XIV. Elimination of LIBOR

A. Introduction

The world's most infamous interest rate is slated for removal in 2021[1] and, as a result, the future of several mortgages, derivatives, car payments, student loans, and nearly $350 trillion in legacy contracts has been put into question.[2] LIBOR, the London Interbank Offered Rate, is the base rate banks pay to borrow money from each other.[3] The interest rate burst into the public spotlight in 2012 when court documents revealed that several large banks had supplied false rates in order to exploit the markets for millions in profits.[4] The British Banker's Association (BBA) set the original methodology for

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[1] Andrew Bailey, Chief Exec., Fin. Conduct Auth., Address at Bloomberg London: The Future of LIBOR (July 27, 2017) (speech draft available at https://www.fca.org.uk/news/speeches/the-future-of-libor [https://perma.cc/BH8J-YKEU]) (summarizing the Financial Conduct Authority's choice to eliminate LIBOR after reviewing the rate); *see also* Jerome H. Powell, Governor, Fed. Reserve, Address at the Money Marketeers of New York University: Reforming U.S. Dollar LIBOR: The Path Forward (Sep. 4, 2014) (transcript available at https://www.federalreserve.gov/news events/speech/powell20140904a.htm [https://perma.cc/P9LC-MN9Y]) (discussing the need in the United States to develop alternative rates to LIBOR).

[2] Lois Weiss, *A Banking Rule Change Puts $350 Trillion of Debt in Limbo*, FORBES (Aug. 7, 2017), www.forbes.com/sites/bisnow/2017/08/07/lois-weiss-a-banking-rule-change-puts-350-trillion-of-debt-in-limbo/#1c6467197821 [https://perma.cc/M9HD-YFW2] (outlining the financial implications of a move away from LIBOR); *see* Jesse Colombo, *This New Libor 'Scandal' Will Cause A Terrifying Financial Crisis*, FORBES (June 3, 2014), https://www.forbes.com/sites/jessecolombo/2014/06/03/this-new-libor-scandal-will-cause-a-terrifying-financial-crisis/#3df278913bd8 [https://perma.cc/5EZJ-CTEM] (arguing financial costs of LIBOR rate-fixing are inconsequential compared to the impact of shifting away from the rate).

[3] John Carney, *Libor Rates: A Readers Guide*, CNBC (July 6, 2012, 7:13 PM), https://www.cnbc.com/id/48100292 [https://perma.cc/A9NK-66RK] (explaining the mechanics of LIBOR and how the rate was determined); *see generally About Us*, BBA, www.bba.org.uk/about-us/ [https://perma.cc/6458-4S7K].

[4] *The LIBOR Scandal: The Rotten Heart of Finance*, THE ECONOMIST (July 7, 2012), http://www.economist.com/node/21558281 [https://perma.cc/Y2CC-MU3N] [hereinafter *The LIBOR Scandal*].

calculating LIBOR.[5] The BBA also decided which banks would be members of the panel that submitted daily interest rate estimates in order to determine LIBOR.[6] Following the 2012 scandal, LIBOR "has since been reformed, and is no longer compiled by the BBA," but by the English government.[7]

LIBOR's importance extends beyond the interbank lending interest rate that it literally measures.[8] LIBOR rates are used "as a benchmark for many other interest rates at which business is actually carried out . . . ."[9] Governor of the Federal Reserve, Jerome H. Powell, said, "Dollar LIBOR is the reference rate used in most interest rate swaps and futures contracts, in most floating-rate mortgages, in many commercial loans, and in structured products such as mortgage- and asset-backed securities . . . ."[10] This article discusses what has transpired in the aftermath of the scandal.

Specifically, this article discusses the end of LIBOR in 2021 and how the governments of the United Kingdom and United States have responded to the rate's future phase-out. Part B will summarize the 2012 LIBOR scandal the resulting reduced confidence in the rate's reliability. Part C will discuss the United Kingdom's response to the LIBOR scandal and explain why the Financial Conduct Authority (FCA) proposed to replace the rate. Part D will give details on the proposed alternative rates from the United Kingdom and the United States. Part D will briefly discuss the current replacement rates each

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[5] Bailey, *supra* note 1; *see also* John Kiff, *What is LIBOR?*, 49 INT'L MONETARY FUND FIN. & DEV., Dec. 2012, at 32, http://www.imf.org/external/pubs/ft/fandd/2012/12/pdf/basics.pdf [https://perma.cc/8V3M-FGPX] (explaining that 18 banks report rates for "15 borrowing terms ranging from overnight to one year" and then "the four highest and four lowest rates are discarded and the remaining rates are averaged").

[6] *See* Kiff, *supra* note 5.

