

VIEWPOINT

## Will LIBOR Get Benched?

MICHAEL PAK | JUNE 9, 2017



### Introduction

The London Interbank Offered Rate (LIBOR) has long enjoyed its position as the star player in the short-term interest rate league. LIBOR made its debut almost 50 years ago in London as the first floating index tied to a syndicated loan. Since then it has evolved into the global benchmark interest rate for an estimated \$300 trillion in derivatives, loans, and mortgages. However, LIBOR has not been able to stay out of the spotlight since the onset of the financial crisis of 2008 and mostly for the wrong reasons. Whether it was due to multiple lawsuits over allegations of rate manipulation or its waning relevance due to the passage of last year's money market reform, LIBOR's prominence and relevance have been called into question.

Given that LIBOR's primary shortcoming (how the rate is set in the first place) has become magnified over time, efforts have been in place since 2014 to potentially send LIBOR to the bench or at least give other, new short-term rates the opportunity to compete for meaningful playing time. To that end, the Alternative Reference Rates Committee (ARRC) was set up by the Federal Reserve and U.S. Treasury to explore developing a new index based on a "large volume of liquid, transparent and daily transactions." The proposed alternative rate could not only be the reference rate for derivatives but also for cash fixed-income products particularly floating rate securities. This committee was tasked with the mandate to develop not only the rate but also a well-planned and methodical transition strategy. Although the spirit of ARRC's mandate is well-intentioned and arguably necessary, in reality we believe LIBOR is too entrenched in the global financial system to be replaced on a wide scale basis. However, ARRC's decision on the chosen rate and transition strategy are expected this summer. Here we take a closer look at LIBOR and the alternative rates under consideration.



**Michael Y. Pak, CFA**  
Senior Vice President  
U.S. Fixed Income

Mr. Pak is a Senior Vice President in the U.S. Fixed Income group where he trades Money Markets, Treasuries, and Agencies. Prior to joining TCW in 2015, he was a Fixed Income Portfolio Manager at Columbia Threadneedle where he managed institutional separate accounts and mutual funds with a focus on the Investment Grade Credit and Rates sectors. Previously, he was a generalist Portfolio Manager at Western Asset focused on short duration strategies. Prior to Western Asset, he worked on the cash desk at PIMCO and the investment department at Teledyne, Inc. Mr. Pak holds a BA in Economics from UCLA and an MBA from the Marshall School of Business at USC. He is a CFA charterholder.

**LIBOR**

The Intercontinental Exchange (ICE) has been in charge of overseeing the LIBOR setting process since taking over from the British Bankers Association (BBA) in 2014. Despite the efforts by ARRC to develop and introduce an alternative rate, ICE remains committed to keeping LIBOR in the limelight and made changes to the rate setting process to promote more transparency such as outlining a specific waterfall to utilize when submitting a rate.

Currently, every LIBOR rate across various currencies and tenors is calculated using a trimmed arithmetic mean. Banks in each LIBOR panel are asked to answer the following daily question and then must submit a rate:

*“At what rate could you borrow funds, were you to do so by asking for and then accepting inter-bank offers in a reasonable market size just prior to 11 am?”*

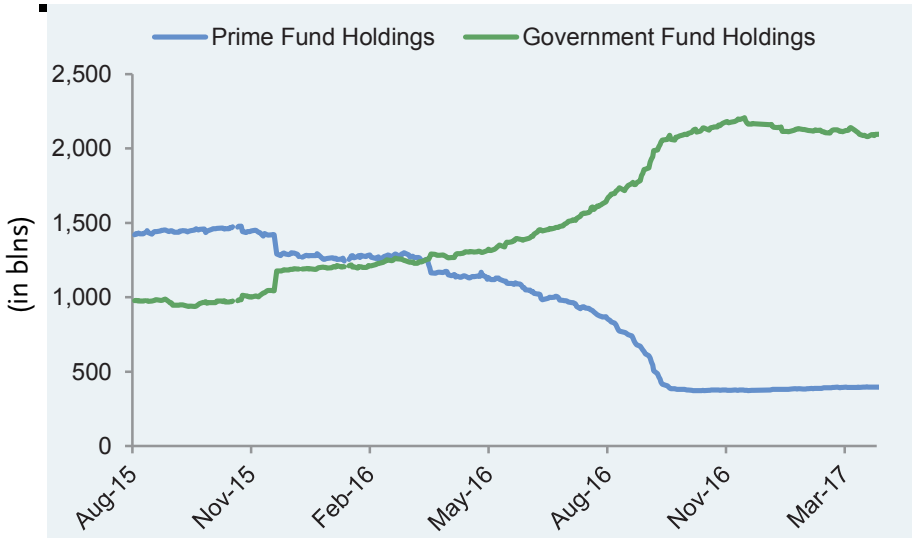
The top and bottom quartiles of the submitted rates are then removed and the remaining rates are averaged to get that day’s LIBOR rate (See Appendix for a more granular look at 3-mo USD LIBOR).

