CMBS Research

Amid All the Noise, U.S. CMBS Likely to Manage Libor's Swan Song With Minimal Disruption

April 2018

Authors:
Jennifer Jones | Vice President, CMBS Senior Loan Analyst | jennifer.jones@morningstar.com | +1 267 960-0562
Michael Fedorochko | Associate, CMBS Credit Analyst | michael.fedorochko@morningstar.com | +1 646 560-4551
David Putro | Senior Vice President, CMBS | david.putro@morningstar.com | +1 267 960-0533
Lea Overby | Managing Director, CMBS Research and Analytics | lea.overby@morningstar.com | +1 646 560-4583

Morningstar Perspective

In the aftermath of a rate fixing scandal, Libor, the underlying interest reference rate for $43.02 billion in loans backing U.S. commercial mortgage-backed securities, is set to ride off into the sunset at the end of 2021. Benchmarks are arriving to take Libor's place around the world, and Morningstar Credit Ratings, LLC believes the new replacement rate for the United States will ultimately prove to be credit positive for the country's CMBS market. The Secured Overnight Financing Rate, or SOFR, is the recommended replacement rate of the Alternative Reference Rates Committee, or AARC, and debuted on April 3, 2018. Morningstar views this new rate to be more reliable because it is underpinned by considerably more transactions than Libor. SOFR is based on overnight repurchase agreements backed by Treasuries and, therefore, does not incorporate a credit stress component like Libor, so its risk-free status may have implications for spread volatility. Proper planning and preparation will be key in ensuring that the transition away from Libor will be smooth for the CMBS market.

CMBS Loans That Reference Libor

Table 1 illustrates the $43.02 billion in loans that collateralize U.S. CMBS bonds tied to Libor by year of maturity as of April 1, 2018. The "pig in the python" year in terms of upcoming maturities is 2019, with 58.2% of the total. Short-term loan extensions of one year have been common in floating-rate loans tied to Libor, so we anticipate that the maturity data will change periodically.

Table 1: CMBS Loans Tied to Libor

Maturity Date	Loan Balance as of April 1, 2018 ($)	% of Total	# of Loans
2018 and Previously Matured	13,109,410,626	30.47	174
2019	25,019,712,677	58.16	111
2020	4,816,596,178	11.20	49
2021	66,435,791	0.15	2
2022 and After	7,476,128	0.02	6
Total	43,019,631,400	100.00	342

Sources: Trepp, Inc. and Morningstar Credit Ratings, LLC

As seen in the following table, the significant majority, or 52.9% of the total floating-rate debt exposure, is collateralized by hotels.

Table 2: CMBS Loans Tied to Libor by Collateral Type

Collateral Type	Loan Balance as of April 1, 2018 ($)	% of Total	# of Loans
Hotel	22,773,736,827	52.94	131
Office	6,890,781,533	16.02	56
Retail	5,927,034,776	13.78	66
Mixed Use	3,220,537,519	7.49	31
Industrial	1,706,762,550	3.97	11
Showroom	955,000,000	2.22	1
Multifamily	780,201,305	1.80	40
Healthcare	706,201,628	1.64	2
Other	59,375,260	0.14	4
Total	43,019,631,400	100.00	342

Sources: Trepp, Inc. and Morningstar Credit Ratings, LLC

Morningstar rated 35.7% of the total $43.02 billion of outstanding floating-rate debt, or $15.38 billion, as noted in Table 3 below. Of this amount, $13.75 billion, or 89.4%, matures in 2018 and 2019 or has already matured.

Table 3: CMBS Loans Tied to Libor in Transactions Rated by Morningstar

Maturity Date	Loan Balance as of April 1, 2018 ($)	% of Total	# of Loans
2018 and Previously Matured	7,277,329,228	47.32	77
2019	6,472,409,445	42.09	27
2020	1,580,000,000	10.27	3
2021	48,653,791	0.32	1
2022 and After	0	0.00	0
Total	15,378,392,464	100.00	108

Sources: Trepp, Inc. and Morningstar Credit Ratings, LLC

As seen in Table 4 below, of the collateral types in CMBS transactions that Morningstar has rated, hotels are predominant, at 42.4%, but less than the CMBS total of 52.9% noted in Table 2.

