IBOR transition

FTA Essential Treasurer

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Building a better working world

Topics

1 Background

What is the IBOR transition?

- Coordinated effort by global regulators and major banks to phase out the use of **interbank offered rates** (IBORs) across financial contracts
- London Interbank Offered Rate (LIBOR) is the best known IBOR
- Consensus that LIBOR will not be reliably published beyond 2021
- This a big deal!

LIBOR is used to price ~USD 370 trillion of financial contracts daily

Key reference rate for both cash + derivative products

Widely used by Australian firms for funding and hedging instruments

Extensively embedded across products, contracts, systems, models

Why are the IBORs going?

- Key feature of the IBORs is that they are submission based
- Panel banks submit quotes to a benchmark administrator
- Has led to concerns around IBOR reliability and robustness since the GFC:

1. Diminished liquidity in unsecured interbank funding markets >> largely driven by bank liquidity reforms requiring banks to be longer funded
2. Panel banks reluctance to submit quotes based on expert judgement >> fear of litigation risk
3. Market manipulation and misconduct by panel banks >> criminal convictions and fines

Broad consensus that transaction-based benchmarks are required to enhance systemic stability and restore market confidence

An aside: BBSW

Structural efforts to improve the robustness and longevity of BBSW have put the current Australian benchmark on a solid footing:

- ASX, as new administrator, has implemented a new transaction-based calculation methodology
- ASIC reforms, compelled rules
- RBA support, along with the RBA Interbank Overnight Cash Rate (Cash Rate or AONIA)

What is happening?

» Financial Stability Board (FSB) leading IBOR phase-out efforts since 2013
» Working groups established for key IBOR currencies

UK	US	EU			Switzerland	Japan	
GBP LIBOR	USD LIBOR	EURO LIBOR	EONIA	EURIBOR	CHF LIBOR	JPY LIBOR	JPY TIBOR, EUROYEN TIBOR
Working Group on Sterling Risk-Free Reference Rates (RFRWG)	Alternative Reference Rates Committee (ARRC)	Working Group on Euro Risk-Free Rates (WGERFR)			The National Working Group on Swiss franc Reference Rate (NWG)	Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks (CJYIRB)	

» Reform efforts (governance, tech; "IBOR+") failed due to thin liquidity. The focus is now on:

Selecting nearly risk-free alternative reference rates (ARRs) conforming to IOSCO benchmark principles	**Done**
Enhancing fallback provisions for IBOR-linked contracts	**In Progress**
Promoting transition to the ARRs	**In Progress**

FCA's position has accelerated transition efforts >> will not persuade or compel banks to make LIBOR submissions from end-2021

② IBOR Impacts

The biggest impacts?

1. New investment, funding and hedging products

2. Contracts, basis and legal disputes

High-level example:

- » AU corporate has raised USD-LIBOR funding (FRN)
- » Exposure swapped back to AUD via a cross-currency IRS
- » Both FRN + derivative maturities align

Scenario 1:	Scenario 2:
Cash product and derivative mature before 31 Dec 2021 >>> OK	Cash product and derivative mature post 31 Dec 2021 >>> no refreshed price on 1 Jan 2022!!! Price derived from fallback provisions (if they exist!) >> designed for temporary disruptions only + legally unenforceable! Some possible outcomes: » Floating-rate instruments convert to fixed (e.g., last published LIBOR price) » Fallback rates between FRN and CCIS differ >> hedge dislocation (economic risk + break in hedge accounting)

The biggest impacts?

How to avoid Scenario 2?

1. Trade out of positions – **but who will buy them up?!**

2. Derivative compression exercises (maybe) – **likely for clearing members only**

3. Amend contract terms **– most realistic option.**

   Can amend either:

   » **The reference rate itself (to an ARR-linked benchmark); or**

   » **The fallback**

ARR structural challenges

The ARRs are very different from the IBORs in that they are:

1	Overnight rates	Term ARRs are being proposed for some currencies >> approaches uncertain and controversial	Will illiquidity in the swaps/futures market lead to the same systemic risks as with the IBORs?
2	Nearly risk-free	No credit risk spread Behaviourally very different in times of economic stress	

- These structural differences mean that trigger events will likely result in a **value transfer**, either upon renegotiation itself or fallback trigger event

- Therefore >> ARR amendments for term and credit spreads are in consultation

2. International Swaps and Derivatives Association

ARR logistical challenges

Derivatives	Cash products
» To be the most straightforward given standardised fallbacks + ISDA protocol » Volume will be a challenge + bilateral renegotiation where counterparties choose to not to adhere to the protocol	» More cumbersome » Little fallback standardisation between products and within products » Little scope for multilateral “ISDA-like” protocols » Often multilateral contracts require a quorum or unanimous consent to contractual changes » Multiple product and industry working groups with different interests (e.g., LMA vs. ARRC)

- **The potential for legal contract frustration is high!**
- **The potential for litigation where firms are perceived to not have treated clients fairly is also high!**

