Alternative Reference Rates Committee (ARRC)
Minutes for the May 16, 2019 Meeting

1. The ARRC Chair welcomed CFTC Commissioner Rostin Behnam and thanked the CFTC for its support of the LIBOR transition effort. The Chair then asked for updates from various working groups:

   A co-Chair of the Regulatory Issues working group noted that the ARRC had submitted a follow-up letter to its July 2018 letter to U.S. regulators regarding regulatory issues associated with the transition of derivatives contracts from interbank offered rates (IBORs) to alternative risk-free benchmarks.

   Fed staff noted that in consultation with other national working groups and industry associations, a subgroup of the ARRC's Market Structure & Paced Transition working group had prepared a document (Attachment 1) detailing a potential approach for the use of risk-free rates in interdealer cross-currency swaps and that the International Swaps and Derivatives Association (ISDA), Securities Industry and Financial Markets Association (SIFMA), Association for Financial Markets in Europe (AFME), and Global Financial Markets Association (GFMA) would use the document to conduct further market consultation. Fed staff also noted that at the working group's last meeting, LCH and CME had discussed their intentions to move to a "big bang" approach to PAI and discounting based on conversations with their members and other market participants. Such an approach would move directly to SOFR PAI and discounting for both new and legacy cleared transactions rather than the more gradual multi-stage approach outlined in the original Paced Transition Plan. Members of the working group were supportive and there was a consensus that it would be useful for the group to further discuss areas in which coordinating approaches to the "big bang" across central counterparty clearing houses (CCPs) could be beneficial to the market at upcoming meetings. The ARRC Chair encouraged the approach, noting a "big bang" would help to accelerate the development of liquidity in SOFR-linked derivatives.

   The Chair of the Consumer Products working group noted that the group had drafted a document proposing guiding principles and defining the scope of work for the group in consultation with ex-officio members. The Chair of the Consumer Products working group noted that while the group will rely on many of the guiding principles released by the ARRC last year, special considerations should be taken into account given that the group's work would impact retail consumers. The ARRC approved the proposed guiding principles and scope of work. The Chair of the working group also provided an overview of the group's proposed model for new SOFR adjustable rate mortgages (ARMs). Fed staff requested that ARRC members provide feedback on the proposed model.

2. The ARRC Chair thanked members for their efforts in developing fallback language for cash products and noted the recent attention that the first set of final recommended language received from market participants and the press. The ARRC Chair noted the importance of safer fallback language and urged member firms to act as role models in considering the ARRC's recommended fallback language in their issuances. The co-Chairs of the Business Loans and

Securitizations working groups then presented their groups' work on developing fallback contract language for market participants' voluntary use in new issuances of bilateral business loans and securitizations. ARRC members subsequently approved the recommended language, which has been released.

3. The ARRC representative from ISDA highlighted their two recently launched consultations: the first on spread and term adjustments for fallbacks in derivatives contracts referenced to U.S. dollar LIBOR, CDOR and HIBOR (which were not covered in ISDA's 2018 consultation) and certain aspects of fallbacks for SOR (because it uses USD LIBOR as an input) and the second on pre-cessation issues in the event that LIBOR or certain other IBORs are deemed to be non-representative. Fed staff noted that the Financial Stability Board's Official Sector Steering Group (OSSG) had encouraged ISDA to consult on pre-cessation issues and that the OSSG had suggested that it would be helpful to include a pre-cessation trigger in the ISDA definition amendments and protocol and also noted that inclusion of such a trigger would help to align ISDA's fallbacks with the ARRC fallback recommendations for cash products. The discussion concluded with the ARRC Chair, Fed staff, and many ARRC members noting the importance of responding to the ISDA consultations, even if only to affirm views expressed during the prior consultation, so that a clear consensus can emerge based on a full set of market views.

4. ARRC members discussed whether there was a need for a mechanism to provide clarity to all market participants when a trigger event takes place.

5. A co-Chair of the Legal working group provided an update on the group's work with Cadwalader concerning potential legislative relief with respect to legacy U.S. dollar LIBOR-linked products. The co-Chair noted that the group would continue its review and report back to the ARRC at the June meeting.