[7] Will Martin, *A Committee of the World's Biggest Banks Chose a New Alternative to the Scandal-Ridden LIBOR Rate*, BUS. INSIDER (June 23, 2017), http://markets.businessinsider.com/news/bonds/arrc-chooses-new-rate-to-replace-libor-2017-6-1002118795 [https://perma.cc/NN56-L2C6] (commenting on ARRC's decision to replace LIBOR with a new broad Treasuries repo rate).

[8] Carney, *supra* note 3 ("LIBOR may be the most important number in the world. It is certainly the world's most important interest-rate bench mark.").

[9] Kiff, *supra* note 5; *see* Carney, *supra* note 3 ("Regulators estimate that Libor is tied to transactions with a notional value of $500 trillion.").

[10] Powell, *supra* note 1 (outlining why it is important for the United States to transition away from LIBOR).

country has chosen in response to the FCA's decision to phase out LIBOR in 2021. Finally, Part E will discuss how the proposed United States' replacement rate will impact ARMs, CLOs, Derivatives, and Legacy Contracts.

B. Brief History of the LIBOR scandal

The public first became aware of problems with LIBOR in 2012 when details of a criminal settlement between Barclays and regulators in the United States and United Kingdom came to light.[11] Many banks had been accused of altering LIBOR for two purposes: (1) "to increase profits (or reduce losses) on their derivatives exposures," and (2) to appear more sound during the financial crisis in 2007.[12] Banks manipulated the rate by submitting rates that they "thought they could" pay to borrow funds on that day, not what rate they paid when borrowing funds in actual market transactions.[13] Even small changes in LIBOR could result in derivatives traders (like Barclays and several other large banks) making daily profits upwards of $40m.[14] While several banks tried to present the problem "as the actions of a few rouge traders," detailed accounts of brazen behavior by bank employees on the trading floors showed that the process was, "if not widespread, at least widely tolerated."[15] Investigations into LIBOR rigging revealed that this purposeful manipulation of the rate went back several decades.[16] Investigators continued to uncover facts about the breadth of LIBOR manipulation which "led to billions of dollars in fines and shook the reputations of some of the world's biggest banks,

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[11] *Id.* ("[D]amning evidence has emerged, in documents detailing a settlement between Barclays and regulators in America and Britain . . . .").
[12] *Id.* (explaining the alleged forms of LIBOR rigging committed by traders at more than 20 large banks); *see also* Kiff, *supra* note 5 at 33 (explaining the flaws in LIBOR connected to and separate from the 2012 scandal).
[13] Carney, *supra* note 3 (detailing the mechanisms used to derive LIBOR).
[14] *The LIBOR Scandal, supra* note 4 (detailing how LIBOR rigging served to earn banks millions in profits through submission of fabricated interest rates).
[15] *Id.* ("Traders happily put in writing requests that were either illegal or, at the very least, morally questionable. In one instance a trader would regularly shout out to colleagues that he was trying to manipulate the rate to a particular level, to check whether they had any conflicting requests.").
[16] *Id.* (quoting traders that "'[i]t was one of those well kept secrets, but the regulator was asleep, the Bank of England didn't care and . . . [participating banks were] happy with the reference prices. Says another: 'Going back to the late 1980s . . . if you don't actually nail it down, they'll steal it.'").

including Barclays, Deutsche Bank, Royal Bank of Scotland and UBS."[17] Although there have been billions of dollars in damages paid to regulators, "the longer-term damage to the public's trust represents the greater cost of this misconduct."[18]

C. United Kingdom Examination of Post-Scandal LIBOR Reveals a Need for Replacement

Following the 2012 LIBOR Scandal, the UK government stepped in to reform and stabilize the now infamous rate.[19] The FCA took over regulation of the rate in April 2013.[20] "The International Organization of Securities Commissions (IOSCO) developed a broad set of 19 principles that . . . financial benchmarks are now expected to meet."[21] Since the scandal, LIBOR has undergone "significant improvements . . . through the work of its administrator, Intercontinental Exchange Benchmark Administration (IBA), and the work of the twenty panel banks that submit contributions to the benchmark."[22] IBA reforms include the creation of a bank oversight committee to challenge methodology, as well as requirements for

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[17] Powell, *supra* note 1 ("Since 2012, seven financial institutions have settled related charges with the U.S. [CFTC] and the U.S. [DOJ] . . . . Global penalties paid related to benchmark misconduct exceed $6 billion as investigations . . . continue."); Chad Bray, *Libor, Scandal-Plagued Interest Rate, Could Disappear by 2021*, CNBC (July 27, 2017), https://www.cnbc.com/2017/07/27/libor-scandal-plagued-interest-rate-could-disappear-by-2021.html [https://perma.cc/686H-FLYD] (detailing the history of the LIBOR scandal which underlies the FCA's decision to move away from LIBOR in 2021); *The LIBOR Scandal*, *supra* note 4.

