

FEDERAL RESERVE SYSTEM**12 CFR Part 253****[Regulation ZZ; Docket No. R-1775]****RIN 7100-AG34****Regulations Implementing the Adjustable Interest Rate (LIBOR) Act****AGENCY:** Board of Governors of the Federal Reserve System (Board).**ACTION:** Final rule.

SUMMARY: The Board is adopting a final rule (final rule) to implement the Adjustable Interest Rate (LIBOR) Act. The final rule establishes benchmark replacements for contracts governed by U.S. law that reference certain tenors of U.S. dollar LIBOR (the overnight and one-, three-, six-, and 12-month tenors) and that do not have terms that provide for the use of a clearly defined and practicable replacement benchmark rate following the first London banking day after June 30, 2023. The final rule also provides additional definitions and clarifications consistent with the Adjustable Interest Rate (LIBOR) Act.

DATES: The final rule is effective February 27, 2023.

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SUPPLEMENTARY INFORMATION:**I. Background****A. LIBOR**

LIBOR, formerly known as the London Interbank Offered Rate, is an interest rate benchmark that was the dominant reference rate used in financial contracts in recent decades and remains in extensive use today, serving as the benchmark rate in more than \$200 trillion worth of contracts worldwide.¹ While over-the-counter and exchange-traded derivatives account for the vast majority of this estimated exposure to LIBOR, LIBOR is also referenced in trillions of dollars' worth of business and consumer loans, bonds, securitizations, and nonfinancial corporate contracts.

LIBOR is intended to reflect the rate at which large banks can borrow

wholesale funds on an unsecured basis. LIBOR is calculated based on submissions contributed by a panel of large, globally active banks (LIBOR panel banks). Until December 31, 2021, LIBOR's administrator calculated and published LIBOR each London business day for five currencies (USD, GBP, EUR, CHF, and JPY) and seven borrowing periods, known as tenors (overnight, one week, one month, two months, three months, six months, and twelve months).

Over the past decade, financial regulators have expressed growing concern regarding the structural vulnerabilities and robustness of LIBOR.² Following the financial crisis of 2007-2009, other forms of borrowing have largely replaced short-term unsecured wholesale borrowing as a source of funds for most banks, resulting in far fewer market transactions on which LIBOR panel banks can base their submissions. At the same time, weaknesses in the governance of LIBOR created the opportunity for LIBOR panel banks to manipulate LIBOR, and numerous high-profile examples of such manipulation were exposed.³ Following these scandals, in 2013, the administration of LIBOR was transferred to a new administrator, ICE Benchmark Administration Limited (IBA), which is regulated by the U.K.'s Financial Conduct Authority (FCA).

Despite increased regulatory oversight and efforts to improve LIBOR, confidence in LIBOR continued to wane, and financial regulators and market participants began to search for alternative reference rates and develop plans for a transition away from LIBOR. In the United States, this effort has been led by the Alternative Reference Rates Committee (ARRC), a group of private-sector firms convened jointly by the Board and the Federal Reserve Bank of New York (FRBNY) in 2014.⁴ Among

other work, the ARRC identified the Secured Overnight Financing Rate (SOFR) as its recommended replacement for USD LIBOR and developed a Paced Transition Plan to support the transition from USD LIBOR to SOFR.⁵ SOFR is a broad measure of the cost of borrowing cash overnight collateralized by U.S. Treasury securities.⁶ Similar groups were convened in other jurisdictions and identified comparable risk-free rates as recommended replacements for the other LIBOR currencies.

In July 2017, following the departure of some panel banks, the FCA announced that the remaining LIBOR panel banks had voluntarily agreed to sustain LIBOR through the end of 2021 to facilitate an orderly transition away from LIBOR.⁷ On March 5, 2021, the FCA announced that, after December 31, 2021, IBA would cease publishing 24 currency and tenor pairs (known as settings). The discontinued LIBOR settings included one-week and two-month USD LIBOR, as well as all EUR and CHF LIBOR tenors and most GBP and JPY LIBOR tenors.⁸ However, the FCA required IBA to continue publishing, on a temporary basis, certain GBP and JPY LIBOR tenors on a "synthetic" basis, stating that any such synthetic LIBOR settings "will no longer be representative of the underlying market and economic reality the setting is intended to measure."⁹

To allow most legacy USD LIBOR contracts governed by non-U.S. law to mature without disruption, the FCA also announced that the panels for the

⁵ ARRC, *The ARRC Selects a Broad Repo Rate as its Preferred Alternative Reference Rate* (June 22, 2017), <https://www.newyorkfed.org/medialibrary/microsites/arrc/files/2017/ARRC-press-release-jun-22-2017.pdf>; ARRC, *Second Report* (Mar. 2018) at 17, <https://www.newyorkfed.org/medialibrary/microsites/arrc/files/2018/ARRC-Second-report>.

⁶ SOFR is published daily by the FRBNY in cooperation with the U.S. Department of the Treasury's Office of Financial Research. See Fed. Res. Bk. of New York, *Secured Overnight Financing Rate Data*, <https://www.newyorkfed.org/markets/reference-rates/sofr> (last visited Nov. 29, 2022). SOFR is calculated as a volume-weighted median of transaction-level tri-party repurchase agreement (repo) data collected from the Bank of New York Mellon, as well as general collateral financing repo transaction data and data on bilateral Treasury repo transactions cleared through the Fixed Income Clearing Corporation's delivery-versus-payment service, which are obtained from the U.S. Department of the Treasury's Office of Financial Research. *Id.*

⁷ See Andrew Bailey, Chief Executive, FCA, *The Future of LIBOR* (July 27, 2017), <https://www.fca.org.uk/news/speeches/the-future-of-libor>.

⁸ See FCA, *FCA Announcement on Future Cessation and Loss of Representativeness of the LIBOR Benchmarks* (Mar. 5, 2021), <https://www.fca.org.uk/publication/documents/future-cessation-loss-representativeness-libor-benchmarks.pdf>.

⁹ *Id.*

² See e.g., Financial Stability Oversight Council, *2013 Annual Report* at 137-42.

³ See, e.g., U.S. Dep't of Justice, *Barclays Bank PLC Admits Misconduct Related to Submissions for London Interbank Offered Rate and the Euro Interbank Offered Rate and Agrees to Pay \$160 Million Penalty* (June 27, 2012), <https://www.justice.gov/opa/pr/barclays-bank-plc-admits-misconduct-related-submissions-london-interbank-offered-rate-and>; U.S. Dep't of Justice, *Rabobank Admits Wrongdoing in Libor Investigation, Agrees to Pay \$325 Million Criminal Penalty* (Oct. 29, 2013), <https://www.justice.gov/opa/pr/rabobank-admits-wrongdoing-libor-investigation-agrees-pay-325-million-criminal-penalty>; U.S. Dep't of Justice, *Deutsche Bank's London Subsidiary Agrees to Plead Guilty in Connection with Long-Running Manipulation of LIBOR* (Apr. 23, 2015), <https://www.justice.gov/opa/pr/deutsche-banks-london-subsidiary-agrees-plead-guilty-connection-long-running-manipulation>.

⁴ See ARRC, *About*, <https://www.newyorkfed.org/arrc/about> (last visited July 7, 2022).

¹ 12 U.S.C. 5801(a)(1).

remaining five tenors of USD LIBOR would continue through, but cease after, June 30, 2023. The FCA has proposed to require IBA to continue publishing one-, three-, or six-month USD LIBOR on a synthetic basis until the end of September 2024 (synthetic LIBOR).¹⁰ As with synthetic GBP or JPY LIBOR settings, the FCA has announced that synthetic LIBOR settings are “not representative of the markets that the original LIBOR settings were intended to measure.”¹¹

In response to the planned cessation of USD LIBOR, U.S. financial regulators have encouraged market participants to transition away from USD LIBOR as a reference rate as soon as practicable. For example, in November 2020, the Office of the Comptroller of the Currency (OCC), the Board, and the Federal Deposit Insurance Corporation (FDIC) issued an interagency statement stating that banking organizations generally should not enter into new contracts referencing USD LIBOR after December 31, 2021.¹² The ARRC and other private industry groups also have worked to encourage an orderly transition away from USD LIBOR. For example, as discussed further below, the International Swaps and Derivatives Association (ISDA) has developed a contractual protocol by which parties to derivative transactions governed by ISDA documentation and other financial contracts can agree to incorporate more robust contractual fallback provisions that replace references to LIBOR with an alternative benchmark based on SOFR in the event that a given LIBOR rate ceases publication or is found by the FCA to no longer be representative.¹³ The ARRC has developed guiding principles for similar fallback language for cash products such as business loans, securitizations, floating rate notes, and consumer products, including specific recommended

language for certain cash products.¹⁴ ISDA’s IBOR protocol and the ARRC fallback language recommendations were both subject to numerous public consultations, and they have received widespread adoption subsequent to their release.¹⁵

B. Legacy Contracts and the Adjustable Interest Rate (LIBOR) Act

Notwithstanding governmental and private-sector efforts to encourage market participants to prepare for the cessation of USD LIBOR, there are a significant number of existing contracts that reference USD LIBOR. Of particular concern are so-called “tough legacy contracts,” which are contracts that reference USD LIBOR and will not mature by June 30, 2023, but which lack adequate fallback provisions providing for a clearly defined or practicable replacement benchmark following the cessation of USD LIBOR. To address these tough legacy contracts, multiple states adopted legislation, initially proposed by the ARRC, to provide a statutory remedy for financial contracts governed by the laws of the enacting states that reference USD LIBOR, will not mature until after USD LIBOR ceases or becomes nonrepresentative, and have no effective means to replace USD LIBOR after it ceases or becomes nonrepresentative.¹⁶ While these state laws provided a solution for a large

number of tough legacy contracts, further legislative action was needed to address tough legacy contracts governed by the laws of other states.

Recognizing the need for a uniform, nationwide solution for replacing references to USD LIBOR in tough legacy contracts, on March 15, 2022, Congress enacted the Adjustable Interest Rate (LIBOR) Act (the “LIBOR Act”) as part of the Consolidated Appropriations Act, 2022.¹⁷ Among other things, the LIBOR Act lays out a set of default rules that apply to tough legacy contracts subject to U.S. law.

The LIBOR Act broadly distinguishes between three categories of LIBOR contracts with different types of fallback provisions. For these purposes, the LIBOR Act defines “LIBOR contract” broadly to include any obligation or asset that, by its terms, uses the overnight, one-month, three-month, six-month, or 12-month tenors of USD LIBOR as a benchmark.¹⁸ Consistent with this definition, the final rule and the remainder of the discussion will focus on these stated tenors of USD LIBOR only. The LIBOR Act defines “fallback provisions” to mean the terms in a LIBOR contract for determining a benchmark replacement, including any terms relating to the date on which the benchmark replacement becomes effective.¹⁹

The first category of LIBOR contracts encompasses contracts that contain fallback provisions identifying a specific benchmark replacement that is not based in any way on any USD LIBOR values (except to account for the difference between LIBOR and the benchmark replacement) and that do not require any person (other than a benchmark administrator) to conduct a poll, survey, or inquiries for quotes or information concerning interbank lending or deposit rates.²⁰ These LIBOR

¹⁰ See FCA, *Further Consultation and Announcements on the Wind-down of LIBOR* (Nov. 23, 2022), <https://www.fca.org.uk/news/news-stories/further-consultation-announcements-wind-down-libor> (discussing further consultation on synthetic LIBOR, <https://www.fca.org.uk/publication/consultation/cp22-21.pdf>).

¹¹ See FCA, *Consultation on ‘Synthetic’ US Dollar LIBOR and Feedback to CP22/11 ¶ 1.7* (Nov. 2022), <https://www.fca.org.uk/publication/consultation/cp22-21.pdf>; see also FCA, *FCA Announcement on Future Cessation and Loss of Representativeness of the LIBOR Benchmarks* (Mar. 5, 2021), <https://www.fca.org.uk/publication/documents/future-cessation-loss-representativeness-libor-benchmarks.pdf>.

¹² See Board, FDIC, OCC, *Statement on LIBOR Transition* (Nov. 30, 2020), <https://www.federalreserve.gov/supervisionreg/srletters/SR2027a1.pdf>.

¹³ ISDA, *ISDA 2020 IBOR Fallbacks Protocol*, <https://www.isda.org/protocol/isda-2020-ibor-fallbacks-protocol/>.

¹⁴ See, e.g., ARRC, *ARRC Guiding Principles for More Robust LIBOR Fallback Contract Language in Cash Products* (July 9, 2018), <https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2018/ARRC-principles-July2018>; ARRC, *Summary of ARRC’s LIBOR Fallback Language* (Nov. 15, 2019), https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2019/LIBOR_Fallback_Language_Summary; ARRC, *ARRC Recommendations Regarding More Robust Fallback Language for New Issuance of LIBOR Securitizations* (May 31, 2019), https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2019/Securitization_Fallback_Language.pdf; ARRC, *ARRC Recommendations Regarding More Robust LIBOR Fallback Contract Language for New Closed-End, Residential Adjustable Rate Mortgages* (Nov. 15, 2019), https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2019/ARM_Fallback_Language.pdf.

¹⁵ See, e.g., ISDA, *ISDA 2020 IBOR Fallbacks Protocol—List of Adhering Parties*, <https://www.isda.org/protocol/isda-2020-ibor-fallbacks-protocol/adhering-parties> (last visited Nov. 29, 2022). The U.S. Department of Justice (DOJ) also reviewed ISDA’s IBOR protocol, concluded that it is unlikely to harm competition, and stated that the DOJ would not challenge ISDA’s IBOR protocol under federal antitrust laws. See DOJ, *Justice Department Issues Favorable Business Review Letter to ISDA for Proposed Amendments to Address Interest Rate Benchmarks* (Oct. 1, 2020), <https://www.justice.gov/opa/pr/justice-department-issues-favorable-business-review-letter-isda-proposed-amendments-address>.

¹⁶ See, e.g., N.Y. Gen. Oblig. Law art. 18–C; Ala. Code tit. 5, ch. 28; Fla. Stat. 687.15; Tenn. Code Ann. sec. 47–33–101 *et seq.*; Ind. Code 28–10–2; Neb. Rev. Stat. 8–3101 *et seq.*

¹⁷ Public Law 117–103, div. U, codified at 12 U.S.C. 5801 *et seq.*

¹⁸ See 12 U.S.C. 5802(16) (definition of “LIBOR contract”), 5802(15) (definition of “LIBOR”). The LIBOR Act does not apply to contracts that use the one-week or two-month tenors of USD LIBOR as a benchmark. *Id.* The LIBOR Act defines “benchmark” to mean an index of interest rates or dividend rates that is used, in whole or in part, as the basis of or as a reference for calculating or determining any valuation, payment, or other measurement. 12 U.S.C. 5802(1).

¹⁹ 12 U.S.C. 5802(11). The LIBOR Act defines “benchmark replacement” to mean a benchmark, or an interest rate or dividend rate (which may or may not be based in whole or in part on a prior setting of LIBOR), to replace LIBOR or any interest rate or dividend rate based on LIBOR, whether on a temporary, permanent, or indefinite basis, under or with respect to a LIBOR contract. 12 U.S.C. 5802(3).

²⁰ See 12 U.S.C. 5803(b). The LIBOR Act defines “benchmark administrator” to mean a person that

contracts generally can be expected to transition to the contractually agreed-upon benchmark replacement as provided by their fallback provisions on or before the LIBOR replacement date—the first London banking day after June 30, 2023 (unless the Board determines that any LIBOR tenor will cease to be published or cease to be representative on a different date).²¹

The second category of LIBOR contracts encompasses (i) contracts that contain no fallback provisions, as well as (ii) LIBOR contracts with fallback provisions that do not identify a determining person (as described below) and that only (A) identify a benchmark replacement that is based in any way on USD LIBOR values (except to account for the difference between LIBOR and the benchmark replacement) or (B) require that a person (other than a benchmark administrator) conduct a poll, survey, or inquiries for quotes or information concerning interbank lending or deposit rates.²² For this second category of LIBOR contracts, the LIBOR Act provides that the benchmark replacement on the LIBOR replacement date will be the Board-selected benchmark replacement identified by the Board, which must be based on SOFR and include the tenor spread adjustments required under the LIBOR Act.²³ Thus, any references to USD LIBOR in LIBOR contracts in this second category will, by operation of law, be replaced by the Board-selected benchmark replacement on the LIBOR replacement date.

For contracts that fall into this second category, the LIBOR Act provides a series of statutory protections, including that no person shall be subject to any claim or cause of action in law or equity or request for equitable relief, or have liability for damages, arising out of the use of the Board-selected benchmark replacement as a benchmark replacement.²⁴ These statutory

provisions are described in more detail below.

The third category of LIBOR contracts encompasses LIBOR contracts that contain fallback provisions authorizing a determining person to determine a benchmark replacement.²⁵ The application of the LIBOR Act to LIBOR contracts in this third category depends on the determination, if any, made by the determining person. Where a determining person does not select a benchmark replacement by the LIBOR replacement date or the latest date for selecting a benchmark replacement according to the terms of the LIBOR contract (whichever is earlier), the LIBOR Act provides that the benchmark replacement for such LIBOR contract will be, by operation of law, the Board-selected benchmark replacement on and after the LIBOR replacement date.²⁶ Where a determining person selects the Board-selected benchmark replacement as the benchmark replacement, the LIBOR Act provides that such selection shall be (i) irrevocable, (ii) made by the earlier of the LIBOR replacement date and the latest date for selecting a benchmark replacement according to the terms of the LIBOR contract, and (iii) used in any determinations of the benchmark under or with respect to the LIBOR contract occurring on and after the LIBOR replacement date.²⁷

Although the LIBOR Act does not require a determining person to select the Board-selected benchmark replacement as the benchmark replacement for a LIBOR contract, the statute provides a series of statutory protections for any determining person who does so, including that a determining person generally shall not be subject to any claim or cause of action in law or equity or request for equitable relief, or have liability for damages, arising out of the selection of the Board-selected benchmark replacement as a benchmark replacement.²⁸

Where the Board-selected benchmark replacement becomes the benchmark replacement for a LIBOR contract (either by operation of law or through the selection of a determining person), the LIBOR Act contemplates that certain

conforming changes to a LIBOR contract may be necessary to facilitate the transition from USD LIBOR to the Board-selected benchmark replacement. These “benchmark replacement conforming changes” may arise in one of two ways. First, the LIBOR Act authorizes the Board to determine benchmark replacement conforming changes that, in its discretion, would address one or more issues affecting the implementation, administration, and calculation of the Board-selected benchmark replacement in LIBOR contracts.²⁹ Second, for a LIBOR contract that is not a consumer loan, a calculating person may, in its reasonable judgment, determine that benchmark replacement conforming changes are otherwise necessary or appropriate to permit the implementation, administration, and calculation of the Board-selected benchmark replacement under or with respect to a LIBOR contract after giving due consideration to any benchmark replacement conforming changes determined by the Board.³⁰ For this purpose, the LIBOR Act defines “calculating person” to mean, with respect to any LIBOR contract, any person, including the determining person, responsible for calculating or determining any valuation, payment, or other measurement based on a benchmark.³¹

The LIBOR Act provides that all benchmark replacement conforming changes (whether determined by the Board or, if applicable, a calculating person) shall become an integral part of the LIBOR contract, and a calculating person shall not be required to obtain consent from any other person prior to the adoption of benchmark replacement conforming changes.³² In addition, the determination, implementation, and performance of benchmark replacement conforming changes are generally subject to certain statutory protections provided by the LIBOR Act, which are designed to ensure continuity of contract.³³ Finally, where a calculating person implements or (in the case of a LIBOR contract that is not a consumer loan) determines benchmark replacement conforming changes, the LIBOR Act provides that the calculating person shall not be subject to any claim

publishes a benchmark for use by third parties. 12 U.S.C. 5802(2).

²¹ 12 U.S.C. 5803(f)(2); *see also* 12 U.S.C. 5802(17) (definition of “LIBOR replacement date”). The Board has not determined, and does not expect to determine, a LIBOR replacement date earlier than the first London banking day after June 30, 2023.

²² The LIBOR Act deems these types of fallback provisions to be null and void by operation of law. 12 U.S.C. 5803(b). To the extent a LIBOR contract contains fallback provisions that would be applied ahead of another, separate benchmark replacement, then under the LIBOR Act, these fallback provisions would be disregarded and the separate benchmark replacement would apply.

²³ 12 U.S.C. 5803(a)–(b); *see also* 12 U.S.C. 5802(6) (definition of “Board-selected benchmark replacement”).

²⁴ 12 U.S.C. 5804(a)–(b), (c)(1), (d).

²⁵ The LIBOR Act defines “determining person” to mean, with respect to any LIBOR contract, any person with the authority, right, or obligation, including on a temporary basis (as identified by the LIBOR contract or by the governing law of the LIBOR contract, as appropriate) to determine a benchmark replacement. 12 U.S.C. 5802(10).

²⁶ 12 U.S.C. 5803(c)(3).

²⁷ 12 U.S.C. 5803(c)(2).

²⁸ 12 U.S.C. 5804(c)(1)–(2), 5804(a)–(d). This statutory safe harbor also applies to the use of the Board-selected benchmark replacement other than at the selection of a determining person.

²⁹ 12 U.S.C. 5802(4)(A).

³⁰ 12 U.S.C. 5802(4)(B). The LIBOR Act defines “consumer loan” to mean a consumer credit transaction, which is defined by cross-reference to the Truth in Lending Act. 12 U.S.C. 5802(9) (definition of “consumer loan”); 5802(8) (definitions of “consumer” and “credit”).

³¹ 12 U.S.C. 5802(7).

³² 12 U.S.C. 5803(d).

³³ *See* 12 U.S.C. 5804(a)–(d).

or cause of action in law or equity or request for equitable relief, or have liability for damages.³⁴

The LIBOR Act includes various other provisions beyond the main operative provisions and statutory protections described above. For example, the LIBOR Act generally provides that a bank may use any benchmark (including a benchmark that is not SOFR) in any non-IBOR loan made before, on, or after the date of enactment of the LIBOR Act that the bank determines to be appropriate, and that no Federal supervisory agency may take enforcement or supervisory action against the bank solely because that benchmark is not SOFR.³⁵ Other provisions of the LIBOR Act amend the Trust Indenture Act of 1939 (15 U.S.C. 77ppp(b)) and the Higher Education Act of 1965 (20 U.S.C. 1087–1(b)(2)(I)), respectively, to facilitate the transition from USD LIBOR.³⁶ Finally, the LIBOR Act expressly preempts any provision of State or local law relating to the selection or use of a benchmark replacement or related conforming changes, or expressly limiting the manner of calculating interest (including the compounding of interest) as that provision applies to the selection or use of a Board-selected benchmark replacement or benchmark replacement conforming changes.³⁷

In July 2022, the Board invited public comment on a notice of proposed rulemaking (proposed rule) to implement the LIBOR Act.³⁸ The comment period ended on August 29, 2022.

II. Overview of the Final Rule

As required by the LIBOR Act, the Board's final rule identifies SOFR-based Board-selected benchmark replacements for LIBOR contracts that will not mature prior to the LIBOR replacement date and do not contain clear and practicable benchmark replacements. The final rule identifies different SOFR-based Board-selected benchmark replacements for different categories of LIBOR contracts. In addition, the final rule identifies certain benchmark replacement conforming changes related to the implementation, administration, and calculation of the Board-selected benchmark replacement. Consistent with the LIBOR Act, the final rule also expressly indicates that a determining person may select the Board-selected

benchmark replacement for the relevant type of LIBOR contract, with any applicable benchmark replacement conforming changes. In addition, the final rule expressly provides that the LIBOR Act's protections related to the selection or use of the Board-selected benchmark replacement shall apply to any LIBOR contract for which the Board-selected benchmark replacement becomes the benchmark replacement (whether by operation of law or by the selection of a determining person). Finally, the final rule indicates that, under the LIBOR Act, the Board's final rule preempts any state or local law or standard relating to the selection or use of a benchmark replacement or conforming changes.

III. Summary of Public Comments

The Board received 29 comment letters in response to the proposed rule.³⁹ Commenters included eight banks and banking trade associations; six other trade associations; four government-sponsored enterprises; four consultants and researchers; three individuals; one government agency; one consortium of consumer groups; and two anonymous comments.

Ten of these comment letters included an explicit statement of support for the proposal. One commenter opposed the proposal based on disagreement with the policy objectives of the LIBOR Act.⁴⁰ The LIBOR Act is federal law, and the Board is required to implement the LIBOR Act consistent with the stated policy objectives of Congress. As described below, the Board's discretion under the LIBOR Act is limited to identifying SOFR-based Board selected benchmark replacements for LIBOR contracts subject to the act, plus a few other narrow areas.

Most of the remaining commenters provided feedback on various topics related to the proposal (including the proposed Board-selected benchmark replacements for specific categories of contracts, synthetic LIBOR, conforming

changes, and certain protections expressly provided by the LIBOR Act), but did not express support or opposition for the overall proposal. Feedback from commenters related to particular aspects of the proposal is discussed, as applicable, in section IV.

One commenter provided feedback on the Board's analysis of the proposed rule under the Regulatory Flexibility Act. This comment is discussed in more detail in section V.

Finally, a commenter requested that the prudential regulators engage in specific efforts to educate banks, consumers, other issuers of financial products, and impacted industry groups, potentially through partnerships with industry groups and capital market participants, on (i) the need to transition away from LIBOR to viable alternative rates like SOFR, and (ii) the likely impact such transition would have on financial instruments that currently reference LIBOR. As previously discussed, U.S. financial regulators have encouraged banks and market participants over the past several years to transition away from USD LIBOR as a reference rate as soon as practicable, including through issuance of an interagency statement.⁴¹ In addition, the ARRC and third parties such as ISDA have engaged in significant efforts to facilitate and to educate parties on the transition away from LIBOR as LIBOR's cessation grows closer. Based on these and other industry efforts, the Board believes that ample information is available concerning the transition away from LIBOR.

IV. Section-by-Section Analysis

A. Section 253.1—Authority, Purpose, and Scope

Section 253.1 of the final rule sets forth the authority for, purpose of, and scope of the final rule. Significantly, and consistent with the statute as described above, the final rule does not apply to (i) contracts that do not reference the overnight or one-, three-, six-, or 12-month tenors of LIBOR or (ii) LIBOR contracts that have fallback provisions providing for the use of a clearly defined and practicable replacement benchmark for LIBOR (including LIBOR contracts where the determining person selects a benchmark replacement other than the Board-selected benchmark replacement), except as provided in § 253.3(a)(1)(iii) and (c), which is discussed further

³⁴ 12 U.S.C. 5804(c).

³⁵ 12 U.S.C. 5805.

³⁶ LIBOR Act sections 108–09, codified at 15 U.S.C. 77ppp(b) and 20 U.S.C. 1087–1(b)(2)(I).