6. Fed staff reviewed the agenda for the Roundtable co-hosted by the ARRC and NYU on June 3, 2019.[1]

7. Fed staff noted that the Operations/Infrastructure working group had been established and would begin to hold regular meetings to address challenges related to the transition away from LIBOR. Fed staff also noted that the ARRC would soon announce a Vendor Workshop that would take place on June 28, 2019 so that the Operations/Infrastructure working group can collaborate with key vendors of software and technology that are critical to operationalizing the transition away from LIBOR and facilitating the use of SOFR.

[1] A recording of the roundtable is posted on the ARRC's website.

Attendance at the May 16, 2019 Meeting

ARRC Members	
American Bankers Association	Hu Benton
AXA	Julien Zusslin*
AXA	Rudolph Shally
Bank of America	Alex van Voorhees
Bank of America	Paul Scurfield*
BlackRock	Jack Hattem
Citigroup	Dina Faenson
Citigroup	Jeannine Hyman
CME	Agha Mirza
CME	Fred Sturm
CRE Finance Council	Raj Aidasani
Deutsche Bank	Vishal Mahadkar
Fannie Mae	Nadine Bates
Fannie Mae	Wells Engledow*
Federal Home Loan Banks, through FHLBNY	Phil Scott
Freddie Mac	Ameez Nanjee
GE Capital	Michael Taets*
Goldman Sachs	Jason Granet
Government Finance Officers Association	Emily Brock*
HSBC	Neil Middleton
Independent Community Bankers of America	Chris Cole*
Independent Community Bankers of America	James Kendrick*
Intercontinental Exchange	Harvey Flax
International Swaps and Derivatives Association	Ann Battle
JP Morgan	Alice Wang
JP Morgan	Andrew Gray
JP Morgan	David Beck
JP Morgan	John Horner
JP Morgan	Katie Morgan*
JP Morgan	Keith Stephan*
JP Morgan	Perry Elbadrawi*
JP Morgan	Terry Belton*
LCH	Phil Whitehurst*
Loan Syndications and Trading Association	Meredith Coffey
Loan Syndications and Trading Association	Tess Virmani*
MetLife	Jason Manske*
MetLife	Kevin Budd*
Morgan Stanley	Maria Douvas-Orme
Morgan Stanley	Tom Wipf
National Association of Corporate Treasurers	Tom Deas
Pacific Investment Management Company	Tracey Jordal*
Pacific Investment Management Company	Courtney Garcia*
Pacific Investment Management Company	Scott Goodman*

Prudential Financial	Chris McAlister*
Prudential Financial	John Vibert
Prudential Financial	Jason Pan
Securities Industry and Financial Markets Association	Chris Killian
Structured Finance Industry Group	Sairah Burki*
TD Bank	Priya Misra
Wells Fargo	Alexis Pederson
Wells Fargo	Brian Grabenstein
World Bank Group	Don Sinclair*

Ex-Officio ARRC Members

Consumer Financial Protection Bureau	Abhishek Agarwal
Commodity Futures Trading Commission	Commissioner Rostin Behnam
Commodity Futures Trading Commission	Sayee Srinivasan*
Federal Deposit Insurance Corporation	Irina Leonova
Federal Housing Finance Agency	Dan Coates
Federal Reserve Bank of New York	Adhiraj Dutt
Federal Reserve Bank of New York	Betsy Bourassa
Federal Reserve Bank of New York	Caren Cox
Federal Reserve Bank of New York	Nathaniel Wuerffel
Federal Reserve Bank of New York	Ray Check
Federal Reserve Bank of New York	William Riordan
Federal Reserve Board of Governors	Chiara Scotti
Federal Reserve Board of Governors	David Bowman
Federal Reserve Board of Governors	Diana Iercosan
Federal Reserve Board of Governors	Evan Winerman*
Office of Financial Research	Matt McCormick*
Office of the Comptroller of the Currency	Kevin Walsh*
U.S. Securities and Exchange Commission	David Metzman
U.S. Securities and Exchange Commission	Michelle Danis*
U.S. Treasury	Chloe Cabot
U.S. Treasury	Peter Phelan