2. International Swaps and Derivatives Association

3 IBOR market developments

IBOR Market Developments

Fallback approaches: Term + credit adjustments

ISDA fallback consultation

Consulted in 2H 2018 for GBP LIBOR, CHF LIBOR , JPY LIBOR, TIBOR, Euroyen TIBOR and BBSW

Adjustment A: term to overnight rate	Adjustment B: credit premium
Compounded setting in arrears rate, daily compounded ARR observed over the IBOR tenor period taking into account actual daily interest rate movements during the relevant period	**Historical Mean/Median Approach,** based on the mean or median spot-spread between the IBOR and the ARR over a 5 or 10 year historical lookback period going into effect after a one year transitional period after the fallback rate takes effect

The setting in arrears option selected means would impact corporates' budgeting capability, especially if mirrored in cash products!

New derivative transactions entered on or after the date of the Supplement will automatically include amended floating rate option fallback language

Legacy derivative transactions entered before the date of the Supplement can be amended to include the same amended floating rate fallback language only if both parties voluntarily adhere to the Protocol

Consultation for USD LIBOR, EUR LIBOR and EURIBOR due 1H 2019

ARRC & LMA fallback consultations for cash products

IBOR Market Developments

Fallback approaches: Trigger types

ISDA trigger (cessation) - The relevant rate does not appear on the relevant screen page (e.g., Bloomberg or Reuters) or is unavailable.

ARRC cash products (pre-cessation) - Pre-cessation trigger events or Benchmark Discontinuance Events (BDEs):

Benchmark Discontinuance Events
1. Public notice by benchmark administrator that it has ceased or will cease to provide benchmark permanently/indefinitely
2. Public notice by regulatory supervisor/central bank/court with power over benchmark administrator that it has ceased or will cease to provide benchmark permanently/indefinitely
3. Other than temporary failure by benchmark administrator to publish benchmark rate for five consecutive business days
1. Public notice by benchmark administrator that it has invoked or will invoke its insufficient submission policy permanently/indefinitely
1. Public notice by regulatory supervisor of benchmark administrator that benchmark is no longer representative/may not be used

In a floating-rate hedging derivative scenario, early trigger of cash product fallback would expose counterparties to uncertain period of fixed-rate payments instead

IBOR Market Developments
ARR term rates

- » Corporate working group participants lobbying hard for term floating ARRs to ensure certainty of cash flows in advance
- » Debate around whether term rate should be backward- or forward-looking
- » ISDA fallbacks promoting backward-looking
- » Forward-looking has its risks – will illiquidity in the swaps/futures market lead to the same systemic risks as with the IBORs?

	Potential Approaches	Type	Key Consideration
1	**Daily compounded average of the realised daily ARR fixings** over the desired tenor, or payment frequency	Backward-looking	Potential operational implications for interest payable not being known until the end of the payment period
2	**Fixed leg of a set of maturity OIS swap contracts** (e.g. 3 or 6 month)	Forward-Looking	Requires robust and liquid OIS swap market for the ARRs.
3	**Interpolate between settlement dates of ARR futures order book**	Forward-Looking	Requires robust and liquid futures market for the ARRs

Other developments

ARR-linked issuance

Type	UK	US	EU	CH	JAPAN	AUSTRALIA
Gov	X	X	X	X	X	X
Semi-Gov	✓	✓	X	X	X	X
Banks	✓	X	X	X	X	X
Corporates	X	✓	X	X	X	X

Cash Rate-linked issuance

Note that RBA Cash Rate-linked FRN is in the pipeline from South Australian Government Financing Authority

"For some financial products, it can make sense to reference a risk-free rate instead of a credit-based benchmark. For instance, floating-rate notes (FRNs) issued by governments, non-financial corporations and securitisation trusts, which are currently priced at a spread to BBSW, could instead tie their coupon payments to the Cash Rate."

Guy Debelle, Deputy Governor of the Reserve Bank of Australia, 15 May 2018

Other developments

What will happen to cross-currency markets?