³⁷ 12 U.S.C. 5806.

³⁸ 87 FR 45268 (July 28, 2022).

³⁹ Two of these commenters submitted additional comment letters that supplemented their original comment letters; these supplemental comment letters have not been included in the count of 29 comment letters. In addition, the count of 29 comment letters does not include two comment letters submitted to the Board that addressed topics unrelated to the LIBOR Act.

⁴⁰ This commenter referenced the manipulation of LIBOR by panel banks and indicated that the identification of Board-selected benchmark replacements under the LIBOR Act and proposal would be most likely to benefit banks rather than certain individuals who may not be able directly to obtain LIBOR-based financing. The commenter further criticized the proposal for failing to address various social issues outside the scope of the LIBOR Act, including ethics standards and climate change effects.

⁴¹ See, e.g., Board, FDIC, OCC, *Statement on LIBOR Transition* (Nov. 30, 2020), <https://www.federalreserve.gov/supervisionreg/srletters/SR2027a1.pdf>.

below.⁴² The proposed rule included a similar provision that received a small number of comments.⁴³ Section 253.1 also clarifies that any determining person's selection of the applicable Board-selected benchmark replacement is subject to §§ 253.4 (identifying Board-selected benchmark replacements for specific categories of LIBOR contracts), 253.5 (concerning benchmark replacement conforming changes), 253.6 (concerning preemption), and 253.7 (concerning statutory protections for the selection or use of the Board-selected benchmark replacement). The rule also applies only to existing contracts governed by federal law or the law of any state. In addition, consistent with the LIBOR Act, § 253.1 states that the parties to a LIBOR contract may, by written agreement, specify that a LIBOR contract shall not be subject to the rule.⁴⁴

B. Section 253.2—Definitions

Section 253.2 provides definitions for many of the terms used in the rule. As with the proposal, most of the defined terms in § 253.2 are substantially the same as the defined terms in the LIBOR Act. However, § 253.2 includes additional definitions for the terms “30-day Average SOFR,” “90-day Average SOFR,” “CME Term SOFR,” “derivative transaction,” “derivative transaction fallback observation day,” “Federal Housing Finance Agency (FHFA)-regulated entity,” “Federal Family Education Loan Program (FFELP) Asset-Backed Securitization (ABS),” “FHFA-regulated-entity contract,” “ISDA protocol,” and “relevant benchmark administrator,” each of which is discussed below in connection with their use in § 253.4 or § 253.5, as applicable.⁴⁵ For ease of reference, the

ISDA protocol in its entirety is republished in appendix A of the final rule.

Definition of “determining person.” Several commenters requested that the term “determining person” be defined to include persons with the right to select a replacement benchmark even if that right would vest only in the future or is subject to some contingency. The definition of “determining person” in section 103(10) of the LIBOR Act does not specify whether a determining person must have a *current* authority, right, or obligation to determine a benchmark replacement, or whether a person with a *contingent* authority, right, or obligation to determine a benchmark replacement also is a determining person.

The final rule clarifies this statutory ambiguity by defining the term “determining person” to include any person with the authority, right, or obligation, including on a temporary basis (as identified by the LIBOR contract or by the governing law of the LIBOR contract, as appropriate) to determine a benchmark replacement, whether or not the person's authority, right, or obligation is subject to any contingencies specified in the LIBOR contract or by the governing law of the LIBOR contract. The Board believes that this clarification is consistent with Congressional intent and will promote a smooth transition away from LIBOR for contracts that authorize a person to select a benchmark replacement when LIBOR becomes unavailable or non-representative. Under the final rule, such a person will qualify as a determining person before LIBOR becomes unavailable or non-representative, and therefore will have a statutory right under section 104(c)(1) and (c)(2) of the LIBOR Act to select the Board-selected benchmark replacement by the earlier of (i) the LIBOR replacement date and (ii) the latest date for selecting a benchmark replacement according to the terms of the LIBOR contract.⁴⁶

The Board notes that, if the term “determining person” were interpreted to be limited only to persons with a

current authority, right, or obligation to select a benchmark replacement, then, under certain LIBOR contracts, a person with a right to select a benchmark replacement when LIBOR becomes unavailable or non-representative would not become a determining person until the LIBOR replacement date—when LIBOR will *actually* become unavailable or non-representative. Accordingly, that person would need to wait until the LIBOR replacement date to exercise the statutory right under section 104(c)(1) and (c)(2) of the LIBOR Act to select the Board-selected benchmark replacement. The Board believes that this outcome—and the market disruption that would likely result from determining persons not selecting a benchmark replacement until the LIBOR replacement date—would be inconsistent with the Congressional intent to facilitate a smooth transition away from LIBOR and avoid disruptive litigation.

A commenter also requested that the final rule clarify that a “determining person” must have *sole* authority to decide a benchmark replacement and would not include a person who is required under the LIBOR contract to collaborate with other persons. The final rule clarifies that the term “determining person” refers to a person with sole authority, right, or obligation, including on a temporary basis, to determine a benchmark replacement. Particularly when considered in the context of the various protections provided by the LIBOR Act with respect to a determining person's selection of the Board-selected benchmark replacement, the most sensible interpretation is that such a selection would be made by only one person, rather than some group.⁴⁷

Finally, as requested by a commenter, the Board hereby clarifies that a determining person selecting a Board-selected benchmark replacement pursuant to the authority and statutory protections of the LIBOR Act must choose the Board-selected benchmark replacement identified in § 253.4 for that contract type.

C. Section 253.3—Applicability

Section 253.3 addresses the applicability of the regulation to LIBOR contracts. Specifically, for the following LIBOR contracts, the applicable Board-selected benchmark replacement indicated in § 253.4 of the final rule shall be the benchmark replacement for the contract on and after the LIBOR replacement date unless an express exception applies: (i) LIBOR contracts that contain no fallback provisions; (ii) LIBOR contracts that contain fallback

⁴² 12 U.S.C. 5803(f)(2)–(3). However, consistent with the LIBOR Act, the final rule applies to LIBOR contracts that identify a determining person if the determining person has not selected a benchmark replacement by the earlier of (i) the LIBOR replacement date and (ii) the latest date for selecting a benchmark replacement according to the terms of the contract. See section 253.3(a)(1)(iii). In addition, the final rule mirrors provisions in the LIBOR Act related to any selection by a determining person of the Board-selected benchmark replacement. See section 253.3(c).

⁴³ Some commenters indicated that the proposed rule did not match the precise language of the LIBOR Act with respect to LIBOR contracts subject to the statute. These comments are discussed in more detail in section IV.C.

⁴⁴ See 12 U.S.C. 5803(f)(1).

⁴⁵ One commenter indicated that some mortgage contracts may include provisions referencing a LIBOR “index” which the commenter believed should be interpreted to mean 12-month LIBOR based on “common use of the term ‘index.’” That commenter suggested defining the term by regulation, since mortgage lenders otherwise may seek to broaden that definition. The LIBOR Act applies on an individual contract basis and looks

to the particular provisions and definitions of that contract to evaluate whether the LIBOR Act applies. The final rule similarly applies to contracts on an individual basis, following evaluation of that contract's provisions. As a result, the Board does not believe it would be reasonable to adopt one definition of “index”. However, the Board observes that the final rule, consistent with the LIBOR Act, replaces the specific tenor of LIBOR referenced in the LIBOR contract with a corresponding Board-selected benchmark replacement that incorporates the applicable tenor spread adjustment specified by the LIBOR Act.

⁴⁶ See 12 U.S.C. 5803(c)(1)–(2).

⁴⁷ See, e.g., 12 U.S.C. 5803(c), 5804(c).

provisions that identify neither a specific benchmark replacement nor a determining person; and (iii) LIBOR contracts that contain fallback provisions that identify a determining person, but where the determining person has not selected a benchmark replacement by the earlier of the LIBOR replacement date and the latest date for selecting a benchmark replacement according to the terms of the LIBOR contract, for any reason.⁴⁸

In evaluating whether a LIBOR contract has any of these characteristics on the LIBOR replacement date, the final rule mirrors the statute and disregards any reference in any fallback provisions of a LIBOR contract to the following: (i) a benchmark replacement that is based in any way on any LIBOR value, except to account for the difference between LIBOR and the benchmark replacement; or (ii) a requirement that a person (other than a benchmark administrator) conduct a poll, survey, or inquiries for quotes or information concerning interbank lending or deposit rates (collectively, “LIBOR- or poll-based fallback provisions”).⁴⁹ For example, if a LIBOR contract specifies the last published LIBOR value will be used if LIBOR is not published, but contains no other fallback provisions, then, pursuant to § 253.3(a)(2), this language would be disregarded as of the LIBOR replacement date. As a result, on the LIBOR replacement date, the LIBOR contract would be treated as having no fallback provisions and would transition to the Board-selected benchmark replacement under the final rule.

Consistent with the LIBOR Act, § 253.3(b) lists three types of contracts that generally would *not* be subject to the act: (i) any LIBOR contract that the parties have agreed in writing shall not be subject to the act; (ii) any LIBOR contract that contains fallback provisions that identify a benchmark replacement that is not based in any way on any LIBOR value (including the prime rate or the effective Federal Funds rate), after disregarding any LIBOR- or poll-based fallback provisions; and (iii) any LIBOR contract as to which a determining person does not elect to use the Board-selected benchmark replacement, again after disregarding any LIBOR- or poll-based

fallback provisions.⁵⁰ Importantly, however, even if a determining person does not *elect* to use the Board-selected benchmark replacement, the LIBOR contract will transition to the Board-selected benchmark replacement by operation of law if the determining person does not select any benchmark replacement by the earlier of (i) the LIBOR replacement date and (ii) the latest date for selecting a benchmark replacement according to the terms of the LIBOR contract.⁵¹

The proposed rule would have defined the term “covered contract” to mean those contracts that would be subject to the proposed rule and would transition to the applicable Board-selected benchmark replacement on and after the LIBOR replacement date. Similarly, the proposed rule would have defined the term “non-covered contract” to mean those contracts that generally would not be subject to the proposed rule. However, the proposed rule would have clarified that a determining person may select the Board-selected benchmark replacement specified in § 253.4 of the proposed rule as the benchmark replacement for a LIBOR contract, consistent with the LIBOR Act.⁵² Several commenters indicated that the proposed rule’s definitions of “covered contract” and “non-covered contract” did not fully align with the provisions of the LIBOR Act and were confusing. Therefore, these commenters recommended eliminating these terms. To avoid confusion, the final rule does not employ those terms and instead hews closely to the text of the LIBOR Act.

A commenter requested that the Board clarify that a determining person may “transition” to the Board-selected benchmark replacement by the LIBOR replacement date *or* the first reset date following that date, which the commenter argued was the same as a practical matter. The LIBOR Act authorizes a determining person to select the Board-selected benchmark replacement, but requires the determining person to make such selection by the earlier of (i) the LIBOR replacement date and (ii) the latest date for selecting a benchmark replacement according to the terms of the contract.⁵³ As a result, a determining person may not select the Board-selected benchmark

replacement on any date after the LIBOR replacement date, including the first reset date following the LIBOR replacement date, and rely on the LIBOR Act’s protections for such a selection. The final rule mirrors the statute by authorizing a determining person to select the Board-selected benchmark replacement by the earlier of (i) the LIBOR replacement date and (ii) the latest date for selecting a benchmark replacement according to the terms of the contract.⁵⁴ The Board notes that, under the LIBOR Act and the final rule, a determining person’s inaction with respect to selecting a benchmark replacement by the LIBOR replacement date will, in the absence of another fallback provision in the LIBOR contract identifying a clear and practicable benchmark replacement, cause the LIBOR contract to transition to the Board-selected benchmark replacement rate by operation of law.⁵⁵

In its proposal, the Board invited public comment as to whether the final rule should require a determining person to provide notice to one or more parties concerning the determining person’s selection. Multiple commenters recommended that the final rule not impose any notice requirements on determining persons. No commenter expressed support for the imposition of notice requirements on determining persons. As a result, the final rule does not include impose any notice requirements.

Eurodollar deposit and lending rates. Some commenters requested clarification that a fallback provision that requires an inquiry for Eurodollar deposit or lending rates would be considered a LIBOR- or poll-based fallback provision that should be disregarded under the LIBOR Act and the final rule.⁵⁶ Eurodollars are

⁵⁴ Section 253.3(c) of the final rule. Although selection of the benchmark replacement must occur by this date, since the LIBOR Act does not affect or alter the payment or reset dates under the LIBOR contract, the actual replacement of LIBOR for payment purposes may not occur until the first reset date after the LIBOR replacement date.

⁵⁵ 12 U.S.C. 5803(c)(3); *see also* § 253.3(a)(1)(iii) of the final rule.

⁵⁶ Section 253.3(a)(2) of the final rule; 12 U.S.C. 5803(b). Under the statute, any such references in any fallback provisions of the LIBOR contract would be disregarded as if not included in the fallback provisions of the contract and would be deemed null and void and without any force or effect. 12 U.S.C. 5803(b).

Another commenter argued that fallback provisions referencing any third-party funding rate or certificate of deposit rate also should be disregarded, regardless of the method by which such rates would be obtained. Such treatment, however, would be inconsistent with the text of the LIBOR Act, which considers the methodology by which interbank lending or deposit rate information

Continued

⁴⁸ Section 253.3(a) of the final rule.

⁴⁹ Section 253.3(a)(2) of the final rule. Under the statute, any such references in any fallback provisions of the LIBOR contract would be disregarded as if not included in the fallback provisions of the contract and would be deemed null and void and without any force or effect. 12 U.S.C. 5803(b).

⁵⁰ Section 253.3(b) of the final rule. As discussed further in section IV.G, nothing in the final rule is intended to alter or modify the availability or effect of the provisions of section 105(e) of the LIBOR Act, and those provisions may apply to these LIBOR contracts. *See* 12 U.S.C. 5804(e).

⁵¹ Section 253.3(a)(1)(iii) of the final rule.

⁵² Section 253.3(b)(2) of the proposed rule.

⁵³ 12 U.S.C. 5803(c)(2)(B).

unsecured U.S. dollar deposits held at banks or bank branches outside of the United States, and many institutional parties, including foreign central banks, are active lenders in the Eurodollar market.⁵⁷ U.S. depository institutions and U.S. branches of foreign banks indirectly borrow in Eurodollars by accepting Eurodollar deposits through offshore branches and then transferring the funds onshore.⁵⁸ The Board has therefore clarified that Eurodollar deposit and lending rates are “interbank lending or deposit rates” for purposes of the LIBOR rule. Accordingly, any requirement to conduct an inquiry concerning Eurodollar deposit and lending rates in fallback provisions of LIBOR contracts should be disregarded as if not included in those fallback provisions and deemed null and void and without any force or effect for purposes of the final rule. Should the LIBOR contract not identify either (i) a determining person or (ii) another clear and practicable benchmark replacement recognized under the LIBOR Act, the LIBOR contract will transition to the applicable Board-selected benchmark replacement under the final rule.

Relatedly, one commenter requested that the Board clarify how the rule applies to LIBOR contracts that give a determining person the right, authority, or obligation to select an “alternative index” or “alternative comparable index” that is “used for determining Eurodollar lending rates” (“Eurodollar DP contracts”). Section 104(c) of the LIBOR Act generally creates a statutory right for a determining person to select the Board-selected benchmark replacement; however, under section 104(f)(2) of the LIBOR Act, a determining person *cannot* exercise this right if the LIBOR contract identifies a benchmark replacement that is not based on any LIBOR value, such as the prime rate or the effective Federal funds rate. The commenter requested confirmation that references in Eurodollar DP contracts to an alternative index “used for determining Eurodollar lending rates” do not “identify a benchmark replacement” for purposes of section 104(f)(2), and thus that a

would be obtained. *See id.* It also would conflict with other provisions of the LIBOR Act, such as section 104(f)(2), which expressly indicates that the act does not alter or impair fallback provisions that identify a benchmark replacement that is not based in any way on any LIBOR value, including the prime rate or the effective Federal funds rate. 12 U.S.C. 5803(f)(2).

⁵⁷ Marco Cipriani and Julia Gouny, *The Eurodollar Market in the United States*, Liberty Street Economics (May 27, 2015), <https://libertystreeteconomics.newyorkfed.org/2015/05/the-eurodollar-market-in-the-united-states>.

⁵⁸ *Id.*

determining person for a Eurodollar DP contract may select the Board-selected benchmark replacement pursuant to section 104(c) of the LIBOR Act.

Section 104(f)(2) of the LIBOR Act is intended to exclude from the act’s scope only those contracts that identify a specific benchmark replacement such as the prime rate. Eurodollar DP contracts provide certain guidelines for determining persons to follow in selecting a benchmark replacement, but they do not identify a specific benchmark replacement. Accordingly, the Board confirms that a determining person for a Eurodollar DP contract may exercise the statutory right to select the Board-selected benchmark replacement under section 104(c) of the LIBOR Act and § 253.3(c) of the final rule.⁵⁹

Other provisions of LIBOR contracts. The final rule includes a new paragraph stating that LIBOR contracts that transition to the Board-selected benchmark replacement generally will not have their other provisions altered or impaired by the final rule.⁶⁰ For example, the final rule states that provisions specifying the date for determining a benchmark (except in the case of derivative transactions and Federal Home Loan Bank advances, as discussed in more detail in section IV.D) would not be affected. This example is similar to a provision in the proposed rule that indicated that selection and use of the Board-selected benchmark replacement would not affect the dates on which the contractual rates are determined.⁶¹

Other contractual provisions that the final rule expressly does not affect include, but are not limited to, (i) provisions specifying rounding conventions for a benchmark; (ii) provisions referencing LIBOR or any LIBOR value prior to the LIBOR replacement date (including any provision requiring a person to look back to a LIBOR value as of a date preceding the LIBOR replacement date); (iii) provisions applying any cap, floor, modifier, or spread adjustment to which LIBOR had been subject pursuant to the terms of a LIBOR contract; (iv) certain provisions of Federal consumer financial law; and (v) except as provided in 12 U.S.C. 5804(c), the rights or obligations of any person, or the

⁵⁹ The Board notes, however, that this statutory right would not be available to the determining person if the LIBOR contract *does* identify a specific benchmark replacement such as the prime rate.

⁶⁰ Section 253.3(d) of the final rule.

⁶¹ Section 253.4(d) of the proposed rule. The proposed rule generally would have replaced references to “LIBOR” in LIBOR contracts with the proposed Board-selected benchmark replacement, without any modification of other contractual provisions. 87 FR 45268, 45276 (July 28, 2022).

authorities of any agency, under Federal consumer financial law, as defined in 12 U.S.C. 5481.⁶²

Some commenters had requested that the final rule expressly state its impact on these types of provisions, particularly provisions specifying rounding conventions or lookback periods that straddle the LIBOR replacement date, perhaps as benchmark replacement conforming changes. The Board believes it is most sensible to address provisions such as those listed above by clarifying that they would not be affected by the final rule.⁶³

Synthetic LIBOR. When issuing the proposal, the Board sought feedback on whether the final rule should clarify how the LIBOR Act would apply if the FCA requires IBA (or any successor administrator) to publish synthetic LIBOR on and after the LIBOR replacement date. The Board specifically requested comment on how synthetic LIBOR might affect LIBOR contracts that contain fallback provisions that either identify a clear and practicable benchmark replacement or authorize a person to select a benchmark replacement, but where these fallback provisions are triggered only where LIBOR is unavailable (and are not expressly triggered where a benchmark called “LIBOR” is available but is not representative of the market that LIBOR is intended to measure). For example, the Board requested comment on whether the final rule should provide that a LIBOR contract containing fallback provisions that identify a clear and practicable benchmark replacement (*e.g.*, the prime rate) but lack an express non-representativeness trigger would transition to the benchmark replacement specified in the LIBOR contract (*i.e.*, the prime rate) on the earlier of (i) the date specified pursuant to the LIBOR contract or (ii) the LIBOR replacement date.

Several commenters supported the clarification outlined in the proposal. In general, these commenters argued that such clarification would (i) be consistent with the intent of the statute, (ii) promote an orderly transition away from LIBOR, (iii) reduce disruptive litigation, and (iv) be reasonable.

However, some commenters argued that the Board lacks the legal authority to adopt the clarification outlined in the proposal. In particular, these commenters noted that LIBOR contracts containing fallback provisions that

⁶² Section 253.3(d) of the final rule.

⁶³ As described further in section IV.E., the final rule does include certain benchmark replacement conforming changes.

identify a specific benchmark replacement (e.g., the prime rate) are outside the scope of the LIBOR Act, even if they lack an express non-representativeness trigger. Accordingly, these commenters recommended that the Board clarify only the ambiguity described in the proposal with respect to LIBOR contracts that authorize a *determining person* to select a benchmark replacement when LIBOR is unavailable.

Other commenters gave other suggestions for addressing synthetic LIBOR. For example, one commenter asked the Board to work with the FCA to avoid the publication of synthetic LIBOR altogether. Other commenters suggested that the Board should deem LIBOR to be unavailable for all LIBOR contracts within the scope of the LIBOR Act even if synthetic LIBOR would be published, unless a determining person affirmatively selects synthetic LIBOR as a benchmark replacement; these commenters argued that construing synthetic LIBOR's publication as continued availability of LIBOR would be inconsistent with the purposes of the LIBOR Act.

The Board has considered this issue in light of the comments received. The Board believes that LIBOR contracts containing fallback provisions that identify a specific benchmark replacement are outside the scope of the LIBOR Act, even if these fallback provisions lack an express non-representativeness trigger. In particular, section 102(b)(3) of the LIBOR Act states that one purpose of the statute is to allow existing contracts that reference LIBOR but provide for the use of a clearly defined and practicable replacement to operate according to their terms.⁶⁴ Further, section 104(f)(2) of the LIBOR Act expressly provides that nothing in the statute may be construed to alter or impair any LIBOR contract that contains fallback provisions that identify a benchmark replacement and are not LIBOR- or poll-based fallback provisions.⁶⁵ The Board believes these provisions of the statute unambiguously remove LIBOR contracts that identify a specific benchmark replacement (e.g., the prime rate) from the scope of the LIBOR Act, even if these fallback provisions lack an express non-representativeness trigger.

However, consistent with the suggestion of some commenters, the Board is clarifying in the final rule how synthetic LIBOR would affect a LIBOR contract that includes fallback provisions authorizing a person to select

a benchmark replacement only when LIBOR is unavailable. As noted in section IV.B, the final rule defines a determining person to include a person with a *contingent* authority, right, or obligation to determine a benchmark replacement. Under the final rule, a person who has the authority, right, or obligation to select a benchmark replacement when LIBOR is unavailable is a “determining person;” accordingly, such person has a statutory right under section 104(c)(1) and (c)(2) of the LIBOR Act to select the Board-selected benchmark replacement by the earlier of (i) the LIBOR replacement date and (ii) the latest date for selecting a benchmark replacement according to the terms of the LIBOR contract.⁶⁶ If the determining person does not select a benchmark replacement by the LIBOR replacement date, the applicable Board-selected benchmark replacement will be the benchmark replacement for the LIBOR contract under section 104(c)(3) of the LIBOR Act.⁶⁷

D. Section 253.4—Board-Selected Benchmark Replacements

Section 253.4 identifies the Board-selected benchmark replacements for various types of contracts subject to the LIBOR Act. As indicated in the proposal, the Board agrees with the ARRC's observation that different benchmark replacements may be appropriate for derivative transactions and other transactions (hereafter, “cash transactions”).⁶⁸ Therefore, the final rule identifies different benchmark replacements for derivative transactions and for different types of cash transactions, as under the proposal. Consistent with the LIBOR Act, all of the Board-selected benchmark replacements (i) are based upon SOFR and (ii) incorporate spread adjustments for each specified tenor of LIBOR.⁶⁹

The spread adjustments specified in the LIBOR Act are intended to address certain differences between SOFR and LIBOR, including the fact that LIBOR is unsecured and therefore includes an element of bank credit risk which may cause it to be higher than SOFR.⁷⁰

⁶⁶ See 12 U.S.C. 5803(c)(1)–(2); section 253.3(c) of the final rule.

⁶⁷ See 12 U.S.C. 5803(c)(3); § 253.3(a)(1)(iii) of the final rule. The Board notes that the statute does *not* accelerate a determining person's contingent right under a LIBOR contract to select a benchmark replacement other than the Board-selected benchmark replacement. See 12 U.S.C. 5803(c)(2).

⁶⁸ ARRC, *ARRC Best Practice Recommendations Related to Scope of Use of the Term Rate* (May 4, 2022), https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2021/ARRC_Scope_of_Use.pdf.

⁶⁹ See § 253.4 of the final rule. See also 12 U.S.C. 5802–03.

⁷⁰ ARRC, *ARRC Consultation on Spread Adjustment Methodologies for Fallbacks in Cash*

LIBOR also may include term premia and reflect supply and demand conditions in wholesale unsecured funding markets, each of which may cause LIBOR to be higher than SOFR.⁷¹ The LIBOR Act prescribes static spread adjustments based on the tenor of LIBOR referenced in the contract (tenor spread adjustments)—specifically, 0.644 basis points (bps) (0.00644 percent) for overnight LIBOR, 11.448 bps (0.11448 percent) for one-month LIBOR, 26.161 bps (0.26161 percent) for three-month LIBOR, 42.826 bps (0.42826 percent) for six-month LIBOR, and 71.513 bps (0.71513 percent) for 12-month LIBOR.⁷² For clarity, the final rule, like the proposed rule, reiterates these tenor spread adjustments in paragraph (c) of § 253.4.⁷³

Two commenters requested that the final rule use different tenor spread adjustments than those specified in the LIBOR Act. As discussed, the LIBOR Act specifies tenor spread adjustments that shall be incorporated into the Board-selected benchmark replacements and does not authorize the Board to alter or modify those tenor spread adjustments. As a result, the final rule identifies Board-selected benchmark replacements that incorporate the tenor spread adjustments specified by the LIBOR Act, without modification.

Another commenter requested that the Board avoid selecting benchmark replacements that are overly complex to calculate or that have the potential to conflict with other Board-selected replacements and result in ambiguous or confusing scenarios. That commenter noted that the Board's selection of different benchmark replacements depending on contract type could create potential for hedging mismatch issues and urged the Board to consider issuing a broad range of alternative rates to allow individual firms flexibility to exercise their judgment in guarding against asset-liability mismatch issues while allowing them to rely on the LIBOR Act's protections for use of the Board-selected benchmark replacement.

Products Referencing USD LIBOR 7 (Jan. 21, 2020), https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2020/ARRC_Spread_Adjustment_Consultation.pdf.