Table 4: CMBS Loans Tied to Libor Rated by Morningstar

Collateral Type	Loan Balance as of April 1, 2018 ($)	% of Total	# of Loans
Hotel	6,523,315,145	42.42	62
Office	3,076,718,919	20.01	15
Retail	2,367,900,431	15.40	16
Mixed Use	1,285,475,000	8.36	5
Showroom	955,000,000	6.21	1
Healthcare	706,201,628	4.59	2
Industrial	373,781,341	2.43	6
Multifamily	90,000,000	0.59	1
Total	15,378,392,464	100.00	108

Sources: Trepp, Inc. and Morningstar Credit Ratings, LLC

Why Libor Is Being Phased Out

Libor has suffered from eroded confidence among market participants, both because of concerns about the fundamental lack of hard transactional data underpinning the rate and because of the 2012 rate fixing scandal. At their core, both issues are a function of the voluntary survey-based methodology used to formulate Libor each business day. Largely a product of the birth of futures contracts used to hedge against interest-rate risk in the 1980s, Libor was originally overseen by the British Bankers Association. A panel of banks each submitted short-term rates for borrowing funds to the BBA. Libor provided a convenient standardized floating-rate benchmark with varying maturities and currency denominations.

In 2012, regulators discovered that members of the Libor bank panel had manipulated their submitted rates. Regulators in both the United Kingdom and the United States levied fines, and the BBA was forced to give up responsibility for setting the rate. Due diligence by the U.K., U.S., and others revealed that the actual number of transactions occurring, which were the basis for the rate, was significantly lower than desirable. This immediately raised material credibility concerns. In the U.S., the Federal Reserve Board and the Federal Reserve Bank of New York convened the ARRC with the task of developing an alternative plan to Libor. Today, the U.K.'s Financial Conduct Authority, or FCA, oversees Libor, and the Intercontinental Exchange Benchmark Administration, an independent subsidiary of Intercontinental Exchange, administers it.

Panel banks may, but are not required, to submit their response to the following hypothetical question: *"At what rate could you borrow funds, were you to do so by asking for and then accepting interbank offers in a reasonable market size just prior to 11 am London time?"* Therefore, Libor can be characterized best as a survey-driven hypothetical rate, rather than a transaction-based rate. No new banks have joined the Libor panel for years, and because the banks perceive there to be an increasing level of regulatory risk from reporting without bona fide transactional data, it is highly unlikely any others will join. In a July 2017 speech, Andrew Bailey, the FCA's chief executive, raised doubts about the continued availability of Libor and noted that a significant amount of time was being spent persuading panel banks to continue submitting their short-term rates. Fundamentally, Libor suffers from a lack of market-based transaction data because fewer and fewer banks are engaging in interbank lending or borrowing activity.

On Nov. 4, 2017, in remarks to the ARRC, then future Federal Reserve Chairman Jerome H. Powell stated, "For three-month funding … the most heavily referenced Libor tenor [although not in the CMBS market, which is one-month Libor], the median is less than $1 billion per day. On some days we see less than $100 million. If we compare this to the more than $100 trillion in outstanding volumes of U.S. dollar Libor contracts, it should be clear that the activity in this market is minuscule compared to the size of the contracts written on it." The lack of transactional data underpinning the benchmark means that credit stress in the marketplace is reflected in the rate only if credit stress is incorporated into the panel banks' responses to the survey question.

The Early Days of the Phase-Out Process

The investor community has the opportunity now to define and address risks associated with retiring Libor so the unwind occurs in a timely, orderly fashion while minimizing uncertainty. Other markets such as credit default swaps and accompanying underlying collateral will likely need to transition first, given securitization is usually the last step in the commercial mortgage lifecycle. Regardless, Morningstar considers the following to be best practices in ensuring a smooth transition before the 2021 expiration date:

<u>1) Review Existing Loan and Deal Documents</u>

CMBS borrowers, servicers, and lenders need to prepare for upcoming maturities by reviewing loan documents early to determine the relevant interest-rate language regarding fallback reference rates. Fortunately, floating-rate loans are highly prepayable depending on property type, metrics, and other factors. The complication of defeasance, which is available for only fixed-rate loans, is a nonissue. It should be noted that some older loans (circa 2014 or before) do not necessarily allow for a change in the reference rate. Instead, the language for those loans indicates that they should convert to a fixed-rate coupon based on the last available Libor rate.

We reviewed the offering materials for JPMCC 2014-FL6 as an example of how loan and deal documents have addressed the possibility of Libor becoming unavailable. The offering circular for the deal says, in general terms, that if Libor cannot be determined, the loan documents allow for an alternative rate. Likewise, there are provisions for interest on the certificates to be calculated in an alternative manner.

A deeper dive into the offering materials sheds more light on these alternatives. If we use the pool's largest loan (Southland Mall) as an example, the loan's interest rate converts to one based on the prime rate in the event that Libor cannot be determined. More specifically, there are provisions to calculate a prime rate spread as of the last date Libor was applicable to the loan. This prime rate spread is the non-negative difference between Libor plus the loan's spread and the prime rate as of the last day Libor was applicable. In equation form, it would be prime rate spread = (Libor + spread) - prime rate. To display how the unavailability of Libor would affect this loan, consider this example with the following variables: a Libor of 1.55947%, a spread of 2.9444%, and a prime rate of 4.50%. The loan's prime rate spread would be set at 0.00387% for the initial reset. This would then be added to the prime rate to calculate interest going forward, which would be 4.50387%. The effect on the interest rate would be minimal. This replacement index language is identical on other large loans we reviewed in the deal.

