

## MEMORANDUM

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Date: November 2, 2020

To: Board of Governors of the Federal Reserve System (“**Federal Reserve**”)  
Federal Deposit Insurance Corporation (“**FDIC**”)  
Office of the Comptroller of the Currency (“**OCC**”)

From: Alternative Reference Rates Committee (“**ARRC**”)

Re: Capital and Liquidity Regulatory Considerations in the Context of a Transition from Interbank Offered Rates to Alternative Risk-Free Rate Benchmarks

This memorandum summarizes the preliminary findings and recommendations of the ARRC regarding potential regulatory considerations associated with the application of current and anticipated capital and liquidity requirements in the context of the market transition from the use of the London Interbank Offered Rate (“**LIBOR**”) as a contractual reference rate to the Secured Overnight Financing Rate (“**SOFR**”) in the United States (the “**Transition**”).<sup>1</sup> This memorandum describes the capital and liquidity considerations the ARRC has identified thus far, including participants’ preliminary assessment as to whether the ARRC should approach regulators to request clarifying guidance regarding the capital and liquidity rules to facilitate the Transition. To that end, this memorandum may be updated from time to time as needed to reflect newly identified considerations and revise previously identified topics for potential clarification as the path and impact of the Transition are better understood.

The ARRC’s findings and recommendations in this memorandum are based on a view that, to the extent the Transition causes a change in the liquidity, risk-weighted asset (“**RWA**”) or other treatment of affected transactions under the applicable capital and liquidity rules, this

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<sup>1</sup> While this memorandum discusses capital and liquidity considerations in the context of a transition from LIBOR to SOFR and focuses on areas of particular importance in the United States, many of the considerations discussed are important internationally and the analysis may also apply to the transition from other interbank offered rates (“**IBORs**”) to other alternative risk-free rate benchmarks (“**RFRs**”), although the precise impact of the Transition (and similar transitions from other IBORs to other RFRs) may vary across jurisdictions.

Groups other than the ARRC are pursuing parallel efforts to identify capital and liquidity considerations related to the transitions to RFRs in other jurisdictions. For example, the Bank of England convened a Working Group on Sterling Risk-Free Reference Rates, which has issued letters to the Basel Committee on Banking Supervision, European Commission, and Prudential Regulatory Authority, informing them of potential impediments to the transition away from IBORs, including potential impediments related to capital and liquidity. See The Working Group on Sterling Risk-Free Reference Rates, Letter to Basel Committee on Banking Supervision re Regulatory Capital Impediments to Transition from ‘IBOR’ to New Risk-Free Rate (“RFR”) Framework (Oct. 23, 2019), *available* [here](#); The Working Group on Sterling Risk-Free Reference Rates, Letter to European Commission re Removal of Pan-European Regulatory Barriers to Transition Away from LIBOR and Other IBORs (Oct. 23, 2019), *available* [here](#); The Working Group on Sterling Risk-Free Reference Rates, Letter to Prudential Regulatory Authority re Regulatory Capital Impediments to Transition from ‘IBOR’ to New Risk-Free Rate (“RFR”) Framework (Oct. 23, 2019), *available* [here](#). The views related to RFR transitions expressed in the forgoing and by other groups do not necessarily reflect the views of the ARRC, except to the extent described in this memorandum.

change in treatment should not discourage timely and voluntary Transition. In this regard, this memorandum seeks regulatory guidance and certain actions and clarifications to avoid any unintended adverse impact to the macroprudential regulatory requirements related to capital and liquidity.<sup>2</sup>

A key policy goal of the Transition is to reduce overall risk in the financial system. The treatment of SOFR-based exposures under prudential capital and liquidity standards during and after the Transition should recognize this policy goal and ensure that prudential treatment of these exposures does not disincentivize timely and voluntary transition to SOFR. In general, if the Transition were to lead to unintended increases in capital and liquidity requirements, this would be at cross-purposes with the macroprudential goal of mitigating risk of the financial system as a whole.<sup>3</sup> To that end, the Basel Committee on Banking Supervision (“**BCBS**”) has issued guidance in the form of FAQs (“**BCBS June 2020 FAQs**”) that clarify application of certain international capital and liquidity standards in light of the transitions in many of its member jurisdictions from IBORs to RFRs.<sup>4</sup> The ARRC believes U.S. regulators should similarly address these principles with respect to current U.S. capital and liquidity regulatory requirements, as well as to future such requirements as they propose and implement the FRTB in the United States, as the BCBS June 2020 FAQs are not otherwise legally operative in the United States.<sup>5</sup>

In addition, the ARRC believes that regulators, industry groups and other market participants such as end users should continue to monitor the impact of the Transition on capital and liquidity requirements, including for example through quantitative impact studies. Where such adverse effects of the Transition are identified, regulators and the industry should collaborate as appropriate to develop responsive actions to avoid unintended consequences.<sup>6</sup>

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<sup>2</sup> Such an approach is in line with calls from regulators of the industry’s need to transition away from LIBOR prior to LIBOR’s potential cessation and the public sector’s need to help with the Transition. See, e.g., Randal K. Quarles, Vice Chair for Supervision, Board of Governors of the Federal Reserve System, *The Next Stage in the LIBOR Transition* (June 3, 2019), [available here](#); John C. Williams, President and Chief Executive Officer, Federal Reserve Bank of New York, *901 Days* (July 15, 2019), [available here](#). In some cases, this memorandum notes upcoming expected rulemakings that would provide regulators an appropriate opportunity to provide clarity on considerations associated with the Transition.

<sup>3</sup> In addition, the potential for unintended or unanticipated consequences may be elevated in this case, because past quantitative evaluations of the impact of future capital and liquidity standards, such as quantitative impact studies of the implementation of the Fundamental Review of the Trading Book (“**FRTB**”), may not have included a robust pro forma analysis reflecting the impact of the Transition. Accordingly, further consultation with the industry is warranted over the course of the U.S. rulemaking process related to implementing such standards, with a focus on considerations related to the Transition.

<sup>4</sup> See BCBS, *Basel Framework Frequently Asked Questions* (June 5, 2020), [available here](#).

<sup>5</sup> Although the BCBS June 2020 FAQs provide welcome guidance, they do not address all of the ARRC’s findings and recommendations in this memorandum.

<sup>6</sup> Although this memorandum focuses on issues with respect to capital and liquidity requirements, the ARRC notes that U.S. regulators, agencies, and standard setters have moved to provide other relief or clarifications in that would help encourage the Transition. See, e.g., Internal Revenue Service, *Guidance on the Transition from Interbank Offered Rates to Other Reference Rates*, 84 Fed. Reg. 54068 (Oct. 9, 2019) (notice of proposed rulemaking with respect to Transition-related tax relief); Office of the Comptroller of the Currency, Board of Governors of

Part I of this memorandum provides background on the Transition and the actions market participants may be expected to take to help effect the Transition.

Part II of this memorandum discusses the capital and liquidity considerations related to the Transition for which the ARRC currently recommends that regulators take appropriate actions to avoid potential unintended and temporary effects of the Transition on regulatory capital and liquidity requirements that may discourage a timely Transition.

Part III of this memorandum discusses other general effects of the Transition on regulatory capital and liquidity requirements that the ARRC believes merit discussion and monitoring but for which the ARRC does not have a specific regulatory recommendation as part of this initial analysis.

Part IV of this memorandum highlights how unintended increases in capital and liquidity requirements related to the Transition would ultimately increase costs to end users of derivatives and other products.

## I. Transition Background

In considering the possible capital and liquidity impacts associated with the Transition, the ARRC anticipates the following primary actions market participants voluntarily may take to help effect the Transition, considering their effects on capital and liquidity requirements:

- *Amendment of Contracts to Include SOFR Fallback Provisions.* In order to protect against any cessation of LIBOR publication, market participants may amend LIBOR-linked contracts to include new fallback RFRs, such as SOFR, that may result in the conversion of the underlying reference rate away from LIBOR to the fallback RFR if LIBOR is permanently discontinued or declared to no longer be representative by the U.K. Financial Conduct Authority (“**Fallback Amendment**”). For swaps, some counterparties may choose to use the International Swaps and Derivatives Association (“**ISDA**”)-developed Fallback Amendments so that upon the cessation of LIBOR, the contract is transitioned to the new SOFR. The ARRC anticipates that a significant portion of Fallback Amendments may be effected by the multilateral ISDA protocol, although some counterparties may enter into the Fallback Amendments bilaterally.<sup>7</sup>
- *Replacing LIBOR with SOFR for Contracts.* Some market participants may choose to voluntarily amend LIBOR-linked contracts to reference SOFR, without waiting for any cessation of LIBOR publication (“**Replacement Rate Amendments**”). Replacement Rate Amendments may be effected bilaterally between the counterparties to the trades.