⁷¹ *Id.*

⁷² See 12 U.S.C. 5802(20) (defining “tenor spread adjustment”). These spread adjustments were based on a methodology originally advanced by ISDA that uses the historical median over a five-year lookback period calculating the difference between USD LIBOR and SOFR. ARRC, *ARRC Announces Further Details Regarding Its Recommendation of Spread Adjustments for Cash Products* (June 30, 2020), https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2020/ARRC_Recommendation_Spread_Adjustments_Cash_Products_Press_Release.pdf.

⁷³ Section 253.4(c) of the final rule.

⁶⁴ 12 U.S.C. 5801(b)(3).

⁶⁵ 12 U.S.C. 5803(f)(2).

As discussed in further detail below, and consistent with the ARRC's recommendations, the Board continues to believe that different contract types warrant different benchmark replacements. However, since a key purpose of the LIBOR Act and final rule is to replace LIBOR with the applicable Board-selected benchmark replacement by operation of law, the final rule aims to create a simple, clear, and manageable taxonomy with as few categories as possible. In addition, the Board believes this purpose of the final rule—to replace LIBOR automatically with a Board-selected benchmark replacement—can function only if there is a single Board-selected benchmark replacement applicable to any particular LIBOR contract. Therefore, the final rule does not identify a broad range of alternative rates as “Board-selected benchmark replacements” from which a firm could choose and avail itself of the LIBOR Act's protections for use of the Board-selected benchmark replacement.

1. Derivative Transactions

With respect to derivative transactions, the Board observed in the proposal that many derivative market participants have adhered to the ISDA 2020 IBOR Fallbacks Protocol (ISDA protocol) to amend their existing derivative transaction contracts to incorporate fallback provisions that would replace references to USD LIBOR with a SOFR-based rate.⁷⁴ Specifically, the ISDA protocol replaces references to USD LIBOR in adhering parties' derivative transaction contracts with a rate equal to (i) SOFR, compounded in arrears for the appropriate tenor,⁷⁵ plus (ii) a stated spread adjustment based on the appropriate tenor (the “Fallback Rate (SOFR)”). The stated spread adjustments of the ISDA protocol are identical to the tenor spread adjustments specified in the LIBOR

Act.⁷⁶ As of November 29, 2022, over 15,400 entities have adhered to the ISDA protocol to amend their derivative transactions.⁷⁷

The Board proposed to select the Fallback Rate (SOFR) as the Board-selected benchmark replacement for derivative transactions. The Board noted that because derivatives markets already appear to reference SOFR compounded in arrears and there has been significant adherence to the ISDA protocol, it would be sensible to avoid disruption to these markets' efforts to transition away from referencing LIBOR.⁷⁸ The Board also observed that promoting use of a consistent approach to replace LIBOR references in derivative transactions should enhance financial stability and that the proposed approach was consistent with the recommendations of the ARRC.⁷⁹ The proposed rule defined a “derivative transaction” as “a contract that would satisfy the criteria to be a ‘Protocol Covered Document’ under the ISDA protocol but for the fact that one or more parties to such contract is not an ‘Adhering Party’ as such term is used in the ISDA protocol, provided that, for purposes of this definition, ‘Protocol Effective Date’ as such term is used in the ISDA protocol means the LIBOR replacement date for the relevant covered contract.”⁸⁰

⁷⁶ ISDA based its spread adjustments on a historical median over a five-year lookback period calculating the difference between USD LIBOR and SOFR. ARRC, *ARRC Announces Further Details Regarding Its Recommendation of Spread Adjustments for Cash Products* (June 30, 2020), https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2020/ARRC_Recommendation_Spread_Adjustments_Cash_Products_Press_Release.pdf.

⁷⁷ See ISDA, *ISDA 2020 IBOR Fallbacks Protocol—List of Adhering Parties*, <https://www.isda.org/protocol/isda-2020-ibor-fallbacks-protocol/adhering-parties> (last visited Nov. 29, 2022).

⁷⁸ 87 FR 45268, 45274 (July 28, 2022).

⁷⁹ *Id.* See also ARRC, *ARRC Best Practice Recommendations Related to Scope of Use of the Term Rate* (May 4, 2022), https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2021/ARRC_Scope_of_Use.pdf (recommending against the use of CME Term SOFR for the vast majority of the derivatives markets because these markets already reference SOFR compounded in arrears).

⁸⁰ Section 253.2 of the proposed rule, “Protocol Covered Documents” include (i) master agreements incorporating certain ISDA definitions booklets (each a “covered ISDA definitions booklet”), including the 2006 ISDA Definitions and the 2000 ISDA Definitions, as published by ISDA, and referencing LIBOR or another specified IBOR (each a “covered master agreement”); (ii) confirmations that supplement, form part of and are subject to, or are otherwise governed by, a covered master agreement; and (iii) any ISDA credit support document, including the 1994 ISDA Credit Support Annex and the 2014 Standard Credit Support Annex, that incorporates a covered ISDA definition booklet and references LIBOR or another specified IBOR. ISDA, *ISDA 2020 IBOR Fallbacks Protocol*

As noted in the proposal, ISDA has selected Bloomberg Index Services Limited (Bloomberg) to calculate and publish the Fallback Rate (SOFR) referenced in its ISDA protocol.⁸¹ Similar to how IBA requires a license for certain uses of LIBOR,⁸² the use of the Fallback Rate (SOFR) is subject to certain licensing or other usage terms imposed by Bloomberg.⁸³ Under its present usage terms, Bloomberg waives usage fees for users with less than \$5 billion of total assets and charges one annual license fee for use of its IBOR fallbacks data.⁸⁴

The Board did not receive comments regarding the proposed definition of “derivative transaction.” Most commenters supported use of the Fallback Rate (SOFR) in the ISDA protocol as the Board-selected benchmark replacement for derivative transactions, but some suggested that the Board incorporate certain technical amendments in the final rule to match precisely the calculation of the Fallback Rate (SOFR) under the ISDA protocol. In particular, these commenters requested that the Board clarify that the Fallback Rate (SOFR) should be determined on the “derivative transaction fallback observation day,” which essentially is defined in the ISDA Protocol as the day two payment business days prior to the payment date for the relevant calculation period.

One commenter stated that it would have preferred that the Board propose to select a rate equal to CME Term SOFR (discussed in detail in section IV.D.2) as its benchmark replacement for derivative transactions pursuant to the LIBOR Act. The commenter argued that CME Term SOFR would be the “most economically equivalent and simplest” replacement for LIBOR for end-users. However, that commenter acknowledged that such an approach would differ from the ARRC's recommendation and ultimately indicated that the Board should not make any changes from the ISDA

14–16 (Oct. 23, 2020), <https://assets.isda.org/media/3062e7b4/08268161.pdf>.

⁸¹ ISDA, *Bloomberg Selected as Fallback Adjustment Vendor* (July 31, 2019), <https://www.isda.org/2019/07/31/bloomberg-selected-as-fallback-adjustment-vendor>.

⁸² IBA, *About*, <https://www.theice.com/iba/about#licensing> (last visited Nov. 29, 2022).

⁸³ See Bloomberg Prof'l Servs., *IBOR Fallback Usage Terms* (Sept. 27, 2021), <https://assets.bbbhub.io/professional/sites/27/ISDA-IBOR-Fallbacks-Web-Terms1.pdf>.

⁸⁴ *Id.* The asset threshold of \$5 billion applies to a user and its affiliates as one group and can be based on assets under management, the value of assets on its balance sheet, or another objective measure that Bloomberg may reasonably employ. *Id.*

⁷⁴ ISDA, *ISDA 2020 IBOR Fallbacks Protocol* (Oct. 23, 2020), <https://assets.isda.org/media/3062e7b4/08268161.pdf>.

⁷⁵ For purposes of this calculation, SOFR generally is compounded in arrears over an accrual period corresponding to the tenor of the LIBOR referenced in the covered contract. That compounded rate is annualized, and the day count convention is adjusted to match that of LIBOR. Bloomberg Professional Services, *Fact Sheet: IBOR Fallbacks* (Dec. 13, 2021), https://assets.bbbhub.io/professional/sites/10/Factsheet-IBOR-Fallbacks_V4_Dec2021.pdf (cited in response to FAQ 3 of ISDA's “2020 IBOR Fallbacks Protocol (IBOR Fallbacks Protocol) FAQs”). See also Bloomberg Professional Services, *IBOR Fallback Rate Adjustments Rule Book* (Dec. 13, 2021), https://assets.bbbhub.io/professional/sites/10/IBOR-Fallback-Rate-Adjustments-Rule-Book_V3_Dec2021.pdf (for complete discussion of the calculation).

protocol's rate given the timing of the rule.

Some commenters suggested that the Board identify separate benchmark replacements for certain categories of derivative contracts. One commenter requested that the final rule transition derivative transactions linked to certain securitizations to the same benchmark replacement as those of securities related to that securitization rather than the Fallback (SOFR) rate in order to avoid basis risk, potential ratings downgrades and defaults due to unplanned mismatches in cash flows, and potential disruptions arising from disputes over how excess cashflows and shortfalls should be treated. Another commenter requested that, where a derivative transaction is executed in connection with a cash asset-backed security and the cash security's terms are structured to reflect payments under the related derivative transaction, the final rule should transition the derivative transaction to a benchmark replacement equal to a term SOFR rate so as to avoid circumventing the expectations of the parties and causing unexpected payment mismatches between the security and the derivative transaction. Similarly, another commenter recommended that the final rule allow a derivative transaction that specifically refers to the definition of LIBOR in an asset-backed security in order to hedge cashflows in the related securitization transaction to transition to the same benchmark replacement as the associated asset-backed security. This commenter acknowledged that it would not be practical or even advisable that every derivative transaction related to every cash security be transitioned in this way and that it is not operationally feasible for the parties to identify all such derivative transactions. As a result, the commenter suggested that the final rule acknowledge that, regardless of the original intent of the parties, there will be misalignments between many cash products and their related hedges because the Board-selected benchmark replacements for these products differ.

As noted, because a key purpose of the LIBOR Act and final rule is to replace LIBOR with the applicable Board-selected benchmark replacement by operation of law, the Board believes it is important for the final rule to create as simple, clear, and manageable a taxonomy as possible. This should allow parties to determine quickly and easily the Board-selected benchmark replacement to which a particular LIBOR contract will transition in the absence of fallback provisions identifying either (i) a clear and practicable benchmark replacement or

(ii) a determining person. The addition of new sub-categories of derivatives transactions would increase greatly the complexity of the rule and increase burden associated with determining the applicable Board-selected benchmark replacement for a given LIBOR contract.

The Board acknowledges that basis risk may arise to the extent that derivative transactions and related cash transactions transition to different Board-selected benchmark replacements; however, the parties typically involved in these types of derivative transactions frequently manage basis risk and other hedging-related risk in the ordinary course of business. In addition, nothing in the LIBOR Act or final rule prevents parties to LIBOR contracts from agreeing to transition a particular LIBOR contract to a benchmark replacement that is more suitable to that contract than the Board-selected benchmark replacement.⁸⁵

For all the foregoing reasons, the final rule selects the Fallback Rate (SOFR) in the ISDA protocol as the Board-selected benchmark replacement for derivative transactions. In response to comments, the final rule includes certain technical amendments to ensure that the calculation of the Fallback Rate (SOFR) under the final rule matches precisely the manner in which that rate is calculated in the ISDA protocol. In particular, the final rule defines "derivative transaction fallback observation day" in the same way the term is defined in the ISDA protocol and incorporates additional technical related to the calculation of the Fallback Rate (SOFR). Incorporation of this term, together with the provision in § 253.3(d)(3) indicating that contractual provisions referencing LIBOR or any LIBOR value prior to the LIBOR replacement date (including any provision requiring a person to look back to a LIBOR value as of a date preceding the LIBOR replacement date) remain unaffected, aligns the Board-selected benchmark replacement in the final rule with the calculation of the Fallback Rate (SOFR) in the ISDA protocol.

2. Cash Transactions

Under the proposed rule, references to overnight LIBOR in cash transactions would be replaced with SOFR plus a spread adjustment specified in the LIBOR Act,⁸⁶ consistent with the

⁸⁵ See, e.g., § 253.3(b)(1) of the final rule (providing that the rule does not apply to "[a]ny LIBOR contract that the parties have agreed in writing shall not be subject to the Adjustable Interest Rate (LIBOR) Act").

⁸⁶ Section 253.4(b)(1)(i), (b)(2)(i)(A), (b)(2)(ii)(A), (b)(3)(i) of the proposed rule. As described further

ARRC's recommendations.⁸⁷ Similarly, consistent with the ARRC's recommendations,⁸⁸ references to one-, three-, six-, or 12-month LIBOR in cash transactions generally would have been replaced with the comparable tenor CME Term SOFR rate plus the spread adjustment specified LIBOR Act.⁸⁹ As described further below, however, the Board proposed different Board-selected benchmark replacements for certain cash transactions involving entities regulated by the Federal Housing Finance Agency (FHFA).⁹⁰

CME Group calculates and publishes CME Term SOFR in one-, three-, six-, and 12-month tenors.⁹¹ Similar to how IBA requires a license for certain uses of LIBOR,⁹² the use of CME Term SOFR is subject to certain licensing or other

below, for one year following the LIBOR replacement date, the spread adjustment specified for cash transactions that are consumer loans will differ from the spread adjustment for LIBOR contracts that are not consumer loans.

⁸⁷ See ARRC, *ARRC Best Practice Recommendations Related to Scope of Use of the Term Rate* (May 4, 2022), https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2021/ARRC_Scope_of_Use.pdf.

⁸⁸ ARRC, *ARRC Formally Recommends Term SOFR* (July 29, 2021), https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2021/ARRC_Press_Release_Term_SOFR.pdf. The ARRC made its recommendation after considering, among other things: (i) the fact that CME Group's term rates were rooted in a robust and sustainable base of derivative transactions over time; (ii) the rates' limited scope of use that should support their stability over time; (iii) continued growth in overnight SOFR-linked derivatives volumes; (iv) visible progress to deepen SOFR derivative transactions' liquidity; and (v) visible growth in offerings of cash transactions linked to averages of SOFR. *Id.* For similar reasons, the Board believes that the forward-looking SOFR term rates administered by CME Group and published in one-, three-, six-, and 12-month tenors generally would be an appropriate basis for a benchmark replacement for one-, three-, six-, and 12-month LIBOR, respectively.

⁸⁹ Section 253.4(b)(1)(ii), (b)(2)(i)(B), and (b)(2)(ii)(B) of the proposed rule. CME Term SOFR is a forward-looking term rate based on SOFR administered by CME Group Benchmark Administration, Ltd. (CME Group). These forward-looking SOFR term rates are calculated by first projecting a possible path of overnight rates that is consistent with the observable averages implied by SOFR-based derivative contracts and then creating averages over standard tenors of that projected path of overnight rates. In projecting the path of overnight rates, CME Group uses a combination of one-month and three-month SOFR futures contracts to ensure that as many data points as possible are used to calculate the term structure. CME Grp., *CME Term SOFR Reference Rates Benchmark Methodology* (May 9, 2022), <https://www.cmegroup.com/market-data/files/cme-term-sofr-reference-rates-benchmark-methodology.pdf>.

⁹⁰ Section 253.4(b)(3)(ii) of the proposed rule.

⁹¹ CME Grp., *CME Term SOFR Rates*, <https://www.cmegroup.com/market-data/cme-group-benchmark-administration/term-sofr.html> (last visited Nov. 29, 2022).

⁹² IBA, *About*, <https://www.theice.com/iba/about#licensing> (last visited Nov. 29, 2022).

usage terms imposed by CME Group.⁹³ One commenter, whose letter appeared to focus on cash transactions, requested that the Board make every effort to ensure that Board-selected benchmark replacements be made available at low or no cost to credit unions and other not-for-profit institutions. As noted by the commenter, under its present usage terms, an end user seeking only to enter into a transaction does not need a license from CME Group.⁹⁴ In addition, CME Group has waived fees for users of CME Term SOFR for cash transactions through 2026.⁹⁵ Based on these facts, the Board believes that Board-selected benchmark replacements that are based on CME Term SOFR would be made available to market participants and end users at low to no cost.

Similar to the proposal, the final rule generally replaces references to overnight LIBOR in cash transactions with SOFR plus a spread adjustment specified in the LIBOR Act.⁹⁶ With respect to references to one-, three-, six-, or 12-month LIBOR in cash transactions other than those in the specific categories listed below, the final rule generally identifies as the Board-selected benchmark replacement the corresponding tenor of CME Term SOFR plus a spread adjustment specified in the LIBOR Act.⁹⁷ As discussed further below, for one year following the LIBOR replacement date, the spread adjustment for cash transactions that are consumer loans will differ from the spread adjustment for LIBOR contracts that are not consumer loans.

The final rule identifies separate Board-selected benchmark replacements for two categories of cash transactions: (i) similar to the proposal, certain cash transactions involving entities regulated by FHFA; and (ii) Federal Family Education Loan Program (FFELP) asset-backed securitizations (ABS). These categories of cash transactions are discussed in more detail below.

a. Cash Transactions That Are Consumer Loans

Under the LIBOR Act, any Board-selected benchmark replacement applicable to consumer loans shall, for the one-year period beginning on the LIBOR replacement date, incorporate an amount that modifies the otherwise-applicable tenor spread adjustment specified in the LIBOR Act.⁹⁸ Specifically, the LIBOR Act requires that, during the one-year period, the Board-selected benchmark replacement for consumer loans incorporate an amount that transitions linearly for each business day during that period from (i) the difference between the Board-selected benchmark replacement and the corresponding LIBOR tenor determined as of the day immediately before the LIBOR replacement date to (ii) the applicable tenor spread adjustment specified in the LIBOR Act (the transition tenor spread adjustment).⁹⁹ This transition tenor spread adjustment is intended to prevent consumer borrowers from experiencing significant, unexpected shifts in borrowing rates on and immediately following the LIBOR replacement date.

The proposed rule generally identified the same Board-selected benchmark replacements for consumer loans as for other cash transactions (*i.e.* SOFR for overnight LIBOR and CME Term SOFR for one-, three-, six-, and 12-month LIBOR).¹⁰⁰ Consistent with the LIBOR Act, however, the proposed rule provided that, for the one-year period beginning on the LIBOR replacement date, the Board-selected benchmark replacements for consumer loans would incorporate the applicable transition tenor spread adjustment.¹⁰¹

Refinitiv Limited has stated it will publish and provide rates for consumer loans that sum (i) CME Term SOFR and (ii) the transition tenor spread adjustment (for the one-year period beginning on the LIBOR replacement date) or the tenor spread adjustment specified in the LIBOR Act (after that one-year period), consistent with the proposed rule and the recommendations of the ARRC.¹⁰² Refinitiv identifies

these rates as “USD IBOR Cash Fallbacks” for “Consumer” products. For clarity, and particularly because calculation of the transition tenor spread adjustment applicable to consumer loans during the one-year period beginning on the LIBOR replacement date may be complex, the proposed rule indicated that these rates from Refinitiv would be deemed equal to the Board-selected benchmark replacement in the proposed rule.¹⁰³ Use of these “USD IBOR Cash Fallbacks” for “Consumer” products may be subject to certain licensing or other usage terms imposed by Refinitiv Limited.

The Board did not receive comments concerning the proposed Board-selected benchmark replacement for cash transactions that are consumer loans. As a result, the final rule generally retains these provisions as proposed, including a provision deeming the “USD IBOR Cash Fallbacks” for “Consumer” products published by Refinitiv equal to the Board-selected benchmark replacement for these transactions.¹⁰⁴

b. Cash Transactions Involving Certain Entities Regulated by FHFA

Since 2020, the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation—government-sponsored enterprises (GSEs) that are regulated by FHFA—have transitioned to using the 30-calendar-day compounded average of SOFR (30-day Average SOFR), as

Refinitiv.pdf. With respect to the transition tenor spread adjustment, Refinitiv has stated it will incorporate a two-week lookback period for SOFR (from June 19, 2023, through June 30, 2023) in determining the difference between the Board-selected benchmark replacement and the corresponding LIBOR tenor as of the day before the LIBOR replacement date. Refinitiv Benchmark Servs. (UK) Ltd., *USD IBOR Institutional Cash Fallbacks Benchmark, USD IBOR Consumer Cash Fallbacks (1 Week, 2 Months) Benchmark, USD IBOR Consumer Cash Fallbacks (1, 3, 6 Months) Prototype Methodology* 11 (Jan. 3, 2022), https://www.refinitiv.com/content/dam/marketing/en_us/documents/methodology/refinitiv-usd-ibor-cash-fallbacks-methodology.pdf. The Board believes this method of determining the difference between the Board-selected benchmark replacement and the corresponding LIBOR tenor as of June 30, 2023, is consistent with the provision in the LIBOR Act.

¹⁰³ See § 253.4(b)(2)(iii) of the proposed rule. Refinitiv also has stated it will publish “USD IBOR Cash Fallbacks” for “Institutional” products. These rates are expected to be consistent with the proposed rule’s benchmark replacement for cash transactions that are not consumer loans. The Board observes that parties to cash transactions that are not consumer loans should be able to compute easily the proposed benchmark replacement and, if needed, verify that any vendor’s reported rate (including that of Refinitiv) is consistent with that proposed replacement such that no provision similar to § 253.4(b)(2)(iii) is needed for these transactions.

¹⁰⁴ See § 253.4(b)(2) of the final rule.

⁹³ See CME Grp., *CME Data Terms of Use*, <https://www.cmegroup.com/trading/market-data-explanation-disclaimer.html> (last visited Nov. 29, 2022); CME Grp., *CME Term SOFR Reference Rates—Frequently Asked Questions*, FAQ 8–10 (Apr. 19, 2022), <https://www.cmegroup.com/articles/faqs/cme-term-sofr-reference-rates.html>.

⁹⁴ CME Group defines an “end user” as an individual or entity that is a counterparty or guarantor to the applicable cash transaction or derivative transaction with the licensee of CME Term SOFR. CME Grp., *CME Term SOFR Reference Rates—Frequently Asked Questions*, FAQ 10 (Apr. 19, 2022), <https://www.cmegroup.com/articles/faqs/cme-term-sofr-reference-rates.html>.

⁹⁵ CME Grp., *CME Group Benchmark Fee List* (Dec. 2021), <https://www.cmegroup.com/files/download/benchmark-data-fee-list.pdf>.

⁹⁶ Section 253.4(b)(1)(i), (b)(2)(i)(A), (b)(2)(ii)(A), and (b)(3)(i)(A) of the final rule.

⁹⁷ Section 253.4(b)(1)(ii), (b)(2)(i)(B), and (b)(2)(ii)(B) of the final rule.

⁹⁸ 12 U.S.C. 5803(e)(2). See § 253.2 of the final rule for the definition of “consumer loan.”

⁹⁹ 12 U.S.C. 5803(e)(2).

¹⁰⁰ Section 253.4(b)(2) of the proposed rule.

¹⁰¹ Section 253.2(b)(2)(i) of the proposed rule.

¹⁰² The ARRC selected Refinitiv Limited to publish its recommended spread adjustments and spread-adjusted rates for cash products. ARRC, *ARRC Announces Refinitiv as Publisher of its Spread Adjustment Rates for Cash Products* (Mar. 17, 2021), <https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2021/20210317-press-release-Spread-Adjustment-Vendor->

published by the FRBNY,¹⁰⁵ in their newly issued multifamily loans and other structured products. Consistent with those GSEs' current practices, the proposed rule would have selected as the benchmark replacement for LIBOR contracts involving those entities (i) in place of overnight LIBOR, SOFR, or in place of one-, three-, six-, or 12-month tenors of LIBOR, 30-day Average SOFR; plus (ii) the applicable tenor spread adjustment specified in the LIBOR Act.¹⁰⁶ Selection of this proposed benchmark replacement was expected to enhance liquidity for both newly issued and legacy LIBOR-based products issued by those GSEs.¹⁰⁷

The proposed rule would have defined a "government-sponsored enterprise (GSE)," consistent with its definition under the Board's capital rule, 12 CFR 217.2, as "an entity established or chartered by the U.S. government to serve public purposes specified by the U.S. Congress but whose debt obligations are not explicitly guaranteed by the full faith and credit of the U.S. government."¹⁰⁸ The proposal would have defined the LIBOR contracts involving the GSEs that would use this benchmark replacement—termed a "covered GSE contract"—as "a covered contract for which a GSE is identified as a party in the transaction documents and that is (i) a commercial or multifamily mortgage loan, (ii) a commercial or multifamily mortgage-backed security, (iii) a collateralized mortgage obligation, (iv) a credit risk transfer transaction, or (v) a Federal Home Loan Bank advance."¹⁰⁹

Multiple commenters opposed the proposed rule's definitions of "GSE" and "covered GSE contract" as overly broad in light of the Board's stated intent to capture contracts involving entities regulated by FHFA.¹¹⁰ One commenter suggested that residential mortgage pass-through certificates issued by the Federal Home Loan

Mortgage Corporation should not be considered a "covered GSE contract" and should instead be considered a cash transaction that would transition to CME Term SOFR. Other commenters suggested that the Board-selected benchmark replacement for covered GSE contracts be a term SOFR rate rather than 30-day Average SOFR for several reasons: (i) that the ARRC did not recommend 30-day Average SOFR for contracts involving GSEs, (ii) that use of 30-day Average SOFR in advance could create volatility in earnings during periods of monetary policy activity; and (iii) that use of a term SOFR rate would avoid bifurcating the market and would be consistent with public statements made by the GSEs, including GSEs not regulated by FHFA. Another commenter—FHFA—generally supported the Board's proposal but suggested certain technical amendments to the definition of "GSE-covered contract."

The Board continues to believe that, with the exception of Federal Home Loan Bank advances, which are discussed further below, it is appropriate to replace references to one-, three-, six-, or 12-month LIBOR in contracts involving entities regulated by FHFA with 30-day Average SOFR plus the applicable tenor spread adjustment specified in the LIBOR Act. In response to comments suggesting that the "GSE" definition was too broad and would cover entities that are not regulated by FHFA, the final rule replaces the terms "GSE" and "covered GSE contract" with "FHFA-regulated entity" and "FHFA-regulated-entity contract". "FHFA-regulated entity" is defined as having the same meaning as "regulated entity" in 12 U.S.C. 4502(20).¹¹¹ "FHFA-regulated-entity contract" is defined to mean "a LIBOR contract that is a commercial or multifamily mortgage loan that has been purchased or guaranteed, in whole or in part, by an FHFA-regulated-entity, or for which an FHFA-regulated entity is identified as a party in the transaction documents, and that is (i) a commercial or multifamily mortgage-backed security (other than a security backed by consumer loans), (ii) a collateralized mortgage obligation, (iii) a credit risk transfer transaction, or (iv) a Federal Home Loan Bank advance." These narrower definitions more closely track SOFR contracts executed by FHFA-regulated entities without

impacting LIBOR contracts of other GSEs.