[18] Powell, *supra* note 1 (arguing that continued use of LIBOR has become untenable due to a lack of trust in the rate).

[19] *Id.* (detailing the United Kingdom's response to LIBOR which has sparked the need to find a replacement rate).

[20] Kiff, *supra* note 5, at 33.

[21] Powell, *supra* note 1; Int'l Org. of Sec. Comm'ns, Principles for Financial Benchmarks, FR07/13, at 9–14 (2013) (describing principles for promoting the reliability of benchmark determinations: overall responsibility, oversight of third parties, conflicts of interest, control framework, benchmark design, data sufficiency, hierarchy of data inputs, transparency of benchmark determinations, periodic review, content of methodology, changes to methodology, transition, submitter code of conduct, internal controls over data collection, complaints procedures, audits, audit trial, and cooperation with regulatory authorities).

[22] Bailey, *supra* note 1 (explaining recent developments with LIBOR).

panel banks to have a "senior executive responsible for benchmark contributions as part of [their] Senior Managers regime."[23] The aim of the LIBOR reforms has been "to anchor LIBOR submissions . . . to actual transactions," instead of "expert judgment" which had allowed banks too much room to tweak their numbers for personal gain.[24]

Even with the newly enacted reforms, the FCA has LIBOR slated for termination in 2021.[25] The FCA has acknowledged that anchoring LIBOR to "actual transactions" has proven to be difficult.[26] In spite of the 2012 scandal, LIBOR appears to be ending due to the fact that "the market for unsecured wholesale term lending to banks . . . is no longer sufficiently active" to support generation of reliable LIBOR rates.[27] Despite the new government oversight, "panel banks feel understandable discomfort about providing submissions based on judgements with so little actual borrowing activity against which to validate those judgements."[28] Andrew Bailey, Chief Executive of the FCA, said that it is "not only potentially unsustainable, but also undesirable" to allow for markets to rely on a reference rate that is not

[23] *Id.* IBA has also publicly consulted on plans to tie LIBOR to transactions instead of "expert judgement" by the panel banks. Reforms have been made in consultation with the FCA as well as other regulators and central banks. *Id.*

[24] Bailey, *supra* note 1 (elaborating on regulatory changes with LIBOR generation).

[25] *Id.*; Bray, *supra* note 17; Kristen Haunss, *LPC: Loan Market Contemplates Life After Libor*, REUTERS (July 27, 2017), https://www.reuters.com/article/loan-libor/lpc-loan-market-contemplates-life-after-libor-idUSL1N1KI2G7 [https://perma.cc/E58B-2ZN8]; Suzi Ring, *Libor Funeral Set for 2021 as FCA Abandons Scandal-Tarred Rate*, BLOOMBERG (July 27, 2017), www.bloomberg.com/news/articles/2017-07-27/libor-to-end-in-2021-as-fca-says-bank-benchmark-is-untenable-j5m5fepe [https://perma.cc/S2HR-D33F]; Weiss, *supra* note 2.

[26] Bailey, *supra* note 1 (acknowledging the shortcomings with LIBOR reform and the need for a replacement).

[27] *Id.* ("[I]n one currency-tenor combination, for which a benchmark reference rate is produced every business day using submissions from around a dozen panel banks, these banks, between them, executed just fifteen transactions of potentially qualifying size in that currency and tenor in the whole of 2016"); John Heltman, *Proposed Alternative to Libor Faces Tough Road Ahead*, AM. BANKER (May 20, 2016), https://www.americanbanker.com/news/proposed-alternative-to-libor-faces-tough-road-ahead.

[28] Bailey, *supra* note 1 (indicating why a lack of government compulsion to supply rates to generate LIBOR would cause further degradation of LIBOR's accuracy and usefulness as a benchmark).

supported by an active market.[29] LIBOR's uncertain future has prompted several countries and institutions to look into replacement rates. The FCA will stop mandating LIBOR rate submissions from participating banks in 2021, effectively ending LIBOR.[30] The FCA believes "transition will be less risky and less expensive if it is planned and orderly rather than unexpected and rushed."[31] With a clear deadline in sight, public and private actors alike have an incentive to find a LIBOR replacement.