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the Federal Reserve System, Federal Deposit Insurance Corporation, Farm Credit Administration, and Federal Housing Finance Agency, Margin and Capital Requirements for Covered Swap Entities (Sept. 17, 2019), *available* [here](#) (notice of proposed rulemaking with respect to Transition-related relief from Swap Margin Rule); FASB Proposed Accounting Standards Update Topic 848, Reference Rate Reform (Sep. 5, 2019), *available* [here](#) (proposed Transition-related changes to financial reporting).

<sup>7</sup> Because liquidity for products linked to SOFR and other RFRs may develop at different times in different markets, it is possible that some contractual fallbacks will contemplate multi-step conversions involving conversion from LIBOR (or another IBOR) to one RFR and then to another RFR (and perhaps other RFRs after that) if required over the course of the Transition. Throughout this memorandum, the term Fallback Amendment therefore also includes contractual fallbacks that may result in a multi-step conversion.

Replacement Rate Amendments may be accomplished in a myriad of ways to address differing interests of contract counterparties. In addition, these amendments may require amendments to contract terms other than the reference rate, for example to adjust for any economic impacts to counterparties of a change from LIBOR to SOFR. In some cases, it may be more efficient for counterparties to execute new contracts to transition a contract or portfolio from LIBOR to SOFR. Alternatively, some counterparties may need to convert their LIBOR-linked trades by amending their entire portfolio of LIBOR-linked trades. Depending on the size of the portfolio, parties may choose to undertake various bilateral or multilateral portfolio compression exercises to reduce the number of transactions on their books.<sup>8</sup>

- *New Contracts Referencing SOFR.* In accordance with the ARRC's Paced Transition Plan and similar plans in other jurisdictions, the trading of certain SOFR contracts commenced in 2018 and ARRC expects to build market liquidity and drive further demand for SOFR in 2019 ("**New SOFR Transactions**").<sup>9</sup> A smooth and orderly transition from LIBOR will necessitate building liquidity in these SOFR contracts.

Several categories of contracts could be affected by these changes, including derivatives contracts, repurchase and reverse repurchase agreements, securities lending and borrowing agreements, and certain regulatory capital instruments issued by banking organizations.

In addition to considering these potential actions by market participants, the ARRC also considered possible general effects of the Transition on the volume of transactions and liquidity of markets. In particular, the ARRC considered the following potential general market effects of the Transition:

- **Increased Volume Effect:** During the Transition, the gross notional amounts of derivatives contracts maintained by dealers may increase because of overlapping demand during the Transition for LIBOR- and SOFR-based instruments and for basis swaps and other instruments used to hedge basis risks between LIBOR and SOFR.<sup>10</sup> As a result of this activity, dealers would hold a larger total notional amount of derivatives and hold more derivatives assets and liabilities, as well as trading securities used to hedge this client-driven activity, on their balance sheets. There are a handful of possible pathways for transmission of the Increased Volume Effect, including:
  - **2020 Transition to SOFR Discounting for Cleared Transactions:** Two major clearinghouses, LCH and CME, plan to change the discount rate for mark-to-market calculations of their cleared derivatives portfolios from a Fed Funds -

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<sup>8</sup> For a list of possible models of conversion from IBORs to RFRs currently identified by the ARRC, see Follow-up Letter from the ARRC to CFTC Chairman Giancarlo Regarding Treatment of Derivatives Contracts Referencing the Alternative Risk-Free Rates, Annex 2, available [here](#).

<sup>9</sup> ARRC, 2019 Incremental Objectives, available [here](#).

<sup>10</sup> The Increased Volume Effect is not limited to LIBOR-SOFR basis swaps. For example, legacy long-term contracts may not have fallback provisions or have fallback provisions that revert the reference rate to the last available LIBOR rate, such that the contract effectively converts to a fixed instrument at the time of a LIBOR cessation event. In such cases, the Transition from LIBOR to SOFR would require a new swap transaction, and that new long-term fixed-for-floating interest rate swap would be appropriately attributable to the Transition.

based discount rate to a SOFR-based discount rate.<sup>11</sup> As part of this transition, both clearinghouses have announced transition plans that include the possibility of booking Fed Funds-SOFR basis trades for affected parties, as an alternative to cash settlement payment. To the extent these new basis trades are effected, this would represent an increased volume of cleared derivatives notional amounts directly tied to the SOFR Transition.

- **Future Transition to SOFR Discounting for OTC Trades:** Over time, credit support annexes for bilateral trades may be amended to reference collateral payments based on SOFR rather than OIS rates. To hedge the resulting OIS/SOFR basis risk, banks may enter into SOFR-OIS basis swaps to hedge this risk, resulting in increased notional volumes.
- **Reduced Opportunity for Trade Compression:** During the initial phases of the Transition, there may be much less of a trade pool to work with for trade compression. Thus, relative to LIBOR-based trades, there is less opportunity for trade compression with new SOFR-linked trades.
- **Market Segmentation:** Parts of the market (in particular the cleared market) may switch to SOFR earlier than the OTC/corporate client segment. Hedges for corporate exposures would need to be hedged with additional basis trades.
- **Reduced Liquidity Effect:** The Transition could impact the liquidity profile of certain instruments in the markets for floating-rate securities and derivatives. For example, SOFR-indexed instruments may be less liquid during the early part of the Transition. In addition, after a shift in volumes to Replacement Rate Amendments and New SOFR Transactions but before LIBOR is discontinued, certain remaining LIBOR-indexed instruments may become less liquid. During periods of reduced liquidity for these instruments, certain measures of liquidity relevant to regulatory capital and liquidity requirements could suffer. For example, a firm's Level 3 assets indicator might increase—thereby increasing a firm's G-SIB surcharge—as LIBOR-linked derivatives increasingly fall into the Level 3 fair-value measurement category or as SOFR-linked derivatives fall into Level 3 until they become more broadly traded. Additional potential consequences to be monitored for applicable capital and liquidity standards include the "liquid and readily-marketable" requirement and the heightened exposure requirements for positions that "cannot be easily replaced."<sup>12</sup>

## II. Specific Capital and Liquidity Considerations and Recommendations

This part is organized into three categories:

1. **Model-Related Considerations:** The Transition could have unintended effects on the determination of certain regulatory capital and liquidity requirements that are based on models requiring historical data; because SOFR-linked products are new, the Transition presents unique challenges for these models.

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<sup>11</sup> See CME Group, SOFR & €STR Discounting & Price Alignment Transition Process for Cleared Swaps, Q2 2020 (June 2020), [available here](#); LCH Limited, Proposed next steps for transition to USD SOFR discounting in SwapClear (Jul. 26, 2019), [available here](#).

<sup>12</sup> See, e.g., 12 C.F.R. §§ 3.37(c)(3)(iv), 217.37(c)(3)(iv), 324.37(c)(3)(iv) (under the standardized collateral haircut approach), 3.132(d)(5)(iii)(B), 217.132(d)(5)(iii)(B), 324.132(d)(5)(iii)(B) (under the internal models methodology).

2. **Recalibration-Related Considerations:** Although the ARRC believes that Increased Volume Effect and the Reduced Liquidity Effects would generally result in genuine increases in risk or decreases in liquidity for which resulting increases in effective capital and liquidity requirements would be warranted (see Part III), the ARRC has identified certain regulatory topics for which the anticipated impact of these effects on capital and related requirements would not align with the underlying regulatory purpose of the Transition. For the affected regulatory topics, the ARRC recommends that regulators consider recalibrating the affected regulatory requirements to avoid these unintended consequences.
3. **Amendment-Related Considerations:** Certain actions related to the Transition, such as market participants contractually implementing Fallback Amendments or Replacement Rate Amendments, could be interpreted to cause unintended effects on the treatment of certain capital or long-term debt instruments issued by banking organizations and recognized as components of the organization's regulatory capital or total loss-absorbing capacity ("TLAC").

#### **A. Model-Related Considerations**

Some regulatory requirements rely on models using historical data as an input. Equivalent historical data may not be available for SOFR-linked instruments for some time. This lack of data availability should not lead to regulatory requirements that would create economic disincentives to the Transition.

##### 1. Stress Testing, CCAR and the Stress Capital Buffer

**Summary Recommendation:** The Federal Reserve should consult with the industry to issue guidance on (i) use of historical proxy data published by the Federal Reserve Bank of New York for purposes of the comprehensive capital analysis and review ("CCAR") process and (ii) expectations for the impact of the Transition on financial projections under modeled stress scenarios.

- RFRs are important factors in stress loss models used for purposes of the CCAR process and company-run stress tests,<sup>13</sup> and as the Transition progresses, SOFR may become an increasingly important factor for these models. Modeling the performance of such instruments may be challenging without reliance on historical proxy data released by the Federal Reserve Bank of New York based on primary dealers' overnight Treasury repo borrowing activity. Firms may need to rely on proxy historical data to build and backtest the models to meet the existing supervisory standards on model risk management.<sup>14</sup>
- In consultation with the industry, the Federal Reserve should consider how to ensure that the lack of direct historical data does not result in overly conservative loss assumptions for purposes of CCAR. Specifically, the Federal Reserve should consult with the industry regarding how banks are expected to use the proxy published by the Federal Reserve Bank of New York as a historical proxy for overnight SOFR and possible related rates

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<sup>13</sup> See 12 C.F.R. Part 46, Part 252, Subparts E and F, Part 325.