Similar to the proposal, the final rule identifies as the Board-selected benchmark replacement for FHFA-regulated-entity contracts other than Federal Home Loan Bank advances (i) in place of overnight LIBOR, SOFR, or in place of one-, three-, six-, or 12-month tenors of LIBOR, 30-day Average SOFR; plus (ii) the applicable tenor spread adjustment specified in the LIBOR Act.¹¹² Having consulted with FHFA, the Board believes that the final rule's Board-selected benchmark replacement rate should enhance liquidity for both newly issued and legacy LIBOR-based products issued by FHFA-regulated entities. In addition, concerning a commenter's request that any Board-selected benchmark replacement for a cash transaction be made available at low or no cost to credit unions and other not-for-profit institutions, the Board notes that 30-day Average SOFR is published by the Federal Reserve Bank of New York and available for free.

Federal Home Loan Bank advances. As noted, the proposed rule would have included Federal Home Loan Bank advances as "covered GSE contracts" for which references to one-, three-, six-, or 12-month tenors of LIBOR would be replaced with 30-day Average SOFR plus the applicable tenor spread adjustment specified in the LIBOR Act. One commenter recommended that references to one-, three-, six-, or 12-month tenors of LIBOR in Federal Home Loan Bank advances be replaced with a rate based on daily average SOFR in arrears matching the Fallback Rate (SOFR) in the ISDA protocol, and not with a rate based on 30-day Average SOFR. This commenter noted that, because the Federal Home Loan Banks utilize SOFR in-arrears indices for their established advance products, selection of the Fallback Rate (SOFR) in the ISDA protocol would align with the current practices of the Federal Home Loan Banks with respect to their advances.¹¹³ FHFA, the supervisor of the Federal Home Loan Banks, supported selection of the Fallback Rate (SOFR) in the ISDA protocol for an FHFA-regulated-entity contract that is a Federal Home Loan Bank advance.

¹¹² See § 253.4(b)(3) of the final rule; *see also* section 253.2 of the final rule (defining "30-day Average SOFR").

¹¹³ This commenter noted also that, since the Federal Home Loan Banks use the same rate for their funding and hedging programs, selection of the Fallback Rate (SOFR) in the ISDA protocol would have the added benefit of aligning its funding costs where such funding has been created using derivative transactions with its lending rate for advances.

¹⁰⁵ Fed. Res. Bk. of NY, *Additional Information about Reference Rates Administered by the New York Fed*, https://www.newyorkfed.org/markets/reference-rates/additional-information-about-reference-rates#sofr_ai_calculation_methodology (last visited Nov. 29, 2022) (detailing the calculation methodology for the SOFR averages and index).

¹⁰⁶ See § 253.4(b)(3) of the proposed rule.

¹⁰⁷ 87 FR 45268, 45276 (July 28, 2022).

¹⁰⁸ Section 253.2 of the proposed rule.

¹⁰⁹ *Id.*

¹¹⁰ One of these commenters would prefer that LIBOR contracts involving the Federal Agricultural Mortgage Corporation (Farmer Mac) that reference one-, three-, six-, or 12-month LIBOR transition to the corresponding tenor of CME Term SOFR plus the applicable tenor spread adjustment specified in the LIBOR Act. This commenter noted that Farmer Mac does not use 30-day Average SOFR as a benchmark for its loan products or securities.

¹¹¹ Section 253.2 of the final rule. Under 12 U.S.C. 4502(20), the term "regulated entity" means "(A) the Federal National Mortgage Association and any affiliate thereof; (B) the Federal Home Loan Mortgage Corporation and any affiliate thereof; and (C) any Federal Home Loan Bank."

Having consulted with FHFA, the Board believes it would be appropriate to identify a separate benchmark replacement for FHFA-regulated-entity contracts that are Federal Home Loan Bank advances so as to align the benchmark used in legacy contracts that are Federal Home Loan Bank advances with the current practices of the Federal Home Loan Banks. Therefore, the final rule identifies the Board-selected benchmark replacement for an FHFA-regulated-entity contract that is a Federal Home Loan Bank advance as the “Fallback Rate (SOFR)” in the ISDA protocol, as calculated under the ISDA protocol.¹¹⁴

FFELP ABS. One group of commenters recommended that the Board identify a separate benchmark replacement for asset-backed securities that are predominantly secured by loans made under the FFELP that aligns with the LIBOR Act’s amendments to FFELP special allowance payments related to those loans. Specifically, section 109 of the LIBOR Act amended the Higher Education Act of 1965 to indicate that, among other things, in instances where one-month LIBOR ceases or is non-representative, special allowance payments shall be calculated using 30-day Average SOFR rates.¹¹⁵ The Board did not receive any comments recommending against identification of a separate benchmark replacement for these contracts.

The Board believes it would be appropriate to identify a separate benchmark replacement for any asset-backed security for which more than 50 percent of the collateral pool consists of FFELP loans, as reported in the most recent servicer report available on the LIBOR replacement date (defined in the final rule as “Federal Family Education Loan Program (FFELP) asset-backed securitizations (ABS)”)¹¹⁶ The Board understands that outstanding FFELP ABS do not reference overnight LIBOR;

therefore, the final rule identifies benchmark replacements for one-, three-, six-, and 12-month LIBOR only.¹¹⁷ Consistent with the comment received, the final rule identifies the benchmark replacement for a FFELP ABS as follows: (i) one-month LIBOR will be replaced with 30-day Average SOFR plus the tenor spread adjustment specified in the LIBOR Act; (ii) three-month LIBOR will be replaced with 90-day Average SOFR plus the tenor spread adjustment specified in the LIBOR Act; and (iii) six- or 12-month LIBOR will be replaced with 30-day Average SOFR plus the applicable tenor spread adjustment specified in the LIBOR Act.¹¹⁸

E. Section 253.5—Benchmark Replacement Conforming Changes

The LIBOR Act authorizes the Board to require any additional technical, administrative, or operational changes, alterations, or modifications to LIBOR contracts based on a determination that such changes, alterations, or modifications would address one or more issues affecting the implementation, administration, and calculation of the Board-selected benchmark replacement in LIBOR contracts (conforming changes).¹¹⁹ The Board’s proposed rule did not require any conforming changes, since it did not appear any additional conforming changes would be needed for successful implementation of the Board-selected benchmark replacements identified in the proposed rule. However, under the proposed rule, the Board reserved the authority, in its discretion, to require any additional conforming changes, by regulation or order.¹²⁰

For clarity, the proposed rule also indicated that, with respect to a LIBOR contract that is not a consumer loan, a calculating person may make any additional technical, administrative, or operational changes, alterations or modifications that, in that person’s reasonable judgment, would be necessary or appropriate to permit the implementation, administration, and calculation of the Board-selected benchmark replacement under or with respect to a LIBOR contract after giving due consideration to any changes, alterations, or modifications otherwise

required by the Board under the proposed rule.¹²¹ This language in the proposed rule mirrored sections 103(4)(B) and 104(d) of the LIBOR Act.¹²²

The Board did not receive any comments concerning the proposed rule’s provisions mirroring sections 103(4)(B) and 104(d) of the LIBOR Act. Some commenters agreed with the Board that no additional conforming changes were necessary. One commenter urged the Board to consider whether some conforming changes may be appropriate for complex consumer loans, since the LIBOR Act does not provide for a calculating person to make additional conforming changes for such loans. Another commenter recommended the Board include as a conforming change a provision that, should the Board-selected benchmark replacement not be published on a given day, then the prior day’s publication of the Board-selected benchmark replacement should be used. Several commenters requested conforming changes addressing provisions in LIBOR contracts that (i) specify a particular source where a LIBOR rate may be obtained (e.g., “LIBOR as published in *The Wall Street Journal*”), (ii) specify a LIBOR rate in effect as of a particular time of day, (iii) require averaging of LIBOR over a period of time that spans the LIBOR replacement date, and (iv) define “business day” in a manner differently from the proposed rule.¹²³

The final rule, like the proposed rule, includes provisions mirroring the language in sections 103(4) and 104(d) of the LIBOR Act, including the Board’s ability to, in its discretion, publish additional benchmark replacement conforming changes, by regulation or order, and a calculating person’s ability to make certain conforming changes with respect to a LIBOR contract that is not a consumer loan, consistent with the LIBOR Act.¹²⁴ In response to comments, the final rule also specifies certain conforming changes and, consistent with the LIBOR Act, indicates that these conforming changes shall become an integral part of any LIBOR contract for

¹¹⁴ Section 253.4(b)(3) of the final rule.

Concerning a commenter’s request that any Board-selected benchmark replacement for a cash transaction be made available at low or no cost to credit unions and other not-for-profit institutions, the Board notes that, although use of the Fallback Rate (SOFR) is subject to certain licensing or other usage terms imposed by Bloomberg, Bloomberg presently waives usage fees for users with less than \$5 billion of total assets and charges one annual license fee for use of its IBOR fallbacks data. See Bloomberg Prof’l Servs., *IBOR Fallback Usage Terms* (Sept. 27, 2021), <https://assets.bbbhub.io/professional/sites/27/ISDA-IBOR-Fallbacks-Web-Terms1.pdf>. The asset threshold of \$5 billion applies to a user and its affiliates as one group and can be based on assets under management, the value of assets on its balance sheet, or another objective measure that Bloomberg may reasonably employ. *Id.*

¹¹⁵ 20 U.S.C. 1087–1(b)(2)(I)(viii).

¹¹⁶ See § 253.2 of the final rule.

¹¹⁷ See § 253.4(b)(4) of the final rule.

¹¹⁸ *Id.* Concerning a commenter’s request that any Board-selected benchmark replacement for a cash transaction be made available at low or no cost to credit unions and other not-for-profit institutions, the Board notes that 30-day Average SOFR and 90-day Average SOFR are published by the Federal Reserve Bank of New York and available for free.

¹¹⁹ 12 U.S.C. 5803(e).

¹²⁰ Section 253.5(a)(1) of the proposed rule.

¹²¹ Section 253.5(a)(2) of the proposed rule.

¹²² See 12 U.S.C. 5802(4)(B), 5803(d).

¹²³ As discussed in section IV.C, some commenters also requested conforming changes addressing provisions in LIBOR contracts that (i) specify rounding conventions, to the extent a particular source for the Board-selected benchmark replacement provides a different number of decimal places; and (ii) specify a lookback period that straddles the LIBOR replacement date. In the Board’s view, it is clearer and more reasonable to indicate that these contractual provisions are unaffected by the final rule, rather than to include these as conforming changes.

¹²⁴ Section 253.5(a) of the final rule.

which the Board-selected benchmark replacement replaces the contract's references to LIBOR.¹²⁵

First, the final rule replaces references in a LIBOR contract to a specified source for LIBOR (such as a particular newspaper, website, or screen) with the publication of the applicable Board-selected benchmark replacement by either the relevant benchmark administrator for the applicable Board-selected benchmark replacement or any third party authorized by the relevant benchmark administrator to publish the applicable Board-selected benchmark replacement.¹²⁶ Second, the final rule replaces references in a LIBOR contract to a particular time of day for determining LIBOR (such as 11:00 a.m. London time) with the standard publication time for the applicable Board-selected benchmark, as established by the relevant benchmark administrator.¹²⁷ Third, the final rule modifies any provision of a LIBOR contract requiring use of a combination (such as an average) of LIBOR values over a period of time that spans the LIBOR replacement to provide that the combination shall be calculated consistent with that contractual provision using (i) the applicable LIBOR for any date prior to the LIBOR replacement date and (ii) the applicable Board-selected benchmark replacement for any date on or following the LIBOR replacement date, respectively.¹²⁸ These conforming changes provide clarifications expressly requested by commenters.

The final rule also provides, subject to § 253.4(a) and (b)(3)(ii) of the final rule, that to the extent a Board-selected benchmark replacement is not available or published on a particular day indicated in the LIBOR contract as the determination date, the most recently available publication of the Board-selected benchmark replacement will apply.¹²⁹ The Board believes this provision, together with § 253.4(a) and (b)(3)(ii) of the final rule, addresses more directly an issue raised by a commenter concerning a provision of a LIBOR contract that defines "business day" differently from the final rule. A different definition of "business day" in the LIBOR contract could result in unavailability of the Board-selected benchmark replacement on the contractual determination date. This conforming change in the final rule would address that issue by directing

parties to use the most recently available publication of the Board-selected benchmark replacement in the event the Board-selected benchmark replacement is not available or published on a particular day indicated in the LIBOR contract as the determination date, without affecting other provisions in the LIBOR contract that may refer to "business day" for a different purpose.¹³⁰

F. Section 253.6—Preemption

As noted, section 107 of the LIBOR Act expressly preempts any provision of state or local law relating to the selection or use of a benchmark replacement or related conforming changes, or expressly limiting the manner of calculating interest (including the compounding of interest) as that provision applies to the selection or use of a Board-selected benchmark replacement or benchmark replacement conforming changes.¹³¹ For clarity, § 253.6 of the proposed rule referenced and repeated the statutory language concerning preemption of such state or local law, statute, rule, regulation, or standard by a final rule issued by the Board pursuant to the LIBOR Act.

The Board did not receive any comments on this section of the proposed rule. Therefore, the final rule retains this section as proposed.¹³²

G. Section 253.7—Continuity of Contract and Safe Harbor

In its proposal, the Board noted that the LIBOR Act provides, among other things, certain statutory protections enumerated in section 105 related to the selection and use of the Board-selected benchmark replacement.¹³³ The Board viewed these provisions as self-executing and, therefore, did not believe it was necessary to include any provisions in the proposed rule reiterating these sections of the LIBOR Act. However, the Board invited comment on whether the Board should

incorporate into the regulation the statutory protections in section 105 of the LIBOR Act.

Some commenters recommended that the final rule incorporate the statutory protections of section 105 of the LIBOR Act. Another commenter suggested that the Board expressly acknowledge in the final rule that section 105 of the LIBOR Act is self-executing and that nothing in the rule is intended to alter or modify the scope of those protections.

Some commenters requested that the final rule expressly state, consistent with section 104(f)(6) of the LIBOR Act, that nothing in the final rule would alter or impair the rights or obligations of any person, or the authorities of any agency, under Federal consumer financial law, as defined in 12 U.S.C. 5481. One commenter suggested in the alternative that section 104(f)(6) of the LIBOR Act be expressly incorporated into the final rule. Consistent with the LIBOR Act, the Board affirms that the final rule does not affect any requirements imposed by any provision of Federal consumer financial law, as defined in 12 U.S.C. 5481.

Having considered all of these comments, the Board's final rule includes a new section expressly stating that the provisions of section 105(a)–(d) of the LIBOR Act shall apply to any LIBOR contract for which the Board-selected benchmark replacement becomes the benchmark replacement pursuant to § 253.3(a) or (c) of the final rule.¹³⁴ The section separately states that nothing in the final rule is intended to alter or modify the availability or effect of the provisions of section 105(e) of the LIBOR Act.¹³⁵

V. Regulatory Analyses

A. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) (5 U.S.C. 601 *et seq.*) requires an agency to consider whether its rules will have a significant economic impact on a substantial number of small entities. Under the RFA, in connection with a final rule, an agency is generally required to publish a final regulatory flexibility analysis (FRFA), unless the head of the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities and the agency publishes the factual basis supporting such certification. For the reasons described below, the Board certifies that the final rule will not have a significant economic impact on a substantial number of small entities.

LIBOR is used in contracts subject to the LIBOR Act across all industries, and

¹²⁵ Section 253.5(a) and (b) of the final rule.

¹²⁶ Section 253.5(b)(1) of the final rule.

¹²⁷ Section 253.5(b)(2) of the final rule.

¹²⁸ Section 253.5(b)(3) of the final rule.

¹²⁹ Section 253.5(b)(4) of the final rule.

¹³⁰ Another commenter initially requested that the Board permit the Federal Home Loan Banks to identify conforming changes for Federal Home Loan Bank advances related to terms such as determination dates, reset dates, payment dates, calculation periods, and adjustment spreads to better reflect the economics of replacing LIBOR with its preferred benchmark replacement for Federal Home Loan Bank advances. The Board notes that, for LIBOR contracts other than consumer loans, the LIBOR Act and the final rule expressly authorize a calculating person to identify benchmark replacement conforming changes. Additionally, consistent with a subsequent suggestion from the same commenter, the final rule identifies the fallback rate (SOFR) as the Board-selected benchmark replacement for Federal Home Loan Bank advances.

¹³¹ 12 U.S.C. 5806.

¹³² Section 253.6 of the final rule.

¹³³ 87 FR 45268, 45271 (July 28, 2022).

¹³⁴ Section 253.7(a) of the final rule.

¹³⁵ Section 253.7(b) of the final rule.

the Board does not believe that it is feasible to provide an estimate of the number of small entities to which the final rule will apply.¹³⁶ Given the broad coverage of the LIBOR Act, the Board expects that the number of small entities to which the final rule will apply could be significant for one or more classes of small entities.¹³⁷ However, for the reasons described below, the Board does not believe that the rule will have a significant economic impact on a substantial number of small entities.

As the Board stated in the IRFA that was published with the proposal, although section 110 of the LIBOR Act directs the Board to promulgate regulations to carry out the LIBOR Act, the Board's discretion under the LIBOR Act is limited to a small number of areas: (i) selecting SOFR-based benchmark replacements, (ii) determining any benchmark replacement conforming changes, and (iii) determining the LIBOR replacement date (in the event that any LIBOR tenor ceases or becomes nonrepresentative prior to the planned LIBOR cessation date).

With respect to Board-selected benchmark replacements, the final rule establishes Board-selected benchmark replacements for six categories of LIBOR

contracts.¹³⁸ As required by the LIBOR Act, all of these Board-selected benchmark replacements are based on SOFR. Although the Board recognizes that there are some differences between the different versions of SOFR that the Board could have selected as a benchmark replacement for LIBOR, the Board believes that there is a basic economic equivalence between all SOFR-based benchmark replacements. This basic economic equivalence is reflected in the LIBOR Act itself, which requires the Board to adjust any Board-selected benchmark replacement to include the same statutorily prescribed tenor spread adjustments (except for the transition tenor spread adjustment for consumer loans). In addition, the Board was guided by voluntary market practices in selecting the Board-selected benchmark replacement for each category of LIBOR contracts. For example, the Board selected CME Term SOFR as the Board-selected benchmark replacement for most cash transactions in large part because the loan market has already transitioned from LIBOR to Term SOFR on a voluntary basis. Thus, the Board has exercised its discretion to select SOFR-based benchmark replacements in a way that will minimize market disruption. Accordingly, the Board does not believe that the Board's selection of a particular Board-selected benchmark replacement over an alternative SOFR-based rate for a particular category of LIBOR contracts is economically material.

With respect to benchmark replacement conforming changes, the final rule identifies a small number of benchmark replacement conforming changes based on feedback from commenters. Specifically, as provided in § 253.5(b) of the final rule, the Board established benchmark replacement conforming changes related to (i) any reference to a specified source for LIBOR (such as a particular newspaper, website, or screen), (ii) any reference to a particular time of day for determining LIBOR, (iii) any provision of a LIBOR contract requiring the use of a combination of LIBOR values over a period of time that spans the LIBOR replacement date, and (iv) any provision

of LIBOR contract specifying use of the most recently available publication of LIBOR for any day where LIBOR is not available or published. Because these benchmark replacement conforming changes are limited to technical, administrative changes to LIBOR contracts that facilitate the transition from LIBOR to the applicable Board-selected benchmark replacement, the Board does not believe that any of the benchmark replacement conforming changes will represent a material change to any LIBOR contract. To the contrary, the Board believes that these benchmark replacement conforming changes will provide clarity and reduce the possibility of disputes over the meaning of a LIBOR contract for which a Board-selected benchmark replacement becomes the benchmark replacement. Therefore, the Board believes that economic impact of these benchmark replacement conforming changes will be de minimis.

With respect to determining the LIBOR replacement date, the Board did not propose, and the final rule does not include, a determination that any LIBOR tenor will cease or become nonrepresentative prior to the first London banking day after June 30, 2023.

Beyond these three areas where the LIBOR Act expressly vests the Board with discretion, there is one additional aspect of the final rule in respect of which the Board has exercised discretion. Specifically, the Board in the final rule has interpreted the ambiguous statutory term "determining person" to include any person with sole authority, right, or obligation, including on a temporary basis, (as identified by the LIBOR contract or by the governing law of the LIBOR contract, as appropriate) to determine a benchmark replacement, *whether or not the person's authority, right or obligation is subject to any contingencies specified in the LIBOR contract or by the governing law of the LIBOR contract*. The Board's interpretation of "determining person" in the final rule does have implications for LIBOR contracts under the terms of which the determining person's authority would be triggered on or after the LIBOR replacement date (*i.e.*, LIBOR contracts where a determining person's contractual authority arises when LIBOR becomes unavailable or non-representative).

As discussed elsewhere in this preamble, section 104(c)(2) of the LIBOR Act creates a statutory right for a determining person to select the Board-selected benchmark replacement by the earlier of the LIBOR replacement date and the latest date for selecting a benchmark replacement according to

¹³⁶ The Board generally uses the industry-specific size standards adopted by the Small Business Administration for purposes of estimating the number of small entities to which a proposed rule would apply. See 13 CFR 121.201. As the Board stated in the initial regulatory flexibility analysis (IRFA) that was published with the proposed rule, parties to contracts subject to the LIBOR Act may include firms of any size and in any industry, and the Board does not believe that it has sufficient data to provide a reasonable estimate of the number of small entities to which the final rule would apply.

¹³⁷ The Board received one comment letter in response to the IRFA that asked the Board to consider conducting a survey of a representative sample of small businesses to determine whether and how the rule will affect them. The Board has considered this commenter's request, but in light of (i) the practical challenges associated with assembling a representative sample of small businesses across all sectors of the U.S. economy, (ii) the statutory deadline within which the Board must promulgate implementing regulations, and (iii) the Board's conclusion that the final rule will not have a significant economic impact on a substantial number of small entities, the Board has declined to follow this commenter's suggestion. The same commenter additionally recommended that the Board conduct a policy analysis illustrating the effect of the rule on small businesses, including an analysis of alternatives, and stated that the Board should grant an exemption from the rule for small businesses if the Board cannot determine how the rule will affect them. The LIBOR Act does not authorize the Board to grant exemptions from the LIBOR Act or the final rule. Elsewhere in this preamble, the Board has discussed the effect of the final rule on parties to LIBOR contracts and explained its reasoning in respect of the limited areas where the Board has discretion to adopt alternatives.

¹³⁸ Specifically, as provided in § 253.4 of the final rule, the Board has selected different benchmark replacements for (i) derivatives transactions ("Fallback Rate (SOFR)" in the ISDA protocol), (ii) FHFA-regulated-entity contracts other than Federal Home Loan Bank advances (30-day Average SOFR), (iii) FHFA-regulated-entity contracts that are Federal Home Loan Bank advances ("Fallback Rate (SOFR)" in the ISDA protocol), (iv) FFELP ABS (30-day Average SOFR and 90-day Average SOFR, as applicable), (v) consumer loans (CME Term SOFR), and (vi) all other transactions (*i.e.*, cash transactions) (CME Term SOFR).

the terms of the LIBOR contract, and the Board's interpretation of "determining person" clarifies that this statutory right is available to a determining person even if the determining person's contractual right to select a benchmark replacement is subject to any contingencies that have not yet occurred. If the determining person does not avail itself of this statutory right, then the LIBOR contract would be regarded on the LIBOR replacement date as a LIBOR contract for which the determining person has not selected a benchmark replacement, and thus, the applicable Board-selected benchmark replacement shall be the benchmark replacement for the LIBOR contract on and after the LIBOR replacement date under section 104(c)(3) of the LIBOR Act.¹³⁹

Alternatively, the Board could have construed "determining person" to include only persons whose right to select a benchmark replacement has already been triggered.¹⁴⁰ Under this alternative interpretation, where a LIBOR contract authorizes a person to select a benchmark replacement subject to any contingencies that do not occur before the LIBOR replacement date, such person would be unable to use the statutory right to select the Board-selected benchmark replacement rate in advance. On the LIBOR replacement date, such contract would be regarded, as applicable, as a LIBOR contract that contains no fallback provisions (or contains fallback provisions that identify neither a specific benchmark replacement nor a determining person), or a LIBOR contract for which a determining person does not select a

benchmark replacement, and thus, the applicable Board-selected benchmark replacement shall be the benchmark replacement for the LIBOR contract on and after the LIBOR replacement date under section 104(a) or section 104(c)(3) of the LIBOR Act, respectively.¹⁴¹

As demonstrated above, the Board's interpretation of "determining person" in the final rule may impact the timing of a determining person's selection but does not affect the ultimate benchmark replacement for contracts under the terms of which the determining person's authority is not triggered until on or after the LIBOR replacement date: Under either possible interpretation, the LIBOR contract would transition to the Board-selected benchmark replacement on and after the LIBOR replacement date.¹⁴² Accordingly, the Board does not believe its interpretation of "determining person" will have a material economic impact on any party to an affected LIBOR contract.

For the reasons discussed above, the Board believes that the economic impact of the final rule on small entities, including any particular class, will not be significant. Therefore, the Board is certifying that the final rule will not have a significant economic impact on a substantial number of small entities.

B. Paperwork Reduction Act

In accordance with the Paperwork Reduction Act (PRA) of 1995 (44 U.S.C. 3506; 5 CFR part 1320, appendix A.1), the Board may not conduct or sponsor, and a respondent is not required to respond to, an information collection unless it displays a valid Office of Management and Budget (OMB) control number. The Board reviewed both the proposed rule and the final rule under the authority delegated to the Board by the OMB and determined that it contains no collections of information under the PRA.¹⁴³ Accordingly, there is no paperwork burden associated with the final rule. The Board received no comments concerning paperwork burden associated with the proposed rule.

¹⁴¹ Alternatively, depending on the particular language of the LIBOR contract, the determining person may take the position that its authority to select a benchmark replacement under the terms of the LIBOR contract is triggered on the LIBOR replacement date, and select a replacement benchmark on that date only. The LIBOR Act and the final rule generally do not apply to a LIBOR contract for which a determining person selects an alternative benchmark replacement.

¹⁴² But see *supra* notes 139 and 141.

¹⁴³ See 44 U.S.C. 3502(3).

C. Solicitation of Comments on Use of Plain Language

Section 722 of the Gramm-Leach-Bliley Act (Pub. L. 106–102, 113 Stat. 1338, 1471, 12 U.S.C. 4809) requires the Federal banking agencies to use plain language in all proposed and final rules published after January 1, 2000. The Board received no comments on these matters and believes that the final rule is written plainly and clearly.