Since most banks do not necessarily borrow unsecured funds on a daily basis, ICE instituted a waterfall that banks can follow if they are not actually borrowing funds for that day. They can then go down the waterfall and estimate (guesstimate?) where they can borrow funds based on various market metrics:

Waterfall
1 Actual transactions (commercial paper “CP”, certificates of deposit “CD”)
2 Transaction-derived data (historical transactions, interpolation)
3 Expert judgement (market-based data: repo, competitors’ rates, f/x swaps)

Source: ICE

However due to money market reform, structural changes in the money market industry have left the size of the Prime fund sector (formerly the largest buyers of CP/CD) greatly diminished relative to the Government fund sector and we don’t anticipate this to reverse in any meaningful way:

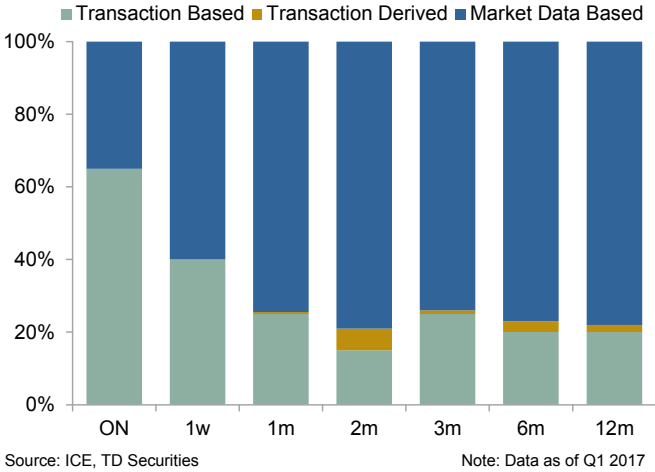


Source: JPMorgan

Although there is probably a yield differential between Prime and Government funds (currently +31 bps) that would sway institutional investors back to Prime funds, most surveys indicate that institutional investors strongly favor the liquidity and capital preservation features of a Government fund. These features can be compromised with a Prime fund, given the imposition of gates/fees on redemptions and floating NAVs.

Therefore, banks that had traditionally relied on CP funding have mostly turned to other avenues of funding including repo, term issuance, deposits and currency swaps. Basel III and in particular the Net Stable Funding Ratio (NSFR) also discourages overreliance on unsecured short-term funding and favors retail deposits/long-term funding against banks' least liquid assets. These factors have greatly diminished the supply of CP in the market and in fact recent data from ICE showed that only 30% of 3-mo USD LIBOR submissions were based on actual transactions. The remaining 70% of the submissions were based on other data points further down the waterfall:

**Figure 3: Only 30% of 3m USD Libor Submissions Are Transaction-Based**



So given the factors above, it is not surprising that ARRC was created to develop a new rate. LIBOR is not very transparent (historical data only released with a quarterly lag) and is only partially based on actual transactions. One also wonders what the incentive is for banks to remain in the panel given the on-going LIBOR-rigging lawsuits. This calls into question the cohesion of the panel banks and therefore LIBOR's viability going forward (BNP voluntarily dropped out of the USD LIBOR panel in August 2016).