<sup>14</sup> See Federal Reserve Supervisory Letter SR 11-7, Guidance on Model Risk Management (Apr. 4, 2011); Federal Reserve Supervisory Letter SR 15-18, Federal Reserve Supervisory Assessment of Capital Planning and Positions for LISCC Firms and Large and Complex Firms (Dec. 18, 2015).

such as term SOFR.<sup>15</sup> If the Federal Reserve concludes that it indeed expects banks to use this proxy for certain purposes, the Federal Reserve should clarify whether this proxy will be considered effectively the same as SOFR, such that the Federal Reserve will not require any additional qualitative or quantitative justification for using the proxy and will not impose any compensating overlay.

- In addition, the Transition could affect firms' financial projections under stress scenarios, including for the CCAR process and company-run stress tests. While Federal Reserve Vice Chair Quarles has suggested that supervisory projections of net interest income are not affected by the Transition,<sup>16</sup> other models impacting profit and loss may be affected due to the different characteristics of SOFR from LIBOR. For example, firm-specific models may involve parameters or assumptions that explicitly or implicitly incorporate the behavior of interest rate indices to which their financial instruments are tied. As a result of the possible differing behavior of SOFR and LIBOR, models of stress losses could be affected by the Transition if stress testing models include RFRs as macroeconomic variables, which could have implications with respect to both financial projections and supervisory expectations.
- The federal banking agencies should consult with the industry regarding the effects of the Transition on stress testing models. Based on these conversations, the Federal Reserve should issue guidance regarding expectations of the effects of the Transition on financial projections under modeled stress scenarios, including by providing clarity whether supervisory projections other than net interest income will be affected by the Transition.

## 2. Stress Period Calibration

**Summary Recommendation:** In implementing the FRTB in the United States, the federal banking agencies should: (i) clarify that, consistent with the BCBS June 2020 FAQs, banks would be permitted during the Transition to use the new benchmark rates for expected shortfall ("ES") calculations for the reduced set of risk factors in the current period ( $ES_{R,C}$ ), while using the old benchmark rates as proxies in the historical stress period ( $ES_{R,S}$ ) if the new benchmark rate is not available; (ii) clarify that banks would be permitted during the Transition to capitalize desks via the internal models approach ("IMA") of the FRTB, even if desk-level models fail backtesting or the profit and loss attribution test, if such failure was a result of the Transition, on the basis that the Transition constitutes a "major regime shift;" and (iii) issue guidance addressing the impact of the Transition under the existing market risk and counterparty credit risk capital frameworks.

- The Transition may unintentionally affect the calculation of ES under the BCBS's FRTB final standard,<sup>17</sup> due to possible inadequacies of historical time series data and the requirement to calculate the ES measure based on a 12-month stress period. The ARRC

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<sup>15</sup> See Federal Reserve Bank of New York, Statement Regarding the Publication of Historical Repo Rate Data (Mar. 9, 2018), *available* [here](#); Joshua Frost, Senior Vice President, Federal Reserve Bank of New York, Presentation by Joshua Frost at the Alternative Reference Rates Committee Roundtable (Nov. 8, 2017), *available* [here](#).

<sup>16</sup> Randal K. Quarles, Vice Chair for Supervision, Board of Governors of the Federal Reserve System, The Next Stage in the LIBOR Transition (June 3, 2019), *available* [here](#).

<sup>17</sup> See BCBS, Minimum Capital Requirements for Market Risk (Jan. 2019, rev. Feb. 2019), *available* [here](#).

recommends that the federal banking agencies consult with the industry on these issues over the course of the U.S. FRTB rulemaking process.

- Many new RFRs potentially will not have an adequate historical time series going back to the 2008–2009 financial crisis, and existing IBORs could suffer from deteriorating historical data quality as trading activity transfers to RFRs and products referencing IBORs become less liquid. Therefore, during the Transition, banking organizations may rely on proxy data for certain RFRs for certain historical time periods.
  - As noted above, the Federal Reserve Bank of New York has published a historical proxy for overnight SOFR.<sup>18</sup> If the Federal Reserve concludes that it expects banks to use this proxy for the purpose of calculating ES for instruments linked to overnight SOFR, the Federal Reserve should clarify, in consultation with the industry, how use of this proxy affects stress period calibration for purposes of the FRTB.
- The lack of historical time series data during the Transition for certain RFRs could call into question a banking organization’s ability to use a reduced set of risk factors to calculate ES under the IMA of the FRTB. The FRTB standard requires a bank to calibrate ES to a stress period based on a reduced set of firm-selected risk factors. The reduced set of risk factors must explain at least 75% of the variation in the ES model with a full set of risk factors.<sup>19</sup> Given the prevalence of general interest rate products, firms may risk falling under the 75% threshold to explain the variation in ES when using reduced factor models. Even where this hurdle is passed, the extent of proxying may result in increasing the ratio of current period ES calculated using the Full Set and Reduced Set of Risk Factors, which in turn may increase capital requirements.
- In light of these issues, the BCBS has provided guidance allowing some flexibility under the FRTB standard with respect to using the old and new benchmark rates for calculating ES.<sup>20</sup> The ARRC appreciates this proactive neutralizing measure and encourages the federal banking agencies to adopt this clarification as part of the FRTB implementation.
- The lack of historical time series data and use of proxies for certain RFRs and IBORs could also have unintended consequences on certain quantitative tests of validity for ES models, including backtesting and profit and loss attribution tests. Both of these tests rely on the availability of a set of risk factors that is representative of the banking organization’s overall portfolio. Replacing these risk factors with proxies could cause failures in backtesting and profit and loss attribution tests.
- The federal banking agencies should permit banks to capitalize desks via the IMA, even if desk-level models fail backtesting or the profit and loss attribution test, if such failure was a result of the Transition, on the basis that the Transition constitutes a “major regime

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<sup>18</sup> See *supra* n.15 and accompanying text.

<sup>19</sup> See *id.*, MAR31.26(6).

<sup>20</sup> See BCBS June 2020 FAQs, *supra* n.4 (“To address this, if the new benchmark rate is eligible for modelling according to MAR31 but was not available during the stress period, banks may use: (i) for the current period, the new benchmark rate in the full set of risk factors ( $ES_{F,C}$ ) and in the reduced set of risk factors ( $ES_{R,C}$ ); and (ii) for the stress period, the old benchmark rate in the reduced set of risk factors ( $ES_{R,S}$ ).”).



shift.”<sup>21</sup> The Federal Reserve, in coordination with the OCC and FDIC, should address these issues through statements in the preamble to its expected notice of proposed rulemaking on FRTB in the United States. In addition, the ARRC encourages BCBS to confirm that the Transition, and similar RFR transitions in other jurisdictions, collectively constitute a “major regime shift.”

- Similar unintended consequences could also affect the existing market risk framework. For example, stressed Value-at-Risk (“**VaR**”) and the stressed Effective Expected Positive Exposure (“**EEPE**”) measure under the internal models methodology (“**IMM**”) may be difficult to model. In particular, regulators have not yet clarified how they expect firms to proxy such time series given that in some cases RFRs did not exist during the 2008–2009 financial crisis.

### 3. Risk Factor Eligibility Test

Summary Recommendation: The federal banking agencies should allow banks to use price observations of both the new and old benchmark rates for the purpose of the RFET test for the new benchmark rates and, if appropriate, the old benchmark rates during the Transition.

- The treatment of SOFR- and/or LIBOR-linked instruments held in the trading book may result in overly conservative market risk capital charges under the FRTB final standard, if LIBOR and/or SOFR are treated as non-modellable risk factors during the Transition. Under the IMA, risk factors that do not qualify as “modellable risk factors” (non-modellable risk factors or “**NMRFs**”) pursuant to the FRTB’s Risk Factor Eligibility Test (“**RFET**”) are subject to capitalization for market risk on the basis of a stress scenario calibrated to be at least as prudent as the FRTB’s 97.5% ES calibration over an extreme stress period. Depending on the type of NMRFs, the FRTB permits only limited recognition of correlation or diversification effects between NMRFs, meaning that the aggregation of stress results for NMRFs could lead to higher capital charges than the aggregation for modellable risk factors, where diversification is permitted within risk classes.
- Under the BCBS standards, and depending on how those standards are implemented, the potential low observability of RFRs (during the Transition, until liquidity and time series are better established) and/or LIBOR (during and after the Transition, as liquidity is reduced) could cause either or both of these rates to be treated as NMRFs during certain periods of the Transition. These issues could be exacerbated if there is a decline in the number of LIBOR panel submitters or tenors at which LIBOR is published. Market participants may take time to transition to RFRs, including by virtue of remaining on LIBOR while transitioning to RFRs by means of Fallback Amendments, which could result in NMRF treatment for an extended period of time. Additionally, newly introduced RFRs, like SOFR, could be treated under FRTB as new risk factors, thereby failing to satisfy modeling criteria even if the RFRs have sufficient liquidity.
- Treatment of RFRs and/or LIBOR as NMRFs could result in significant capital charges. Firms may limit the impact by using modeling proxies and only capitalizing the basis between the proxy and the benchmark rates, or by modeling an NMRF as a combination of a modellable risk factor and a non-modellable proxy. However, the capital charges from treating RFRs and/or LIBOR as NMRFs may nonetheless be large.

