/2/2033</td><td>5,589,010.25</td><td>5,589,697.34</td><td>-3,312.91</td><td>35,603.41</td><td>35,591.26</td><td>-12.15</td></tr> <tr> <td>Totals</td><td></td><td>220,000,000</td><td>USD</td><td></td><td>-7,749,017.91</td><td>-7,552,131.93</td><td>196,885.98</td><td>-37,877.26</td><td>-37,194.92</td><td>682.34</td></tr> <tr> <td>As Percentage</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-2.54%</td><td></td><td>-1.80%</td></tr> </tbody> </table>											Deal ID	Asset Type	Notional	Deal Currency	Maturity	Market Value	Market Value What If	Diff Market Value	DV01	DV01 What If	Diff DV01	Error	SL325A6Z Corp	OIS Swap	10,000,000	USD	4/12/2021	-202,258.02	-202,281.09	-23.07	-1,648.66	-1,649.04	-0.38	SL325A6W Corp	US 6M Libor	25,000,000	USD	4/2/2030	327,981.52	328,059.03	77.52	181.31	181.39	0.08	SL325A6T Corp	US 1M Libor	10,000,000	USD	4/2/2025	9,843.39	9,842.34	-1.05	-0.06	-0.06	-0.00	SLM4038G Corp	Rec Fix/Pay Flt	20,000,000	USD	15/7/2039	5,636,479.17	5,603,500.53	-32,978.65	42,579.15	42,366.49	-212.66	SLM4038P Corp	Pay Fix/Rec Flt	10,000,000	USD	10/9/2026	-710,200.83	-710,318.78	-117.95	-6,719.85	-6,721.49	-1.63	SLM4038A Corp	Pay Fix/Rec Flt	25,000,000	USD	24/5/2048	-14,622,023.40	-14,388,044.85	233,978.55	-86,804.12	-85,887.59	916.53	SLM4038J Corp	Rec Fix/Pay Flt	20,000,000	USD	19/7/2022	801,229.51	801,308.22	78.71	4,611.01	4,612.14	1.13	SLM4038M Corp	Pay Fix/Rec Flt	10,000,000	USD	19/8/2024	-652,215.40	-652,330.37	-114.97	-4,660.15	-4,661.51	-1.36	SLM4038D Corp	Pay Fix/Rec Flt	15,000,000	USD	15/3/2024	-790,332.62	-790,464.08	-131.46	-6,172.37	-6,174.10	-1.73	SLM4038I Corp	Pay Fix/Rec Flt	25,000,000	USD	17/7/2025	-2,592,985.77	-2,593,501.26	-515.49	-13,868.86	-13,873.63	-4.77	SLM4037V Corp	Rec Fix/Pay Flt	10,000,000	USD	17/7/2029	1,157,412.99	1,157,608.10	195.11	9,699.68	9,701.49	1.81	SLM4038A Corp	Pay Fix/Rec Flt	15,000,000	USD	15/1/2027	-1,700,958.70	-1,701,207.07	-248.37	-10,677.75	-10,680.28	-2.54	SLM4038T Corp	Rec Fix/Pay Flt	25,000,000	USD	24/2/2033	5,589,010.25	5,589,697.34	-3,312.91	35,603.41	35,591.26	-12.15	Totals		220,000,000	USD		-7,749,017.91	-7,552,131.93	196,885.98	-37,877.26	-37,194.92	682.34	As Percentage								-2.54%		-1.80%
Deal ID	Asset Type	Notional	Deal Currency	Maturity	Market Value	Market Value What If	Diff Market Value	DV01	DV01 What If	Diff DV01	Error																																																																																																																																																																																
SL325A6Z Corp	OIS Swap	10,000,000	USD	4/12/2021	-202,258.02	-202,281.09	-23.07	-1,648.66	-1,649.04	-0.38																																																																																																																																																																																	
SL325A6W Corp	US 6M Libor	25,000,000	USD	4/2/2030	327,981.52	328,059.03	77.52	181.31	181.39	0.08																																																																																																																																																																																	
SL325A6T Corp	US 1M Libor	10,000,000	USD	4/2/2025	9,843.39	9,842.34	-1.05	-0.06	-0.06	-0.00																																																																																																																																																																																	
SLM4038G Corp	Rec Fix/Pay Flt	20,000,000	USD	15/7/2039	5,636,479.17	5,603,500.53	-32,978.65	42,579.15	42,366.49	-212.66																																																																																																																																																																																	
SLM4038P Corp	Pay Fix/Rec Flt	10,000,000	USD	10/9/2026	-710,200.83	-710,318.78	-117.95	-6,719.85	-6,721.49	-1.63																																																																																																																																																																																	
SLM4038A Corp	Pay Fix/Rec Flt	25,000,000	USD	24/5/2048	-14,622,023.40	-14,388,044.85	233,978.55	-86,804.12	-85,887.59	916.53																																																																																																																																																																																	
SLM4038J Corp	Rec Fix/Pay Flt	20,000,000	USD	19/7/2022	801,229.51	801,308.22	78.71	4,611.01	4,612.14	1.13																																																																																																																																																																																	
SLM4038M Corp	Pay Fix/Rec Flt	10,000,000	USD	19/8/2024	-652,215.40	-652,330.37	-114.97	-4,660.15	-4,661.51	-1.36																																																																																																																																																																																	
SLM4038D Corp	Pay Fix/Rec Flt	15,000,000	USD	15/3/2024	-790,332.62	-790,464.08	-131.46	-6,172.37	-6,174.10	-1.73																																																																																																																																																																																	
SLM4038I Corp	Pay Fix/Rec Flt	25,000,000	USD	17/7/2025	-2,592,985.77	-2,593,501.26	-515.49	-13,868.86	-13,873.63	-4.77																																																																																																																																																																																	
SLM4037V Corp	Rec Fix/Pay Flt	10,000,000	USD	17/7/2029	1,157,412.99	1,157,608.10	195.11	9,699.68	9,701.49	1.81																																																																																																																																																																																	
SLM4038A Corp	Pay Fix/Rec Flt	15,000,000	USD	15/1/2027	-1,700,958.70	-1,701,207.07	-248.37	-10,677.75	-10,680.28	-2.54																																																																																																																																																																																	
SLM4038T Corp	Rec Fix/Pay Flt	25,000,000	USD	24/2/2033	5,589,010.25	5,589,697.34	-3,312.91	35,603.41	35,591.26	-12.15																																																																																																																																																																																	
Totals		220,000,000	USD		-7,749,017.91	-7,552,131.93	196,885.98	-37,877.26	-37,194.92	682.34																																																																																																																																																																																	
As Percentage								-2.54%		-1.80%																																																																																																																																																																																	

Data-sets specific questions

- What new data sets are required as we transition to the new RFRs
- How will RFR data evolve as liquidity shifts over transition life cycle
- Will term rates be available and what if not? How do build new curves.