D. Riegle Community Development and Regulatory Improvement Act of 1994

Section 302(a) of the Riegle Community Development and Regulatory Improvement Act (the "Riegle Act"), Public Law 103–325, generally requires that, in determining the effective date and administrative compliance requirements for new regulations that impose additional reporting, disclosure, or other requirements on insured depository institutions, a Federal banking agency must consider, consistent with the principle of safety and soundness and the public interest, any administrative burdens that such regulations would place on depository institutions, including small depository institutions, and customers of depository institutions, as well as the benefits of such regulations.¹⁴⁴ In addition, section 302(b) of the Riegle Act requires new regulations and amendments to existing regulations that impose additional reporting, disclosures, or other new requirements on insured depository institutions generally shall take effect on the first day of a calendar quarter that begins on or after the date of publication in the **Federal Register**.¹⁴⁵ This requirement concerning the effective date does not apply in certain limited cases, including (i) if the agency determines, for good cause published with the regulation, that the regulation should become effective before such time, and (ii) if the regulation is required to take effect on a different date pursuant to an act of Congress.¹⁴⁶

The Board believes that, in this case, there is good cause for an earlier effective date. In particular, an earlier effective date gives determining persons, including any determining person that is an insured depository institution, additional time to use the statutory right to select the Board-selected benchmark replacement, rather than requiring the determining person to wait until at least April 1, 2023, to make such selection. For this reason, the Board believes that an earlier effective

¹⁴⁴ 12 U.S.C. 4802(a).

¹⁴⁵ 12 U.S.C. 4802(b).

¹⁴⁶ *Id.*

¹³⁹ Alternatively, depending on the particular language of the LIBOR contract, the determining person may take the position that its authority to select a benchmark replacement under the terms of the LIBOR contract is triggered on the LIBOR replacement date, and select an alternative replacement benchmark on that date only. The LIBOR Act and the final rule generally do not apply to a LIBOR contract for which a determining person selects an alternative benchmark replacement.

¹⁴⁰ As explained elsewhere in the preamble, the alternative interpretation of "determining person" is not preferable because, under that interpretation, a person who has a right to select a benchmark replacement when LIBOR becomes unavailable or non-representative would not become a determining person until the LIBOR replacement date—when LIBOR will *actually* become unavailable or non-representative. Accordingly, that person would need to wait until the LIBOR replacement date to exercise the statutory right under section 104(c)(1) and (c)(2) of the LIBOR Act to select the Board-selected benchmark replacement. The Board believes that this outcome—and the market disruption that would likely result from determining persons not selecting a benchmark replacement until the LIBOR replacement date—would be inconsistent with the Congressional intent to facilitate a smooth transition away from LIBOR and avoid disruptive litigation.

date will increase certainty for parties to LIBOR contracts involving determining persons and will facilitate a smooth transition away from LIBOR after the LIBOR replacement date.

In addition, prompt effectiveness of the rule is consistent with congressional intent.¹⁴⁷

List of Subjects in 12 CFR Part 253

Banks and banking, Interest rates.

Authority and Issuance

■ For the reasons stated in the preamble, the Board of Governors of the Federal Reserve System adds part 253 to 12 CFR chapter II to read as follows:

PART 253—REGULATIONS IMPLEMENTING THE ADJUSTABLE INTEREST RATE (LIBOR) ACT (REGULATION ZZ)

Sec.

253.1 Authority, purpose, and scope.

253.2 Definitions.

253.3 Applicability.

253.4 Board-selected benchmark replacements.

253.5 Benchmark replacement conforming changes.

253.6 Preemption.

253.7 Continuity of contract and safe harbor.

Appendix A to Part 253—ISDA Protocol

Authority: 12 U.S.C. 5801 *et seq.*

§ 253.1 Authority, purpose, and scope.

(a) *Authority.* The Board of Governors of the Federal Reserve System (Board) has issued this part (Regulation ZZ) under the authority of Public Law 117–103, division U (the “Adjustable Interest Rate (LIBOR) Act”), codified at 12 U.S.C. 5801 *et seq.*

(b) *Purpose.* The purposes of the Adjustable Interest Rate (LIBOR) Act are to establish a clear and uniform process, on a nationwide basis, for replacing the overnight and one-, three-, six-, and 12-month tenors of U.S. dollar LIBOR in existing contracts that do not provide for the use of a clearly defined or practicable replacement benchmark rate; to preclude litigation related to such existing contracts; to allow existing contracts that reference LIBOR but provide for the use of a clearly defined and practicable replacement rate to operate according to their terms; and to address LIBOR references in Federal law.¹⁴⁸ This part implements the statute by defining terms used in the statute and identifying Board-selected

benchmark replacements for LIBOR contracts.

(c) *Scope.* As described in § 253.3, the Adjustable Interest Rate (LIBOR) Act and this part apply by their terms to existing contracts governed by Federal law or the law of any state that reference the overnight and one-, three-, six-, and 12-month tenors of U.S. dollar LIBOR and do not have fallback provisions providing for the use of a clearly defined and practicable replacement benchmark rate following the LIBOR replacement date, unless the parties to that contract agree in writing that the contract is not subject to the Adjustable Interest Rate (LIBOR) Act. This part does not apply to or affect existing or prospective contracts that do not reference the overnight or one-, three-, six-, or 12-month tenors of U.S. dollar LIBOR, and except as provided in § 253.3(a)(1)(iii) and (c), generally does not apply to or affect LIBOR contracts that have fallback provisions providing for the use of a clearly defined and practicable replacement benchmark for LIBOR (either directly or through selection by a determining person), even if that rate differs from the otherwise applicable Board-selected benchmark replacement. Any determining person’s selection of the applicable Board-selected benchmark replacement pursuant to § 253.3(c) is subject to §§ 253.4, 253.5 (including any benchmark replacement conforming changes made by a calculating person), 253.6, and 253.7.

§ 253.2 Definitions.

30-day Average SOFR means the 30-calendar-day compounded average of SOFR, as published by the Federal Reserve Bank of New York or any successor administrator.

90-day Average SOFR means the 90-calendar-day compounded average of SOFR, as published by the Federal Reserve Bank of New York or any successor administrator.

Benchmark means an index of interest rates or dividend rates that is used, in whole or in part, as the basis of or as a reference for calculating or determining any valuation, payment, or other measurement.

Benchmark administrator means a person that publishes a benchmark for use by third parties.

Benchmark replacement means a benchmark, or an interest rate or dividend rate (which may or may not be based in whole or in part on a prior setting of LIBOR) to replace LIBOR or any interest rate or dividend rate based on LIBOR, whether on a temporary, permanent, or indefinite basis, under or with respect to a LIBOR contract.

Benchmark replacement conforming change means any technical, administrative, or operational change, alteration, or modification that:

(1) The Board determines, in its discretion, would address one or more issues affecting the implementation, administration, and calculation of the Board-selected benchmark replacement in LIBOR contracts; or

(2) Solely with respect to a LIBOR contract that is not a consumer loan, in the reasonable judgment of a calculating person, are otherwise necessary or appropriate to permit the implementation, administration, and calculation of the Board-selected benchmark replacement under or with respect to a LIBOR contract after giving due consideration to any benchmark replacement conforming changes determined by the Board under paragraph (1) of this definition.

Board-selected benchmark replacement means the benchmark replacements identified in § 253.4.

Business day means any day except for:

(1) A Saturday;

(2) A Sunday;

(3) A day on which the Securities Industry and Financial Markets Association recommends that the fixed income departments of its members be closed for the entire day for purposes of trading in United States Government securities; or

(4) A day on which the Federal Reserve Bank of New York, with advance notice, chooses not to publish its Treasury repurchase agreement reference rates if participants in the Treasury repurchase agreement market broadly expect to treat that day as a holiday.

Calculating person means, with respect to any LIBOR contract, any person, including the determining person, responsible for calculating or determining any valuation, payment, or other measurement based on a benchmark.

CME Term SOFR means the CME Term SOFR Reference Rates published for one-, three-, six-, and 12-month tenors as administered by CME Group Benchmark Administration, Ltd. (or any successor administrator thereof).

Consumer has the same meaning as in section 103 of the Truth in Lending Act (15 U.S.C. 1602).

Consumer loan means a consumer credit transaction.

Credit has the same meaning as in section 103 of the Truth in Lending Act (15 U.S.C. 1602).

Derivative transaction means a contract that would satisfy the criteria to be a “Protocol Covered Document”

¹⁴⁷ 12 U.S.C. 4802(b)(1)(C); see also 12 U.S.C. 5807.

¹⁴⁸ The act does not affect the ability of parties to use any appropriate benchmark rate in new contracts.

under the International Swaps and Derivatives Association (ISDA) protocol (*see* appendix A to this part) but for the fact that one or more parties to such contract is not an “Adhering Party” as such term is used in the ISDA protocol, provided that, for purposes of this definition, “Protocol Effective Date” as such term is used in the ISDA protocol means the LIBOR replacement date for the relevant LIBOR contract.

Derivative transaction fallback observation day means the day that is two payment business days prior to the payment date for the relevant calculation period.

Determining person means, with respect to any LIBOR contract, any person with the sole authority, right, or obligation, including on a temporary basis (as identified by the LIBOR contract or by the governing law of the LIBOR contract, as appropriate) to determine a benchmark replacement, whether or not the person’s authority, right, or obligation is subject to any contingencies specified in the LIBOR contract or by the governing law of the LIBOR contract.

Fallback provisions means terms in a LIBOR contract for determining a benchmark replacement, including any terms relating to the date on which the benchmark replacement becomes effective.

Federal Housing Finance Agency (FHFA)-regulated entity has the same meaning as “regulated entity” in 12 U.S.C. 4502(20).

Federal Family Education Loan Program (FFELP) asset-backed securitization (ABS) means an asset-backed security for which more than 50 percent of the collateral pool consists of FFELP loans, as reported in the most recent servicer report available on the LIBOR replacement date.

FHFA-regulated-entity contract means a LIBOR contract that is a commercial or multifamily mortgage loan that has been purchased or guaranteed, in whole or in part, by an FHFA-regulated entity, or for which an FHFA-regulated entity is identified as a party in the transaction documents, and that is:

- (1) A commercial or multifamily mortgage-backed security (other than a security backed by consumer loans);
- (2) A collateralized mortgage obligation;
- (3) A credit risk transfer transaction; or
- (4) A Federal Home Loan Bank advance.

ISDA protocol means the ISDA 2020 IBOR Fallbacks Protocol published by the International Swaps and Derivatives Association, Inc., on October 23, 2020,

and minor or technical amendments thereto (*see* appendix A to this part).

LIBOR, as used in this part:

(1) Means the overnight and one-, three-, six-, and 12-month tenors of U.S. dollar LIBOR (formerly known as the London interbank offered rate) as administered by ICE Benchmark Administration Limited (or any predecessor or successor administrator thereof); and

(2) Does not include the one-week or two-month tenors of U.S. dollar LIBOR.

LIBOR contract means any contract, agreement, indenture, organizational document, guarantee, mortgage, deed of trust, lease, security (whether representing debt or equity, including any interest in a corporation, a partnership, or a limited liability company), instrument, or other obligation or asset that, by its terms, uses LIBOR as a benchmark.

LIBOR replacement date means the first London banking day after June 30, 2023, unless the Board determines that any LIBOR tenor will cease to be published or cease to be representative on a different date.

Relevant benchmark administrator means:

- (1) Bloomberg Index Services Limited with respect to Fallback Rate (SOFR);
- (2) CME Group Benchmark Administration, Ltd. with respect to CME Term SOFR;
- (3) Refinitiv Limited with respect to the Board-selected benchmark replacement for a LIBOR contract that is a consumer loan; and
- (4) The Federal Reserve Bank of New York with respect to 30-day Average SOFR and 90-day Average SOFR.

Security has the same meaning as in section 2(a) of the Securities Act of 1933 (15 U.S.C. 77b(a)).

SOFR means the Secured Overnight Financing Rate published by the Federal Reserve Bank of New York or any successor administrator.

State means any state, commonwealth, territory, or possession of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, American Samoa, Guam, or the United States Virgin Islands.

§ 253.3 Applicability.

(a) *General requirement.* On and after the LIBOR replacement date, the applicable Board-selected benchmark replacement shall be the benchmark replacement for the following LIBOR contracts, except to the extent that an exception in paragraph (b) of this section applies:

- (1) A LIBOR contract with one of the following characteristics as of the

LIBOR replacement date, after giving effect to paragraph (a)(2) of this section:

- (i) The LIBOR contract contains no fallback provisions;
- (ii) The LIBOR contract contains fallback provisions that identify neither—
 - (A) A specific benchmark replacement; nor
 - (B) A determining person; or
- (iii) The LIBOR contract contains fallback provisions that identify a determining person, but the determining person has not selected a benchmark replacement by the earlier of the LIBOR replacement date and the latest date for selecting a benchmark replacement according to the terms of the LIBOR contract, for any reason.

(2) For purposes of this part, on the LIBOR replacement date, any reference in any fallback provisions of a LIBOR contract to the following shall be disregarded as if not included in the fallback provisions of such LIBOR contract and shall be deemed null and void and without any force or effect:

(i) A benchmark replacement that is based in any way on any LIBOR value, except to account for the difference between LIBOR and the benchmark replacement; or

(ii) A requirement that a person (other than a benchmark administrator) conduct a poll, survey, or inquiries for quotes or information concerning interbank lending or deposit rates (including, but not limited to, Eurodollar deposit or lending rates).

(b) *Exceptions.* Notwithstanding paragraph (a) of this section, this part shall not apply to—

(1) Any LIBOR contract that the parties have agreed in writing shall not be subject to the Adjustable Interest Rate (LIBOR) Act;

(2) Any LIBOR contract that contains fallback provisions that identify a benchmark replacement that is not based in any way on any LIBOR value (including the prime rate or the effective Federal Funds rate) after application of paragraph (a)(2) of this section; or

(3) Except as provided in paragraph (a)(2) or (a)(1)(iii) of this section, any LIBOR contract subject to paragraph (c) of this section as to which a determining person does not elect to use a Board-selected benchmark replacement pursuant to paragraph (c).

(c) *Selection of Board-selected benchmark replacement by determining person.* Except for any LIBOR contract described in paragraph (b)(2) of this section, a determining person may select the Board-selected benchmark replacement specified in § 253.4 as the benchmark replacement for a LIBOR contract. Any such selection shall be—

(1) Irrevocable;

(2) Made by the earlier of the LIBOR replacement date and the latest date for selecting a benchmark replacement according to the terms of the LIBOR contract; and

(3) Used in any determinations of the benchmark under or with respect to the LIBOR contract occurring on and after the LIBOR replacement date.

(d) *Other provisions of LIBOR contracts unchanged.* Except as provided in paragraph (a)(2) of this section and in § 253.5, where the applicable Board-selected benchmark replacement becomes the benchmark replacement for a LIBOR contract on and after the LIBOR replacement date pursuant to paragraph (a) or (c) of this section, all other provisions of such contract shall not be altered or impaired and shall apply to such contract using the Board-selected benchmark replacement, including but not limited to:

(1) Any provision specifying the date for determining a benchmark, except in the case of derivative transactions, which are subject to § 253.4(a)(2), and Federal Home Loan Bank advances, which are subject to § 253.4(b)(3)(ii)(B);

(2) Any provision specifying rounding conventions for a benchmark;

(3) Any provision referencing LIBOR or any LIBOR value prior to the LIBOR replacement date (including any provision requiring a person to look back to a LIBOR value as of a date preceding the LIBOR replacement date);

(4) Any provision applying any cap, floor, modifier, or spread adjustment to which LIBOR had been subject pursuant to the terms of a LIBOR contract;

(5) Any provision of Federal consumer financial law that—

(i) Requires creditors to notify borrowers regarding a change-in-terms; or

(ii) Governs the reevaluation of rate increases on credit card accounts under open-ended (not home-secured) consumer credit plans; or

(6) Except as provided in 12 U.S.C. 5804(c), the rights or obligations of any person, or the authorities of any agency, under Federal consumer financial law, as defined in 12 U.S.C. 5481.

§ 253.4 Board-selected benchmark replacements.

(a) *Derivative transactions.* (1) A LIBOR contract subject to the requirements of this part that is a derivative transaction shall use the benchmark replacement identified as the “Fallback Rate (SOFR)” in the ISDA protocol (*see* appendix A to this part) for each day on which LIBOR would ordinarily be observed occurring on or

after the LIBOR replacement date. For clarity, the reference to “spread relating to U.S. dollar LIBOR” in the definition of “Fallback Rate (SOFR)” in the ISDA protocol is equal to the applicable tenor spread adjustment identified in paragraph (c) of this section.

(2) The benchmark replacement used to calculate the payment due for the relevant calculation period shall be determined on the derivative transaction fallback observation day in respect of the day that, under the LIBOR contract, would have been used to determine the LIBOR-based rate that is being replaced or, if the Board-selected benchmark replacement in respect of that day is not available on the derivative transaction fallback observation day, the most recently available publication on the derivative transaction fallback observation day shall be used.

(b) *All other transactions.* On the LIBOR replacement date, a LIBOR contract subject to the requirements of this part that is not a derivative transaction shall use the following benchmark replacements:

(1) For a LIBOR contract that is not a consumer loan, an FHFA-regulated-entity contract, or a FFELP ABS—

(i) In place of overnight LIBOR, the benchmark replacement shall be SOFR plus the tenor spread adjustment identified in paragraph (c)(1) of this section; and

(ii) In place of one-, three-, six-, or 12-month tenors of LIBOR, the benchmark replacement shall be the corresponding one-, three-, six-, or 12-month CME Term SOFR plus the applicable tenor spread adjustment identified in paragraph (c) of this section.

(2) For a LIBOR contract that is a consumer loan—

(i) During the one-year period beginning on the LIBOR replacement date:

(A) In place of overnight LIBOR, the benchmark replacement shall be SOFR plus an amount that transitions linearly for each business day during that period from:

(1) The difference between SOFR and overnight LIBOR determined as of the day immediately before the LIBOR replacement date; to

(2) The tenor spread adjustment identified in paragraph (c)(1) of this section; or

(B) In place of the one-, three-, six-, or 12-month tenors of LIBOR, the benchmark replacement shall be the corresponding one-, three-, six-, or 12-month CME Term SOFR plus an amount that transitions linearly for each business day during that period from:

(1) The difference between the relevant CME Term SOFR and the relevant LIBOR tenor determined as of the day immediately before the LIBOR replacement date; to

(2) The applicable tenor spread adjustment identified in paragraph (c) of this section.

(ii) On the date one year after the LIBOR replacement date and thereafter:

(A) In place of overnight LIBOR, the benchmark replacement shall be SOFR plus the tenor spread adjustment identified in paragraph (c)(1) of this section; and

(B) In place of one-, three-, six-, or 12-month tenors of LIBOR, the benchmark replacement shall be the corresponding one-, three-, six-, or 12-month CME Term SOFR plus the applicable tenor spread adjustment identified in paragraph (c) of this section.

(iii) The rates published or provided by Refinitiv Limited as “USD IBOR Cash Fallbacks” for “Consumer” products shall be deemed equal to the rates identified in paragraphs (b)(2)(i) and (ii) of this section.

(3) For a LIBOR contract that is an FHFA-regulated-entity contract—

(i) For an FHFA-regulated-entity contract that is not a Federal Home Loan Bank advance—

(A) In place of overnight LIBOR, the benchmark replacement shall be SOFR plus the tenor spread adjustment identified in paragraph (c)(1) of this section; and

(B) In place of one-, three-, six-, or 12-month tenors of LIBOR, the benchmark replacement shall be the 30-day Average SOFR plus the applicable tenor spread adjustment identified in paragraph (c) of this section.

(ii) For an FHFA-regulated-entity contract that is a Federal Home Loan Bank advance—

(A) The benchmark replacement shall be the “Fallback Rate (SOFR)” in the ISDA protocol (*see* appendix A to this part) for each day on which LIBOR would ordinarily be observed occurring on or after the LIBOR replacement date. For clarity, the reference to “spread relating to U.S. dollar LIBOR” in the definition of “Fallback Rate (SOFR)” in the ISDA protocol is equal to the applicable tenor spread adjustment identified in paragraph (c) of this section.

(B) The benchmark replacement used to calculate the payment due for the relevant calculation period shall be determined on the derivative transaction fallback observation day in respect of the day that, under the LIBOR contract, would have been used to determine the LIBOR-based rate that is being replaced or, if the Board-selected

benchmark replacement in respect of that day is not available on the derivative transaction fallback observation day, the most recently available publication on the derivative transaction fallback observation day shall be used.

(4) For a LIBOR contract that is a FFELP ABS—

(i) In place of one-month LIBOR, the benchmark replacement shall be 30-day Average SOFR plus the tenor spread adjustment identified in paragraph (c)(2) of this section;

(ii) In place of three-month LIBOR, the benchmark shall be 90-day Average SOFR plus the tenor spread adjustment identified in paragraph (c)(3) of this section; and

(iii) In place of six- or 12-month tenors of LIBOR, the benchmark replacement shall be 30-day Average SOFR plus the tenor spread adjustment identified in paragraph (c)(4) or (5) of this section, as applicable.

(c) *Tenor spread adjustments.* The following tenor spread adjustments shall be included as part of the Board-selected benchmark replacements as indicated in paragraphs (a) and (b) of this section:

(1) 0.00644 percent for overnight LIBOR;

(2) 0.11448 percent for one-month LIBOR;

(3) 0.26161 percent for three-month LIBOR;

(4) 0.42826 percent for six-month LIBOR; and

(5) 0.71513 percent for 12-month LIBOR.

§ 253.5 Benchmark replacement conforming changes.

(a) *Benchmark replacement conforming changes generally.* (1) If the Board-selected benchmark replacement becomes the benchmark replacement for a LIBOR contract pursuant to § 253.3(a) or (c), all applicable benchmark replacement conforming changes shall become an integral part of the LIBOR contract.

(2) Paragraph (b) of this section establishes specific benchmark replacement conforming changes. The Board may, in its discretion, publish additional benchmark replacement conforming changes by regulation or order.

(3) Solely with respect to any LIBOR contract that is not a consumer loan, a calculating person may make any additional technical, administrative, or operational changes, alterations, or modifications that, in that person's reasonable judgment, would be necessary or appropriate to permit the implementation, administration, and

calculation of the Board-selected benchmark replacement under or with respect to a LIBOR contract after giving due consideration to any changes, alterations, or modifications otherwise required by the Board, without any requirement to obtain consent from any other person prior to the adoption of such benchmark replacement conforming changes.

(b) *Specified benchmark replacement conforming changes.* (1) Any reference to a specified source for LIBOR (such as a particular newspaper, website, or screen) shall be replaced with the publication of the applicable Board-selected benchmark replacement (inclusive or exclusive of the relevant tenor spread adjustment identified in § 253.4(c)) by either the relevant benchmark administrator for the applicable Board-selected benchmark replacement or any third party authorized by the relevant benchmark administrator to publish the applicable Board-selected benchmark replacement.

(2) Any reference to a particular time of day for determining LIBOR (such as 11:00 a.m. London time) shall be replaced with the standard publication time for the applicable Board-selected benchmark replacement (inclusive or exclusive of the relevant tenor spread adjustment identified in § 253.4(c)), as established by the relevant benchmark administrator.

(3) Any provision of a LIBOR contract requiring use of a combination (such as an average) of LIBOR values over a period of time that spans the LIBOR replacement date shall be modified to provide that the combination shall be calculated consistent with that contractual provision using:

(i) The applicable LIBOR for any date prior to the LIBOR replacement date; and

(ii) The applicable Board-selected benchmark replacement rate for any date on or following the LIBOR replacement date, respectively.

(4) Subject to § 253.4(a) and (b)(3)(ii), to the extent a Board-selected benchmark replacement is not available or published on a particular day indicated in the LIBOR contract as the determination date, the most recently available publication of the Board-selected benchmark replacement will apply.

§ 253.6 Preemption.

Pursuant to section 107 of the Adjustable Interest Rate (LIBOR) Act, 12 U.S.C. 5806, this part supersedes any provision of any state or local law, statute, rule, regulation, or standard—

(a) Relating to the selection or use of a benchmark replacement or related conforming changes; or

(b) Expressly limiting the manner of calculating interest, including the compounding of interest, as that provision applies to the selection or use of a Board-selected benchmark replacement or benchmark replacement conforming changes.

§ 253.7 Continuity of contract and safe harbor.

(a) The provisions of section 105(a)–(d) of the Adjustable Interest Rate (LIBOR) Act, 12 U.S.C. 5804(a)–(d), shall apply to any LIBOR contract for which the Board-selected benchmark replacement becomes the benchmark replacement pursuant to § 253.3(a) or (c).

(b) Nothing in this part is intended to alter or modify the availability or effect of the provisions of section 105(e) of the Adjustable Interest Rate (LIBOR) Act, 12 U.S.C. 5804(e).

Appendix A to Part 253—ISDA Protocol

For ease of reference, the Board is republishing, with permission, the full text of the ISDA 2020 IBOR Fallbacks Protocol (ISDA protocol), published on October 23, 2020, by the International Swaps and Derivatives Association, Inc. The full text of the ISDA protocol follows:

ISDA 2020 IBOR Fallbacks Protocol

Published on October 23, 2020

By the International Swaps and Derivatives Association, Inc.

The International Swaps and Derivatives Association, Inc. (ISDA) has published this ISDA 2020 IBOR Fallbacks Protocol (this Protocol) to enable parties to Protocol Covered Documents to amend the terms of each such Protocol Covered Document to (i) in respect of a Protocol Covered Document which incorporates, or references a rate as defined in, a Covered ISDA Definitions Booklet, include in the terms of such Protocol Covered Document either the terms of, or a particular defined term included in, the Supplement to the 2006 ISDA Definitions, finalized on October 23, 2020 and to be published by ISDA and effective on January 25, 2021 (the IBOR Fallbacks Supplement) and (ii) in respect of a Protocol Covered Document which otherwise references a Relevant IBOR, include in the terms of such Protocol Covered Document new fallbacks for that Relevant IBOR.

Accordingly, a party may adhere to this Protocol and be bound by its terms by completing and delivering a letter substantially in the form of Exhibit 1 to this Protocol (an Adherence Letter) to ISDA, as agent, as described below (each such party, an Adhering Party).

1. Adherence to and Effectiveness of the Protocol

(a) By adhering to this Protocol in the manner set forth in this paragraph 1, each

Adhering Party agrees, in consideration of the mutual promises and covenants contained herein, that the terms of each Protocol Covered Document between such Adhering Party and any other Adhering Party will be amended in accordance with the terms and subject to the conditions set forth in the Attachment hereto.

(b) Adherence to this Protocol will be evidenced by the execution and online delivery, in accordance with this paragraph, to ISDA, as agent, of an Adherence Letter (in accordance with subparagraphs 1(b)(i) to 1(b)(iii) below). ISDA shall have the right, in its sole and absolute discretion, upon at least thirty calendar days' notice on the "ISDA 2020 IBOR Fallbacks Protocol" section of its website at www.isda.org (or by other suitable means), to designate a closing date of this Protocol (such closing date, the Cut-off Date). After the Cut-off Date, ISDA will not accept any further Adherence Letters to this Protocol.