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<sup>21</sup> See BCBS, Minimum Capital Requirements for Market Risk, *supra* n.17, MAR32.45.

- In light of these issues, the BCBS has provided guidance allowing use of both old and new benchmark rate observations for the purpose of the RFET for the new benchmark rates for a limited period during the Transition.<sup>22</sup> We welcome this clarification and encourage the federal banking agencies to adopt similar guidance in the United States when implementing FRTB.
- As a conceptual matter, the ARRC notes that the language in the BCBS June 2020 FAQs may suggest that this permission to expand price observations is limited to the RFET of the *new* benchmark rates and therefore does not address instruments that are linked to the *old* benchmark rates. However, it is possible that the old benchmark rates could become non-modellable as liquidity shifts to the new benchmark rates. This possibility may or may not materialize depending on the relative timing of FRTB implementation in the United States and Transition activities. The ARRC recommends that the federal banking agencies monitor liquidity conditions in old benchmark rates and, if applicable after the FRTB is finalized in the United States, consider clarifying that a bank would be permitted to use price observations of both the new and old benchmarks for the RFET of both the new *and old* benchmark rates during the Transition.

#### 4. Supervisory Model Review Process

Summary Recommendation: The federal banking agencies should consult with the industry to simplify model approval requirements for model changes related to the Transition, including for changes to current market risk or counterparty credit risk models that are related to the Transition.

- There is a need for a more streamlined permission and approval process related to the Transition. The introduction of new RFRs may result in significant changes to modeled market risk measures, including existing market risk models such as VaR, stressed VaR, and (under IMM) EEPE, which could require regulatory notification and/or approval of model changes. An important consideration is whether changes made to bank risk models following implementation of the Transition framework are considered to be model changes that require ex ante model approval or whether ex post approval would be sufficient. Specific areas of potential impact include:
  - Model change notification requirements, including the requirement to obtain pre-approval from regulators for material changes (e.g., extended periods of regulatory review may discourage banks from bringing transactions within the internal models perimeter);
  - Model backtesting and stress calibration—potentially impacted by limited data time series; and
  - Model limitation monitoring—banks’ models for the new benchmarks may evolve in sophistication over time, increasing the complexity of the model limitation

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<sup>22</sup> See BCBS June 2020 FAQs, *supra* n.4 (“Hence, when conducting the RFET for a new benchmark rate, banks can count both: (i) real price observations of the old benchmark rate (that has been replaced by the new benchmark rate) from before the discontinuation of the old benchmark rate; and (ii) real price observations of the new benchmark rate, until one year after the discontinuation of the old benchmark rate (eg in the UK, LIBOR discontinuation is expected to be 31 December 2021).”).

monitoring framework, including efforts to implement compensating controls. This may also lead to the need for repeated model change submissions to regulators.

- In light of these issues, the BCBS has noted the importance of coordination between supervisors and the industry on these issues,<sup>23</sup> and we encourage continued engagement between the U.S. federal banking regulators and the industry as part of these international efforts.
- The federal banking agencies should consult with the industry to develop more streamlined model approval requirements applicable to Transition-related model changes and effective for a temporary period during the Transition and should otherwise make reasonable accommodations for Transition-related issues that may arise in existing market risk and counterparty credit risk models that banks may rely on during the Transition. After this period, models could be revisited and assessed on an ex-post basis, which would help mitigate time and resource constraints for both banks and supervisors.

#### 5. Counterparty Credit Risk Exposure Estimation under Standardized Approaches and IMM

Summary Recommendation: The federal banking agencies should provide guidance confirming that, during the Transition, the lack of liquidity of certain collateral securities and / or derivatives will not result in an increase in the standardized or modelled exposure amounts for derivatives and securities financing transactions via an extended assumed holding period or margin period of risk (“MPOR”). In addition, the federal banking agencies, in conjunction with the industry, should monitor whether the Transition could cause certain collateral securities to fail to meet the “readily marketable” standard for financial collateral under the collateral recognition requirements.

- Firms may recognize higher MPOR parameters under SA-CCR and IMM as a result of the Reduced Liquidity Effect.<sup>24</sup> Similarly, where the collateral haircut approach (also known as “E minus C” treatment)<sup>25</sup> is permitted by the Federal Reserve, OCC, or FDIC, haircuts must be adjusted upwards (via an extended assumed holding period/MPOR) for illiquid collateral or derivative contracts that cannot be “easily replaced,”<sup>26</sup> as might be the case during the Transition as a result of the Reduced Liquidity Effect.
- The BCBS has acknowledged this potential issue and has proactively issued guidance neutralizing the effect of any transitional illiquidity on the MPOR parameter used in SA-

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<sup>23</sup> See BCBS, Benchmark Rate Reforms (Feb. 27 2020), *available* [here](#) (“In this regard, the Committee notes that various parts of the Basel Framework permit the use of proxies in internal models. Banks should hold early engagements with their supervisory authorities on how they plan to adapt their models to account for the transition to the alternative reference rates, including what proxies they plan to use. Banks that are required to submit model changes for approval should discuss their submission plans with their supervisory authorities, which will help to avoid bottlenecks.”).

<sup>24</sup> See 12 C.F.R. §§ 3.132(c), (d), 217.132(c), (d), 324.132(c), (d).

<sup>25</sup> See 12 C.F.R. §§ 3.34(b), 3.37(c), 217.34(b), 217.37(c), 324.34(b), 324.37(c).

<sup>26</sup> See 12 C.F.R. §§ 3.37(c)(3)(iv), (4)(i)(C), 217.37(c)(3)(iv), (4)(i)(C), 324.37(c)(3)(iv), (4)(i)(C).

CCR and IMM.<sup>27</sup> The ARRC recommends that the U.S. federal banking agencies follow this approach and take a similar or equivalent approach with respect to the MPOR parameter applicable under the collateral haircut approach, which banks in some circumstances are required to increase above the otherwise-applicable standardized levels.<sup>28</sup>

- If instruments fail to meet the “readily marketable” standard as a result of the Reduced Liquidity Effect, then firms may no longer be able to recognize collateral received under the applicable exposure amount methodology, effectively increasing the capital required to be held against exposures collateralized by less liquid collateral. The federal banking agencies should monitor this issue in conjunction with the industry. At a later date, the ARRC may have a separate recommendation on this issue.

## 6. Liquidity Coverage Ratio

Summary Recommendation: The federal banking agencies should issue guidance providing that, during the Transition, supervisors can take into account anticipated increases in the liquidity of replacement instruments for purposes of assessing whether those instruments qualify as high quality liquid assets (“HQLA”) under the liquidity coverage ratio (“LCR”) rule.

- The liquidity of RFR-linked instruments is expected to grow over the course of the Transition. However, because of the Reduced Liquidity Effect, such instruments could have more adverse HQLA treatment during the early stages of the Transition than the IBOR-linked instruments they replace, which in turn would impact firms’ Federal Reserve, OCC, and FDIC LCR requirements.<sup>29</sup> The BCBS has acknowledged this potential issue and has proactively issued guidance providing for more flexible HQLA treatment, which would help negate the potential impact of the Transition on the LCR numerator.<sup>30</sup> The ARRC recommends that the U.S. federal banking agencies similarly issue guidance that takes into account anticipated future liquidity of replacement instruments that reference alternative reference rates for purposes of determining HQLA qualification and computing the LCR.
- In addition, the ARRC welcomes the federal banking agencies to apply a similarly flexible approach to legacy IBOR-linked instruments, which may experience a loss of liquidity during the Transition but before the relevant legacy index terminates. In particular, if legacy instruments lose “readily marketable” status as a result of the Reduced Liquidity Effect as IBOR liquidity declines during the Transition, there will be an impact to LCR

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<sup>27</sup> See BCBS June 2020 FAQs, *supra* n.4 (“Until one year after the discontinuation of an old benchmark rate, any transitional illiquidity of collateral and OTC derivatives that reference the relevant new benchmark rate should not trigger the extended margin period of risk in CRE52.51(2) for SA-CCR and CRE53.24(2) for the IMM.”).