Observers

BNP Paribas	Simon Winn
Cadwalader	Jonathan Hoff
Cadwalader	Lary Stromfeld
Morgan Lewis	Jon Roellke*
Venerable	Charles Schwartz

*Indicates participation by telephone

Attachment 1

May 2019

Preliminary Recommendations for Interdealer Cross-Currency Swap Market Conventions

Developed for Wider Consultation by the Market Structures Working Group of the Alternative Reference Rates Committee in Cooperation with other National Working Groups and Associations

Introduction

In August 2018, the Market Structures working group of the Alternative Reference Rates Committee (ARRC) formed a subgroup of buy side, sell side, and intermediary market participants to discuss potential technical specifications for interdealer trading of cross-currency basis swaps that reference overnight risk-free rates (RFRs) designated by the ARRC and similar National Working Groups (NWGs) in other jurisdictions. Members of several other NWGs participated in this work, including the Sterling Risk-Free Rates Working Group, the Swiss National Working Group, the working group on euro risk-free rates, the Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks, and the Canadian Alternative Reference Rates Working Group. The Australian Financial Markets Association, the International Swaps and Derivatives Association (ISDA), representatives of a number of central banks, clearing and settlement infrastructure providers, and participants in other markets also joined in the subgroup's discussions.

The aim of this document is to summarize the subgroup's work to date and to encourage other market participants to provide feedback on potential conventions for interdealer trading of RFR-RFR and RFR-IBOR cross currency swaps. In addition, the group has discussed with ISDA the potential benefits of a template that would allow market participants to ensure, if they desired to do so, that both legs of a legacy cross-currency swap referencing IBORs would move to successor rates at the same time.

The group is working with several industry trade associations to receive wider feedback from market participants on this document and the market conventions described herein. Any final recommendations of the ARRC with respect to any such market conventions will be for the market's consideration only; the counterparties to any given contract will ultimately determine for themselves the contract's specifications and whether or to what extent any recommended market conventions are adopted.

1. Potential conventions for an RFR-RFR dealer-to-dealer cross currency basis swaps

Current cross-currency swap markets are well established and typically based on LIBOR (or similar) interest rate benchmarks. As RFR single currency markets develop, corresponding cross-currency markets will need to develop as well to complement and support the use of RFRs. While there are pre-existing cross-currency swap markets based on overnight rates (for example, cross-currency swaps based on EONIA and the effective federal funds rate), these instruments are not widely traded or very liquid and tend to be used in dealer-to-customer trades rather than in interdealer transactions.

The conventions and options proposed below were developed in the context of dealer-to-dealer transactions. End users in the subgroup noted that they frequently negotiate bespoke terms for cross-currency and other swaps to meet their underlying needs, and that any conventions recommended or adopted for interdealer transactions may not be suitable for dealer-to-customer or customer-to-customer transactions. For that reason, the conventions described herein are intended for dealer-to-dealer transactions; they are not, however, intended to suggest that swaps traded pursuant to these conventions should trade on any particular platform or that customers could not directly trade swaps with these terms. In addition, the conventions described in this document are aligned with underlying single-currency RFR market conventions to minimize operational issues in implementing RFR cross-currency markets. Some of the suggested conventions are very similar to current Libor-based markets while others can differ. For example, principal (notional) exchanges would be very similar, but interest payment lags for compounded RFRs could differ.

In the subgroup's opinion, it is important to emphasise that dealer-to-dealer transactions should be as uniform as possible across currencies where RFRs are expected to be the dominant benchmarks to avoid unnecessary operational complexities, allow for easier hedging, and keep costs contained. It is also preferable to keep the variants of dealer-to-dealer swaps across a given currency pair (e.g. SOFR/SONIA) to a minimum to limit market fragmentation that could compromise liquidity.

The dealer-dealer conventions could then be a basis for pricing other structures for end users. This is common practice today in which many auxiliary structures are built on liquid, traded dealer-to-dealer markets to accommodate and serve the needs of end users. This could potentially include bespoke trades referencing the forward-looking term rates that some NWGs have indicated may be produced based on derivatives markets referencing RFRs, although as mentioned earlier the scope of this current note is only on potential specifications for RFR-based swaps and not on other structures.