(i) Each Adhering Party will access the "Protocols" section of the ISDA website at www.isda.org to enter information online that is required to generate its form of Adherence Letter and will submit payment of any applicable fee. Either by directly downloading the populated Adherence Letter from the Protocol system or upon receipt via email of the populated Adherence Letter, each Adhering Party will sign and upload the signed Adherence Letter as a PDF (portable document format) attachment into the Protocol system. Once the signed Adherence Letter has been approved and accepted by ISDA, such Adhering Party will receive an email confirmation of the Adhering Party's adherence to this Protocol.

(ii) A conformed copy of each Adherence Letter containing, in place of each signature, the printed or typewritten name of each signatory will be published by ISDA so that it may be viewed by all Adhering Parties. Each Adhering Party agrees that, for evidentiary purposes, a conformed copy of an Adherence Letter certified by the General Counsel (or other appropriate officer) of ISDA will be deemed to be an original.

(iii) Each Adhering Party agrees that the determination of the date and time of acceptance of any Adherence Letter will be determined by ISDA in its absolute discretion. Any Adherence Letter which is dated and delivered to ISDA before the date on which this Protocol is published will be deemed to have been delivered on the date on which this Protocol is published.

(c) As between two Adhering Parties, the agreement to make the amendments contemplated by this Protocol, on the terms and conditions set forth in this Protocol, will be effective on the Implementation Date and that agreement will form part of each Protocol Covered Document from the later of the Implementation Date and the related Protocol Covered Document Date. The amendments contemplated by this Protocol shall be made on the later of (i) the Implementation Date and (ii) the Protocol Effective Date.

(A) The Protocol Effective Date with respect to a Protocol Covered Document shall be January 25, 2021.

(B) The Implementation Date with respect to any two Adhering Parties shall be the date

of acceptance by ISDA, as agent, of an Adherence Letter (in accordance with paragraph 1(b) above) from the later of such two Adhering Parties to adhere except that:

(i) In respect of any Protocol Covered Document into which an Agent has entered on behalf of a Client, subject to paragraph 3(m) below, the Implementation Date shall be the date specified in subparagraph 3(g)(i)(A), subparagraph 3(g)(i)(B), subparagraph 3(g)(i)(C), paragraph 3(h), paragraph 3(i) or paragraph 3(j) below, as applicable; and

(ii) In respect of any Non-Agent Executed Protocol Covered Document, subject to paragraph 3(m) below, the Implementation Date shall be the day specified in paragraph 3(l) below.

Acceptance by ISDA of a subsequent or revised Adherence Letter from either such Adhering Party will not have the effect of changing such Implementation Date.

(d) This Protocol is intended for use without negotiation, but without prejudice to any amendment, modification or waiver in respect of a Protocol Covered Document that the parties may otherwise effect in accordance with the terms of that Protocol Covered Document.

(i) In adhering to this Protocol, an Adhering Party may not specify additional provisions, conditions or limitations in its Adherence Letter.

(ii) Any purported adherence that ISDA, as agent, determines in good faith is not in compliance with this Protocol will be void and ISDA will inform the relevant party of such fact as soon as reasonably possible after making such determination.

(e) Each Adhering Party acknowledges and agrees that adherence to this Protocol is irrevocable, except that an Adhering Party may, after the Protocol Effective Date, deliver to ISDA, as agent, a notice substantially in the form of Exhibit 2 to this Protocol that is effective (determined pursuant to paragraph 3(f) below) on any Protocol Business Day (a Revocation Notice) to designate the next Revocation Date as the last date on which an Implementation Date can occur in respect of any Protocol Covered Document between the counterparty and such Adhering Party.

Following the effective delivery of a Revocation Notice by an Adhering Party, this Protocol will not amend any Protocol Covered Document between that Adhering Party and another Adhering Party for which the Implementation Date would occur after the related Revocation Date.

(i) If an Agent adheres to this Protocol on behalf of a Client, then, if the Client effectively delivers a Revocation Notice in accordance with this paragraph 1(e), this Protocol will not amend any Protocol Covered Document between another Adhering Party and that Client entered into by that Client itself or by the Agent on behalf of that Client or any Non-Agent Executed Protocol Covered Document (if applicable), in each case, for which the Implementation Date would occur after the Revocation Date designated as the last date on which an Implementation Date can occur in the Client's Revocation Notice.

(ii) If an Agent delivers a Revocation Notice in accordance with this paragraph 1(e) on behalf of a Client and the Client separately

adheres to this Protocol directly rather than through the agency of an Agent, then the Revocation Notice delivered by the Agent will not prevent an Implementation Date from occurring after the Revocation Date in respect of any Protocol Covered Document into which the Client has entered with another Adhering Party (including through the Agent).

(iii) Subparagraph 1(e)(i), subparagraph 1(e)(ii) and subparagraph 1(e)(iii) are without prejudice to any amendment effected pursuant to this Protocol to any Protocol Covered Document between two Adhering Parties for which the Implementation Date occurred on or before the day on which that Revocation Date occurs or is deemed to occur, regardless of the date on which such Protocol Covered Document is entered into, and any such amendment shall be effective notwithstanding the occurrence or deemed occurrence of such Revocation Date.

(iv) Each Revocation Notice must be delivered by the means specified in paragraph 3(f) below.

(v) Each Adhering Party agrees that, for evidentiary purposes, a conformed copy of a Revocation Notice certified by the General Counsel or an appropriate officer of ISDA will be deemed to be an original.

(vi) Any purported revocation that ISDA, as agent, determines in good faith is not in compliance with this paragraph 1(e) will be void and ISDA will inform the relevant party of such fact as soon as reasonably possible after making such determination.

2. Representations and Undertakings

(a) As of the later of (i) the date on which an Adhering Party adheres to this Protocol in accordance with paragraph 1 above (which will be the date of acceptance by ISDA of an Adherence Letter from that Adhering Party (in accordance with paragraph 1(b) above)) and (ii) the Protocol Covered Document Date, such Adhering Party represents to each other Adhering Party with which it has entered into a Protocol Covered Document (which representations will be deemed to be repeated on the Protocol Effective Date and the Implementation Date if one or both such dates are later than the date on which such Adhering Party adheres to this Protocol) each of the following matters:

(A) *Status.* It is, if relevant, duly organized and validly existing under the laws of the jurisdiction of its organization or incorporation and, if relevant under such laws, in good standing or, if it otherwise represents its status in or pursuant to the Protocol Covered Document, has such status.

(B) *Powers.* It has the power to execute and deliver the Adherence Letter and to perform its obligations under the Adherence Letter and the Protocol Covered Document as amended by the Adherence Letter and this Protocol (including the Attachment hereto), and has taken all necessary action to authorize such execution, delivery and performance.

(C) *No Violation or Conflict.* Such execution, delivery and performance do not violate or conflict with any law applicable to it, any provision of its constitutional documents, any order or judgment of any court or other agency of government

applicable to it or any of its assets or any contractual restriction binding on or affecting it or any of its assets.

(D) *Consents*. All governmental and other consents that are required to have been obtained by it with respect to the Adherence Letter and the Protocol Covered Document, as amended by the Adherence Letter and this Protocol (including the Attachment hereto), have been obtained and are in full force and effect and all conditions of any such consents have been complied with.

(E) *Obligations Binding*. Its obligations under the Adherence Letter and the Protocol Covered Document, as amended by the Adherence Letter and this Protocol (including the Attachment hereto), constitute its legal, valid and binding obligations, enforceable in accordance with their respective terms (subject to applicable bankruptcy, reorganization, insolvency, moratorium or similar laws affecting creditors' rights generally and subject, as to enforceability, to equitable principles of general application (regardless of whether enforcement is sought in a proceeding in equity or at law)).

(F) *Credit Support*. Its adherence to this Protocol and any amendment contemplated by this Protocol (including the Attachment hereto) will not, in and of itself, adversely affect the enforceability, effectiveness or validity of any obligations owed, whether by it or by any third party, under any Credit Support Document or Third Party Credit Support Document in respect of its obligations relating to any Protocol Covered Document as amended by the Adherence Letter and this Protocol (including the Attachment hereto).

(b) Each Adhering Party agrees with each other Adhering Party with which it has entered into a Protocol Covered Document that each of the foregoing representations will be deemed, in the case of a Protocol Covered Document that is an ISDA Master Agreement, to be a representation for purposes of Section 5(a)(iv) and in the case of any other Protocol Covered Document, to be a representation for purposes of any analogous provisions of each such Protocol Covered Document, that is made by each Adhering Party as of the later of (i) the date on which such Adhering Party adheres to this Protocol in accordance with paragraph 1 above and (ii) the Protocol Covered Document Date and which is deemed repeated on the Protocol Effective Date and the Implementation Date if one or both such dates are later than the date on which such Adhering Party adheres to this Protocol.

(c) *Undertakings in respect of Protocol Covered Documents with Third Party Credit Support Documents*. With respect to Protocol Covered Documents with Third Party Credit Support Documents that expressly require the consent, approval, agreement, authorization or other action of a Third Party to be obtained, each Adhering Party whose obligations under such arrangements are secured, guaranteed or otherwise supported by such Third Party undertakes to each other Adhering Party with which it has entered into such arrangements that it has obtained the consent (including by way of paragraph 2(d) below), approval, agreement,

authorization or other action of such Third Party and that it will, upon demand, deliver evidence of such consent, approval, agreement, authorization or other action to such other Adhering Party.

(d) *Deemed Third Party Consent*. Each Adhering Party which is also a Third Party in relation to a Third Party Credit Support Document is hereby deemed to have consented to the amendments imposed by this Protocol on the Protocol Covered Document supported by such Third Party Credit Support Document.

3. Miscellaneous

(a) *Entire Agreement; Restatement; Survival*.

(i) This Protocol constitutes the entire agreement and understanding of the Adhering Parties with respect to its subject matter and supersedes all oral communication and prior writings (except as otherwise provided herein) with respect thereto. Each Adhering Party acknowledges that in adhering to this Protocol it has not relied on any oral or written representation, warranty or other assurance (except as provided for or referred to elsewhere in this Protocol or in the Attachment) and waives all rights and remedies which might otherwise be available to it in respect thereof, except that nothing in this Protocol will limit or exclude any liability of an Adhering Party for fraud.

(ii) Except for any amendment deemed to be made pursuant to this Protocol in respect of any Protocol Covered Document, all terms and conditions of each Protocol Covered Document will continue in full force and effect in accordance with its provisions as in effect immediately prior to the date on which it first becomes subject to this Protocol. Except as explicitly stated in this Protocol, nothing herein shall constitute a waiver or release of any rights of any Adhering Party under any Protocol Covered Document to which such Adhering Party is a party or a provider or recipient of credit support. This Protocol will, with respect to its subject matter, survive, and any amendments made or deemed to be made pursuant to this Protocol will form a part of each Protocol Covered Document between the Adhering Parties, notwithstanding any statements in a Protocol Covered Document to the effect that such Protocol Covered Document constitutes the entire agreement and understanding between the parties to such Protocol Covered Document with respect to the subject of such Protocol Covered Document.

(b) *Exclusion of Agreements*. Notwithstanding anything in paragraph 1(a) above, with respect to any agreement between Adhering Parties, if the parties to such agreement have expressly stated in such agreement or otherwise agreed in writing that this Protocol shall not apply, then such agreement shall not be a Protocol Covered Document.

(c) *Amendments*. An amendment, modification or waiver in respect of the matters contemplated by this Protocol (including, for the avoidance of doubt, any amendment, modification or waiver relating to the alignment of a Protocol Covered Document with an instrument for which such

Protocol Covered Document is intended to serve as a hedge (or *vice versa*)) will only be effective in respect of a Protocol Covered Document if made in accordance with the terms of the Protocol Covered Document and then only with effect between the parties to that Protocol Covered Document.

(d) *Headings*. The headings used in this Protocol and any Adherence Letter are for convenience of reference only and are not to affect the construction of or to be taken into consideration in interpreting this Protocol or any Adherence Letter.

(e) *Governing Law*. This Protocol and each Adherence Letter will, as between two Adhering Parties and in respect of each Protocol Covered Document between them, be governed by and construed in accordance with the laws of England and Wales, without reference to choice of law doctrine, *provided* that the amendments to each Protocol Covered Document shall be governed by and construed in accordance with the law specified to govern that Protocol Covered Document and otherwise in accordance with the applicable choice of law doctrine.

(f) *Notices*. Any Revocation Notice must be in writing and delivered as a locked PDF (portable document format) attachment to an email to ISDA at isda@isda.org and will be deemed effectively delivered on the date it is delivered unless, on the date of that delivery, ISDA's London office is closed or that communication is delivered after 5:00 p.m., London time, in which case that communication will be deemed effectively delivered on the next day ISDA's London office is open.

(g) *Ability of an Agent to Adhere to the Protocol on Behalf of a Client*.

(i) An Agent may adhere to this Protocol:

(A) On behalf of all Clients represented by such Agent (in which case, such Agent need not identify each Client through an online platform available generally to the industry, including, for example, the ISDA Amend platform provided by IHS Markit (a Platform) and, in respect of any Protocol Covered Document into which the Agent has entered on behalf of those Clients, the Implementation Date shall be the date of acceptance by ISDA of an Adherence Letter (in accordance with paragraph 1(b) above) from the later of the two Adhering Parties to adhere);

(B) On behalf of only those Clients represented by such Agent that such Agent specifically names or identifies through a Platform and, in respect of any Protocol Covered Document into which the Agent has entered on behalf of any such Client, the Implementation Date shall be the date shown on the Platform as the date on which the Agent communicates the name or identity of that Client to the other Adhering Party (or, if later, the date of acceptance by ISDA, as agent, of an Adherence Letter from the other Adhering Party); or

(C) On behalf of all Clients represented by such Agent, excluding any Clients whose name or identity the Agent communicates to the other Adhering Party through a Platform as a Client excluded from adherence, subject to subparagraph 3(h)(i) below, on or before the date of acceptance by ISDA of an Adherence Letter (in accordance with

paragraph 1(b) above) from the later of the two Adhering Parties to adhere (in which case, such Agent need not identify each Client on whose behalf it adheres through a Platform). In respect of any Protocol Covered Document into which the Agent has entered on behalf of any Client whose name or identity has not been communicated to the other Adhering Party through a Platform as a Client excluded from adherence, the Implementation Date shall (subject to subparagraph 3(h)(i) below) be the date of acceptance by ISDA of an Adherence Letter (in accordance with paragraph 1(b) above) from the later of the two Adhering Parties to adhere. If the Agent has not communicated the name or identity of any Clients excluded from adherence to the other Adhering Party through a Platform on or before the date of acceptance by ISDA of an Adherence Letter (in accordance with paragraph 1(b) above) from the later of the two Adhering Parties to adhere, then (subject to subparagraph 3(h)(i) below) in respect of any Protocol Covered Document into which the Agent has entered on behalf of any Client, the Implementation Date shall be the date of acceptance by ISDA of an Adherence Letter (in accordance with paragraph 1(b) above) from the later of the two Adhering Parties to adhere, and, in each case, if the Agent elects for Option 2 in its Adherence Letter, on behalf of those Clients whose name or identity the Agent communicates to the other Adhering Party through a Platform as being a Client in respect of which subparagraph 3(g)(ii)(B)(II) below applies (in which case, the Implementation Date in respect of any Non-Agent Executed Protocol Covered Document shall be as specified in subparagraph 3(l) below).

(ii) In each case, the Agent can elect to apply the amendments in this Protocol to either:

(A) In respect of all those Clients on whose behalf the Agent adheres pursuant to subparagraph 3(g)(i)(A), subparagraph 3(g)(i)(B) or subparagraph 3(g)(i)(C) above, each Protocol Covered Document into which the Agent has entered on behalf of those Clients (Option 1); or

(B) In respect of all those Clients on whose behalf the Agent adheres pursuant to subparagraph 3(g)(i)(A), subparagraph 3(g)(i)(B) or subparagraph 3(g)(i)(C) above, each Protocol Covered Document into which the Agent has entered on behalf of those Clients and (II) in respect of those Clients on whose behalf the Agent adheres whose name or identity the Agent communicates to the other Adhering Party through a Platform as being a Client in respect of which this subparagraph 3(g)(ii)(B)(II) applies, each Protocol Covered Document into which the Agent did not enter on behalf of those Clients but which the Agent has the authority from the relevant Client to amend (for the purpose of this Protocol, documents described in this subparagraph 3(g)(ii)(B)(II) being *Non-Agent Executed Protocol Covered Documents* and the date shown on the Platform as the date on which the Agent communicates the name or identity of the Client to the other Adhering Party for the purposes of this subparagraph 3(g)(ii)(B)(II) being the *Identification Date*) (Option 2). If an Agent adheres to this

Protocol and elects for Option 2, in respect of any Client on whose behalf the Agent adheres pursuant to subparagraph 3(g)(i)(A), subparagraph 3(g)(i)(B) or subparagraph 3(g)(i)(C) above whose name or identity is communicated to the other Adhering Party as being a Client in respect of which subparagraph 3(g)(ii)(B)(II) above applies, Protocol Covered Documents referred to in both subparagraph 3(g)(ii)(B)(I) and subparagraph 3(g)(ii)(B)(II) above will be amended in accordance with the terms of this Protocol. For the avoidance of doubt, any Protocol Covered Document into which the Agent did not enter on behalf of a Client and which the Agent does not have the authority from the relevant Client to amend will not constitute a Non-Agent Executed Protocol Covered Document.

(iii) The election for Option 1 or Option 2 shall be made in the Adherence Letter. Adherence by the Agent shall only be effective with respect to those Protocol Covered Documents described in Option 1 or Option 2, as applicable, and as elected in the Adherence Letter (subject to, if the Agent elects for Option 2 and with respect to Non-Agent Executed Protocol Covered Documents,

(A) Subparagraph 3(g)(iv) and paragraph 3(l) below and (B) the Agent communicating the name or identity of those Clients on behalf of which it is amending Non-Agent Executed Protocol Covered Documents to the other Adhering Party, in accordance with subparagraph 3(g)(ii)(B)(II) above (regardless of whether the Agent adheres to this Protocol using the approach described in subparagraph 3(g)(i)(A), subparagraph 3(g)(i)(B) or subparagraph 3(g)(i)(C) above)).

(iv) If an Agent adheres to this Protocol and elects for Option 2 in its Adherence Letter, then, in respect of any Non-Agent Executed Protocol Covered Document only, the Agent shall, as soon as reasonably practicable following a written request (including by email) from the other Adhering Party, and in any event by no later than the end of the fifteenth calendar day following such request, provide reasonable evidence satisfactory to the other Adhering Party in its sole discretion supporting the Agent's authority to amend such documents, provided that:

(A) If, prior to the date of acceptance by ISDA of an Adherence Letter (in accordance with paragraph 1(b) above) from the later of the Agent and the other Adhering Party to adhere, the Agent has delivered to the other Adhering Party a copy, or relevant extracts, of the agreement (such as an investment management agreement) pursuant to which the relevant Client appoints the Agent to act on its behalf and authorizes the Agent to make the amendments contemplated by this Protocol to the Non-Agent Executed Protocol Covered Document (whether or not such authority expressly refers to this Protocol), then, subject to the other Adhering Party's right to request (which request must be in writing (which includes by email)) an additional copy of that agreement or those relevant extracts (which request shall be made no later than the end of the fifteenth calendar day following the later of the Identification Date and the date of acceptance

by ISDA, as agent, of an Adherence Letter from that other Adhering Party), the Agent need not provide any further evidence supporting its authority to amend that Non-Agent Executed Protocol Covered Document on behalf of that Client for the purposes of this Protocol and, in respect of that Non-Agent Executed Protocol Covered Document, shall be deemed to have provided reasonable evidence satisfactory to the other Adhering Party on (I) if the other Adhering Party does not request an additional copy of that agreement or those relevant extracts, the end of the fifteenth calendar day following the later of the Identification Date and the date of acceptance by ISDA, as agent, of an Adherence Letter from that other Adhering Party or

(II) If the other Adhering Party does request an additional copy of that agreement or those relevant extracts, the day on which that additional copy is delivered to the other Adhering Party;

(B) If the other Adhering Party does not request such evidence by the end of the fifteenth calendar day following the later of the Identification Date and the date of acceptance by ISDA, as agent, of an Adherence Letter from that other Adhering Party, then the Agent shall be deemed to have provided reasonable evidence satisfactory to the other Adhering Party at the end of that fifteenth calendar day;

(C) Subject to subparagraph 3(g)(iv)(A) above, following the delivery of any such evidence by the Agent to the other Adhering Party, unless the other Adhering Party notifies the Agent to the contrary by the end of the fifteenth calendar day following the day on which such evidence is delivered, the Agent shall be deemed to have provided reasonable evidence satisfactory to the other Adhering Party at the end of that fifteenth calendar day;

(D) If: (I)

(I) following written request from the other Adhering Party, the Agent does not provide the other Adhering Party with any evidence supporting its authority to amend such documents or, if subparagraph 3(g)(iv)(A) above applies, with an additional copy of the relevant agreement or extracts, by the end of the fifteenth calendar day following such written request; or

(II) subject to subparagraph 3(g)(iv)(A) above, the other Adhering Party determines that the evidence provided by the Agent is not satisfactory and notifies the Agent accordingly by the end of the fifteenth calendar day following the day on which such evidence is delivered,

Then request for evidence and the Agent's right to provide such evidence and, in respect of any such evidence, subject to subparagraph 3(g)(iv)(C) above, the Non-Agent Executed Protocol Covered Document shall not be amended by this Protocol; and

(E) Any failure by the Agent to provide the other Adhering Party with such evidence shall not give rise to a Potential Event of Default or an Event of Default (each as defined in the ISDA Master Agreement), or any similar event, under that Non-Agent Executed Protocol Covered Document or other contractual right of action under this Protocol or that Non-Agent Executed Protocol Covered Document.

(v) If an Agent adheres to this Protocol and specifically names or identifies one or more Clients

(A) On whose behalf it is adhering (as contemplated in subparagraph 3(g)(i)(B) above), (B) which are excluded from adherence (as contemplated in subparagraph 3(g)(i)(C) above), and/or (C) on whose behalf it is amending Non-Agent Executed Protocol Covered Documents (as contemplated in subparagraph 3(g)(ii)(B)(II) above), as applicable, through a Platform, that Agent shall provide the legal entity identifier (LEI) of each such Client through such Platform.

(vi) If an Agent adheres to this Protocol on behalf of a Client by executing and delivering an Adherence Letter on behalf of such Client in accordance with paragraph 1 above and this paragraph 3(g), references to the Adhering Party for purposes of this Protocol (including the Attachment hereto) and the Adherence Letter shall be interpreted to refer to such Client. If, in respect of a Client, more than one Adherence Letter is accepted by ISDA in accordance with paragraph 1(b) above (by virtue of the Client adhering on its own behalf and one or more Agents adhering on behalf of that Client), then:

(A) If ISDA accepts an Adherence Letter from an Agent on behalf of a Client after it accepts an Adherence Letter from that Client, any document entered into by:

(I) That Agent acting on behalf of that Client; or

(II) If the Agent elects for Option 2 in its Adherence Letter, that Client on its own behalf but which the Agent has the authority from the relevant Client to amend, in each case, which has a Protocol Covered Document Date prior to:

(1) The Protocol Effective Date; or

(2) If later, the date of acceptance by ISDA, as agent, of an Adherence Letter from that Agent (or, if later, the date of acceptance by ISDA, as agent, of an Adherence Letter from the other Adhering Party), will be deemed to have “a Protocol Covered Document Date prior to the Protocol Effective Date (or, if later, the date of acceptance by ISDA, as agent, of an Adherence Letter (in accordance with paragraph 1(b) above) from the later of the two Adhering Parties to adhere)” for the purposes of the definitions of Protocol Covered Confirmation, Protocol Covered Credit Support Document and Protocol Covered Master Agreement below; and

(B) If ISDA accepts an Adherence Letter from a Client after it accepts an Adherence Letter from an Agent on behalf of that Client, any document entered into by the Client, whether directly or through the agency of an Agent, which has a Protocol Covered Document Date prior to:

(I) The Protocol Effective Date; or if later, the date of acceptance by ISDA, as agent, of an Adherence Letter from that Client (or, if later, the date of acceptance by ISDA, as agent, of an Adherence Letter from the other Adhering Party), will be deemed to have “a Protocol Covered Document Date prior to the Protocol Effective Date (or, if later, the date of acceptance by ISDA, as agent, of an Adherence Letter (in accordance with paragraph 1(b) above) from the later of the two Adhering Parties to adhere)” for the purposes of the definitions of Protocol

Covered Confirmation, Protocol Covered Credit Support Document and Protocol Covered Master Agreement below.

(vii) If an Agent adheres to this Protocol on behalf of a Client, then as of the later of (A) the date on which such Agent adheres to this Protocol in accordance with paragraph 1 above and (B) the Protocol Covered Document Date, such Agent represents to each Adhering Party (I) with which it has entered into a Protocol Covered Document on behalf of such Client or (II) which is a party to any Non-Agent Executed Protocol Covered Document (which representation will be deemed to be repeated on the Protocol Effective Date and on the Implementation Date if one or both such dates are later than the date on which such Agent adheres to this Protocol) that it has, as at the relevant Implementation Date, all necessary authority to enter into the Adherence Letter on behalf of such Client. In respect of any Client referred to in paragraph 3(h), paragraph 3(i), paragraph 3(j) or paragraph 3(k) below, the Agent represents that it has, as at the relevant Implementation Date, all necessary authority to apply the terms of the Adherence Letter to such Client.

(h) *Clients Added to an Agent Protocol Covered Document after the date of acceptance by ISDA of an Adherence Letter from the later of the Agent and the other Adhering Party to adhere.*

(i) Subject to subparagraph 3(h)(ii) below, in respect of any Client added to an Agent Protocol Covered Document between an Agent and an Adhering Party after the date of acceptance by ISDA of an Adherence Letter (in accordance with paragraph 1(b) above) from the later of the Agent and the other Adhering Party to adhere (a New Client), the Agent and such Adhering Party agree that the terms of such Agent Protocol Covered Document as between such Adhering Party and any New Client will be subject to the amendments effected by this Protocol and as between the Adhering Party and the New Client the Implementation Date shall be the date on which the New Client is added to the Agent Protocol Covered Document, unless otherwise agreed between such Agent and such Adhering Party (which agreement may, if the Agent adheres to this Protocol using the approach in subparagraph 3(g)(i)(C) above, be reached by the Agent communicating to the other Adhering Party through a Platform, at the time the New Client is added to the Agent Protocol Covered Document, that the New Client is excluded from adherence).