<sup>28</sup> See 12 C.F.R. § 3.37(c)(3)(iv), 217.37(c)(3)(iv), 324.37(c)(3)(iv).

<sup>29</sup> See 12 C.F.R. §§ 50.10, 249.10, 329.10.

<sup>30</sup> See BCBS June 2020 FAQs, *supra* n.4 (“Solely for the purpose of implementing benchmark rate reforms, when a type of instrument that references an interbank offered rate (IBOR) and has historically qualified as eligible HQLA is being replaced with an equivalent type of instrument that references an alternative reference rate, supervisors can take into account anticipated increases in the liquidity of the replacement instrument during the transition period when determining whether it qualifies as HQLA.”).

requirements for firms that continue to hold these instruments. The Reduced Liquidity Effect would be most relevant for level 2A and level 2B liquid assets,<sup>31</sup> which feed into the computation of the amount of HQLA<sup>32</sup> that forms the numerator of the LCR.

## **B. G-SIB Surcharge Method 2 Calculation**

Summary Recommendation: The Federal Reserve should engage with the ARRC to discuss and provide modifications to the G-SIB surcharge computation and FR Y-15 reporting instructions to avoid disincentivizing the participation by G-SIBs in the Transition.

- The Increased Volume and Reduced Liquidity Effects would likely have significant impacts on the G-SIB surcharge<sup>33</sup> under the generally binding (and U.S.-specific) Method 2 calculation for determining the amount of a firm's G-SIB surcharge,<sup>34</sup> due to their effects on both the size and complexity categories of indicators. The interconnectedness category could also be affected.
  - For the size category, for which the sole indicator of systemic risk is a firm's total leverage exposure (the measure used as the denominator for the supplementary leverage ratio ("SLR")), the Increased Volume Effect would increase this measure for the same reasons it would affect the SLR as discussed in Part III below.<sup>35</sup>
  - For the complexity category, the Increased Volume and Reduced Liquidity Effects could potentially affect all three indicators in this category. First, the Increased Volume Effect would increase the total notional amount of over-the-counter derivatives, the first complexity indicator. Second, to the extent that the Increased Volume Effect leads to a firm increasing its holdings of securities used to hedge the increased client-driven activity, this would also increase the amount of the firm's trading and available-for-sale securities indicator. Third, the Increased Volume and the Reduced Liquidity Effects could together increase a firm's Level 3 assets indicator. As LIBOR-indexed instruments are retired by firms and become less liquid, LIBOR-linked derivatives could increasingly fall into the Level 3 fair-value measurement category, thereby increasing the Level 3 assets indicator. Similarly, until SOFR-linked derivatives become more broadly traded, they potentially may have limited liquidity and holdings of such instruments could therefore increase the Level 3 assets indicator.
  - In addition, the Increased Volume Effect could lead to increases in the interconnectedness category, through the indicators for intra-financial system assets

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<sup>31</sup> See 12 C.F.R. §§ 50.20, 249.20, 329.20.

<sup>32</sup> See 12 C.F.R. §§ 50.21, 249.21, 329.21.

<sup>33</sup> See 12 C.F.R. § 217.403.

<sup>34</sup> See 12 C.F.R. §§ 217.403(c), 217.405.

<sup>35</sup> Working groups within the ARRC are simultaneously working to address trade/notional compression. If successful, these efforts could mitigate the G-SIB surcharge problems caused by the Increased Volume Effect. It is not yet clear if or precisely how trade/notional compression might mitigate increases in the G-SIB surcharge caused by the Increased Volume Effect. Firms should be mindful that the FR Y-15 data used to compute the G-SIB surcharge may be noisy over the course of the Transition, so firms should monitor computations of the G-SIB surcharge over time and seek regulatory actions to help neutralize these effects, if appropriate, when the impact on the G-SIB surcharge is better understood.

and intra-financial system liabilities. Because firms may simultaneously have assets and liabilities that are linked to LIBOR and assets and liabilities linked to SOFR, some of which may be held between banking organizations, the total intra-financial system assets and liabilities reported on the FR Y-15 may increase, thereby increasing the interconnectedness category and, in turn, the G-SIB surcharge.

- The ARRC expects that over the medium-term some technical changes may be made to other aspects of the G-SIB surcharge calculation. The ARRC would welcome consultation with the Federal Reserve, as part of those changes, regarding accommodations for Transition-related activities. For example, as described in more detail in the sub-bullet below, the ARRC would welcome the opportunity to discuss potential modifications to the G-SIB surcharge calculation and/or neutralization of Transition-related effects on G-SIB surcharges, in order to incentivize the Transition.
  - The ARRC notes that the G-SIB surcharge is different in kind from other capital requirements, in that the surcharge does not capture the risk of a particular activity but instead is a proxy for a firm's overall riskiness to the financial system based on its size, complexity and interconnectedness. The Transition could result in changes to a firm's G-SIB surcharge that do not reflect changes to the firm's underlying systemic risk profile. Because the Transition is meant to reduce overall risk in the system, it should not conflict with, or lead to an increased capital charge under, macroprudential requirements servicing the same purpose, such as the G-SIB surcharge. The ARRC welcomes engagement between the Federal Reserve and the industry to ensure that the Transition does not have an unintended impact, including disincentivizing the risk-reducing switch from LIBOR to SOFR. The Federal Reserve therefore should modify the G-SIB surcharge calculation to be at a minimum indifferent to the Transition or, in the alternative (or until such modification is completed), the Federal Reserve should neutralize any increased G-SIB surcharge attributable to Transition-related activities.
  - To avoid unnecessary volatility in the G-SIB surcharge that would be an impediment to the Transition, one approach would be to establish, whether by an amendment to the G-SIB surcharge rule or other supervisory guidance, a standardized process for identifying Transition-related transactions and effects of the Transition on legacy transactions, and to permit institutions to apply zero weight on these transactions toward the applicable G-SIB surcharge indicators.
    - In particular, under this approach, the Federal Reserve would permit firms to disregard for purposes of the G-SIB surcharge a hedging basis swap entered into as a result of the Transition. For example:
      - Assume a banking organization has a portfolio of \$100 million notional of LIBOR-based interest rate swaps and enters into a \$100 million notional LIBOR-SOFR basis swap to manage its Transition risk. Absent changes to the G-SIB surcharge calculation, the banking organization would then have \$200 million of derivatives notional for purposes of the complexity and other indicators. Yet the effect of the basis swap on the banking organization is essentially to convert its LIBOR-based portfolio into a SOFR-based portfolio. Across the existing LIBOR-based portfolio and basis swap transaction, the bank's resulting net position is a \$100 million notional of SOFR-based interest rate swap portfolio.
      - The Federal Reserve should instead allow the banking organization in this example to continue to use the \$100 million notional—

disregarding the Transaction-related hedging basis swap—for the purpose of calculating its G-SIB surcharge, avoiding the effect of the resulting increase in notional amount of derivatives on the Size, Interconnectedness, and Complexity indicators.<sup>36</sup>

- In addition, amendments to the G-SIB surcharge rule should identify Transition-related and legacy transactions that are categorized as Level 3 assets because of the Transition. A firm's level 3 assets indicator might increase, solely as a consequence of the Transition, because LIBOR-linked derivatives may increasingly fall into the Level 3 fair-value measurement category as they become less liquid and SOFR-linked derivatives may initially fall into Level 3 until they become more broadly traded. The G-SIB surcharge rule should be amended to neutralize this impact by deducting Transition-related transactions from the Level 3 assets indicator.
- An alternative approach would be to temporarily recalibrate—until an appropriate date—the affected G-SIB surcharge indicator coefficients based on estimated impacts of the Transition estimated from data collected through a QIS.
- Moreover, the Federal Reserve should revise the instructions to the FR Y-15 report, beginning with the report as of December 31, 2020, to permit firms that adopt the standardized approach to counterparty credit risk (“SA-CCR”)<sup>37</sup> early to use SA-CCR, instead of the current exposure methodology (“CEM”),<sup>38</sup> for reporting potential future exposure (“PFE”)<sup>39</sup> consistent with 12 C.F.R. § 217.132(c)(7) under the Interconnectedness indicator.<sup>40</sup>
  - As commenters noted during the SA-CCR rulemaking process, the adoption of SA-CCR—which some firms may choose to do prior to the January 1, 2022 mandatory compliance deadline—could affect FR Y-15 reporting.<sup>41</sup> Although the Federal Reserve stated in the final SA-CCR rule that it expects to address use of SA-CCR for purposes of the FR Y-15 in a separate process,<sup>42</sup> the Transition makes alignment of the FR Y-15 to SA-CCR more urgent. Alignment to SA-CCR would allow greater recognition of offsetting positions in PFE measurements, and, given that the Transition is expected to accelerate in 2020, the ARRC expects the Increased

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<sup>36</sup> See Sections III.A, H, F, G and I below for a discussion of the effects of such transactions on the risk-based capital requirements (other than the G-SIB surcharge), leverage ratio, supplementary leverage ratio and TLAC requirements.