Assess data in systems readiness by testing the following:

- Enhance analytical models, risk and valuation models and scenario analysis across enterprise systems to work on RFR
- Impact of discounting change on treasury and downstream enterprise systems

Infrastructure Support For Securities

Index Compounding Calculator										
Index	SOFR RATE	United States SOFR Secured Overnight Financing Rate			Show Graph					
Dates		Day	Date	Rate Date	Rate	Eff Rate	Factor			
Start	02/05/2020	WED	02/13/2020	02/13/2020	1.57000	1.57000	1.000043611			
End	03/06/2020	FRI	02/14/2020	02/14/2020	1.58000	1.58000	1.000175556			
Inclusive	No	SAT	02/15/2020	--	--	1.58000	1.000000000			
Number of Days	30	SUN	02/16/2020	--	--	1.58000	1.000000000			
Day Count	ACT/360	MON	02/17/2020	--	--	1.58000	1.000000000			
Curve	TUE	02/18/2020	02/18/2020	--	1.60000	1.60000	1.000044444			
Curve #	490	Currency	USD	WED	02/19/2020	02/19/2020	1.59000	1.000044167		
USD SOFR Swap Curve		THU	02/20/2020	02/20/2020	--	1.60000	1.000044444			
Other Inputs	FRI	02/21/2020	02/21/2020	--	1.58000	1.58000	1.000131667			
Comp/Avg	Uniform	SAT	02/22/2020	--	--	1.58000	1.000000000			
Spread (BP)	0	SUN	02/23/2020	--	--	1.58000	1.000000000			
Spread Use	At End	MON	02/24/2020	02/24/2020	--	1.58000	1.000043889			
Index Lag	0	TUE	02/25/2020	02/25/2020	--	1.59000	1.000044167			
Lockout	0	WED	02/26/2020	02/26/2020	--	1.58000	1.000043889			
Fixing	Prior	THU	02/27/2020	02/27/2020	--	1.58000	1.000043889			
Outputs	FRI	02/28/2020	02/28/2020	--	1.60000	1.60000	1.000133333			
Factor	100.13002	SUN	03/01/2020	--	--	1.60000	1.000000000			
Effective Rate	1.56028	MON	03/02/2020	03/02/2020	--	1.59000	1.000044167			
Last Obs Date	03/06/2020	TUE	03/05/2020	03/05/2020	1.59000	1.64000	1.000045556			
		WED	03/04/2020	03/04/2020	1.23000	1.23000	1.000034167			
		THU	03/05/2020	03/05/2020	1.12000	1.12000	1.000031111			

SOFR

FONC<GO>

Index Compounding Calculator										
Index	DIINONT	Bank Indonesia Overnight Index Average Rate (INDONIA)			Show Graph					
Dates		Day	Date	Rate Date	Rate	Eff Rate	Factor			
Start	12/09/2020	WED	12/09/2020	12/08/2020	3.03889	3.03889	1.000084414			
End	01/08/2021	THU	12/10/2020	12/10/2020	3.03889	3.03889	1.000084414			
Inclusive	No	FRI	12/11/2020	12/11/2020	3.03915	3.03915	1.000253262			
Number of Days	30	SAT	12/12/2020	--	--	3.03915	1.000000000			
Day Count	ACT/360	SUN	12/13/2020	--	--	3.03915	1.000000000			
Curve	MON	12/14/2020	12/14/2020	--	3.03889	3.03889	1.000084414			
Curve #	158	Currency	IDR	TUE	12/15/2020	12/15/2020	3.03889	1.000084414		
IDR OIS Swap Curve		WED	12/16/2020	12/16/2020	--	3.03889	3.03889	1.000084414		
Other Inputs	THU	12/17/2020	12/17/2020	--	3.03889	3.03889	1.000084414			
Comp/Avg	Uniform	FRI	12/18/2020	12/18/2020	--	3.03915	3.03915	1.000253262		
Spread (BP)	0	SAT	12/19/2020	--	--	3.03915	1.000000000			
Spread Use	At End	SUN	12/20/2020	--	--	3.03915	1.000000000			
Index Lag	0	MON	12/21/2020	12/21/2020	--	3.03889	3.03889	1.000084414		
Lockout	0	TUE	12/22/2020	12/22/2020	--	3.03889	3.03889	1.000084414		
Fixing	Prior	WED	12/23/2020	12/23/2020	3.04030	3.04030	1.001013434			
Outputs		THU	12/24/2020	--	--	3.04030	3.04030	1.000000000		
Factor	100.25355	FRI	12/25/2020	--	--	3.04030	3.04030	1.000000000		
Effective Rate	3.04261	SAT	12/26/2020	--	--	3.04030	3.04030	1.000000000		
Last Obs Date	01/08/2021	MON	12/27/2020	--	--	3.04030	3.04030	1.000000000		
		TUE	12/28/2020	--	--	3.04030	3.04030	1.000000000		
		WED	12/29/2020	--	--	3.04030	3.04030	1.000000000		

INDONESIA

MARS
API



Custom Loans Application

Loan Inputs	
1 Internal Client ID	<input type="text"/>
2 Security Action	<input type="text"/>
3 Index	<input type="text"/>
4 Principal	<input type="text"/>
5 Compound Method	<input type="text"/>
6 Loan Spread	<input type="text"/>
7 Loan Tenor	<input type="text"/> Lending Date <input type="text"/> Maturity Date
8 Calculation Calendar	<input type="text"/>
9 Day Count	<input type="text"/>
10 Payment Frequency	<input type="text"/>
11 Pay Delay	<input type="text"/>
12 Lookback Day	<input type="text"/>
13 Lockout Day	<input type="text"/>
14 Observation Shift	<input type="text"/>
15 Amortization	<input type="text"/>
16 Portfolio	<input type="text"/> Select of PRTU portfolios
17 Commit Loan Generation	<input type="text"/>
18 Bloomberg ID	<input type="text"/>
Loan Interest	
19 Accrual Interest Period	<input type="text"/>
20 Accrued Interest	<input type="text"/>
21 Effective Rate	<input type="text"/>

Floating rate loans on new RFR indices such as SOFR, ESTR and EONIA pose challenges for analytics such as accrued interest and effective rate computations due to the complex nature of day count, compounding method and observation shifts.

Planning for Transition

LIBOR is used as an input into various calculations, systems, and models for operations and administration across business units.

1. Business and Front Office	2. Operations	3. Contracts	4. Compliance
<ul style="list-style-type: none">• Position/product inventory• New curve construction & risk management change• Repapering legacy contracts <p>Other considerations:</p> <ul style="list-style-type: none">• Identify business lines in scope• Economic sensitivities• Client outreach and communications	<ul style="list-style-type: none">• Collateralization/management• PAI• Settlement/ cash flow• Confirmations	<ul style="list-style-type: none">• Identification of all contracts• Fall-back provisions <p>Other considerations:</p> <ul style="list-style-type: none">• Renegotiating/ rewriting legacy contracts• Legal consent & legal/ statutory obligations• Standard documentation (e.g. ISDA and FIA)	<ul style="list-style-type: none">• Different regulatory requirements/ treatment of RFRs across jurisdictions <p>Other considerations:</p> <ul style="list-style-type: none">• Regulatory tracking and impact

Impact Assessment – Where to Begin

Challenges arise as market participants mobilize to identify technology gaps with handling new data sets, analytics, valuation models. And its impact on core banking system.