D. International Efforts to Find LIBOR Replacement Rates

1. United Kingdom

The United Kingdom has settled on the Sterling Overnight Index Average (SONIA).[32] "SONIA is designated as a specified benchmark under the Financial Services and Markets Act 2000 (FSMA) . . . . The Wholesale Market Brokers' Association (WMBA) is acting as the Bank's . . . publication agent for the SONIA benchmark."[33] SONIA was taken over by the Bank of England in 2016 and reflects "bank and building societies' overnight funding rates in the sterling unsecured market."[34] "The Working Group on Sterling

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[29] *Id.* (acknowledging that continued use of LIBOR would be inadvisable).
[30] *Id.* (discussing FCA's hope to no longer need "to persuade, or compel, banks to submit to LIBOR" through its legal powers).
[31] *Id.* ("By having a date by which transition will need to be complete, however, we give market participants a schedule to plan to, and make it easier for them to engage as many counterparties and LIBOR users as is practicably possible in that planning.").
[32] Ring, *supra* note 25 (describing the "push" from authorities to develop LIBOR replacement rates).
[33] *The SONIA Interest Rate Benchmark*, BANK OF ENG., http://www.bankofengland.co.uk/markets/Pages/benchmarks/sonia.aspx [https://perma.cc/RY5Q-MVRT] (explaining how SONIA is calculated and would be published for use by banks).
[34] Huw Jones, *BoE's Libor Alternative SONIA Backed as Benchmark by Dealers*, CNBC (Apr. 28, 2017), https://www.cnbc.com/2017/04/28/reuters-america-boes-libor-alternative-sonia-backed-as-benchmark-by-dealers.html [https://perma.cc/N87Z-PM5S] (reporting on the decision to adopt SONIA and the development for plans to allow for a greater adoption of the rate); *see also* Ben Moshinsky, *A Group of the World's Biggest Banks Backed an Alternative to Libor—Reducing Opportunities for Misconduct*, BUS. INSIDER

Risk-Free Reference Rates (the Working Group) . . . announced SONIA as its preferred near risk-free interest rate benchmark (RFR) for use in sterling derivatives and relevant financial contracts."[35] The Bank of England selected SONIA "based on robust transaction volumes" and how well it measures overnight interest rates.[36] An industry group of sixteen derivatives dealers believes that it can begin to create SONIA futures contracts next year.[37]

Despite endorsements from the Bank of England, FCA, and the Working Group, a number of critics question SONIA's ability to replace LIBOR. IBA has expressed a "desire to preserve LIBOR and is said to view SONIA as an inadequate alternative."[38] LIBOR's administrators have an unfavorable view of SONIA because LIBOR offers "a range of indices covering five different major currencies and a series of time periods from overnight to 12 months."[39] The IBA contrasts LIBOR's flexibility with the fact that "Sonia only covers

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(Apr. 28, 2017), http://www.businessinsider.com/sonia-backed-as-an-alternative-to-libor-2017-4 (describing the reasoning behind adoption of SONIA).

[35] Press Release, Bank of England, SONIA Recommended as the Sterling Near Risk-Free Interest Rate Benchmark (Apr. 28, 2017), https://www.bankofengland.co.uk/news/2017/april/sonia-recommended-as-the-sterling-near-risk-free-interest-rate-benchmark [https://perma.cc/MA7R-JS4L] (announcing the adoption of SONIA).

[36] Moshinsky, *supra* note 34 (elaborating upon the qualities of SONIA that contributed to its selection).

[37] Huw Jones, *Exclusive: Foundations for Post-Libor System Sliding into Place*, REUTERS (Aug. 10, 2017), https://www.reuters.com/article/us-banks-libor-markets-exclusive/exclusive-foundations-for-post-libor-system-sliding-into-place-idUSKBN1AQ1X3 [https://perma.cc/B3MX-3DZB] (reporting reactions to SONIA selection).

[38] Memorandum from Skadden, Arps, Slate, Meagher & Flom LLP & Affiliates, Mark D. Young et al., LIBOR Replacement Plans Bring Regulatory Considerations for Derivatives (Aug. 15, 2017) [hereinafter Skadden Memo], www.skadden.com/insights/publications/2017/08/libor-replacement-plans (elaborating upon the reactions to SONIA's selection and the implications of LIBOR replacement).

[39] Tim Wallace, *Libor's US owners fight UK plan to scrap the interest benchmark*, THE TELEGRAPH (July 29, 2017) http://www.telegraph.co.uk/business/2017/07/29/libors-us-owners-fight-uk-plan-scrap-interest-benchmark/ [https://perma.cc/D2EZ-K258] (expounding upon the criticisms leveled at SONIA's selection as a LIBOR replacement).

sterling and only measures the rate overnight."[40] Joshua Roberts, of J.C. Rathbone Associates Limited, adds that "SONIA . . . does not reflect dependence of rates on the term of a loan. A borrower pegged to three-month LIBOR knows his interest payments for the next quarter. With SONIA, he won't."[41]

Along with SONIA, the Working Group considered two other rates: the Sterling Secured Overnight Executed Transactions (£SONET) and the Sterling Repo Index Rate (£RIR).[42] "£SONET includes cleared and uncleared repo activity, and captures approximately two-thirds of the overnight gilt repo market."[43] £RIR "is calculated from repo trades that use UK sovereign government bonds as the underlying collateral."[44] While the Bank of England has endorsed SONIA, it encourages "development of the two new secured benchmarks that have emerged during this process."[45] The future development of £SONET and £RIR is a critical protection for the system stability of the sterling markets in case SONIA ultimately proves to be flawed and ineffective; unlike with LIBOR, the Bank of England does not wish to lose a rate without a ready replacement ever again.[46]

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[40] *Id.* (expounding upon the criticisms leveled at SONIA's selection as a LIBOR replacement).