<sup>37</sup> See 83 Fed. Reg. 64660 (Dec. 17, 2018).

<sup>38</sup> See 12 C.F.R. §§ 3.2, 3.34(a), 3.132(c)(5)–(6), 217.2, 217.34(a), 217.132(c)(5)–(6), 324.2, 324.34(a), 324.132(c)(5)–(6).

<sup>39</sup> See 12 C.F.R. §§ 3.34(a), 217.34(a), 324.34(a).

<sup>40</sup> PFE is reported on the FR Y-15 with respect to the Interconnectedness indicator on Schedule B item 5.b (intra-financial system assets, PFE of OTC derivatives contracts with other financial institutions that have a net positive fair value) and Schedule B item 11.b (intra-financial system liabilities, PFE of OTC derivatives contracts with other financial institutions that have a net negative fair value).

<sup>41</sup> See 85 Fed. Reg. 4362, 4470 (Jan. 24, 2020).

<sup>42</sup> See *id.*

Volume Effect will result in greater quantities of such positions. Without alignment of the FR Y-15 to SA-CCR, PFE measurements could have undesirable knock-on effects on the G-SIB surcharge that would be inconsistent with the systemic risk-reduction purpose of the Transition.

### **C. Effects of Amendments to Legacy Contracts**

#### **1. Qualification of TLAC-eligible Debt Instruments and Clean Holding Company Restrictions**

**Summary Recommendation:** The Federal Reserve should issue guidance confirming that amending an instrument from LIBOR to SOFR (i) would not call into question its grandfathered status for purposes of the TLAC rule and (ii) would not trigger the need for re-approval of a contractual conversion feature. The Federal Reserve should also confirm that the TLAC rule would not prohibit using tender or exchange offers to transition the index rate of debt or equity securities.

- The Transition could affect the treatment of TLAC-eligible long-term debt (“LTD”) instruments in two ways.
  - First, by changing LIBOR to SOFR as the reference rate for a debt instrument, either through a Fallback Amendment or a Replacement Rate Amendment, firms might be treated as newly issuing an instrument rather than amending an existing instrument.<sup>43</sup> In such cases, it would be necessary to reevaluate the TLAC and LTD eligibility of LIBOR-linked debt securities issued externally prior to December 31, 2016 that currently benefit from grandfathering under the Federal Reserve’s TLAC rule.<sup>44</sup> If amended instruments are treated as newly issued and lose grandfathered status, they may become ineligible to count towards TLAC and LTD based on having impermissible acceleration clauses or being governed by non-U.S. law.
  - Second, U.S. intermediate holding company subsidiaries of non-U.S. G-SIBs subject to the TLAC rule must obtain Federal Reserve approval of contractual conversion triggers present in LTD instruments intended to serve as internal TLAC.<sup>45</sup> If changing the reference rate on such automatically convertible LTD instruments from LIBOR to SOFR, either through a Fallback Amendment or a Replacement Rate Amendment, is treated as a new issuance of LTD, the issuer may be required to re-obtain Federal Reserve approval for the already-approved contractual conversion feature.
- In addition, the clean holding company requirements in the Federal Reserve’s TLAC rule could limit some firms’ flexibility to use tender offers or exchange offers to replace debt and preferred equity securities indexed to LIBOR with securities indexed to SOFR. In connection with a tender offer or exchange offer for its own debt or equity securities, a bank holding company typically enters into binding securities contracts to repurchase securities from third-party investors. These securities contracts are qualified financial contracts (“QFCs”) for purposes of the TLAC rule and would be prohibited by the TLAC rule’s clean holding company requirements if a covered bank holding company enters

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<sup>43</sup> If the change from LIBOR to SOFR results in the transaction being classified as a new instrument, such classifications will have broader implications beyond the capital and liquidity considerations discussed in this memorandum.

<sup>44</sup> See 12 C.F.R. §§ 252.61, 252.161.

<sup>45</sup> See 12 C.F.R. § 252.163.



into a QFC (other than a credit enhancement) directly with an unaffiliated third party.<sup>46</sup> Therefore, absent clarification from the Federal Reserve, this provision of the TLAC rule could limit some holding companies' ability to use tender offers or exchange offers to effect Transition-related transactions related to their debt and preferred equity securities.

- The Federal Reserve should extend grandfathering relief for LTD instruments amended to reference SOFR by means of a Fallback Amendment or Replacement Rate Amendment where such amendments are necessitated by the Transition, and confirm that amendments will not be considered the issuance of a “new” instrument for purposes of grandfathering, in line with the guidance for regulatory capital instruments in the BCBS June 2020 FAQs.<sup>47</sup> One way for the Federal Reserve to provide this confirmation would be to issue guidance clarifying that the treatment for TLAC purposes will follow the accounting guidance proposed by the Financial Accounting Standards Board (“FASB”) regarding Transition-related contract modifications.<sup>48</sup>
- The Federal Reserve should issue guidance stating that firms need not request the Federal Reserve to reapprove existing contractual conversion features.
  - This guidance should cover instances in which a contractual fallback waterfall is triggered due to unavailability of a reference rate. For example, some instruments may use term SOFR as the reference rate for a scheduled reset, but if term SOFR liquidity does not develop quickly enough, it is possible that term SOFR will be unavailable at the time of reset, triggering the reference rate to convert according to the contractual fallback waterfall.
- The Federal Reserve should issue guidance clarifying that the clean holding company restriction on QFCs with third parties would not prohibit the holding company of a firm from executing a tender offer or exchange offer the purpose of which is to replace a LIBOR-indexed debt or preferred equity security with a SOFR-indexed LTD debt or preferred equity security, or any similar Transition-related transaction.

## 2. Capital Instrument Qualification

**Summary Recommendation:** The federal banking agencies should confirm that an amendment to a capital instrument to reference SOFR rather than LIBOR would not (i) be treated as a redemption and replacement for purposes of the capital rule or CCAR or (ii) trigger a reassessment of whether the instrument has an incentive to redeem. These confirmations would be consistent with BCBS guidance regarding capital qualification of instruments amended to effectuate the Transition.

- Changes to reference rates could be effected through a redemption and replacement of legacy LIBOR-based capital instruments, or through a Fallback or Replacement Rate Amendment to such an instrument. A redemption and replacement would generally require regulatory approval for purposes of the capital rule.<sup>49</sup> In addition, if an

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<sup>46</sup> 12 C.F.R. § 252.64(a)(3).

<sup>47</sup> See *infra* note 53 and accompanying text.

<sup>48</sup> See FASB Proposed Accounting Standards Update Topic 848, Reference Rate Reform (Sep. 5, 2019), available [here](#).

<sup>49</sup> See, e.g., 12 C.F.R. §§ 3.20(c)(1)(vi), (d)(1)(x), 217.20(c)(1)(vi), (d)(1)(x), 324.20(c)(1)(vi), (d)(1)(x). At the holding company level, firms would generally request these

amendment is treated as a redemption and new issuance for regulatory or accounting purposes, such amendment would also trigger regulatory approval. Under the stress capital buffer final rule,<sup>50</sup> approvals may also be required for certain capital actions under the capital plan rule<sup>51</sup>

- Changes to reference rates could alter the process for determining that new additional tier 1 and tier 2 capital instruments (e.g., fixed-to-float additional tier 1 instruments) do not have an incentive to redeem; if they had such an incentive, they would no longer maintain their qualifying capital status.<sup>52</sup> Currently, the process for confirming that fixed-to-float instruments do not have an incentive to redeem involves comparing the contractual spread over the reference floating rate to the implied spread of the contractual fixed rate over a LIBOR swap rate of the same maturity. The Transition could alter this process.
- The Federal Reserve, OCC, and FDIC should issue guidance clarifying that a Reference Rate Amendment or Fallback Amendment to a LIBOR-indexed additional tier 1 or tier 2 capital instrument would not be treated as a redemption and new issuance for purposes of the capital rules and/or, in the case of the Federal Reserve, CCAR. One way for the federal banking agencies to provide this confirmation would be to clarify that the regulatory treatment of such amendments for capital and CCAR purposes would follow the accounting guidance proposed by the FASB regarding Transition-related contract modifications. Moreover, even where the instrument is transitioned through redemption and replacement, rather than amendment, the instrument should retain existing eligibility under the capital rules and not require additional approval under the capital plan rule nor in connection with CCAR, and regulatory guidance should confirm this approach.
  - Such actions by the Federal Reserve, OCC, and FDIC would be consistent with guidance issued by the BCBS confirming that Transition-related amendments to capital instruments will not be treated as new instruments.<sup>53</sup>
- The ARRC understands that, for the purpose of assessing whether a fixed-to-floating capital instrument contains an incentive to redeem at issuance, banking organizations are required to perform the quantitative assessment only at the issuance date based on the then-current terms of the instrument. Therefore, the ARRC assumes that a new analysis would not be required, for example, if the terms of the instrument are amended to change the benchmark rate from LIBOR to SOFR or for similar changes to the reference rate. The ARRC also assumes that the standard for assessing the incentive to redeem at

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required approvals in connection with capital planning and capital distribution requests under CCAR.