5. Treasury	6. Valuations and Market Risk	7. Accounting and Finance	8. IT and Infrastructure
<ul style="list-style-type: none">• ALM Internal funding• Changes to issuance and hedging programs• Transfer pricing implications	<ul style="list-style-type: none">• Valuation impacts (e.g. term structure curves/ market value/ secured vs unsecured)• Risk management (hedging)• Models' review & market risk sensitives• Price testing <p>Other considerations:</p> <ul style="list-style-type: none">• Assurance & QA of risk systems	<ul style="list-style-type: none">• Hedge accounting/ effectiveness• Forecast transactions• Impact on discounting <p>Other considerations:</p> <ul style="list-style-type: none">• Differences in tax treatment/ payments due• Modification accounting	<ul style="list-style-type: none">• Adjusting relevant support systems (e.g. trade capture, payment systems & inter-company funding arrangements) <p>Other considerations:</p> <ul style="list-style-type: none">• Technology enhancements• Infrastructure impact mapping

Data and Infrastructure - Quantify Valuation Impact in Libor Transition

Preparation required across all asset classes: cash, derivatives, and loans

Data		Infrastructure	
ISDA	Fallback Language	Risk Systems	Country Updates
<ul style="list-style-type: none">ISDA Rule Book & Technical notes	<ul style="list-style-type: none">Daily refreshed fallback language Data for 154,000 cash securitiesLoans	<ul style="list-style-type: none">CCP PAI from Fed Funds to SOFR (Oct 2020)Migration of Bilateral CSALIBOR Transition analysisDerivative Structuring	<ul style="list-style-type: none">Risk Free Rate Solutions
Fallback	Data	New Calculations	Analytics
<ul style="list-style-type: none">ISDA-BISLFallback, Spread Adjustments and Adjusted Rates	<ul style="list-style-type: none">Reference DataRFR Benchmark DataRFR Interest Rate CurvesWhere is LIBOR usedHow will RM units have access to fallback and RFR data.	<ul style="list-style-type: none">RFR Loans CalculatorDifferent type of RFR payment conventions	<ul style="list-style-type: none">Derivative Structuring of RFR Instruments
			Electronic Trading
			<ul style="list-style-type: none">Electronic Execution for RFR Derivatives
			RFR Adoption
			<ul style="list-style-type: none">FRN IssuanceLoans IssuanceRFR OTC Traded

Available Today: ISDA Fallback Data

200<GO> to view in CTNU



ISDA<GO>

ISDA Fallbacks for LIBOR and other IBORs:

- 1) IBOR Fallback Rate Adjustments
- 2) IBOR Fallback Rate Adjustments Rule Book (last update October 8th, 2020)
- 3) IBOR Fallback Usage Terms
- 4) IBOR Fallbacks Frequently Asked Questions (last update September 29th, 2020)
- 5) IBOR Fallback Test Data (last update July 6th, 2020)
- 6) IBOR Fallbacks Sample Calculation
- 7) IBOR Fallbacks Technical Notice (issued November 17th, 2020)
- 8) IBOR Fallbacks Technical Notice (issued October 13th, 2020)
- 9) IBOR Fallbacks Technical Note (issued August 11th, 2020)
- 10) IBOR Fallbacks Technical Note (issued July 27th, 2020)
- 11) IBOR Fallbacks Fact Sheet (last update September 29th, 2020)
- 12) IBOR Fallbacks Fact Sheet...Japanese (last update October 30th, 2020)
- 13) IBOR Fallback Tickers
- 14) Bloomberg's IBOR Transition Program

86

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

200<GO> to view in CTNU



Bloomberg

Official ISDA IBOR Fallback Rates, calculated by Bloomberg Index Services Limited

For access to the latest Adjusted Reference Rates, Spread Adjustments and 'all-in' Fallback Rates, including the Calculation Date for these rates, see {W#SPEC 70 <GO>} for the Bloomberg Worksheet or {DOCS #2094350 <GO>} for an Excel Workbook. For prior day rates, select the Rate Type from the list below, select the relevant tenor, and run <HP> <GO>. For information about the methodology used in these calculations and a full list of tickers, please see {ISDA <GO>}.