[41] *LIBOR Pains*, THE ECONOMIST (Aug. 3, 2017) https://www.economist.com/news/finance-and-economics/21725811-regulators-are-nudging-financial-markets-towards-new-reference-points-crucial [https://perma.cc/H42C-A4LM] (quoting Joshua Roberts and his critique of SONIA).

[42] Press Release, Bank of England, *supra* note 35 (outlining the options considered to replace LIBOR).

[43] *£SONET Indicative Rate*, FTSE RUSSELL, http://www.ftse.com/products/indices/gbp-sonet [https://perma.cc/2JJX-VMBA] (describing the creation of £SONET and what it measures); *see Explanatory Notes—Wholesale*, BANK OF ENG., http://www.bankofengland.co.uk/statistics/Pages/iadb/notesiadb/wholesale_gilt_repomarket.aspx [https://perma.cc/2TFE-9B6M] ("Gilt repo transactions are sale and repurchase agreements in British government stock, conducted in accordance with legal documentation.").

[44] *£RIR*, NEX DATA, http://www.nexdata.com/indices/money-markets/sterling-repo-index-rate-rir/ [https://perma.cc/A7M3-Y3WA] (describing the creation of £RIR and what it measures).

[45] Press Release, Bank of England, *supra* note 35 (encouraging the development of replacement rates).

[46] *Id.* ("Having a range of benchmarks available clearly benefits the infrastructure of sterling markets.").

2. *United States*

In 2014, "the Financial Stability Oversight Council (FSOC) recommended regulators identify an alternative benchmark rate to LIBOR."[47] The Federal Reserve "created the Alternative Reference Rates Committee (ARRC)" to identify rates "tied to actual transactions."[48] In June, the ARRC selected the "broad Treasuries repo rate, linked to the cost of borrowing cash secured against U.S. government debt."[49] The Federal Reserve Bank of New York "proposed publishing . . . the rate that . . . represents best practice for use in . . . U.S. dollar derivatives and other financial contracts."[50] The Federal Reserve plans to publish the Broad Treasury Financing Rate (BTFR) in the first half of 2018.[51] The BTFR index "will have to run in parallel with LIBOR for several years . . . [to] change their reference interest rate to the new index."[52] BTFR was selected because of its strong reflection of "live, actual transactions" which can be easily monitored and will prevent the sort of rate rigging that plagued LIBOR.[53]

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[47] Skadden Memo, *supra* note 38.
[48] *Id.* (elaborating on the United States' response to SONIA).
[49] Ring, *supra* note 25; *see also* Tortoise Investments, *Replacing Libor: The Countdown Begins*, FORBES (Aug. 16, 2017), https://www.forbes.com/sites/tortoiseinvest/2017/08/16/replacing-libor-the-countdown-begins/#237e6c914e2b [https://perma.cc/HB2D-89Q] (recounting the steps taken by the US government to replace LIBOR).
[50] Martin, *supra* note 7; *see* Skadden Memo, *supra* note 38 ("The ARRC selected this rate . . . because of the depth of the market . . . approximately $660 billion in daily transactions"); *see also Frequently Asked Questions*, FED. RES. BANK OF N.Y.: ALTERNATIVE REFERENCE RATES COMMITTEE, https://www.newyorkfed.org/arrc/faq [https://perma.cc/5572-52MN] (last visited Sep. 10, 2017).
[51] Tortoise Investments, *supra* note 49 (outlining the ARRC plan to implement BTFR).
[52] *Id.* (explaining how BTFR will be implemented to ensure a smooth transition from LIBOR).
[53] Joe Rennison, *New Treasuries 'Repo' Rate to Replace LIBOR*, FIN. TIMES (June 22, 2017), https://www.ft.com/content/fe1fbf76-5793-11e7-80b6-9bfa4c1f83d2 ("The new rate was chosen above the Overnight Bank Funding Rate . . . in part based on the depth of the underlying market and its long-term robustness.").