Likewise, there are provisions for resetting the interest on the deal's certificates. The certificates have a similar mechanism for calculating a certificate prime rate spread, and the bonds then pay interest at the lesser of the prime rate plus the prime rate spread and the

weighted average rate of the underlying mortgages (minus administrative costs). While we did not do an exhaustive review of offering documents, this is consistent with the language we've seen across other deals (COMM 2014-FL4 and MSCI 2015-XLF1).
One item of note is that while the loans have provisions for converting to a rate using the prime rate as the index, it is unknown if the Libor caps the loans are required to purchase have similar provisions. If there is no alternative to replicate the rate caps, and assuming the rate caps subsequently disappear, an environment of rising interest rates would increase debt service and increase default risk, especially on properties that have not yet stabilized. This could, in theory, result in ratings activity, especially at the bottom of the capital stack. However, Morningstar assumes a stressed interest rate on floating-rate loans using a fixed value of 3.50% or the actual rate cap, whichever is greater. Because our stressed rate is typically higher than the actual rate caps, our credit support levels already include sufficiently robust interest-rate assumptions.

While the planned retirement of Libor presents us with an array of interesting what-if scenarios to contemplate, the actual event will likely be far less consequential. The actual impact on existing floating-rate CMBS deals would likely be immaterial. Because floating-rate loans typically have five-year terms (be it two years with three one-year extensions or three years with two one-year extensions), nearly every existing loan will be paid off (or, alternatively, with the special servicer) by the time Libor is retired. Newer deals are already including adequate language to address the switch from Libor to an alternative rate. Therefore, while the broad impact on existing CMBS will be somewhat muted, there will likely be some individual loans that, based on performance and loan terms, could become interesting case studies as the retirement date nears.

2) Analyze Alternative Rates

The ARRC recommends SOFR, which is fully transaction based (at least $800.00 billion in daily transactions). The New York Fed began publishing SOFR on April 3, 2018, at an initial rate of 1.80%. In addition to the rate, the New York Fed will publish data summarizing the daily volume as well as the total amount of transactions used to calculate the rate. There is sufficient time to study the behavior and characteristics of SOFR in advance of Libor's expiration on Dec. 31, 2021.

Morningstar views SOFR's underlying transaction amount as robust and potentially credit positive for the CMBS market given the scope of underlying transactions and that the rate tracks closely with Libor over short- and long-term time frames. Because this rate lacks a credit stress component the way Libor does, it may necessitate the need for a credit stress spread above SOFR that CMBS market participants will need to analyze. Also, Libor is a spectrum of rates that spans five different currencies and seven different maturities for a total of 35 rates per business day. The robust term structure created by the various maturities is enormously beneficial to market participants, and Morningstar believes this is one of the most important features likely to be sought in any replacement benchmark. In the

U.S., the most commonly referenced term structure in CMBS collateral is one-month Libor. Of the floating-rate U.S. CMBS loans that Morningstar analyzed, almost all are benchmarked to one-month Libor. SOFR does not yet provide a market for term loans such as one-month Libor, and a term loan market would have to be developed to facilitate comfortable implementation of SOFR.

3) Use CMBS Industry Initiatives

The CRE Finance Council, a trade group for the commercial real estate finance industry, has been drawing attention to the Libor issue and launched a task force in December 2015. Lisa Pendergast, executive director, later noted colorfully in a CREFC membership conference call on the issue that Libor represents "an elephant perched on a peanut" because of the low level of transactions associated with Libor. Among the issues which CREFC has highlighted was the necessity of publishing replacement rates as soon as possible so that market participants can sufficiently study potential reference rates. As noted earlier, SOFR was first published April 3. CREFC is also collaborating with other associations, including the International Swaps and Derivatives Association, and third-party counsel to develop new language in legal documentation concerning interest rates and replacement rates for the CMBS community, which could be adapted for individual loans.

Improved Risk Management in CMBS' Future

Although Libor could theoretically continue after 2021, the rate is unlikely to have any credibility at that point, and prudent risk management would dictate that no further CMBS floating-rate deals should be tied to Libor. Morningstar anticipates several credit positive themes for CMBS despite the uncertainty that the dissolution of Libor provides. Among these are the opportunity to implement a credible replacement rate and improved CMBS risk management, including more thorough legal documentation regarding interest and replacement rates.