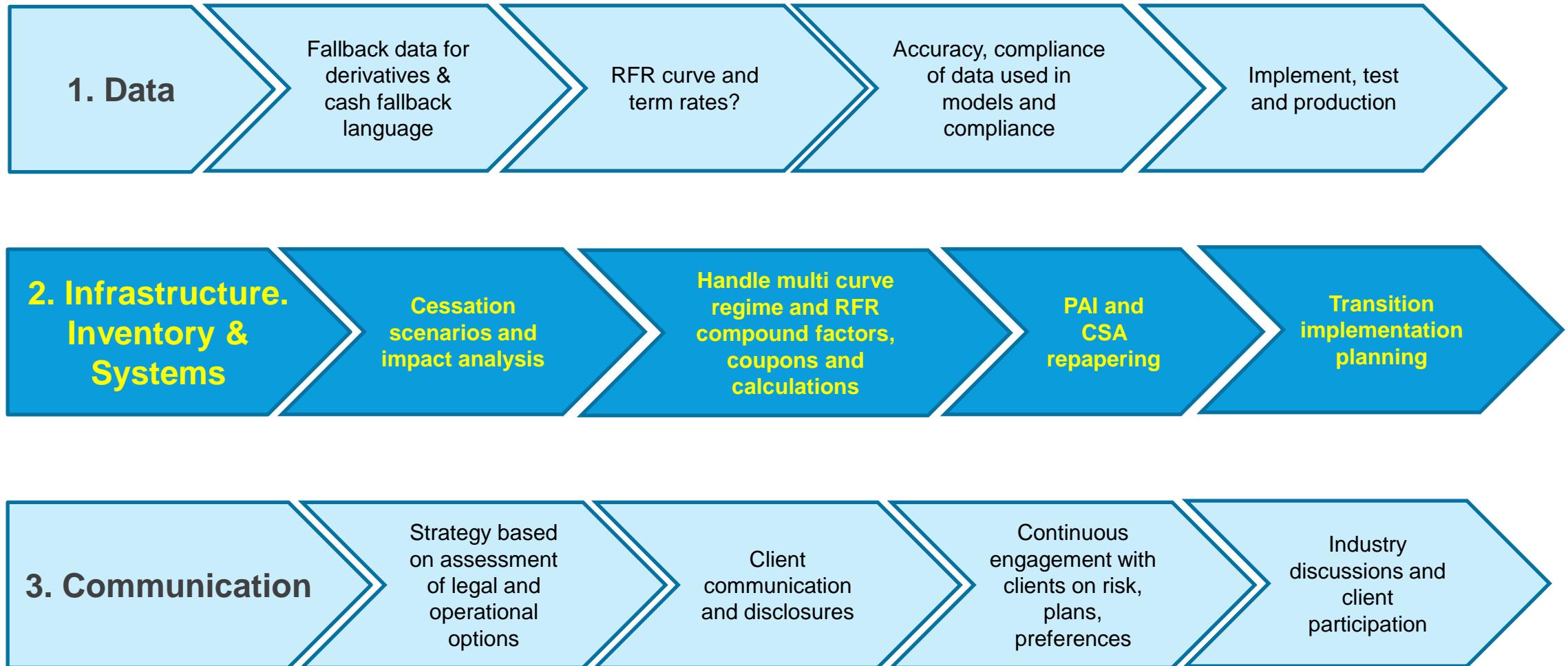
Official ISDA Fallback Rates

- 1) Official ISDA Fallback Rates
- 2) AUD BBSW
- 3) CAD CDOR
- 4) CHF LIBOR
- 5) EUR EURIBOR
- 6) EUR LIBOR
- 7) GBP LIBOR
- 8) HKD HIBOR
- 9) JPY Euroyen TIBOR
- 10) JPY LIBOR
- 11) JPY TIBOR
- 12) USD LIBOR
- 13) Official Adjusted Reference Rates
- 14) Official Spread Adjustments between Adjusted Reference Rates and IBOR Rates
- 15) Technical Guidance Note
- 16) IBOR Fallbacks Bloomberg Worksheet
- 17) IBOR Fallbacks Excel Workbook

FBAK<GO>

Bloomberg

Summary: Benchmark Transition Preparedness





Thank You

The data included in these materials are for illustrative purposes only. The BLOOMBERG TERMINAL service and Bloomberg data products (the “Services”) are owned and distributed by Bloomberg Finance L.P. (“BFLP”) except (i) in Argentina, Australia and certain jurisdictions in the Pacific islands, Bermuda, China, India, Japan, Korea and New Zealand, where Bloomberg L.P. and its subsidiaries (“BLP”) distribute these products, and (ii) in Singapore and the jurisdictions serviced by Bloomberg’s Singapore office, where a subsidiary of BFLP distributes these products. BLP provides BFLP and its subsidiaries with global marketing and operational support and service. Certain features, functions, products and services are available only to sophisticated investors and only where permitted. BFLP, BLP and their affiliates do not guarantee the accuracy of prices or other information in the Services. Nothing in the Services shall constitute or be construed as an offering of financial instruments by BFLP, BLP or their affiliates, or as investment advice or recommendations by BFLP, BLP or their affiliates of an investment strategy or whether or not to “buy”, “sell” or “hold” an investment. Information available via the Services should not be considered as information sufficient upon which to base an investment decision. The following are trademarks and service marks of BFLP, a Delaware limited partnership, or its subsidiaries: BLOOMBERG, BLOOMBERG ANYWHERE, BLOOMBERG MARKETS, BLOOMBERG NEWS, BLOOMBERG PROFESSIONAL, BLOOMBERG TERMINAL and BLOOMBERG.COM. Absence of any trademark or service mark from this list does not waive Bloomberg’s intellectual property rights in that name, mark or logo. All rights reserved. © 2020 Bloomberg.

IBOR TRANSITION SERIES:

A LOCAL MARKET PERSPECTIVE INDONESIA IBOR TRANSITION

(IN COLLABORATION WITH INDONESIA
FOREIGN EXCHANGE MARKET COMMITTEE)

Lead Sponsor



Endorser



Banking Panel on Implementation/Conduct Issues



Branko Windoe

Senior Executive Vice President
Bank Central Asia



Tony

Deputy Director, Basel and International Banking,
Banking Research and Regulation Department
Indonesian Financial Service Authority



Tiak-Peow Phua

Executive Director, Libor Transition,
Conduct, Financial Crime and Compliance
Standard Chartered



Ryan Page

Proposition Specialist
Refinitiv (moderator)

IBOR TRANSITION SERIES:

A LOCAL MARKET PERSPECTIVE INDONESIA IBOR TRANSITION

(IN COLLABORATION WITH INDONESIA
FOREIGN EXCHANGE MARKET COMMITTEE)

Lead Sponsor



Endorser



Accounting and Taxation Issues:



David Wake

Advisor – PwC Indonesia Financial Services Leader
PwC

LIBOR and Reference Rate Reform

Accounting and Tax
considerations

ASIFMA Webinar

16 December 2020



Finance heatmap

Accounting impacts	Disclosures	Tax
PSAK 71 (IFRS 9) Contract modifications Is modification "substantial"? – Derecognition required if a substantial modification	Balance sheet implications Line items where IBOR discounting is used, eg - <ul style="list-style-type: none"> Impairment assessments Pension liabilities Revenue customer contract assets Reinsurance contracts Provisions Lease liabilities 	Risks and uncertainties disclosure Appropriate disclosure for investors and customers - annual report, debt programme / prospectus, any impacted customer contract disclosures
PSAK 71(IFRS 9) Hedge accounting Assess quantum and methods of determining hedge effectiveness and updates to hedge documentation	PSAK 68 (IFRS 13) Fair Value methodology Assess IBOR replacement rates for use in valuations /treasury systems	Contract amendments and intra-group transactions Assess if contract amendments give rise to a 'disposal' for tax purposes, and assess interest basis on intra-group arrangements

IASB/DSAK IAI relief

Assess IASB relief across loan modification and hedge accounting

PSAK 73 Leases with variable payments
For variable lease payments linked to an IBOR, updates to the discount rate and the lease liability when the cash flows change

Operational impacts

Rate collections Assess collection and frequency of published indices	Interest accruals Assess implications of daily rates on interest accruals and MIS views	Settlements Assess implications of backward looking rate and new conventions on settlement systems and processes	Treasury Assess economic 'mis-match' or basis risks, and FX risk, from new rate change
---	---	--	--

Impact Key

High Medium Low

DSAK IAI / IASB relief – Loan modifications

Phase 1 (Pre IBOR replacement)

- Amendments to PSAK 71, PSAK 55, PSAK 60 (IFRS 9, IAS 39, IFRS 7) – financial instruments,
 - Ratified in ID on 24 June 2020. Effective for year ends commencing on or after 1 January 2020
-
- Provides temporary relief from applying specific hedge accounting requirements to relationships affected by the uncertainty arising from IBOR reform:
 - Reliefs over the highly probable requirement and risk components;
 - Ineffectiveness still needs to be measured and recorded in the income statement under both IFRS9 and IAS39, but reliefs are provided over prospective and retrospective assessments during the period of IBOR uncertainty; and
 - Disclosures required in the financial statements.

Phase 2 (Post IBOR replacement)

- Amendments to PSAK 71, PSAK 55, PSAK 60 – financial instruments, PSAK 62 (IFRS 4) – Insurance contracts and PSAK 73 (IFRS 16) - Leases
 - Draft ratified in ID on 16 Oct 2020. Effective for year ends commencing after 1 January 2021 with early application permitted.
-
- Addresses effects of changes in contractual cash flows or hedging relationships that arise from replacing the benchmark interest rate with a new alternative reference rate; or changes in the basis for determining contractual cash flows of financial assets, financial liabilities and lease liabilities.
 - Applies only to changes required by the reform of the benchmark interest rates for financial instruments and hedging relationships

IASB relief – Loan modifications

Existing requirement

- A change in contractual cashflows generally triggers a P&L outcome (or de-recognition event)
- This arises as new modified cashflows are required to be discounted at the **original contract** effective interest rate (EIR)

What is the relief?