<sup>50</sup> See Federal Reserve, Press Release, Federal Reserve Board Approves Rule to Simplify Its Capital Rules for Large Banks, Preserving the Strong Capital Requirements Already in Place (Mar. 4, 2020), *available* [here](#).

<sup>51</sup> 12 C.F.R. § 225.8.

<sup>52</sup> See 12 C.F.R. §§ 3.20(c)(1)(iv), (d)(1)(iv), 217.20(c)(1)(iv), (d)(1)(iv), 324.20(c)(1)(iv), (d)(1)(iv).

<sup>53</sup> See BCBS June 2020 FAQs, *supra* n.4 (“The Committee confirms that amendments to capital instruments pursued solely for the purpose of implementing benchmark rate reforms will not result in them being treated as new instruments for the purpose of assessing the minimum maturity and call date requirements or affect their eligibility for transitional arrangements of Basel III.”); see *also* BCBS, Benchmark Rate Reforms (Feb. 27 2020), *available* [here](#) (same).

issuance should be based on the contractual reference rate in effect at issuance, whether that reference rate is LIBOR or SOFR. The Federal Reserve, OCC, and FDIC should issue guidance confirming these assumptions.

- Moreover, as discussed above with respect to TLAC-eligible debt instruments, some instruments using term SOFR as the reference rate for a scheduled interest rate reset may convert to a contractual fallback rate if term SOFR is unavailable at the time of the reset. In such situations, these instruments should retain existing eligibility under the capital rules and not require additional approval under the capital plan rule, and the regulatory guidance should confirm this approach. The Federal Reserve, OCC and FDIC should also include these instruments in guidance confirming that assessment of whether a fixed-to-floating instrument amended for purposes of the Transition contains an incentive to redeem will be only at the issuance date of the instrument based on its then-current terms, and not also upon the triggering of a fallback rate.

### **III. Other General Effects of the Transition on Capital and Liquidity Requirements**

This part discusses other considerations and possible effects of the Transition on capital and liquidity requirements. For these topics, the ARRC recommends close ongoing monitoring by regulators and the industry but does not have more specific regulatory recommendations as part of this initial analysis. However, the ARRC expects that this memorandum may be revised to reflect specific regulatory recommendations in the future as the path and impact of the Transition are better understood over time.

#### **A. Counterparty Credit Risk for OTC Derivatives**

Summary Recommendation: Continued monitoring and regulatory dialogue.

- If a firm's derivatives portfolio were to expand during the Transition as a result of the Increased Volume Effect, the portfolio would have higher RWAs, and thus the firm would be required to hold additional regulatory capital for counterparty credit risk under the U.S. Basel III capital rules.<sup>54</sup> This would be the case regardless of whether the firm is subject to the standardized approach<sup>55</sup> or advanced approaches<sup>56</sup> for computing RWAs.
- Under CEM, a firm's RWAs for PFE would generally increase as a result of the Increased Volume Effect. Under CEM, the PFE generally increases as the gross notional size of its derivatives portfolio increases, though not necessarily on a one-for-one basis. To the extent that increased gross notional amounts reflect heightened counterparty credit risks, it is appropriate to recognize higher capital requirements for a given counterparty. However, given netting, increases in gross notional amounts are a poor indicator of increases in risk.
- In addition, under the SA-CCR, because the basis swaps form their own hedging set separate from existing non-basis swaps interest derivatives, the Increased Volume Effect could artificially increase the PFE due to decreased diversification benefits.
- For netting sets of multiple positions with a single counterparty, both CEM and SA-CCR have the potential to overstate the counterparty credit risk stemming from future

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<sup>54</sup> See 12 C.F.R. Parts 3, 217, 324.

<sup>55</sup> See 12 C.F.R. Part 3, Subpart D, Part 217, Subpart D, Part 324, Subpart D.

<sup>56</sup> See 12 C.F.R. Part 3, Subpart E, Part 217, Subpart E, Part 324, Subpart E.

exposures. This overstatement could be exacerbated during the Transition due to the Increased Volume Effect.

- For CEM, the potential for overstatement relates to how offsetting risks are generally not reflected in the gross notional calculation as the primary input into the PFE.
- For SA-CCR, the potential for overstatement relates to how basis-risk transactions (e.g., a LIBOR-for-SOFR interest rate swap) are treated as separate hedging sets.<sup>57</sup>
- For Example: Consider a firm with an existing swap with a customer for which the firm pays a fixed interest rate and receives a LIBOR-indexed floating leg. If the firm and its customer want to amend this transaction so that the firm receives, and the customer pays, a SOFR-indexed floating leg, the firm and the customer could enter into a new basis swap for which the firm would pay LIBOR floating and receive SOFR floating, resulting in a synthetic fixed-to-SOFR swap. Under CEM, the PFE for the netting set on day one would approximately double, since the notional for this netting set (assuming just these two transactions) would double while the net-to-gross ratio would be unchanged on day one of the trade (because the current mark-to-market value of the new basis swap is zero). Under SA-CCR, the basis swap may have to be recognized in a separate hedging set, effectively ignoring the offsetting LIBOR legs of the two swaps. Under CEM and possibly also under SA-CCR the firm would be required to hold capital to cover the two positions separately, raising costs to end-users for what is ultimately a Transition meant to reduce risk in the financial system by helping phase out LIBOR.<sup>58</sup>
- At this time, the federal banking agencies and the industry should monitor exposures under CEM and SA-CCR for potential unintended consequences of the Transition, engage in informal dialogue, and, as appropriate, consider responsive regulatory changes or guidance.<sup>59</sup> The overstatement of PFE under the CEM is well known and, although it may be exacerbated by the Increased Volume Effect of the Transition, such overstatement is not a unique effect of the Transition. For SA-CCR, the inability to net exposures (or legs of exposures) between the hedging set for interest rate risk and the hedging set for basis risk is arguably exacerbated by the Transition under some scenarios, such as the example above.

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<sup>57</sup> See 83 Fed. Reg. 64668 (“Basis derivative contracts ... would require separate hedging sets.”).

<sup>58</sup> The ARRC notes that to the extent capital requirements would increase unless both positions are entered with the same counterparty, this feature of the Transition could lead to higher costs for end users, as discussed in Section IV below.

<sup>59</sup> In particular, as discussed in Section II.B above, the federal banking agencies and the industry should monitor basis swap activity that may affect the G-SIB surcharge. To the extent there is an impact through the Interconnectedness indicator, as appropriate, it should be neutralized by either treating the basis swap and related transaction as one trade or by temporarily recalibrating G-SIB surcharge indicator coefficients.

## **B. FDIC Assessments**

Summary Recommendation: Continued monitoring and regulatory dialogue.

- Because FDIC insurance assessments are based on the size of an insured depository institution's assets,<sup>60</sup> assessments may increase during the transition because of the Increased Volume Effect. Assessments are currently based on CEM, and there is not yet an indication whether SA-CCR—which the ARRC notes could potentially mitigate the potential effect on assessments—would replace this.
- At this time, the ARRC recommends that regulators and the industry monitor the potential impact of the Transition on FDIC insurance assessments and, as appropriate, consider responsive regulatory changes or guidance.

## **C. FRTB Timeline and Resource Implications**

Summary Recommendation: No action at this time.

- The timelines for FRTB implementation in different jurisdictions remain uncertain. In addition, the mechanics of and work required to effectuate the Transition also remain uncertain. Both FRTB implementation and the Transition may require substantial work by the same teams to develop supporting models and infrastructure. In some cases, firms may intend to implement FRTB by the first quarter of 2022, which coincides with when LIBOR may cease to exist. As a result of these overlaps in resource needs and timing, resource constraints may pose a challenge for both implementing FRTB and executing the Transition effectively.
- The ARRC does not have a specific recommendation for these timeline and resource implications at this time.

## **D. Net Stable Funding Ratio**

Summary Recommendation: No action at this time.

- If the amount of gross derivatives liabilities increases as a result of the Increased Volume Effect, then firms could have higher required stable funding amounts under the Federal Reserve, OCC, and FDIC's proposed rule. In turn, this would require firms to hold more liquid instruments.<sup>61</sup>
- To the extent that the Increased Volume Effect results in increases in the relevant balance sheet measures that correspond to increases in the underlying funding risks and exposures, there may be no need to request regulatory action.

## **E. Broker-Dealer Net Capital Requirements**

Summary Recommendation: Continued monitoring.