(ii) If an Agent adheres to this Protocol using the approach described in subparagraph 3(g)(i)(B) above and therefore specifically names or identifies one or more Clients on whose behalf it is adhering, then in order for the terms of an Agent Protocol Covered Document as between an Adhering Party and any New Client to be subject to the amendments effected by this Protocol, the Agent shall communicate the identity of each New Client (including the legal entity identifier (LEI)) to the other Adhering Party which is a party to the Agent Protocol Covered Document to which the New Client is added through a Platform and, as between the other Adhering Party and that New

Client, the Implementation Date shall be the date shown on the Platform as the date on which the Agent communicates the identity of that New Client to the other Adhering Party through that Platform.

(i) *Clients Added to an Agent's List of Identified In-Scope Clients after the date of Acceptance by ISDA of the Agent's Adherence Letter.* If an Agent adheres to this Protocol using the approach described in subparagraph 3(g)(i)(B) above and therefore specifically names or identifies one or more Clients on whose behalf it is adhering, then for the purposes of subparagraph 3(g)(ii)(A) or 3(g)(ii)(B)(I) above, as applicable, it may communicate the name or identity of additional Clients on whose behalf it is adhering (through a Platform) to another Adhering Party after the date of acceptance by ISDA, as agent, of its Adherence Letter and, as between that other Adhering Party and the additional Client, the Implementation Date shall be the date shown on the Platform as the date on which the Agent communicates the identity of that additional Client to the other Adhering Party through that Platform for those purposes (or, if later, the date of acceptance by ISDA, as agent, of an Adherence Letter from that other Adhering Party), unless otherwise agreed between such Agent and such Adhering Party.

(j) *Clients Removed from an Agent's List of Excluded Clients after the date of Acceptance by ISDA of the Agent's Adherence Letter.* If an Agent adheres to this Protocol using the approach described in subparagraph 3(g)(i)(C) above and therefore specifically names or identifies one or more Clients as excluded from adherence, then for the purposes of subparagraph 3(g)(ii)(A) or 3(g)(ii)(B)(I) above, as applicable, the Agent may, after the date of acceptance by ISDA, as agent, of its Adherence Letter, remove one or more of those Clients from its list of excluded Clients through a Platform and, as between any other Adhering Party and that Client, the Implementation Date shall be the date shown on the Platform as the date on which the Agent communicates to the other Adhering Party that the Client is removed from the list of excluded Clients (or, if later, the date of acceptance by ISDA, as agent, of an Adherence Letter from that other Adhering Party), unless otherwise agreed between such Agent and such Adhering Party.

(k) *Clients Added to an Agent's List of Clients in respect of which subparagraph 3(g)(ii)(B)(II) above applies.* If an Agent adheres to this Protocol, elects for Option 2 in its Adherence Letter and therefore specifically names or identifies one or more Clients in respect of which subparagraph 3(g)(ii)(B)(II) above applies, then it may name or identify additional Clients in respect of which subparagraph 3(g)(ii)(B)(II) above applies (through a Platform) after the date of acceptance by ISDA, as agent, of its Adherence Letter.

(l) *Authority to amend Non-Agent Executed Protocol Covered Documents.* If an Agent adheres to this Protocol and elects for Option 2 (as described in subparagraph 3(g)(ii) above), then, in respect of each Non-Agent Executed Protocol Covered Document, the Implementation Date shall be the day on

which the Agent is deemed to have provided evidence supporting the Agent's authority to amend such Non-Agent Executed Protocol Covered Document to the other Adhering Party pursuant to subparagraph 3(g)(iv) above and, for the purposes of subparagraph 3(g)(iii) above, with respect to such Non-Agent Executed Protocol Covered Documents only, the Agent's adherence will be deemed effective on that day.

(m) *Implementation Date if both an Agent and a Client adhere to this Protocol or if more than one Agent adheres for a Client.* If an Agent adheres to this Protocol and, in respect of a particular Client and a Protocol Covered Document into which the Agent has entered on behalf of that Client or a Non-Agent Executed Protocol Covered Document, there is, pursuant to the terms of this Protocol, more than one Implementation Date, then, notwithstanding any provision to the contrary in this Protocol, the Implementation Date shall be the first of those dates to occur.

(n) *Adhering Party that is an Agent with respect to a Protocol Covered Document.* An Adhering Party that executes a Protocol Covered Document (including an annex thereto) as agent with respect to that Protocol Covered Document, shall not for purposes of this Protocol be considered to be a party to or to have entered into such Protocol Covered Document solely by acting as agent with respect to that Protocol Covered Document except as expressly provided therein.

4. Definitions

References in this Protocol and the Attachment to the following terms shall have the following meanings:

Additional Credit Support Document means the documents (which, for the avoidance of doubt, shall be deemed to include any annexes or appendices thereto) set out in Part 2 of the Additional Documents Annex to this Protocol.

Additional Master Agreement means the documents (which, for the avoidance of doubt, shall be deemed to include any annexes or appendices thereto) set out in Part 1 of the Additional Documents Annex to this Protocol.

Adherence Letter has the meaning given to such term in the introductory paragraphs hereof.

Adhering Party has the meaning given to such term in the introductory paragraphs hereof, as construed in accordance with subparagraph 3(g)(vi) above where relevant.

Agent means an entity that enters into a Protocol Covered Document (or which has the authority to amend a Non-Agent Executed Protocol Covered Document) and executes and delivers an Adherence Letter with respect to this Protocol on behalf of, and as agent for, one or more Clients. With respect to paragraph 3(h) above, Agent also means an entity that enters into a Protocol Covered Document and executes and delivers an Adherence Letter pursuant to subparagraph 3(g)(i) above solely for purposes of amending such agreements to which New Clients may be added under paragraph 3(h) above.

Agent Protocol Covered Document means any Protocol Covered Document signed by

the Agent on behalf of one or more Clients prior to the Protocol Effective Date (or, if later, the date of acceptance by ISDA, as agent, of an Adherence Letter (in accordance with paragraph 1(b) above) from the later of the Agent and the other Adhering Party to adhere), including any agreement that is signed as an umbrella agreement by an Agent and an Adhering Party prior to the Protocol Effective Date (or, if later, the date of acceptance by ISDA, as agent, of an Adherence Letter (in accordance with paragraph 1(b) above) from the later of the Agent and the other Adhering Party to adhere) which would be a Protocol Covered Document but for the absence of any underlying Client which is an Adhering Party.

Client means, with respect to an Agent, a client, investor, fund, account and/or other principal on whose behalf the Agent acts.

Confirmation means, in respect of a transaction, one or more documents or other confirming evidence exchanged between the parties or otherwise effective for the purpose of confirming or evidencing the transaction.

Covered ISDA Definitions Booklet means each of the 2006 ISDA Definitions, the 2000 ISDA Definitions, the 1998 ISDA Euro Definitions, the 1998 Supplement to the 1991 ISDA Definitions and the 1991 ISDA Definitions, each as published by ISDA.

Credit Support Document means, in respect of an Adhering Party and a Protocol Covered Document, any document in effect on the Implementation Date, which by its terms secures, guarantees or otherwise supports such Adhering Party's obligations under such Protocol Covered Document from time to time, whether or not such document is specified as such therein or in the Protocol Covered Document.

Cut-off Date has the meaning given to such term in paragraph 1(b) above.

IBOR Fallbacks Supplement has the meaning given to such term in the introductory paragraphs hereof.

Identification Date has the meaning given to such term in subparagraph 3(g)(ii)(B)(II) above.

Implementation Date has the meaning given to such term in subparagraph 1(c)(B) above.

ISDA has the meaning given to such term in the introductory paragraphs hereof.

ISDA Credit Support Document means each of the following documents:

(a) 1994 ISDA Credit Support Annex (Bilateral Form; ISDA Agreements Subject to New York Law Only);

(b) 1995 ISDA Credit Support Annex (Bilateral Form—Transfer; ISDA Agreements Subject to English Law);

(c) 1995 ISDA Credit Support Deed (Bilateral Form—Security Interest; ISDA Agreements Subject to English Law);

(d) 1995 ISDA Credit Support Annex (Bilateral Form—Loan and Pledge; Security Interest Subject to Japanese Law);

(e) 1995 ISDA Credit Support Annex (Bilateral Form—Transfer; ISDA Agreement Subject to French Law);

(f) 1995 ISDA Credit Support Annex (Bilateral Form—Transfer; ISDA Agreement Subject to Irish Law);

(g) 2008 ISDA Credit Support Annex (Loan/Japanese Pledge);

(h) 2013 Standard Credit Support Annex (New York Law);

(i) 2013 Standard Credit Support Annex (English Law);

(j) 2014 Standard Credit Support Annex (New York Law—Multicurrency Settlement);

(k) 2014 Standard Credit Support Annex (English Law—Multicurrency Settlement);

(l) 2014 ISDA Korean Law Credit Support Annex (Bilateral Form—Loan and Pledge; Credit Support Annex Subject to Korean Law);

(m) 2016 Credit Support Annex for Variation Margin (VM) (Bilateral Form; ISDA Agreements Subject to New York Law Only), including any such form entered into between the Parties pursuant to the ISDA 2016 Variation Margin Protocol;

(n) 2016 Credit Support Annex for Variation Margin (VM) (Bilateral Form—Transfer; ISDA Agreements Subject to English Law), including any such form entered into between the Parties pursuant to the ISDA 2016 Variation Margin Protocol;

(o) 2016 Credit Support Annex for Variation Margin (VM) (Bilateral Form—Loan; ISDA Agreements Subject to Japanese Law), including any such form entered into between the Parties pursuant to the ISDA 2016 Variation Margin Protocol;

(p) 2016 Credit Support Annex for Variation Margin (VM) (Bilateral Form—Transfer; ISDA Agreements Subject to French Law); or

(q) 2016 Credit Support Annex for Variation Margin (VM) (Bilateral Form—Transfer; ISDA Agreements Subject to Irish Law).

ISDA Master Agreement means an ISDA 2002 Master Agreement, an ISDA 2002 Master Agreement (French law), an ISDA 2002 Master Agreement (Irish law), a 1992 ISDA Master Agreement (Multicurrency—Cross Border), a 1992 ISDA Master Agreement (Local Currency—Single Jurisdiction), a 1987 ISDA Interest Rate Swap Agreement or a 1987 ISDA Interest Rate and Currency Exchange Agreement, in each case as published by ISDA.

Master Agreement means an agreement which may be an ISDA Master Agreement or an Additional Master Agreement that has been entered into (a) by execution by the parties thereto (whether directly or through the agency of an Agent) or (b) by execution by the parties thereto (whether directly or through the agency of an Agent) of a Confirmation pursuant to which a party is deemed to have entered into an ISDA Master Agreement or an Additional Master Agreement with the other party.

New Client has the meaning given to such term in paragraph 3(h)(i) above.

Non-Agent Executed Protocol Covered Documents has the meaning given to such term in subparagraph 3(g)(ii)(B)(II) above.

Platform has the meaning given to such term in paragraph 3(g)(i)(A) above.

Protocol has the meaning given to such term in the introductory paragraphs hereof.

Protocol Business Day means a day following the Protocol Effective Date on which commercial banks and foreign exchange markets are generally open to settle payments in both London and New York.

Protocol Covered Confirmation means, subject to subparagraph 3(g)(vi) above, a

Confirmation which is entered into between two Adhering Parties (whether directly or through the agency of an Agent and, if through the agency of an Agent, whether executed by that Agent or by an entity on behalf of that Agent), has a Protocol Covered Document Date prior to the Protocol Effective Date (or, if later, the date of acceptance by ISDA, as agent, of an Adherence Letter (in accordance with paragraph 1(b) above) from the later of the two Adhering Parties to adhere) and:

(a) supplements, forms part of and is subject to, or is otherwise governed by, a Master Agreement and incorporates a Covered ISDA Definitions Booklet;

(b) supplements, forms part of and is subject to, or is otherwise governed by, a Master Agreement and references a Relevant IBOR “as defined” in, or otherwise provides that the Relevant IBOR has the meaning given in, a Covered ISDA Definitions Booklet (regardless of whether such Covered ISDA Definitions Booklet is incorporated in full in that Confirmation); and/or

(c) supplements, forms part of and is subject to, or is otherwise governed by, a Master Agreement and references a Relevant IBOR, howsoever defined.

*Protocol Covered Credit Support Document*¹ means, subject to subparagraph 3(g)(vi) above, any ISDA Credit Support Document or Additional Credit Support Document which is entered into between two Adhering Parties (whether directly or through the agency of an Agent and, if through the agency of an Agent, whether executed by that Agent or by an entity on behalf of that Agent), has a Protocol Covered Document Date prior to the Protocol Effective Date (or, if later, the date of acceptance by ISDA, as agent, of an Adherence Letter (in accordance with paragraph 1(b) above) from the later of the two Adhering Parties to adhere) and:

(a) Incorporates a Covered ISDA Definitions Booklet;

(b) References a Relevant IBOR “as defined” in, or otherwise provides that the Relevant IBOR has the meaning given in, a Covered ISDA Definitions Booklet (regardless of whether such Covered ISDA Definitions Booklet is incorporated in full in that ISDA Credit Support Document or Additional Credit Support Document); and/or

(c) References a Relevant IBOR, howsoever defined.

¹ Note that the parties to any credit support document that is amended by the Protocol should consider whether they need to take any steps to reconfirm or retake any security or otherwise satisfy any formalities under or in connection with the relevant credit support document as a result of the amendment made by the Protocol.

Protocol Covered Document Date means, in respect of any document, the date of such document, howsoever described therein, provided that (a) if such document has different dates specified therein, one of which includes a date specified as an “as of” date, such date shall be the Protocol Covered Document Date, and (b) if such document is a Confirmation (other than a master confirmation agreement, including any

related general terms confirmation), the Protocol Covered Document Date shall be the Trade Date.

Protocol Covered Documents means Protocol Covered Confirmations, Protocol Covered Master Agreements and Protocol Covered Credit Support Documents, other than any such documentation governing cleared transactions (including any transactions that are “Client Transactions” (or in substance equivalent) under a 2016 ISDA/FIA Client Cleared OTC Derivatives Addendum or any agreement that in substance relates to the same matters as those contemplated by the 2016 ISDA/FIA Client Cleared OTC Derivatives Addendum between a clearing member and its client).

Protocol Covered Master Agreement means, subject to subparagraph 3(g)(vi) above, a Master Agreement which is entered into (or deemed entered into) between two Adhering Parties (whether directly or through the agency of an Agent and, if through the agency of an Agent, whether executed by that Agent or by an entity on behalf of that Agent), has a Protocol Covered Document Date prior to the Protocol Effective Date (or, if later, the date of acceptance by ISDA, as agent, of an Adherence Letter (in accordance with paragraph 1(b) above) from the later of the two Adhering Parties to adhere) and:

(a) Incorporates a Covered ISDA Definitions Booklet;

(b) References a Relevant IBOR “as defined” in, or otherwise provides that the Relevant IBOR has the meaning given in, a Covered ISDA Definitions Booklet (regardless of whether such Covered ISDA Definitions Booklet is incorporated in full in that Master Agreement); and/or

(c) References a Relevant IBOR, howsoever defined.

Protocol Effective Date has the meaning given to such term in subparagraph 1(c)(A) above.

Relevant IBOR means:

(a) Any of sterling LIBOR (London interbank offered rate), Swiss franc LIBOR (London interbank offered rate), U.S. dollar LIBOR (London interbank offered rate), euro LIBOR (London interbank offered rate), the euro interbank offered rate, Japanese yen LIBOR (London interbank offered rate), the Japanese yen Tokyo interbank offered rate, the euroyen Tokyo interbank offered rate, the bank bill swap rate, the Canadian dollar offered rate, the Hong Kong interbank offered rate, the Singapore dollar swap offer rate and the Thai baht interest rate fixing; and

(b) LIBOR (London interbank offered rate) with no reference to, or indication of, the currency of the relevant LIBOR (London interbank offered rate) (including, for the avoidance of doubt, the reference in Section 7.3 (*Corrections to Published Prices*) of the 2005 ISDA Commodity Definitions to “the spot offered rate for deposits in the payment currency in the London interbank market as at approximately 11:00 a.m., London time”), in each case, howsoever defined or described (whether in English or in any other language) in the relevant Protocol Covered Document.

Revocation Date means, with respect to a Revocation Notice and an Adhering Party, the last Protocol Business Day of the calendar month following the calendar month in

which that Revocation Notice is effectively delivered by that Adhering Party to ISDA.

Revocation Notice has the meaning given to such term in paragraph 1(e) above.

Third Party means, in relation to an agreement supported by a Third Party Credit Support Document, any party to such Third Party Credit Support Document other than either of the Adhering Parties which are parties to the agreement.

Third Party Credit Support Document means, with respect to an Adhering Party and a Protocol Covered Document, any Credit Support Document which is executed by one or more Third Parties (whether or not an Adhering Party is a party thereto), whether or not such document is specified as a Third Party Support Document or as a Credit Support Document therein or in the Protocol Covered Document.

Trade Date means, in respect of a Protocol Covered Confirmation (other than a master confirmation agreement, including any related general terms confirmation), the date on which the parties enter into the related transaction.

Exhibit 1 to the ISDA 2020 IBOR Fallbacks Protocol

Form of Adherence Letter

[Letterhead of Adhering Party]

[Date]

International Swaps and Derivatives Association, Inc.

Ladies and Gentlemen,

ISDA 2020 IBOR Fallbacks Protocol

The purpose of this letter is to confirm our adherence to the ISDA 2020 IBOR Fallbacks Protocol as published by the International Swaps and Derivatives Association, Inc. (ISDA) on October 23, 2020 (the Protocol). By submitting this Adherence Letter, we confirm that we are an Adhering Party to the Protocol. This letter constitutes, as between each other Adhering Party and us, an Adherence Letter as referred to in the Protocol. The definitions and provisions contained in the Protocol are incorporated into this Adherence Letter, which will supplement and form part of each Protocol Covered Document between us and each other Adhering Party.

1. Specified Terms for Adhering Party as Principal

As between each Adhering Party and us, we acknowledge and agree that the amendments in the Attachment to the Protocol shall apply to each Protocol Covered Document to which we are a party in accordance with the terms of the Protocol and this Adherence Letter.

2. Appointment as Agent and Release

We hereby appoint ISDA as our agent for the limited purposes of the Protocol and accordingly we waive any rights and hereby release ISDA from any claims, actions or causes of action whatsoever (whether in contract, tort or otherwise) arising out of or in any way relating to this Adherence Letter or our adherence to the Protocol or any actions contemplated as being required by ISDA.

3. Arbitration Agreement and Class Action Waiver

By adhering to the Protocol, we agree that all claims or disputes arising out of or in connection with adherence to the Protocol shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce (the Rules) by three arbitrators, and hereby waive any right to assert any such claims or disputes against ISDA as a representative or member in any class or representative action. The claimant(s) (as defined in the Rules) shall nominate one arbitrator in the 'Request for Arbitration'. The respondent(s) (as defined in the Rules) shall nominate one arbitrator in the 'Answer to the Request'. The two party-nominated arbitrators shall then have 30 days to agree, in consultation with the parties to the arbitration, upon the nomination of a third arbitrator to act as president of the tribunal, barring which the International Chamber of Commerce Court shall select the third arbitrator (or any arbitrator that claimant(s) or respondent(s) shall fail to nominate in accordance with the foregoing). This agreement to arbitrate shall not be affected by the Revocation Notice as described in the Protocol.

4. Payment

Each Adhering Party or, if such Adhering Party is a Client on whose behalf an Agent adheres to this Protocol, each Agent, that is classified by ISDA for purposes of membership of ISDA as an "ISDA Primary Member" must submit a one-time fee of U.S. \$500 to ISDA at or before the submission of this Adherence Letter. Each Adhering Party or, if such Adhering Party is a Client on whose behalf an Agent adheres to this Protocol, each Agent, which is not an "ISDA Primary Member" is not required to submit a fee to ISDA if this Adherence Letter is submitted prior to the Protocol Effective Date. If an Adhering Party or, if such Adhering Party is a Client on whose behalf an Agent adheres to this Protocol, an Agent, which is not an "ISDA Primary Member" submits this Adherence Letter on or after the Protocol Effective Date, such Adhering Party or Agent (as applicable) must submit a one-time fee of U.S. \$500 to ISDA at or before the submission of this Adherence Letter.

5. Contact Details

Our contact details for purposes of this Adherence Letter are:

Name:

Company Name:

Address:

Phone:

Fax:

Email:

We consent to the publication of a conformed copy of this letter by ISDA and to the disclosure by ISDA of the contents of this letter.

Yours faithfully,

[ADHERING PARTY]²

By:

Name:

Title:

Note 2: Specify legal name of Adhering Party.

If you are an Agent, you may sign the Adherence Letter using one of the options below. Please note that, if you would like to adhere on behalf of yourself, as principal, and also on behalf of your Clients, as Agent, you must submit one adherence letter for yourself, as principal, and a second adherence letter on behalf of your Clients, as Agent, in the latter case, in accordance with one of the options set out below.

First, if you have the authority to adhere to this Protocol as Agent on behalf of all Clients, you may indicate the following in the signature block: "acting on behalf of [(a)] each fund, account or other principal (each, a "Client") on whose behalf we have entered, or will enter, into a Protocol Covered Document and any New Clients added to an Agent Protocol Covered Document in the future [and (b) in respect of any Non-Agent Executed Protocol Covered Documents, each Client which we name or identify through a Platform as being a Client in respect of which subparagraph 3(g)(ii)(B)(II) of the Protocol applies]". If such a signature block is used, a separate Adherence Letter for each Client does not need to be submitted to ISDA and no specific names of Clients must be identified through a Platform (except if you elect for Option 2 in this Adherence Letter, in which case the Clients on whose behalf you are amending Non-Agent Executed Protocol Covered Documents should be identified through such Platform; you will be responsible for identifying such Clients and providing their LEIs. If you cannot or do not wish to name such Clients, then provided that you can identify the Clients by way of LEIs, you may identify such Clients using LEIs and without including any names). If you do not elect for Option 2 in this Adherence Letter, you should delete the wording in square brackets in the signature block.

Second, if you adhere to this Protocol as an agent on behalf of certain Clients only by specifically identifying such Clients, you may indicate the following in the signature block: "acting on behalf of [(a)] each fund, account or other principal (each a "Client") which we name or identify through a Platform as being a Client on whose behalf we have entered, or will enter, into a Protocol Covered Document and any New Clients added to an Agent Protocol Covered Document and identified through a Platform as a New Client [and (b) in respect of any Non-Agent Executed Protocol Covered Documents, each Client which we name or identify through a Platform as being a Client in respect of which subparagraph 3(g)(ii)(B)(II) of the Protocol applies]". You will be responsible for identifying any Clients on whose behalf you have entered into, or will enter into, a Protocol Covered Document, any New Clients and any Clients on whose behalf you amend Non-Agent

Executed Protocol Covered Documents and, in each case, providing their LEIs. If you cannot or do not wish to name such Clients, then provided that you can identify the Clients by way of LEIs, you may identify such Clients using LEIs and without including any names. If you do not elect for Option 2 in this Adherence Letter, you should delete the wording in square brackets in the signature block.

Third, if you adhere to this Protocol as an agent on behalf of certain Clients only by excluding certain Clients, you may indicate the following in the signature block: "acting on behalf of [(a)] each fund, account or other principal (each, a "Client") on whose behalf we have entered, or will enter, into a Protocol Covered Document (except for those Clients which we identify through a Platform as excluded from adherence) and any New Clients added to an Agent Protocol Covered Document (except for any New Clients which we identify through a Platform as excluded from adherence) [and (b) in respect of any Non-Agent Executed Protocol Covered Documents, each Client which we name or identify through a Platform as being a Client in respect of which subparagraph 3(g)(ii)(B)(II) of the Protocol applies]". You will be responsible for identifying any excluded Clients and any Clients on whose behalf you amend Non-Agent Executed Protocol Covered Documents and, in each case, for providing their LEIs. If you cannot or do not wish to name those excluded Clients or those Clients on whose behalf you are amending Non-Agent Executed Protocol Covered Documents, then provided that you can identify them by way of LEIs, you may identify those Clients using LEIs and without including any names. If you do not elect for Option 2 in this Adherence Letter, you should delete the wording in square brackets in the signature block.

Fourth, if you adhere to this Protocol as an agent on behalf of no current Clients, you may indicate the following in the signature block: "acting to amend each Protocol Covered Document (or other agreement which deems a Protocol Covered Document to have been created) between it (as agent) and each Adhering Party, with respect to New Clients."

Specified Terms for Adhering Party as Agent³

The election for Option 1 or Option 2 below should only be made by an Agent. Any entity which adheres to the Protocol and which is not acting as an Agent should not complete the election below.

As between each Adhering Party and us, we acknowledge and agree that the amendments in the Attachment to the Protocol shall apply to each:

Option 1

☐ Protocol Covered Document into which we have entered on behalf of one or more Clients covered in accordance with the terms of the Protocol and this Adherence Letter (as contemplated by Option 1 in the Protocol); or

Option 2

☐ Protocol Covered Document into (i) which we have entered on behalf of one or more Clients covered in accordance with the

terms of the Protocol and this Adherence Letter and (ii) which we did not enter on behalf of one or more Clients but which we otherwise have the authority from the relevant Client to amend in accordance with and subject to the terms of the Protocol and this Adherence Letter (as contemplated by Option 2 in the Protocol).

We agree, in our capacity as Agent for the relevant Client(s), to provide each other Adhering Party, as soon as reasonably practicable following such other Adhering Party's written request (including by email), and in any event by no later than the end of the fifteenth calendar day following such request (and as required by and in accordance with subparagraph 3(g)(iv) of the Protocol), with reasonable evidence satisfactory to such other Adhering Party in its sole discretion supporting our authority to amend any Protocol Covered Document into which we did not enter on behalf of one or more Clients (whose name or identity we communicate to the other Adhering Party through a Platform as being a Client in respect of which subparagraph 3(g)(ii)(B)(II) of the Protocol applies).

Failure to provide an Adhering Party with such evidence shall (unless the Agent is deemed to have provided such evidence, pursuant to subparagraph 3(g)(iv) of the Protocol), only in respect of those Non-Agent Executed Protocol Covered Documents between the relevant Client(s) and such Adhering Party, result in this Adherence Letter being ineffective unless and until we, in our capacity as Agent for the relevant Client(s), are deemed to have provided that Adhering Party with such evidence pursuant to subparagraph 3(g)(iv) of the Protocol. Failure to provide an Adhering Party with such evidence shall not give rise to a Potential Event of Default or an Event of Default (each as defined in the ISDA Master Agreement), or any similar event, under those Protocol Covered Documents or other contractual right of action under this Protocol or those Protocol Covered Documents.