- Practical expedient: If the change is required by IBOR reform, modified cashflows are discounted at the **revised contract EIR**
 - No change to carrying amount, **and no P&L**
- If there are other modifications, first apply this practical expedient for IBOR related changes (refer to case study 2)

2 concepts for relief:

The change is a **direct consequence of interest rate benchmark reform**. eg –

- (a) Contract terms amended for new rate
- (b) Change in method of calculation of benchmark rate (but no contract change)
- (c) Existing fallback clause is triggered

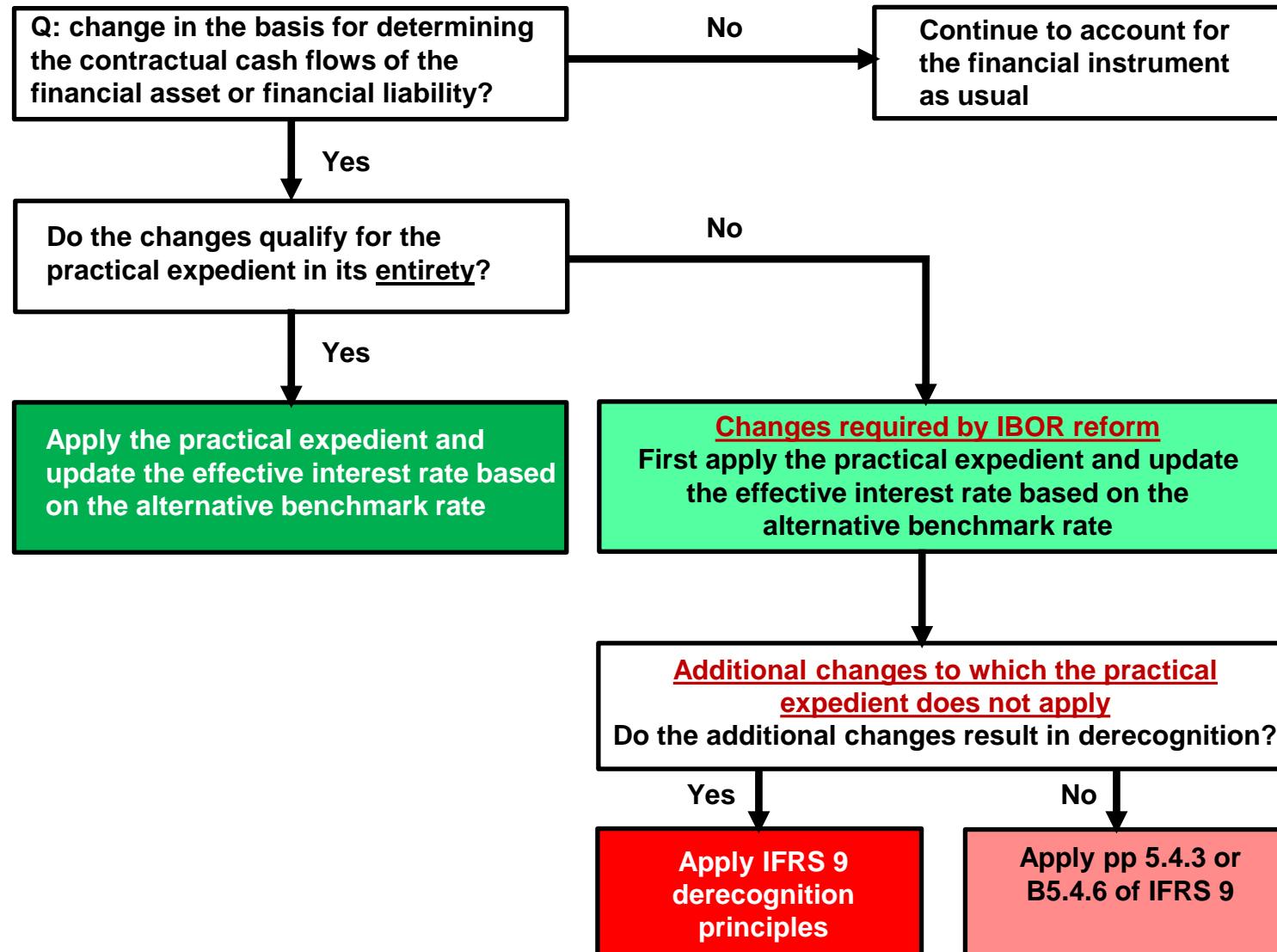
AND

Contractual cash flows are '**economically equivalent**' to previous, eg –

- (a) replace existing rate with new rate plus fixed spread
- (b) change to reset periods and dates to implement the reform
- (c) addition of fallback provisions

Judgement required

Relief – Loan modifications 2 step approach



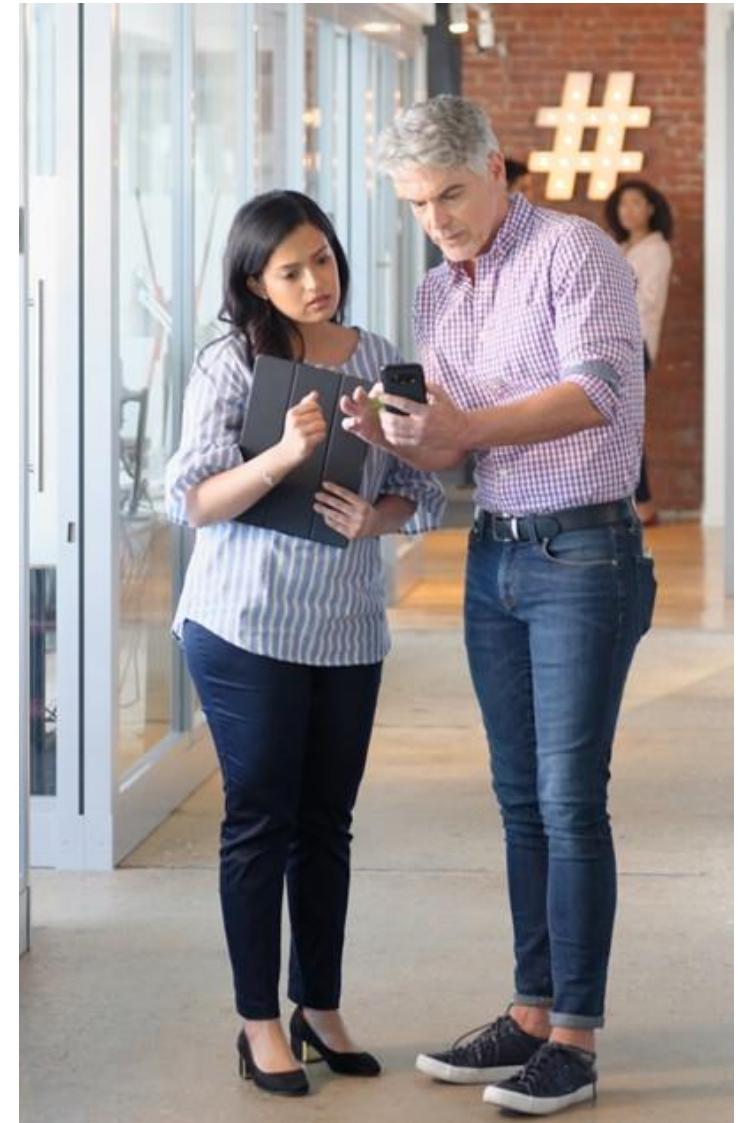
Loan modifications – case study 1

Scenario 1: change only as a result of IBOR reform.