E. Impact of Proposed New Rates on ARMs, CLOs, Derivatives, and Legacy Contracts

1. Adjustable Rate Mortgages

The end of LIBOR in 2021 forced financial actors to transition out of using the rate. In the United States, the future of LIBOR has been of particular importance to Adjustable Rate Mortgages (ARMs). 2,700,000 outstanding ARMs are indexed to Libor.[54] "Most ARM contracts specify that if the underlying index is no longer available, the lender or investor will pick a new 'comparable' index . . . [but] [w]hat qualifies as 'comparable' isn't clear."[55] Although banks do have ARMs tied to the one-year Treasury rate, they are unlikely to switch current ARMs to the repo rate for fear of lost profits, as "one-year Treasury is trading at 1.2%, compared with the one-year LIBOR at 1.7%."[56] While the market for ARMs has shrunken since the financial crisis, ARMs "still account for roughly $1.33 trillion of mortgages outstanding," and are projected to begin growing in popularity once again.[57] Unlike in other markets (such as the loan markets discussed below), banks and investors dealing with ARMs appear to be waiting on Fannie Mae, Freddie Mac or regulators to mandate a LIBOR replacement rate.[58]

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[54] Brad Finkelstein, *Libor Going Away Creates a Compliance Trap for ARM Lenders*, NAT'L MORTGAGE NEWS (Aug. 10, 2017), https://www.nationalmortgagenews.com/news/libor-going-away-creates-a-compliance-trap-for-arm-lenders [https://perma.cc/9FG5-2XG3] (considering features of ARMs that make a transition away from LIBOR potentially difficult for consumers).

[55] Christina Rexrode, *A Mortgage Mystery: What Happens to ARMs When Libor Goes Away?*, WALL ST. J. (Aug. 7, 2017), https://www.wsj.com/articles/a-mortgage-mystery-what-happens-to-arms-when-libor-goes-away-1502098201 (highlighting the major problem for ARMs in the face of LIBOR's discontinuation in 2021).

[56] *Id.* Representative Brad Sherman on the House Financial Services Committee, stated, "'Imagine if banks figured out a way to add just 0.10 percentage points to the cost of a mortgage . . . . It would cost a consumer hundreds of dollars in the first year . . . and it would be very unfair.'" *Id.*

[57] *Id.* ("That is nearly 14% of the overall market, and lenders had been expecting that share to grow as the Federal Reserve continues to raise interest rates. Banks also favor ARMs for jumbo mortgages, high-dollar amount loans they view as a source of revenue growth.").

[58] *Id.* ("For banks that plan to keep the mortgages on their books, they could presumably set the ARMs to any index they wish. To sell the ARMs to

2. *Loans and CLOs*

LIBOR's phase-out poses new problems for leveraged loans and Collateralized Loan Obligations (CLOs). Lenders and investors alike are unsure how to proceed with amending and creating new loan agreements in the wake of LIBOR's slated termination because the interest rate has been "a longtime benchmark for all manner of [financial] instruments" that they relied upon.[59] The Loan Syndications and Trading Association (LSTA) has called for the creation of new loan agreements that would not require unanimous investor approval to switch benchmarks.[60] Covenant Review argues that allowing loan agreements to be amended without unanimous investor approval "would open the door to manipulation by the largest banks—which, remember, is the kind of thing that necessitated rethinking LIBOR in the first place."[61]

Loan market participants face additional challenges regarding interest rate calculations. BTFR rates were designed "for the swap markets, and may not be well-suited to loans and [CLOs]."[62] Furthermore, industry officials face additional complications because "[t]he current market standard . . . requires consent from each affected lender for any amendments [to loan agreements] that would reduce the rate of interest on a loan."[63] This standard is a problem because neither borrowers nor lenders have any clear indication that any given

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investors, they will likely follow whatever guidelines are set by Fannie Mae and Freddie Mac . . . .").

[59] Allison Bisbey, *'Potential for Mischief' in Libor Replacement for Leveraged Loans*, AM. BANKER (Aug. 23, 2017), https://www.americanbanker.com/news/potential-for-mischief-in-libor-replacement-for-leveraged-loans ("Some credit agreements provide for a fallback in case Libor is unavailable," though these were not designed for a permanent disruption).

[60] *Id.*; *see also Libor: A Process, Not a Problem (II)*, LSTA, https://www.lsta.org/news-and-resources/news/libor-a-process-not-a-problem-ii [https://perma.cc/9WK8-483C] ("[A]s new agreements are drafted, parties may want to consider the ability to amend the agreement with less than 100% lender vote to avoid market disruption in the event LIBOR is permanently discontinued.").

[61] Bisbey, *supra* note 59 (elaborating that repeating mistakes in deciding a replacement rate would not generate the proper solution for the loan industry).

[62] *Id.* (explaining why "banks, corporate borrowers, and investors" are concerned about the usefulness of BTFR in loan markets).