**The Alternatives**

The alternative short-term rates under consideration are 1) Overnight Bank Funding Rate (OBFR) and 2) a Treasury repurchase agreement (repo) rate. The OBFR was originally introduced in March 2016 and the rate is currently being posted daily. However, the ultimate Treasury repo rate to be picked is still under consideration as there are three "subsets" of Treasury repo rates with each referencing a different segment of the broader Treasury repo market.

Overnight Bank Funding Rate

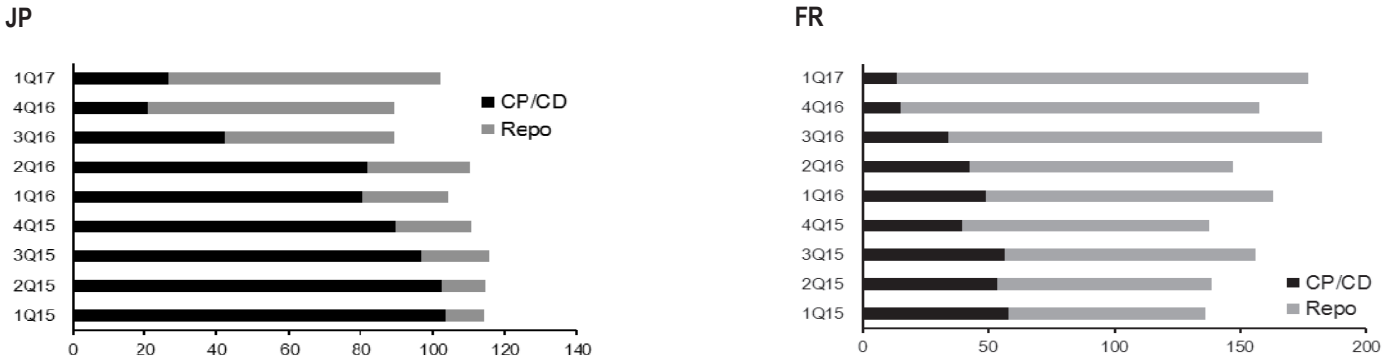
The Overnight Bank Funding Rate (OBFR) is calculated as a volume-weighted median of overnight transactions in the Fed Funds and Eurodollar markets (USD raised offshore by U.S. banks). Since o/n Eurodollar rates closely follow the Fed Funds market (within 1 to 2 bps), the OBFR has remained relatively stable and doesn't deviate much from the Fed

Funds rate. Unlike LIBOR, we also have more data and transparency in OBFR as the transaction level data is published by the Fed.

Although trading activity is more robust in the Fed Funds and Eurodollar markets than it is in the CP market, Eurodollar trading has also recently slowed primarily due to a shift in unsecured bank funding towards Treasury repo (Shifts in Japanese and French funding profile below):

**Exhibit 2: Holdings data suggests that banks have shifted increasingly towards repo as a source for short-term funding in response to lower CP/CD demand from money market funds post-reform**

Quarterly average of prime and government money market fund holdings of bank (CP/CD and repo (\$bn)



Source: JPMorgan

Although the OBFR was a leading candidate to be chosen as the alternative rate when it was first introduced, 1) the massive decrease in Prime fund AUM, 2) shifts in bank funding away from CP towards repo, and 3) the balance sheet costs of short-term unsecured borrowing now weaken OBFR's candidacy. In particular, the decrease in Eurodollar activity since money market reform's passage makes the OBFR fall short of one of ARRC's main criteria – that the chosen rate have underlying trading activity that can reasonably be expected to remain strong into the future.

Treasury Repo Rates

The other alternative rate under discussion is a Treasury repo rate (repo). The potential candidate will be one of the three below with each rate referencing a different segment of the broader Treasury repo market:

Treasury Repo Rates
<b>Treasury repo rate #1:</b> Tri-party repo excluding the Fed's repo facility.
<b>Treasury repo rate #2:</b> Treasury repo rate #1 + General Collateral Finance repo (centrally-cleared).
<b>Treasury repo rate #3:</b> Treasury repo rate #2 + Bi-lateral repo.