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<sup>60</sup> See 12 C.F.R. § 327.5.

<sup>61</sup> See 81 Fed. Reg. 35124 (June 1, 2016).

- If a broker-dealer’s own securities held in proprietary or other accounts are less liquid because of the Reduced Liquidity Effect—that is, if they lose “liquid and readily marketable” status under the relevant rules—then the broker-dealer may face increased haircuts for these securities for purposes of its net capital requirements and thus may face greater difficulty meeting its SEC minimum net capital requirements.<sup>62</sup>
- Firms may wish to continue monitoring the impact of the Transition on ability to meet minimum net capital requirements. If securities are not “readily marketable,” that is a reality for which relief likely should not be granted. Because it is unclear whether there will be substantial effects on broker-dealer net capital requirements due to legacy LIBOR-linked instruments falling out of “readily marketable” status, and whether such effects will be significant impediments to the Transition, it is premature to request regulatory action from the SEC.

#### ***F. U.S. Leverage Ratio***

Summary Recommendation: Continued monitoring and regulatory dialogue.

- If balance sheet size increases as a result of the Increased Volume Effect, the U.S. leverage ratio<sup>63</sup> denominator would similarly increase. As firms hold both LIBOR- and SOFR-linked instruments, firms would have duplicative market positions that, to the extent they are uncollateralized, would be receivables on their balance sheets requiring greater amounts of capital to meet U.S. leverage ratio requirements set by the Federal Reserve, OCC, and FDIC.
- At this time, the federal banking agencies and the industry should monitor the U.S. leverage ratio for potential unintended consequences of the Transition, engage in informal dialogue, and, as appropriate, consider responsive regulatory changes or guidance.<sup>64</sup>

#### ***G. Supplementary Leverage Ratio***

Summary Recommendation: No action at this time.

- As with the U.S. leverage ratio, the Increased Volume Effect could lead to a larger balance sheet and supplementary leverage ratio (“**SLR**”)<sup>65</sup> denominator, and therefore to higher SLR requirements under the rules of the Federal Reserve, OCC, and FDIC. In addition, the SLR denominator includes a measure of PFE for derivatives similar to that

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<sup>62</sup> See 17 C.F.R. § 240.15c3-1.

<sup>63</sup> See 12 C.F.R. §§ 3.10(a)(1)(iv), (b)(4), 217.10(a)(1)(iv), (b)(4), 324.10(a)(1)(iv), (b)(4).

<sup>64</sup> In particular, as discussed in Section II.B above, the federal banking agencies and the industry should monitor Transition-related new swap activity that may affect the G-SIB surcharge. To the extent there is an impact through the Size indicator, as appropriate, it should be neutralized by either treating the legacy swap and associated hedging transaction as one trade or by temporarily recalibrating G-SIB surcharge indicator coefficients.

<sup>65</sup> See 12 C.F.R. §§ 3.10(c)(4), 217.10(c)(4), 324.10(c)(4).

determined under CEM (and SA-CCR, when implemented), which would also increase as portfolios increase in notional amount, for the reasons discussed in Section III.A above.<sup>66</sup>

- At this time, the ARRC does not have a specific recommendation for regulatory action.

#### **H. Regulatory Capital Requirements**

Summary Recommendation: No action at this time.

- If firms' balance sheets grow in size because of the Increased Volume Effect, Federal Reserve, OCC, and FDIC regulatory capital requirements would increase for the same reasons explained above regarding increases in the RWAs and total leverage exposure measures.
- At this time, the ARRC does not have a specific recommendation for regulatory action. To the extent that the Increased Volume Effect results in increases in the RWA and total leverage exposure measures that correspond to increases in underlying risks and exposures, there may be no need to request regulatory action.

#### **I. Total Loss-Absorbing Capacity and Long-Term Debt Requirements**

Summary Recommendation: No action at this time.

- If firms' balance sheets grow in size because of the Increased Volume Effect, Federal Reserve TLAC<sup>67</sup> and LTD<sup>68</sup> requirements would increase for the same reasons explained above regarding increases in the RWAs and total leverage exposure measures.
- At this time, the ARRC does not have a specific recommendation for regulatory action. To the extent that the Increased Volume Effect results in increases in the RWA and total leverage exposure measures that correspond to increases in underlying risks and exposures, there may be no need to request regulatory action from the Federal Reserve.

#### **J. Interest Rate Risk in the Banking Book**

Summary Recommendation: Continued monitoring and regulatory dialogue.

- The Transition may produce a technical mismatch between assets and liabilities for purposes of the Interest Rate Risk in the Banking Book ("IRRBB") framework,<sup>69</sup> as firms' deposits and other liabilities may be linked to SOFR going forward even though firms might have legacy mortgage assets linked to LIBOR remaining on their books during the Transition (and before LIBOR is completely phased out). As a result, relative movements in LIBOR and SOFR could impact IRRBB. At the same time, the IRRBB framework may be sufficiently flexible to absorb the Transition.

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<sup>66</sup> See 12 C.F.R. §§ 3.10(c)(4)(ii)(B), 217.10(c)(4)(ii)(B), 324.10(c)(4)(ii)(B).

<sup>67</sup> See 12 C.F.R. §§ 252.63, 252.165.

<sup>68</sup> See 12 C.F.R. §§ 252.62, 252.162.

<sup>69</sup> See BCBS, Standards, Interest Rate Risk in the Banking Book (Apr. 2016), [available here](#).

- At this time, the ARRC recommends that regulators<sup>70</sup> and the industry monitor potential mismatches between assets and liabilities under the IRRBB framework as a consequence of the Transition and, as appropriate, consider responsive regulatory changes or guidance.

#### **K. Basel Pillar 3 Disclosures**

Summary Recommendation: Continued monitoring and regulatory dialogue.

- The ARRC is not certain whether the BCBS has considered the Transition in the context of Pillar 3 disclosures.<sup>71</sup> It is possible BCBS will ask firms for disclosures regarding risks associated with the Transition.
- At this time, the ARRC recommends that regulators<sup>72</sup> and the industry monitor potential impact of the Transition on Pillar 3 disclosures and, as appropriate, consider responsive regulatory changes or guidance. The risks of the Transition will be disclosed as a consequence of SEC advisory requirements, but Pillar 3 may still present challenges under the Transition.

#### **IV. End User Considerations**

Summary Recommendation: Regulators should take into account the impact of capital and liquidity requirements on commercial end users.

- Commercial end users differ from many other participants in the over-the-counter derivatives markets in that they generally use derivatives to reduce risks arising from their business operations. To qualify for the exemption from mandatory margining and central clearing for their derivatives transactions, commercial end-users must have entered into their derivative trades to hedge one of their fundamental commercial risks.
- From an end-user company's point of view, the OTC derivatives market should allow, as appropriate, the efficient transmittal of risk from where it is incurred to where it can be matched and offset. Regulatory costs along the way, including requirements for higher capital placed on its financial intermediaries, inevitably affect end users.
- Although all of the capital requirements cited above in this memorandum must be met by the regulated financial derivatives counter-party, these costs are inevitably felt by end users, raising their costs of conducting their day-to-day business operations in a prudent manner using the derivatives market to hedge anticipated risks.
- Consider a manufacturing company that has availed itself of the derivatives end-user exemptions. If this company had previously entered into an interest rate swap to hedge its floating interest rate exposure from a bank-provided LIBOR-based term loan, the simplest way to amend this structure in the market-wide transition away from LIBOR might be to 1) amend the LIBOR-based term loan to use a SOFR-based interest rate

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<sup>70</sup> Because IRRBB is a BCBS standard, the BCBS could also be engaged in these conversations in addition to U.S. regulators.

<sup>71</sup> BCBS, Standards, Pillar 3 Disclosure Requirements—Updated Framework (Dec. 2018), *available* [here](#).

<sup>72</sup> Because Pillar 3 Disclosures are a BCBS standard, the BCBS could also be engaged in these conversations in addition to U.S. regulators.



index and 2) amend its derivative in which it pays a fixed rate and receives a LIBOR-based rate into one where it receives a SOFR-based rate.

- To encourage a competitive bidding process among the company's derivatives dealer counterparties, the end-user's corporate treasury would likely bid a new offsetting interest rate swap not only to its existing counterparty, but also to other swap counterparties. However, as described above in this memorandum, this offsetting swap would likely require the end-user's financial counterparties to satisfy a variety of additional capital requirements. The cost of these additional capital requirements would be passed on to the end-user. This might cause the end-user company to forego hedging the SOFR floating interest rate risk, increasing its overall risk and the systemic risk in the U.S. financial system and the economy as a whole. If the end-user persists and enters into the higher-cost derivative, it would need an offset coming from a dollar-for-dollar reduction in the funds it has available to invest in new inventory for higher sales, expansions of its plant and equipment, to conduct additional research and development, and ultimately to grow its business.