	Original contract	Amended contract*
Loan amount	100bn	100bn
Interest rate	3m JIBOR + 100bps	IndoNIA + Fixed spread + 100bps
Payment convention	Interest set in advance (3m)	Compounded in arrears (with 2 day observation shift)
Maturity	Jan 2023	Jan 2023
Analysis		
Contractual interest rate	4.85% p.a	4.75% p.a
EIR	4.85% p.a	4.75% p.a
NPV (gross carrying amount)	100bn	100bn

Impact: Update the effective interest rate for changes - **NO P&L impact**

*amendment could be in the form of a new agreement with an amendment directly to interest rate which will be effective from amendment date or update to the fallback rate which would be generally effective from the date it is announced that the JIBOR rate is “no longer representative”.



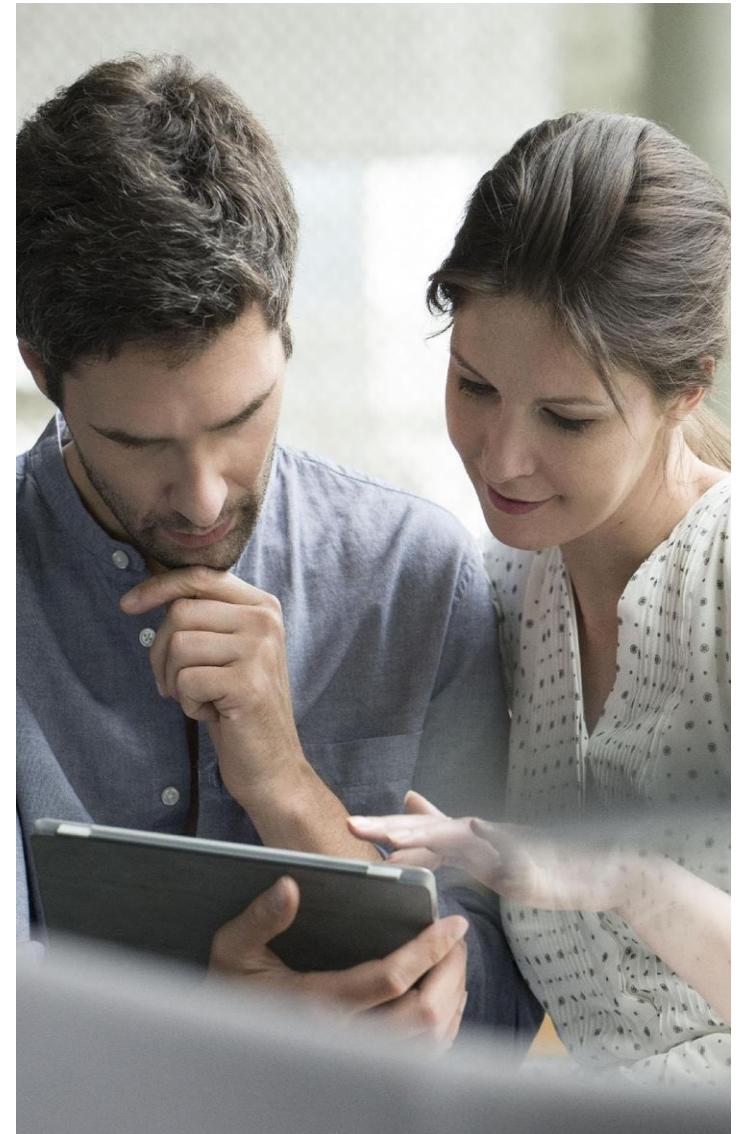
Loan modifications – case study 2

Scenario 2: modification also include changes not a result of IBOR reform.
i.e. due to COVID-19 borrower requested an interest free window and term extension for final payment.

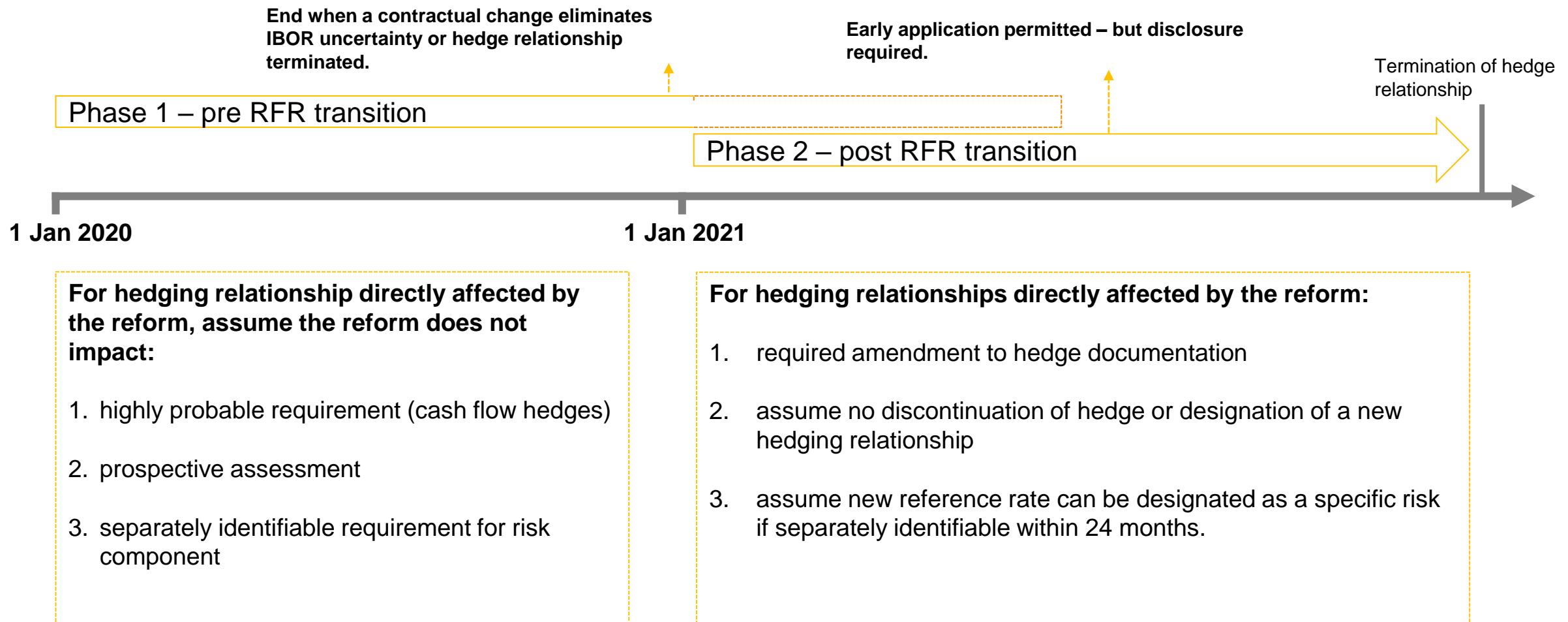
	Original contract	Amended contract
Loan amount	100bn	100bn
Interest rate	3m JIBOR + 100bps	IndoNIA + Fixed spread + 100bps (one year interest free window in 2021)
Payment convention	Interest set in advance (3m)	Compounded in arrears (2 day observation shift)
Maturity	Jan 2023	Jan 2024

Analysis		
Contractual interest rate	4.85% p.a	4.75% p.a (from 2022)
EIR	4.85% p.a	4.75% p.a
NPV (gross carrying amount)	100bn	96.5bn

Difference between the original and new NPV reflected in P&L (3.5bn) as the value of the interest free window



IASB relief – Hedge accounting



Hedge Accounting

To stay substantially fully matched you will have to achieve all of the following...

