

1. The ARRC has narrowed its focus to two potential alternative rates, the Overnight Bank Funding Rate (OBFR) and an overnight Treasury general collateral repo rate. Do you have a preference between these two rates? If so, why?

Our preference between the two rates that are being discussed is the Overnight Bank Funding Rate (OBFR). We feel this is better suited to being the alternative rate than General Collateral (GC) repo as it closely follows the Effective Fed Funds Rate (EFFR). Overnight Index Swaps (OIS) and Fed Fund vs. LIBOR swaps both currently use the EFFR as a benchmark. The similarity of the OBFR to the EFFR will likely make for a smoother transition process than would be the case for GC repo.

2. Is there another potential rate that you believe should be considered by the ARRC?

We are not aware of an alternative rate not currently under consideration that fits the ARRC's criteria as an Alternative Benchmark.

3. With respect to an overnight Treasury general collateral repo rate, the ARRC itself has expressed a preliminary preference for a rate that included both cleared and uncleared triparty and bilateral transactions. Recognizing that no entity has committed to producing such a rate, would you prefer a repo rate that includes only triparty transactions or both triparty and bilateral? Would the inclusion or exclusion of bilateral data materially influence your preference for a repo rate as a benchmark or cause you to prefer a repo rate to the OBFR?

No, we still favor the OBFR rate. The difficulties in using the GC rate are excessive volatility (both intraday and day-to-day) and a lack of transparency.

4. What concerns, if any, do you have that the alternative reference rates identified by the ARRC might be subject to manipulation if they were adopted? Are there concerns that the underlying markets, at times, could be highly concentrated or not sufficiently deep to discourage collusion? How do any concerns compare to similar concerns regarding already existing USD reference interest rates?

We believe the previous work done on existing rates has made the LIBOR index more robust. With respect to OBFR, if your sample set is \$300 billion, it would likely be very difficult for a single entity to manipulate the OBFR unless the markets were to see a massive stress and decreased trading volumes like we did during the crisis. However, this is true of essentially any short-term funding rate. We do believe that there is a place for both LIBOR and OBFR. Having both rates in concert allows one to see the credit component expressed by the market.

Compared with the EFFR, the OBFR draws from a deeper and more diverse pool of transactions with a more diverse pool of market participants.

5. Would the paced transition plan preliminarily outlined in the interim report lead you to

seek to trade instruments and hedge risk linked to the new rate chosen by the

ARRC?

We do not have a high degree of confidence that this process can be quickly implemented. There are factors to consider - including legal documentation, technology implementations and risk issues - that will need to be addressed and that will take some time to be addressed before the market can move towards supporting the new rate. In addition, the derivative markets that will support the new rate will need to be very robust and most of all the end users of the swaps will have to embrace the index.

6. Are there considerations, such as the existence of a basis market between the new

rate ultimately chosen by the ARRC (new rate) and the effective fed funds rate

(EFFR) that would aid in smoothing a paced transition for your firm? Are there

potential disruptions that would concern you under such a plan? What are your

biggest concerns relating to the paced approach outlined in this paper?

Whenever a new rate is introduced, a stable market is needed to support it. Increased costs of regulation have reduced liquidity in existing front-end markets, so markets for new products will face challenges getting off the ground. The GC rate and GC derivatives provide a good example from the recent past. The market for GC futures never got off the ground because there was little liquidity and mostly one-way flow. The transition could be marred by market forces that could push it one way. We also need to remember that the transition from LIBOR discounting to OIS discounting took a very long time to implement. Traders can quickly adapt to a new market rate, but legal, technology and clearing issues take more time to resolve.

7. Under the paced transition plan, if markets referencing the new rate were sufficiently

liquid would you:

a. Be willing and able to trade to convert legacy contracts referencing EFFR as the floating

index in your swaps to reference the new rate, and receive/pay any transparent at-market

price change, given a basis market?

This is not an easy question since the market does not exist. We are relatively comfortable in transitioning from the EFFR to the new ARRC rate on an overnight basis, but there is considerable uncertainty surrounding the potential term structure for the new rate.

b. Be willing to amend your CSA to reference the new rate as the interest rate for cash

collateral and receive/pay any transparent at-market price change due to change in

discount regime?