The potential conventions and options for liquid, RFR-based dealer-dealer transactions are described below, and end-user structures could be readily derived from the proposals.

Potential conventions

1) *Frequency of payments*

   It was thought that quarterly payments on each leg would align well with current Libor-based markets and the likely structure of standard OIS swaps referencing RFRs. Participants in the subgroup's discussions felt this appeared to be well supported and that quarterly payments on each leg of the swap could be recommended as a standard.

2) *Exchange of notional principal cash flows*

Participants in the subgroup's discussions felt that it was appropriate to align with current principal exchange conventions and that therefore exchange of notional principal cash flows at the start and maturity dates of the swap could be recommended as a standard.

3) *Interest convention*

Because underlying, single currency OIS markets use compounded averages of daily rates settled in arrears, participants in the subgroup felt that compound daily settled in arrears could be recommended as a standard using the day count convention of the underlying OIS market of each currency (i.e. act/360 or act/365).

4) *Alignment of payment or rate fixing dates*

OIS markets have differing payment lags (e.g. T + 2 for USD and T + 1 for EUR). This means, in practice, that alignment of dates for interest payments and daily rate sets is not possible for many currency pairs. Either the interest payment days would differ (based on the payment lags) or the rates set dates would differ (offset by the payment lags).[1]

Note that this rate-set date issue is also present in the current Libor markets, where some currencies rate set 2 days prior to the relevant period while others have a 1 or 0 day setting. While any decision needs to weigh the importance of alignment of rate set dates against the operational and credit implications of differing payment dates, participants in the subgroup discussions believed that it was important to avoid the credit risk that would be generated if payment dates did not align if notional principal was exchanged. Therefore, the subgroup felt that moving payment lags where necessary in order to achieve alignment of payment dates could be recommended as a standard.

5) *Spot (2 business days) start*

Participants in the subgroup discussions felt it was appropriate to align with current market conventions and that a spot (2 business days) start could be recommended as a standard.

[1] Some recent dollar FRN issuances have utilized a lockout period (freezing the last several days of compound interest at the published value of the overnight rate at the time the lockout period begins) rather than or in addition to a payment lag. Potentially market participants could consider this option as well. As well, this issue could be addressed if there were standardized terms for payment lags across OIS contracts in different currencies.

6) *Reset of notional principals*

Resetting notional principals each quarter to current FX rates in order to keep mark-to-market valuations is often used in current markets. Many of the participants in the subgroup believed that this is a key tool in reducing counterparty credit exposures and that it would likely be typically adopted in interdealer RFR-RFR markets. However, it was noted that other tools for reducing counterparty credit exposures develop over time, such as greater use of central clearing for cross-currency swaps or greater standardization of credit support annexes (CSAs), and also that in some circumstances cross-currency basis swaps were used to hedge cash instruments that did not have quarterly resets and that in such circumstances it could be reasonable to forgo this type of convention.

While most participants in the subgroup felt that quarterly resetting of notional principals would likely become a de facto standard in many cases, the group felt that it was <u>not necessary to recommend a standard on reset of principal</u>, instead leaving options open.

7) *Discounting and PAI*

There are currently no explicitly-stated market practices for discounting and price alignment interest (PAI) in the cross-currency market. While in many instances dealers use the U.S. dollar (USD) effective federal funds rate as the basis for discounting in collateral calculations, this is not uniform and can depend on the terms of individual CSAs. Although there would be some benefit to a homogenous approach to discounting and PAI, the subgroup recognized that there are often sound reasons for heterogeneity and that ultimately these choices would need to be based on the needs of the counterparties involved. The participants in subgroup discussions therefore felt was <u>not necessary to recommend one standard for discounting and PAI.</u>

As a matter of practice, however, there should be a standard convention for *quoting* prices in these markets. It was thought likely that quoting prices based on USD discounting and PAI would remain the norm, although other standards could potentially be as efficient.