Same rate that the loan and derivative are calculated on (e.g. JIBOR, IndONIA, etc)

1

Transition timing: loan and derivative transit to new rate at the same time

2

Substantially Fully matched?

**Interest
Calculation**

4

mechanism of loan and derivative is the same (e.g. “forward looking” or “backward looking compounding”)

3

No other modifications to loan.

Hedge Accounting

Careful of mismatches and issues! e.g.

- Loan contract – defaults to a rate which is not matched on the swap side
- Forward looking vs backward looking rates
- Not just rates, but also calculation basis, payment mechanisms

Even if hedge accounting may continue, ineffectiveness must still be accounted for in the P/L.

Sufficient liquidity for Term IndoNIA to emerge?

Sharia accounting considerations

Sharia principle of ‘gharar’ requires upfront certainty on all fundamental contract terms in asset-based transactions, including certainty of pricing.

- **Backward looking RFRs**
- **Fallback provisions to Cost of Funds rate?**

Tax considerations

No special tax laws or rulings on this topic in Indonesia to-date

Key questions

- Does a reference rate change to an existing contract cause a **deemed taxable exchange**?
- What are the impacts of **credit spread adjustments** and **one-time payments**?
- How could IBOR transition impact **transfer pricing** and **intercompany transactions**

Opportunities and considerations

- For existing instruments with scheduled maturities beyond 2021 that provide for LIBOR based payments, it is widely anticipated that these **contracts will be modified or settled early in conjunction with a replacement contract**. Counterparties should carefully consider whether the new terms could result in a taxable exchange.
- How will **product needs change** for financial institutions and their clients, and what are the **tax implications** of these changes. Can changes be optimized for tax?
- Modification of an instrument or contract to replace an IBOR must account for the differences between the IBOR and new reference rate, and may include an **additional one-time payment** because of a reduction in periodic payments. The **source and character** of this payment could result in taxable events.
- Group debt arrangements – consider tax transfer pricing or interest restriction rules. Will the new rate be considered arm's length?

Thank you

pwc.com

© 2019 PwC. All rights reserved. Not for further distribution without the permission of PwC. "PwC" refers to the network of member firms of PricewaterhouseCoopers International Limited (PwCIL), or, as the context requires, individual member firms of the PwC network. Each member firm is a separate legal entity and does not act as agent of PwCIL or any other member firm. PwCIL does not provide any services to clients. PwCIL is not responsible or liable for the acts or omissions of any of its member firms nor can it control the exercise of their professional judgment or bind them in any way. No member firm is responsible or liable for the acts or omissions of any other member firm nor can it control the exercise of another member firm's professional judgment or bind another member firm or PwCIL in any way.

IBOR TRANSITION SERIES:

A LOCAL MARKET PERSPECTIVE INDONESIA IBOR TRANSITION

(IN COLLABORATION WITH INDONESIA
FOREIGN EXCHANGE MARKET COMMITTEE)

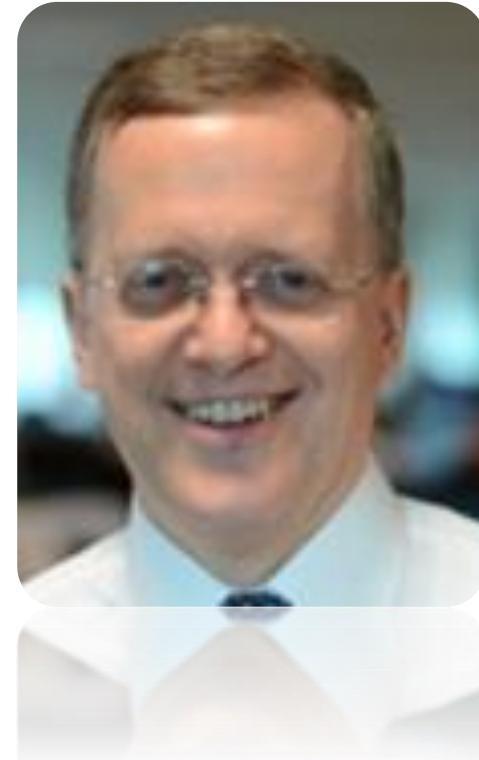
Lead Sponsor



Endorser

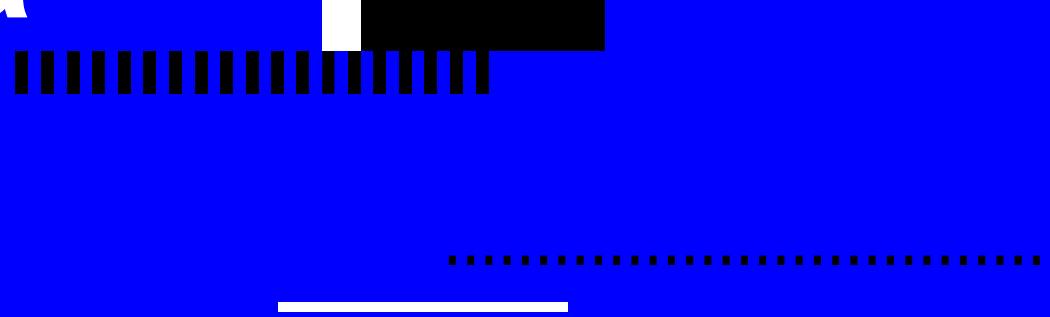


Closing Remarks:



Steve Dean
President Director
Refinitiv Indonesia

ASIFMA: Indonesia IBOR Transition



Closing Comments

Steve Dean / Refinitiv

16 December, 2020

Ever Evolving content for LIBOR Transition

<LIBOR> Transition App in Eikon

						OIS (Underlying based on RFR rate)					
Currency	IBOR Instrument	RFR Instrument	RFR Instrument Code	RFR Publication time (Local)	Example Fallback RIC	Refinitiv Composite	Specialist	OIS Zero curve	Term Rates	Compound Index	Futures
USD	LIBOR USD	SOFR	USDSOFR=	08:00 EST/EDT	USDONFSRF=ISDA			USDSROIS=TWEB, RCM, TRDL, SX, TPSR, TRHK	0#USDSROISZ=R		.SOFR, SOFR1MAVG=, SOFR3MAVG=, SOFR6MAVG=
GBP	LIBOR GBP	SONIA	SONIAOSR=	09:00 London Time	GBPONFSRF=ISDA	GBPOIS=	GBPOIS=ICAP, TTKL, TWEB, TRDL, MBGL	0#GBPOISZ=R	GBPTRR=RFTB	.SONIA	0#SON:
CHF	LIBOR CHF	SARON	SARON.S	18:00 CET	CHFSNFSRF=ISDA	CHFOIS=	CHFOIS=ICAP, BGCP, TWMK,	0#CHFOISZ=R		.SAR1MC, .SAR3MC, .SAR6MC	0#SARON:
JPY	LIBOR JPY	TONA	JPONMU=RR	10:00 JST	JPYSNFSRF=ISDA	JPYOIS=	JPYOIS=ICAP, SMKR, YMPR, TKFX	0#JPYOISZ=R	JPYTRR=		
AUD	BBSW	RBA Cash Rate	AUCASH=RB AA	09:00 AEST/AEDT	AU1MBAF=ISDA	AUDIOIS=	AUDIOIS=ICAA, SMKR, TTKA, BGCP, FMD	0#AUDIOISZ=R			
CAD	CDOR	CORRA	CORRA=	09:00 ET	CA1MBAFIXF=ISDA	CADOIS=	CADOIS=ICAP, SMKR, FMD, GCMN, TRDL	0#CADOISZ=R			0#CRA:
EUR	EURIBOR	€STR	EUROSTR=	08:00 CET	EURIBORSWDF=ISDA	EURESTOIS=	EURESTOIS=ICAP, TRDL, BGCP, TPEU	0#EURESTOISZ=R			0#EON:
HKD	HIBOR	HONIA	HONIA=	17:00 Hong Kong Time	HIHKDOND=ISDA	HKDOIS=	HKDOIS=TRHK, PREA, NITC				

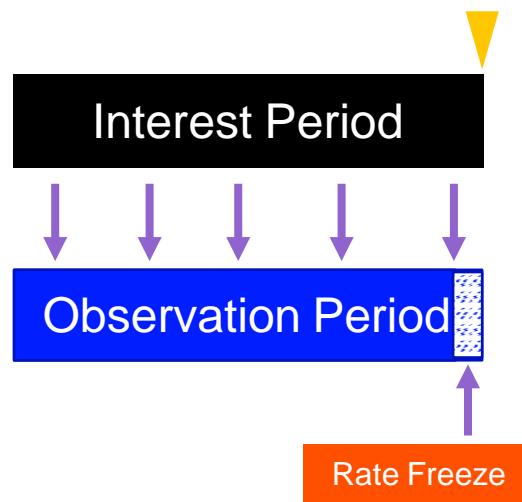
Solutions for Loan/Bond markets

Compounding Approaches, until term structure for RFR evolves

- Based on the type of cash product or derivative, there could be multiple ways to put in a payment structure
- Key Decision variables : What is the **Observation Period** ? What is the **Interest Period** ? What is the **lag / lockout** ?

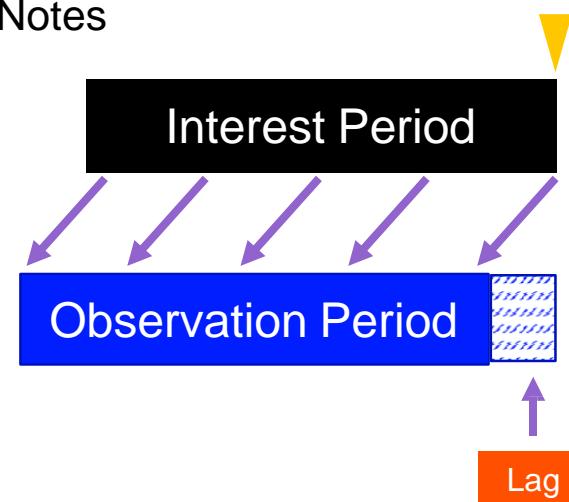
Payment Delay with Lockout

- Interest Rate value frozen a few days before the payment date
- Floating Rate Notes (2-5 days)
- SOFR-referenced Floating Notes



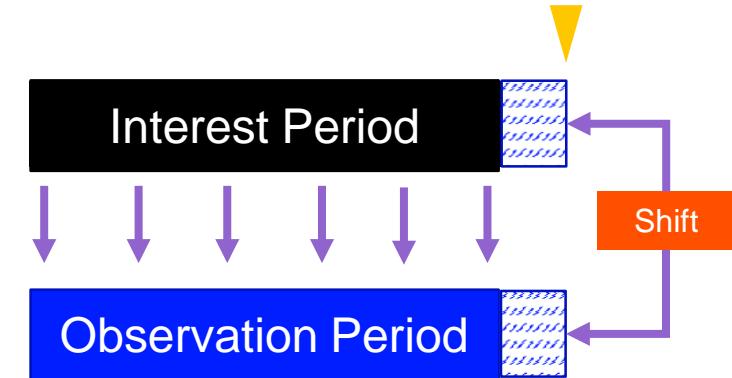
Lookback

- Interest Rate value lagged by a certain number of business days
- Standard Lag is 5 business days
- SONIA/SORA-referenced Floating Notes



Backward Shift

- Interest Rate values and Interest Period is shifted backwards
- Standard Shift is 5 business days
- Similar to OIS market conventions



Solutions for derivatives

Price new RFR based derivatives and quantify the impact of transition

Use new RFR OIS Zero Coupon based Curves in Calculators

The screenshot shows the Swap Picer SWPR software interface. The main window title is "Swap Picer SWPR". A banner at the top says "NEW Capped / Floored Swaps Now in Beta - Please Click Here". The currency is set to "USD" and the swap type is "OIS: Fixed - Float". The start date is "Feb 27, 2020" and the tenor is "5Y". The valuation date is "Feb 25, 2020" and the maturity date is "Feb 27, 2025". The swap details show Leg 1 Notional as 10,000,000.00 and Leg 2 Notional as 10,000,000.00. The "VALUATION" section displays NPV as 0.00, Premium as 0.00, Par Rate (%) as 0.9960, Principal Value as 0.00, Accrued as 0.00, and Market Value as 0.00. The "RISK" section shows DV01 as -4,851.62, Annuity as -4,918.37, Modified Duration as -4.85, and BP DV01 as -4.85. The "SWAP RESULTS" section shows the same values as the valuation section. The "ZERO CURVE" section has two tabs: "Discount Curve" and "OIS SOFR". The "LEG RESULTS" section shows Fixed Rate (%) as 0.9960, NPV / Premium as -489,869.33, Accrued as 0.00, and Market Value as -9,999,121.51. The "RISK" section shows PVBP / DV01 as -144.82, -4,857.05, PVBP / DV01 as -4,706.80, and 5.43.

Click the Curves in Zero Curve and change to OIS SOFR (USD), €STR (EUR) or SONIA (GBP)



A big thank you to all the speakers,
panelists and participants today

Thank you for attending!

We hope to see you at our next event:



www.asifma.org/events