We have the same concern identified in the response to question 7a.

c. Be willing to migrate cleared positions that had PAI based on the EFFR to contracts that

had PAI based on the new rate, assuming you would be compensated for price changes?

We have the same concern identified in the response to question 7a.

8. Could you transition only certain segments of your EFFR trading? If so, which

segments would be easier to transition and what share of your trading do they

comprise?

Yes, it is possible to transition certain aspects of EFFR trading. However, there are several moving variables to take into consideration. The current OIS and Fed Funds vs LIBOR markets are liquid in the 2yr and under maturities but liquidity issues are apparent moving further out the curve. Introducing a new index has the potential to fragment that market further.

9. If you could not transition certain segments of your trading, what would need to change to allow you to do so (external factors, internal systems, etc.)?

There are several components to be considered including documentation, technology, risk, compliance, regulation, accounting, market participant acceptance and liquidity. These components would need to be addressed or resourced if there is a cost involved in the transition.

10. Could you and would you be willing to transition some or all of your derivatives trading currently referencing LIBOR into OIS or futures referencing an alternative rate chosen by the ARRC if the OIS and futures market were sufficiently liquid?

As the current market structure of Fed Funds vs. Libor has been in place for 25 years and the OIS market has been in place since the late 1990s, this question is difficult to answer. These markets are liquid, despite the potential to be volatile at times. In the current market structure, open interest and liquidity in fed funds futures beyond the 1st 6 futures contracts is limited, yet a well-defined derivative market exists. So, it is possible that a similar situation could develop for the new ARRC rate, but we are concerned that liquidity in both markets would be hampered if they ran in parallel.

11. What criteria would you use to determine whether the OIS and futures markets referencing an alternative rate chosen by the ARRC were sufficiently liquid?

(Bid/ask spread, price impact, trade size achievable, trade frequency, etc.?)

Would you be willing to participate initially at wider bid/ask spreads and without a long history of swap volume in the new rate in order to support the transition of the market to a more robust benchmark? Are there other considerations besides liquidity that would influence your choice?

In the futures market we would need to see a bid/ask spread of 0.5bp similar to Fed Funds for the 1<sup>st</sup> 12 contracts and 5000 contracts on each side. The instrument would need to trade daily for a sustained period. Within the derivative market, it is still unclear as some trades are not reported on a swap data repository. Liquidity could be defined as the ability to move \$250m of a 5yr or 10yr OIS swap without pushing the market by more than 0.25/0.5bp.

A wide bid /ask spread could help to encourage market participation, but it may not be enough to encourage market making due to the uncertainty surrounding the new benchmark's behavior during times of market volatility.

12. Could you transition only certain segments of your LIBOR trading and, if so, which segments would be easier to transition and what share of your trading do they comprise?

We believe it would be easy to transition in the front end of the Short-Term Interest Rate (STIR) market. However the ease of transition is less certain for long-term markets. Whether or not trading in LIBOR, OIS and Fed Funds vs LIBOR continues due to potential market fragmentation is also a factor to consider.

13. If you could not transition certain segments of your LIBOR trading, what would need to change to allow you to do so (external factors, internal systems, etc.)?

Costs and market participant preferences would be two factors that would need to be understood and considered.

14. What concerns, if any, would you have to transitioning away from existing reset and payment conventions in OTC derivatives referencing LIBOR?

We do not have any concerns transitioning away from existing reset and payment conventions in OTC derivatives referencing LIBOR.

15. Do you think the paced transition would have an adverse impact on the corporate bond market, consumer loans, or securitizations? What would be needed for these types of products to reference the new rate?

Liquidity is a significant concern and market participants can sometimes be resistant to change. To begin the transition, we would first have to see the Government Sponsored Enterprise (GSEs) change from LIBOR funding to OBFR funding. The other market segments would also need to be educated and have an understanding of the changes to the reference rate. For example, Fed research on the probable term structure of the new ARRC rate would go a long way towards alleviating concerns and reducing uncertainty. We believe market participants would probably be more comfortable with floating rates pegged to a term structure than an overnight rate.