Tri-party repo = cash vs. Treasury collateral, GCF repo = inter-dealer repo market (centrally-cleared), Bi-lateral repo = cash vs. Treasury collateral on DVP basis

The repo rates under consideration have multiple positive attributes. Aside from being a risk-free rate based on a large number of daily transactions, the structural shift in the money market sector (growth of Government funds) and large expected Treasury issuance in the future ensure a robust market going forward. Additionally, if the recent initiative to move more repo onto a centrally-cleared platform takes hold, this could add even more liquidity into the repo market by bringing more and diverse lenders onto that platform.

However, repo still has some drawbacks since bi-lateral repo rates can be distorted if specific Treasury issues trade special (deeply negative repo rates). Additionally GCF repo futures introduced 5 years ago have not garnered the support that was expected. Volumes are low and dwarfed by Eurodollar futures volume, most open interest is concentrated in the front contract, and they are primarily only traded by a handful of sell-side repo desks. These drawbacks do seem relatively minor though as any outlier bi-lateral repo rate can be removed altogether from the calculation since it only pertains to specific CUSIPs. Additionally a new repo futures contract whose reference rate encompasses many underlying transaction types could promote more liquidity than the current GCF repo futures which only specifically reference the inter-dealer repo market.

Given these factors, Treasury Repo Rate #3 does appear to be the strongest candidate from this bunch given the breadth of transactions it covers within the overall Treasury repo market, the wider range of lenders/borrowers involved and the growth of the Government fund sector.

## Conclusion

A potential shift away from LIBOR as a global benchmark interest rate is clearly no small feat. Given over \$300 trillion in financial products are tied to LIBOR any transition away from the benchmark will certainly take many years. In the meantime, a more viable derivatives market would have to be developed to encourage trading in the new rate. This part of the transition only leads to more questions than answers and will evolve over time. When derivative contracts are developed, how quickly will they be embraced given the experience so far with GCF repo futures? Will financial contracts have to be re-written or will they simply be allowed to roll off and new ones be drawn up with the alternative rate?

With more questions still to be answered even after an alternative rate is chosen, this match-up could go well into overtime. While some in the crowd envisioned a complete replacement or “benching” of LIBOR, a more realistic scenario appears to be LIBOR splitting playing time with a new teammate. The new teammate’s performance and the degree to which playing time is split up will ultimately define the success of ARRC’s game plan.

We expect the transition to be a multi-year process with fits and starts along the way, however TCW will continue monitoring developments here to assess potential impacts on markets and client portfolios. ■

## Appendix

3-month USD LIBOR: After each bank submits a rate, the rates are ranked in descending order and the top four and bottom four rates are removed with the remaining nine being arithmetically averaged to get that day's 3-month LIBOR setting.

USD 3-mo LIBOR Panel Banks	
Bank	Region
Citibank	U.S.
Bank of America	U.S.
JP Morgan	U.S.
Royal Bank of Canada	Canada
Lloyds Bank	Europe
Barclays Bank	Europe
Rabobank	Europe
Credit Suisse	Europe
HSBC Bank	Europe
Credit Agricole	Europe
Deutsche Bank	Europe
Societe Generale	Europe
Royal Bank of Scotland	Europe
UBS	Europe
Bank of Tokyo-Mitsubishi UFJ	Japan
Sumitomo Mitsui Banking Corp.	Japan
Norinchukin Bank	Japan

Source: ICE

This material is for general information purposes only and does not constitute an offer to sell, or a solicitation of an offer to buy, any security. TCW, its officers, directors, employees or clients may have positions in securities or investments mentioned in this publication, which positions may change at any time, without notice. While the information and statistical data contained herein are based on sources believed to be reliable, we do not represent that it is accurate and should not be relied on as such or be the basis for an investment decision. The information contained herein may include preliminary information and/or "forward-looking statements." Due to numerous factors, actual events may differ substantially from those presented. TCW assumes no duty to update any forward-looking statements or opinions in this document. Any opinions expressed herein are current only as of the time made and are subject to change without notice. Past performance is no guarantee of future results. © 2017 TCW