[63] *Id.* (highlighting current industry practices that make finding a LIBOR replacement particularly troublesome in the area of loan agreements).

replacement rate would be lower than LIBOR. Additionally, if LIBOR is eliminated before a replacement rate can be agreed upon, "it would not be at all possible to determine if a new reference rate is lower."[64] "With no clear replacement rate . . . new loan documents cannot be drafted to accommodate a new benchmark" and current loan agreements cannot be properly amended.[65] The end of LIBOR has not been properly addressed in the loan market by ARRC's replacement rate and it is not yet clear if a suitable substitute will be found before LIBOR is terminated in 2021.

3. *Derivatives*

ARRC's decision to use BTFR has prompted the Chicago Mercantile Exchange Group (which serves as a non-voting member of ARRC) to announce "that it will develop futures and options on the new benchmark."[66] Futures and options tied to BTFR will become available "after the Federal Reserve Bank of New York and the U.S. Treasury Office of Financial Research begin daily publication of the rate in the first half of 2018."[67] While the CME Group feels they can handle the transition to BTFR because they have spent years exploring products based on "similar Treasury repo rates," not all traders view the change as optimistically.[68]

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[64] *Id.*
[65] *Id.* (highlighting the underlying need to find a replacement for LIBOR in order to contextualize the additional time pressure which complicates an already heated industry debate).
[66] News Release, CME Group, CME Group to Develop Derivatives on Broad Treasuries Repo Financing Rate (July 26, 2017), http://www.cmegroup.com/media-room/press-releases/2017/7/26/cme_group_to_developderivativeson broadtreasuriesrepofinancingrat.html.
[67] *Id.*; s*ee What's Next for LIBOR and Eurodollar Futures?*, CME GROUP (Aug. 14, 2017), http://www.cmegroup.com/education/whats-next-for-libor-eurodollar-futures.html [https://perma.cc/HVP5-8ATZ] (stating their plan to begin developing financial products based on LIBOR replacement rates).
[68] News Release, CME Group, *supra* note 66*; see also* Karen Brettell, *CME to Offer Repo-Backed Futures and Options*, REUTERS (July 26, 2017), https://www.reuters.com/article/us-cme-rates-repo/cme-to-offer-repo-backed-futures-and-options-idUSKBN1AB273 [https://perma.cc/9FJ9-EZXM] ("CME Group has spent the past several years exploring products based on similar Treasury repo rates, which would be complementary to its Federal Fund futures and Eurodollar futures products.").

Skeptics of ARRC's decision to adopt BTFR as a LIBOR replacement highlight several important questions concerning implementation of the new rate which regulators will need to answer in order for a smooth transition to take place. Derivatives traders are unsure if products based on the alternative rate "will be subject to the derivatives clearing mandates adopted under Dodd-Frank . . . ."[69] The Commodity Futures Trading Commission will examine rules "governing how customer funds can be invested," because current regulations required some interest payments to correlate with "one-month to three-month LIBOR rate[s]."[70] Traders of over-the-counter derivatives fear documentation difficulties could come with a rate change since LIBOR has been a standard feature on derivatives documentation as well as "International Swaps and Derivatives Associations (ISDA) terms."[71] The ISDA Master Agreement is one of the most widely used documents governing over-the-counter derivative swaps with an eye toward "reducing counterparty credit risk, increasing transparency, and improving the industry's operational infrastructure," which has been aided by the availability of LIBOR as a common benchmark.[72] In recognition of the efficiency gained by using a universal rate, the ISDA proposed publishing protocols to help firms alter legacy contracts to incorporate appropriate fallback rates with an eye toward the termination of LIBOR in 2021.[73]

4. *Legacy Contracts*

Legacy contracts are contracts that companies have held onto for extended periods of time and were typically formed under different

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[69] Skadden Memo, *supra* note 38 (explaining legal questions in derivatives markets that have yet to be answered regarding the LIBOR replacement rate).
[70] *Id.* (highlighting one area of financial regulation regarding investments in futures which had been tied to LIBOR which now requires re-examination).
[71] *Id.* (explaining how the pervasiveness of LIBOR had been helpful in streamlining documentation and how the creation of new rates will possibly complicate trading by increasing the time and resources that need to be spent on documenting trades more thoroughly as a result of LIBOR's replacement).
[72] *See About ISDA*, ISDA, https://www.isda.org/about-isda/ [https://perma.cc/E937-L7WQ] (last visited Nov. 12, 2017).
[73] *Benchmark Transition Plans will be Critical*, ISDA: DERIVATIVIEWS (June 29, 2017), http://isda.derivativiews.org/2017/06/29/benchmark-transition-plans-will-be-critical/ [https://perma.cc/2G8V-HKM5] (expounding upon one industry solution to try and retain the efficiency in futures markets that has been gained by using LIBOR as a universal rate).