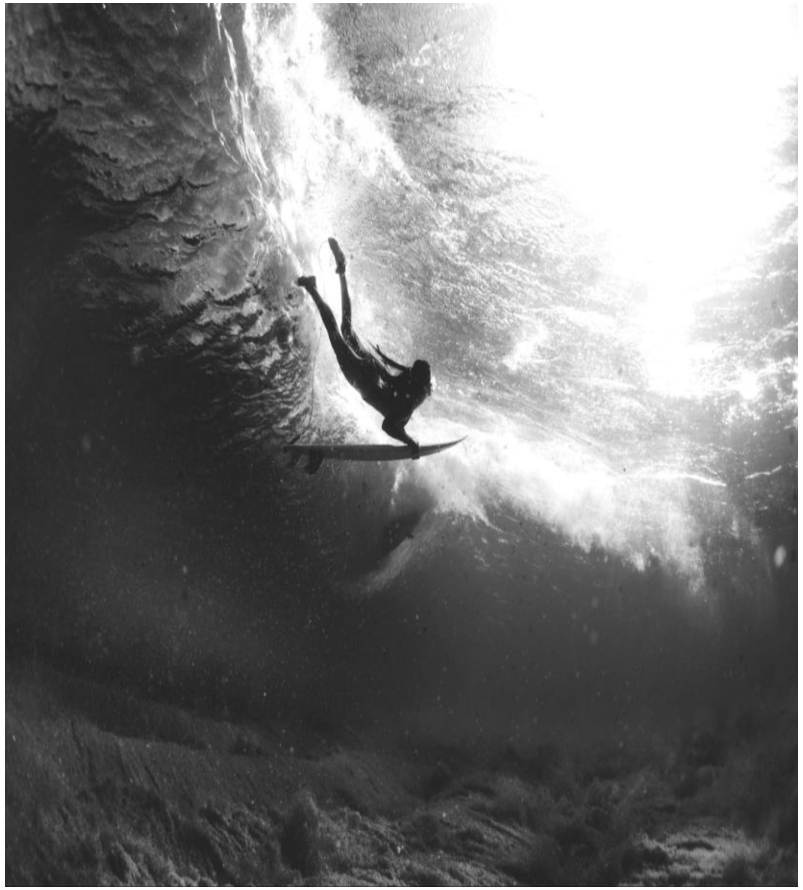
How will Australian firms issuing SOFR-linked debt swap USD cash flows into AUD? SOFR-BBSW CCIRS?

Risk-free vs. credit-based legs? Will liquidity shift from BBSW towards the RBA cash rate?

Futures/swaps

- Futures contracts have been launched referencing some ARRs by the likes of CME Group and the Intercontinental Exchange (ICE)
- SOFR and SONIA swaps are also being cleared by LCH and CME Group

4 Key challenges



Key challenges

Legal and contract renegotiation	» Logistics of repapering with clients, counterparties and 3rd parties » Litigation, as a participant, or from customers » Alignment of transition timing between hedged and hedging items
New product development	» Remodelling and repricing client products » Issuing new products to maintain market share
Risk Management	» Managing basis risks associated with: 1. Discrepant fallback rates between hedging and hedged items 2. Credit spread differentials (e.g. cross-currency interest rate swaps with both risk-free and credit-based legs) 3. Timing discrepancies related to ARR adoption, fallback trigger events, contractual renegotiations between cash products and their hedging derivatives, or payment and calculation day count terms between cross-currency swap legs 4. Term differentials between overnight ARR-linked derivative contracts and term ARR cash products (in the event an ARR term structure develops) » Monitoring value transfer potential for legacy contracts » Liquidity management and cash flow forecasting (with compounding in arrears)

Key challenges

Funds transfer pricing (FTP)	» Implementing new FTP methodologies and systems to reflect a multi-rate environment, with simultaneous exposure to IBORs (legacy book) and ARRs (new product book) across assets, liabilities, and funding arrangements » Constructing relevant cost of funds curves for foreign currency assets and liabilities » Understand the impact of IBOR transition on future product pricing and existing product margin
Accounting	» Impacts on the fair value of financial and non-financial instruments, including debt, derivatives, goodwill, employee share schemes, leases, etc. » Accounting for potential de-designation and re-designation of hedges due to changes in the hedged risk and its associated documentation » Levelling impacts (i.e., potential Level 3 classification) for illiquid IBOR-linked instruments
Tax	» Termination, amendments, or revaluation of financial instruments may entail immediate tax recognition >> potentially acceleration of tax payments.

Key challenges

Systems, infrastructure and models

- Need to be able to trade, book, settle, margin, clear and risk manage new ARR-linked products
- Cash flow forecasting with compounding in arrears
- Trade data repositories, data providers and middleware, core retail and commercial banking systems, and non-financial corporate systems
- New interest rate derivative models for curve construction and pricing
- Non-interest rate derivative, risk models and business models that rely on interest rate ‘feeder’ models

3rd-party vendor platforms to be prioritised

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Preparing for the transition

Preparing for the transition

Firms must proactively prepare!

1. Identify and nominate a senior executive – IBOR transition executive
2. Mobilise an IBOR transition program
3. Conduct a comprehensive impact assessment across: products, contracts (all types), systems, models
4. Prepare to offer new products and financial instruments linked to ARRs
5. Develop an inventory of legacy exposures and contracts that mature after 2021
6. Define an enterprise-wide governance framework
7. Define a knowledge and education strategy
8. Define an outreach and communication strategy to counterparties, lawyers, auditors, agencies, system providers, and regulators
9. Communicate to the board and executive management committee
10. Prepare for onsite supervisory examination (financial services firms)

Consider:

» Dynamic monitoring tools
» IBOR exposure reporting dashboards
» Contract digitisation

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