2. Potential conventions for an RFR-IBOR dealer-to-dealer cross currency basis swaps

If there is a liquid base RFR in both currencies, then dealers would be more likely to enter in to a RFR-RFR cross-currency swap and then a RFR-IBOR basis swap, rather than to engage directly in a cross-currency basis swap between and an RFR and an IBOR. However, in some currencies, there may be no liquid RFR or for other reasons a term IBOR may remain as the base liquid interest rate benchmark. Use of a RFR-IBOR cross currency swap in the dealer-to-dealer market would therefore likely only be in such circumstances, where an RFR was the base liquid benchmark in one currency and the IBOR remained the base benchmark in the other. This may be the case for cross-currency swaps between many of the LIBOR currencies, where RFRs are expected to become the dominant liquid base rate, and some EMEs, which may only have IBORs available.

Subgroup participants went through the exercise of booking a hypothetical trade confirmations based on one currency expected to rely fully on an overnight RFR and an EME currency with only an IBOR. Going through the exercise made it clear that using the standard conventions that suggested above for an RFR-RFR swap in the RFR leg and what is currently used for an IBOR-IBOR swap for the IBOR leg seemed to work in a natural way.[2]

Going through the exercise also pointed to some of the problems cash products have been grappling with in terms of how many days in advance of payment are needed to be sure that counterparties could make the required payments (both the cross-currency swap and any related hedge payments). Although some RFR floating-rate debt issuances in the United States are using a lockout (defined as freezing the daily rate for the last several days of an interest period at the last rate published), similar issuances in other jurisdictions are using a lookback (defined as using the RFR rate published a pre-determined number of days ago for the current day's interest) and it was felt that this was easier to incorporate in to the cross-currency swap market. A lockout is not consistent with the current ISDA definitions of compound RFRs. While ISDA could create different definitions that allows for options like this or for use of daily rates with a daily reset period in a simple averaging framework, using the most standardized structure was seen as having the greatest chance of creating a liquid interdealer market.

Based on this, the subgroup developed the following recommendations for wider consultation. As above, any recommendations are intended for the dealer-to-dealer market, recognizing that dealer-to-customer arrangements may be varied and depend on the needs of the customer:

Potential conventions

1) *Conventions for the RFR leg*

   <u>As a standard, the RFR conventions in the RFR-IBOR cross currency market should match RFR accrual conventions which develop in the RFR-RFR cross currency market</u> and which are discussed in the previous section.

[2] For certain EME currencies, cross-currency swaps that involve exchanging a fixed rate for a floating rate in another currency may also be used. Using the same principle, the recommendations for RFR legs discussed in this document could also be used for the floating-rate legs in these fixed-floating cross currency swaps.

2) Conventions for the IBOR leg

As a standard, the IBOR leg of the RFR-IBOR cross currency market should match the conventions developed in the related IBOR currency.

3) Aligning Accrual Conventions with Cash Products

In certain circumstances, RFR accrual conventions may develop to include lookback periods or lockout periods. Such conventions would facilitate alignment of principal and interest and alignment with conventions in cash markets. As a matter of convenience, these may also be adopted in cross-currency swap conventions, although it is too soon to say how this will develop. Note however, that because IBOR is a forward looking rate and overnight RFRs are based upon realized rates, incorporating certain conventions in the RFR leg might lead to additional basis or convexity.

3. Potential fallbacks for cross-currency swaps currently referencing IBORs

Current cross-currency swap markets will be impacted as the use of LIBOR is expected to fall prior to 2021. If counterparties transition from Libor to RFRs (because fallbacks are triggered or they otherwise agree to change the reference rate in their contracts) they will need to decide whether to move both benchmarks (i.e. both legs of the swap) or just the impacted leg only. This will likely be a matter for the counterparties to agree on an individual basis depending on the circumstances involved. Under the definition changes contemplated by ISDA, a given leg of a cross-currency swap referencing two IBORs would trigger and fallback to the designated RFR successor rate if that given IBOR permanently or indefinitely stopped publication, but the other leg would remain referencing its IBOR for as long as that rate remained in production. However, ISDA has agreed to consider offering templates that would allow counterparties two agree that both legs of the cross-currency swap would trigger in these circumstances or in other circumstances that the counterparties agree.