economic conditions than those faced today.[74] Legacy contracts pose problems since an attempt "to amend contractual terms across all legacy contract holders even in a period longer than four to five years" would expose banks and other companies to significant costs and risks associated with revaluation of the legacy contracts.[75] ARRC "envisions a phasing out of existing contracts referencing LIBOR . . . that would allow market participants to use LIBOR under those contracts until they mature or expire."[76] Unfortunately, ARRC has not put much thought into what mechanisms would be involved in a phase-out.[77] The committee has stated that its mandate was focused on transferring derivatives to the BTFR, not "[moving] all trading or all products to a new rate."[78] Still, ARRC envisions the creation of contracts referencing BTFR as it gains in market share.[79]

The American Bankers Association (ABA) advised bankers to begin loan document due diligence for commercial loans while it engages with ARRC in several roundtables to discuss reference rate transition issues in the context of commercial loans.[80] In the UK, the

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[74] *See Legacy Asset*, INVESTOPEDIA, www.investopedia.com/terms/l/legacy-assets.asp?ad=dirN&qo=relatedSearchNarrow&qsrc=6&o=40186 [https://perma.cc/HT6Z-58D6] (last visited Oct. 12, 2017) ("An asset that has been on the company's books for a long period of time. This type of asset has generally decreased in value to the point of a loss for the company."); *see also Legacy Hedge*, INVESTOPEDIA, www.investopedia.com/terms/l/legacy-hedge.asp [https://perma.cc/A2RX-AVUB] (last visited Oct. 12, 2017) ("Depending on the movement of market prices over time, a legacy hedge can become extremely valuable or negative for the company.").

[75] Bailey, *supra* note 1 ("[Banks] also carry the cost and risks of submitting expert judgements, which many of them would prefer to cease as soon as they can. The first striking fact about a four or five year transition is that it is longer than the period under which we could compel individual banks to contribute to LIBOR under the European Benchmark Regulation. Trying to achieve transition within a shorter time would significantly increase costs, risks and disruption.").

[76] Skadden Memo, *supra* note 38 (citing FED. RES. BANK OF N.Y.: THE ALTERNATIVE REFERENCE RATES COMMITTEE, INTERIM REPORT AND CONSULTATION (2016)).

[77] *Frequently Asked Questions*, *supra* note 50, at 5–6.

[78] *Id.* (clarifying ARRC's mission was more focused on finding a rate for derivatives rather than an economy-wide solution).

[79] *Id.* (proposing a possible solution to greater economic concerns about the end of LIBOR).

[80] *Libor to Be Sustained Until 2021*, ABA BANKING J. (July 27, 2017), https://bankingjournal.aba.com/2017/07/libor-to-be-phased-out-after-2021/

Working Group responsible for SONIA has recommended that banks should not pursue a complete transition to the LIBOR replacement rate.[81] Because "[t]here would be a long tail of legacy contracts referencing Libor (some with remaining maturities of 50 years or more)" the Working Group fears a full transition would increase demand by corporations for a reference rates that include a "term credit risk component" in order to deal with the potential increase in defaults on legacy contracts caused by interest rate changes which would increase the costs of an already daunting transition.[82] While some loans allow for flexibility if LIBOR is not available, they provide no guidance on what that replacement rate should be.[83] Other loans state if LIBOR is not around or can't be determined, there will be another rate chosen by the lender, though there is fear that this would put borrowers at their creditors' mercy.[84]

F. Conclusion

With LIBOR slated to end in 2021, governments and investors across the globe have been forced to create contingency plans. In the United Kingdom, the FCA has settled on SONIA as its LIBOR replacement, though there are powerful opponents to the choice like the IBA. In the United States, ARRC has lent its support to BTFR, though the rate poses complex challenges for mortgages, CLOs, and legacy contracts. The next four years are bound to yield challenges for these industries as investors and lenders adapt. As Andrew Bailey stated, "The planning and the transition must now begin."[85]

Sam Waxenbaum[86]

(proscribing steps banks can take to prepare for the end of LIBOR and the effects that might have on legacy contracts).

[81] Minutes of the Meeting of the Working Group on Sterling Risk-Free Reference Rates, Bank of England (Mar. 18, 2015), https://www.bankofengland.co.uk/minutes/2015/rfr-march-2015 [https://perma.cc/KTA3-7VV5].

[82] *Id.*

[83] Weiss, *supra* note 2 (highlighting concerns of financial institutions and business that contracts had not been prepared with real contingencies in case LIBOR became unusable).

[84] *Id.*

[85] Bailey, *supra* note 1 (concluding the transition away from LIBOR will be challenging, but work on a solution cannot be delayed any longer).

[86] Student, Boston University School of Law (J.D. 2019).