Note 3: The descriptions of Option 1 and Option 2 in this Adherence Letter and of related provisions within the Protocol are intended for convenience of reference only. Adhering Parties should read the provisions of the Protocol before submitting an Adherence Letter. In the event of any inconsistency between the descriptions of Option 1 and Option 2 and related provisions in this Adherence Letter and the provisions of the Protocol, the provisions of the Protocol shall take precedence.

EXHIBIT 2 to the ISDA 2020 IBOR Fallbacks Protocol

Form of Revocation Notice

[Letterhead of Adhering Party]

[Date]

International Swaps and Derivatives Association, Inc. Send to: isda@isda.org

Ladies and Gentlemen,

ISDA 2020 IBOR Fallbacks Protocol—Designation of a Revocation Date

The purpose of this letter is to notify you that we wish to designate a Revocation Date

as the last date on which an Implementation Date can occur pursuant to the terms of the ISDA 2020 IBOR Fallbacks Protocol as published by the International Swaps and Derivatives Association, Inc. (ISDA) on October 23, 2020 (the Protocol) in respect of any Protocol Covered Document between us and any other Adhering Party.

This letter constitutes a Revocation Notice as referred to in the Protocol.

We consent to the publication of the conformed copy of this notice by ISDA on and after the Revocation Date and to the disclosure by ISDA of the contents of this letter.

Yours faithfully,

[ADHERING PARTY]⁴

By:

Name: _____

Title: _____

Signature: _____

Note 4: Specify legal name of Adhering Party.

If you are an Agent and act on behalf of multiple Clients, you may sign a Revocation Notice using one of the methods below. Alternatively, you may submit one Revocation Notice per Client.

First, if you have the authority to deliver a Revocation Notice for this Protocol as Agent on behalf of all Clients, you may indicate the following in the signature block: "acting on behalf of each fund, account or other principal (each, a "Client") represented by us (as agent)" or such other language which indicates the Clients to which this letter is applicable. If such a signature block is used, a separate Revocation Notice for each Client does not need to be submitted to ISDA and no specific names of Clients must be identified in the Revocation Notice.

Second, if you have the authority to deliver a Revocation Notice for this Protocol as Agent on behalf of certain Clients only, you may indicate the following in the signature block: "acting on behalf of each fund, account or other principal (each, a "Client") represented by us (as agent) identified in the Revocation Notice or an appendix thereto". If you cannot or do not wish to name such Clients, then provided that you can identify the revoking Clients by way of specific identifiers which will be known and recognized by all Adhering Parties with which the relevant Clients have entered into Confirmations, Master Agreements and/or credit support documents, you may identify such revoking Clients using specific identifiers and without including any names.

Paragraph 1(e) of the Protocol sets out the consequences of a Revocation Notice where an Agent adheres to the Protocol on behalf of a Client.

ANNEX to the ISDA 2020 IBOR Fallbacks Protocol

Additional Documents Annex

Part 1: Additional Master Agreements

(a) 2001 FBF Master Agreement relating to Transactions on Forward Financial Instruments.

(b) 2007 FBF Master Agreement relating to Transactions on Forward Financial Instruments.

(c) 2013 FBF Master Agreement relating to Transactions on Forward Financial Instruments.

(d) 1994 AFB Master Agreement for Foreign Exchange and Derivatives Transactions.

(e) 1997 AFTI/BBF Master Agreement for Loans of Securities.

(f) 2007 AFTI/BBF Master Agreement for Loans of Securities.

(g) 2007 FBF Master Agreement for Repurchase Transactions.

(h) 1994 AFTB Master Agreement for Repurchase Transactions with Delivery of Securities.

(i) Execution Annex with respect to the AFB/BBF 1994/2001/2007/2013 Master Agreements.

(j) 1997 Spanish Master Agreement (Contrato Marco de Operaciones Financieras or CMOF) published by Asociación Española de Banca (Spanish Banking Association) and Confederación Española de Cajas de Ahorros (Spanish Confederation of Savings Banks).

(k) Annex III to the 1997 Spanish Master Agreement (Contrato Marco de Operaciones Financieras or CMOF) published by Asociación Española de Banca (Spanish Banking Association) and Confederación Española de Cajas de Ahorros (Spanish Confederation of Savings Banks).

(l) 2009 Spanish Master Agreement (Contrato Marco de Operaciones Financieras or CMOF) published by Asociación Española de Banca (Spanish Banking Association) and Confederación Española de Cajas de Ahorros (Spanish Confederation of Savings Banks).

(m) Annex III to the 2009 Spanish Master Agreement (Contrato Marco de Operaciones Financieras or CMOF) published by Asociación Española de Banca (Spanish Banking Association) and Confederación Española de Cajas de Ahorros (Spanish Confederation of Savings Banks).

(n) 2013 Spanish Master Agreement (Contrato Marco de Operaciones Financieras or CMOF) published by Asociación Española de Banca (Spanish Banking Association) and Confederación Española de Cajas de Ahorros (Spanish Confederation of Savings Banks).

(o) Annex III to the 2013 Spanish Master Agreement (Contrato Marco de Operaciones Financieras or CMOF) published by Asociación Española de Banca (Spanish Banking Association) and Confederación Española de Cajas de Ahorros (Spanish Confederation of Savings Banks).

(p) 2003 Swiss Master Agreement for OTC Derivative Instruments published by the Swiss Bankers Association.

(q) 2013 Swiss Master Agreement for OTC Derivative Instruments published by the Swiss Bankers Association (for use in connection with certain ISDA definitions).

(r) 2013 Swiss Master Agreement for OTC Derivative Instruments published by the Swiss Bankers Association (non-ISDA version not for use in connection with any ISDA definitions).

(s) 1999 Bilateral Swiss Master Agreement for Repo Transactions published by the Swiss Bankers Association.

(t) 1999 Multilateral Swiss Master Agreement for Repo Transactions published by the Swiss Bankers Association.

(u) 2011 Swiss Master Agreement for Securities Lending and Borrowing prepared by the Swiss Bankers Association.

(v) 2001 Master Agreement for Financial Transactions sponsored by the Banking Federation of the European Union (EBF or FBE) in cooperation with the European Savings Banks Group (ESBG) and the European Association of Cooperative Banks (EACB).

(w) 2004 Master Agreement for Financial Transactions sponsored by the Banking Federation of the European Union (EBF or FBE) in cooperation with the European Savings Banks Group (ESBG) and the European Association of Cooperative Banks (EACB).

(x) 2020 Master Agreement for Financial Transactions sponsored by the Banking Federation of the European Union (EBF or FBE) in cooperation with the European Savings Banks Group (ESBG) and the European Association of Cooperative Banks (EACB).

(y) Austrian Master Agreement for Financial Transactions (Österreichischer Rahmenvertrag für Finanztermingeschäfte or ÖRV).

(z) 1997 International Foreign Exchange and Options Master Agreement (FEOMA).

(aa) 1993 International Foreign Exchange Master Agreement (IFEMA).

(bb) 1997 International Foreign Exchange Master Agreement (IFEMA).

(cc) 1997 International Currency Options Market (ICOM) Master Agreement.

(dd) 2005 International Foreign Exchange and Currency Option Master Agreement (IFXCO).

(ee) 1992 PSA/ISMA Global Master Repurchase Agreement (GMRA).

(ff) 1995 PSA/ISMA Global Master Repurchase Agreement (GMRA).

(gg) 2000 TBMA/ISMA Global Master Repurchase Agreement (GMRA).

(hh) 2011 SIFMA/ICMA Global Master Repurchase Agreement (GMRA).

(ii) 2000 ISLA Global Master Securities Lending Agreement (GMSLA).

(jj) 2010 ISLA Global Master Securities Lending Agreement (GMSLA).

(kk) 2018 ISLA Global Master Securities Lending Agreement (GMSLA)—Security Interest over Collateral.

(ll) 1993 TBMA/SIA Master Securities Loan Agreement (MSLA).

(mm) 2000 TBMA/SIA Master Securities Loan Agreement (MSLA).

(nn) 2017 SIFMA Master Securities Loan Agreement (MSLA).

(oo) 1987 PSA Master Repurchase Agreement (MRA).

(pp) 1996 TBMA Master Repurchase Agreement (MRA).

(qq) 2000 SIFMA Master OTC Options Agreement.

(rr) 1989 TBMA Master Dealer Agreement, OTC Option Transaction—U.S. Treasury Securities.

(ss) Emissions Master LF—IETA Master Agreement.

(tt) WSPP Agreement.

(uu) 2004 FIA Grid Trade Master Agreement.

(vv) EEI Master Power Purchase & Sale Agreement. (ww)

EL Master—Electricity Power Master Agreement.

(xx) 1994 LBMA/FEC International Bullion Master Agreement (English law version).

(yy) 1994 LBMA/FEC International Bullion Master Agreement (New York law version).

(zz) 1997 ASLA Australian Master Securities Lending Agreement (AMSLA).

(aaa) 2002 ASLA Australian Master Securities Lending Agreement (AMSLA).

(bbb) 2003 ASLA Australian Master Securities Lending Agreement (AMSLA).

(ccc) GISB Base Short-Term Contract for Sale and Purchase of Natural Gas.

(ddd) NAESB Base Contract for Sale and Purchase of Natural Gas.

(eee) 1996 Master Gilt Edged Stock Lending Agreement (GESLA).

(fff) 1996 Master Equity and Fixed Interest Stock Lending Agreement (MEFISLA).

(ggg) 1994 Equity and Fixed Interest Stock Lending (Agency) Agreement.

(hhh) 1994 Overseas Securities Lender's Agreement (OSLA).

(iii) 1995 Overseas Securities Lender's Agreement (OSLA).

(jjj) globalCOAL Standard Coal Trading Agreement (SCoTA).

(kkk) KOFIA Agreement on Margin Transactions.

(lll) KOFIA Agreement on Foreign Exchange Margin Trading.

(mmm) KOFIA Agreement on Securities Lending and Borrowing.

(nnn) KOFIA Agreement on Repurchase Agreement (Repo) between Institutions.

(ooo) KOFIA Agreement on Repurchase Agreement (Repo) with Customers.

(ppp) KOFIA best practice Korean language agreement template for OTC derivatives.

(qqq) Investment Industry Regulatory Organization of Canada (IIROC) Repurchase/Reverse Repurchase Transaction Agreement.

(rrr) Master Agreement Concerning Stock Lending Transactions (*kabuken tou taishaku torihiki ni kansuru kihon keiyakusho*) (including without limitation separate agreements to be executed pursuant to or in connection with that Master Agreement such as Supplemental Memorandum of Understanding (*kabuken tou taishaku torihiki ni kansuru kihon keiyakusho fuzoku oboegaki*)) published by Japan Securities Dealers Association.

(sss) Master Agreement Concerning Bond Lending Transactions (*saiken taishaku torihiki ni kansuru kihon keiyakusho*) (including without limitation separate agreements to be executed pursuant to or in connection with that Master Agreement such as Supplemental Memorandum of Understanding (*saiken taishaku torihiki ni kansuru kihon keiyakusho fuzoku oboegaki*)) published by Japan Securities Dealers Association.

(ttt) Master Agreement Concerning Bond Repo Transactions (*saiken tou no gensaki torihiki ni kansuru kihon keiyakusho*) (including without limitation separate agreements to be executed pursuant to or in connection with that Master Agreement such as Supplemental Memorandum of Understanding (*saiken tou no gensaki torihiki ni kansuru kihon keiyakusho fuzoku oboegaki*)) published by Japan Securities Dealers Association.

(uuu) Mexican Master Derivatives Agreement (Contrato Marco para Operaciones Financieras Derivadas) published by Asociación de Bancos de Mexico (ABM) y Asociación Mexicana de Instituciones Bursátiles (AMIB).

(vvv) Mexican Master Securities Purchase and Sale/Repo Agreement (Contrato Marco para Operaciones de Compraventa de Valores y Reporto) published by Asociación de Bancos de Mexico (ABM) y Asociación Mexicana de Instituciones Bursátiles (AMIB).

Part 2: Additional Credit Support Documents

(a) 2007 FBF Collateral Annex.

(b) 1997 ABF Collateral Annex.

(c) AFB/BBF Addendum to the ISDA 2016 Credit Support Annex for Variation Margin (VM).

(d) 2008 Credit Support Appendix to the Swiss Master Agreement for OTC Derivative Instruments published by the Swiss Bankers Association.

(e) 2015 Credit Support Appendix to the Swiss Master Agreement for OTC Derivative Instruments published by the Swiss Bankers Association.

(f) Credit Support Appendix for Variation Margin to the Swiss Master Agreement for OTC Derivative Instruments published by the Swiss Bankers Association.

(g) Mexican Credit Support Agreement related to Derivatives (Contrato Global para Otorgar Garantías respecto de Operaciones Financieras Derivadas) published by Asociación de Bancos de Mexico (ABM) y Asociación Mexicana de Instituciones Bursátiles (AMIB).

Attachment to the ISDA 2020 IBOR Fallbacks Protocol

1. Amendments to Protocol Covered Documents Incorporating the 2006 ISDA Definitions

If a Protocol Covered Document incorporates the 2006 ISDA Definitions, the version of the 2006 ISDA Definitions so incorporated shall be amended in accordance with the terms of the IBOR Fallbacks Supplement (and, if that Protocol Covered Document is a Protocol Covered Master Agreement, any reference to a term defined in the 2006 ISDA Definitions in a Confirmation which supplements, forms part of and is subject to that Protocol Covered Master Agreement will be a reference to the term as defined in the 2006 ISDA Definitions as amended in accordance with the IBOR Fallbacks Supplement).

2. Amendments to Protocol Covered Documents Incorporating the 2000 ISDA Definitions

If a Protocol Covered Document incorporates the 2000 ISDA Definitions, the version of the 2000 ISDA Definitions so incorporated shall be amended in accordance with the terms of the IBOR Fallbacks Supplement (and, if that Protocol Covered Document is a Protocol Covered Master Agreement, any reference to a term defined in the 2000 ISDA Definitions in a Confirmation which supplements, forms part of and is subject to that Protocol Covered Master Agreement will be a reference to the

term as defined in the 2000 ISDA Definitions as amended in accordance with the IBOR Fallbacks Supplement), provided that the IBOR Fallbacks Supplement shall be deemed amended as follows:

(a) Each of the following sections shall be deleted:

- (i) “GBP-LIBOR-BBA-Bloomberg”;
- (ii) “CHF-LIBOR-BBA-Bloomberg”;
- (iii) “USD-LIBOR-BBA-Bloomberg”;
- (iv) “EUR-LIBOR-BBA-Bloomberg”;
- (v) “JPY-LIBOR-FRASET”;
- (vi) “JPY-LIBOR-BBA-Bloomberg”;
- (vii) “JPY-TIBOR-TIBM-(All Banks)-Bloomberg”;

- (viii) “AUD-BBR-BBSW-Bloomberg”;
- (ix) “CAD-BA-CDOR-Bloomberg”; and
- (x) “HKD-HIBOR-HKAB-Bloomberg”;

(b) The section titled “EUR-EURIBOR-Reuters” will be re-titled “EUR-EURIBOR-Telerate” and references in such section (or in related sections) to “EUR-EURIBOR-Reuters” will be deleted and replaced with “EUR-EURIBOR-Telerate”;

(c) The section titled “AUD-BBR-AUBBSW” will be re-titled “AUD-BBR-ISDC” and references in such section (or in related sections) to “AUD-BBR-AUBBSW” will be deleted and replaced with “AUD-BBR-ISDC”;

(d) The section titled “SGD-SOR-VWAP” will be re-titled “SGD-SOR-Telerate” and references in such section (or in related sections) to “SGD-SOR-VWAP” will be deleted and replaced with “SGD-SOR-Telerate”;

(e) In the section titled “THB-THBFX-Reuters”, the paragraph entitled “No Index Cessation Effective Date” shall be deemed amended as follows:

(i) The words “THB-THBFX-Reference Banks” as the applicable Floating Rate Option” will be deleted and replaced with the words ““THB-SOR-Reference Banks” as the applicable Floating Rate Option, but with the following variations:” and subparagraphs (a), (b) and (c) of Section 7.1(z)(iii) of the 2000 ISDA Definitions will be inserted immediately thereafter; and

(ii) The last sentence in that paragraph will be deleted; and

(f) All references to section numbers within the 2006 ISDA Definitions will be deemed to be references to the equivalent sections within the 2000 ISDA Definitions.

3. Amendments to Protocol Covered Documents Incorporating the 1991 ISDA Definitions and/or the 1998 Supplement to the 1991 ISDA Definitions

If a Protocol Covered Document incorporates the 1991 ISDA Definitions and/or the 1998 Supplement to the 1991 ISDA Definitions, the version of the 1991 ISDA Definitions and/or the 1998 Supplement to the 1991 ISDA Definitions (as applicable) so incorporated shall be amended in accordance with the terms of the IBOR Fallbacks Supplement (and, if that Protocol Covered Document is a Protocol Covered Master Agreement, any reference to a term defined in the 1991 ISDA Definitions and/or the 1998 Supplement to the 1991 ISDA Definitions in a Confirmation which supplements, forms part of and is subject to that Protocol Covered Master Agreement will be a reference to the

term as defined in the 1991 ISDA Definitions and/or the 1998 Supplement to the 1991 ISDA Definitions as amended in accordance with the IBOR Fallbacks Supplement), provided that the IBOR Fallbacks Supplement shall be deemed amended as follows:

(a) If the Protocol Covered Document incorporates the 1991 ISDA Definitions only, the 1991 ISDA Definitions as supplemented by the 1998 Supplement to the 1991 ISDA Definitions or the 1998 Supplement to the 1991 ISDA Definitions only, each of the following sections shall be deleted:

- (i) “GBP-LIBOR-BBA-Bloomberg”;
- (ii) “CHF-LIBOR-BBA-Bloomberg”;
- (iii) “USD-LIBOR-BBA-Bloomberg”;
- (iv) “EUR-LIBOR-BBA-Bloomberg”;
- (v) “EUR-EURIBOR-Reuters”;
- (vi) “JPY-LIBOR-FRASET”;
- (vii) “JPY-LIBOR-BBA-Bloomberg”;
- (viii) “JPY-TIBOR-17097”;
- (ix) “JPY-TIBOR-TIBM-(All Banks)-Bloomberg”;
- (x) “AUD-BBR-BBSW-Bloomberg”;
- (xi) “CAD-BA-CDOR-Bloomberg”;
- (xii) “HKD-HIBOR-HKAB-Bloomberg”;

and

(b) If the Protocol Covered Document incorporates the 1991 ISDA Definitions only, each of the following sections shall be deleted:

- (i) “JPY-TIBOR-ZTIBOR”; and
- (ii) “SGD-SOR-VWAP”;

(c) If the Protocol Covered Document incorporates the 1991 ISDA Definitions as supplemented by the 1998 Supplement to the 1991 ISDA Definitions or the 1998 Supplement to the 1991 ISDA Definitions only, the section titled “SGD-SOR-VWAP” will be re-titled “SGD-SOR-Telerate” and references in such section (or in related sections) to “SGD-SOR-VWAP” will be deleted and replaced with “SGD-SOR-Telerate”;

(d) The section titled “EUR-LIBOR-BBA” will be re-titled “XEU-LIBOR-BBA” and references in such section (or in related sections) to “EUR-LIBOR-BBA” will be deleted and replaced with “XEU-LIBOR-BBA”;

(e) The section titled “AUD-BBR-AUBBSW” will be re-titled “AUD-BBR-ISDC” and references in such section (or in related sections) to “AUD-BBR-AUBBSW” will be deleted and replaced with “AUD-BBR-ISDC”;

(f) All references to section numbers within the 2006 ISDA Definitions will be deemed to be references to the equivalent sections within the 1991 ISDA Definitions or the 1998 Supplement to the 1991 ISDA Definitions (as applicable).

4. Amendments to Protocol Covered Documents Incorporating the 1998 ISDA Euro Definitions

If a Protocol Covered Document incorporates the 1998 ISDA Euro Definitions:

(a) the version of the 1998 ISDA Euro Definitions so incorporated shall be amended in accordance with the terms of the IBOR Fallbacks Supplement (and, if that Protocol Covered Document is a Protocol Covered Master Agreement, any reference to a term

defined in the 1998 ISDA Euro Definitions in a Confirmation which supplements, forms part of and is subject to that Protocol Covered Master Agreement will be a reference to the term as defined in the 1998 ISDA Euro Definitions as amended in accordance with the IBOR Fallbacks Supplement), provided that the IBOR Fallbacks Supplement shall be deemed amended as follows:

(i) Each of the following sections shall be deleted:

- (A) “GBP-LIBOR-BBA”;
- (B) “GBP-LIBOR-BBA-Bloomberg”;
- (C) “CHF-LIBOR-BBA”;
- (D) “CHF-LIBOR-BBA-Bloomberg”;
- (E) “USD-LIBOR-BBA”;
- (F) “USD-LIBOR-BBA-Bloomberg”;
- (G) “EUR-LIBOR-BBA-Bloomberg”;
- (H) “JPY-LIBOR-FRASET”;
- (I) “JPY-LIBOR-BBA”;
- (J) “JPY-LIBOR-BBA-Bloomberg”;
- (K) “JPY-TIBOR-17097”;
- (L) “JPY-TIBOR-TIBM-(All Banks)-Bloomberg”;

(M) “JPY-TIBOR-ZTIBOR”;

(N) “AUD-BBR-AUBBSW”;

(O) “AUD-BBR-BBSW”;

(P) “AUD-BBR-BBSW-Bloomberg”;

(Q) “CAD-BA-CDOR”;

(R) “CAD-BA-CDOR-Bloomberg”;

(S) “HKD-HIBOR-HKAB”;

(T) “HKD-HIBOR-HKAB-Bloomberg”;

(U) “SGD-SOR-VWAP”; and

(V) “THB-THBFX-Reuters”;

(ii) the section titled “EUR-EURIBOR-Reuters” will be re-titled “EUR-EURIBOR-Telerate” and references in such section (or in related sections) to “EUR-EURIBOR-Reuters” will be deleted and replaced with “EUR-EURIBOR-Telerate”; and

(iii) all references to section numbers within the 2006 ISDA Definitions will be deemed to be references to the equivalent sections within the 1998 ISDA Euro Definitions.

(b) If a Relevant Rate (as defined in the 1991 ISDA Definitions) is to be determined pursuant to Section 4.3(b) (*Price Source Fallbacks*) of the 1998 ISDA Euro Definitions and “rates for deposits in euros” referred to in that section are required for any determination but are not available, they shall be deemed to be references to a Relevant IBOR (and, in particular, the euro interbank offered rate) to which paragraph 6 of this Attachment applies.

5. Amendments to Protocol Covered Documents Which Reference a Relevant IBOR “as defined”, or as Having the Meaning Given, in a Covered ISDA Definitions Booklet

A Protocol Covered Document of the type described in subparagraph (b) of, respectively, the definition of Protocol Covered Confirmation, Protocol Covered Credit Support Document or Protocol Covered Master Agreement shall be amended so that the reference to the Relevant IBOR “as defined in”, or the reference to the Relevant IBOR as having the meaning given in, the Covered ISDA Definitions Booklet will instead be a reference to the relevant Rate Option in the IBOR Fallbacks Supplement (or, if there is more than one relevant Rate Option, the first relevant Rate Option in the

IBOR Fallbacks Supplement) for the Relevant IBOR “as defined in the IBOR Fallbacks Supplement” (and, if that Protocol Covered Document is a Protocol Covered Master Agreement, any reference to the Relevant IBOR (as defined in that Protocol Covered Master Agreement) in a Confirmation which supplements, forms part of and is subject to that Protocol Covered Master Agreement will be a reference to the relevant Rate Option in the IBOR Fallbacks Supplement (or, if there is more than one relevant Rate Option, the first relevant Rate Option in the IBOR Fallbacks Supplement) for the Relevant IBOR “as defined in the IBOR Fallbacks Supplement”), provided that:

- (a) If the Relevant IBOR is:
 - (i) “EUR–EURIBOR–Telerate”, it will be deemed to be a reference to “EUR–EURIBOR–Reuters”;
 - (ii) “AUD–BBR–ISDC”, it will be deemed to be a reference to “AUD–BBR–AUBBSW”;
 - (iii) “XEU–LIBOR–BBA”, it will be deemed to be a reference to “EUR–LIBOR–BBA”; and
 - (iv) “SGD–SOR–Telerate”, it will be deemed to be a reference to “SGD–SOR–VWAP”, in each case, as defined in the IBOR Fallbacks Supplement; and
- (b) If the Relevant IBOR is “THB–THBFX–Reuters” and the Covered ISDA Definitions Booklet is the 2000 ISDA Definitions, the IBOR Fallbacks Supplement shall be deemed amended in accordance with subparagraph 2(e) of this Attachment.

6. Amendments to Certain Protocol Covered Documents That Reference a Relevant IBOR

If a Protocol Covered Document is of the type described in subparagraph (c) of, respectively, the definition of Protocol Covered Confirmation, Protocol Covered Credit Support Document or Protocol Covered Master Agreement and, in each case, includes a reference to a Relevant IBOR pursuant to which the Relevant IBOR is required for any determination, and:

(a) (i) the Relevant IBOR which is required for that determination is neither the Singapore dollar swap offer rate nor the Thai baht interest rate fixing, (ii) the Relevant IBOR which is required for that determination has not been published by the source that is specified or otherwise ordinarily used to determine the level of the Relevant IBOR on the day on which it is required, and (iii) an Index Cessation Effective Date with respect to the Relevant IBOR has not occurred, then the reference to the Relevant IBOR will be deemed to be a reference to the rate as provided by the administrator of the Relevant IBOR and published by an authorized distributor of the Relevant IBOR or the administrator of the Relevant IBOR itself in respect of the day on which it is required. If neither an authorized distributor nor the administrator has published or provided the Relevant IBOR in respect of that day and an Index Cessation Effective Date with respect to the Relevant IBOR has not occurred, then, unless otherwise agreed by the parties, the reference to the Relevant IBOR will be deemed to be a reference to:

(A) A rate formally recommended for use by the administrator of the Relevant IBOR; or

(B) A rate formally recommended for use by:

(I) If the Relevant IBOR which is required for that determination is Swiss franc LIBOR, the competent authority responsible for supervising that rate or the administrator of that rate;

(II) If the Relevant IBOR which is required for that determination is sterling LIBOR, euro LIBOR or the euro interbank offered rate, the supervisor which is responsible for supervising the Relevant IBOR or the administrator of the Relevant IBOR;

(III) If the Relevant IBOR which is required for that determination is Japanese yen LIBOR, the Japanese yen Tokyo interbank offered rate or the euroyen Tokyo interbank offered rate, a committee officially endorsed or convened by the Bank of Japan for the purposes of recommending an alternative rate for that Relevant IBOR (which rate may be produced by the Bank of Japan or another administrator) or any other supervisor which is responsible for supervising the Relevant IBOR or the administrator of the Relevant IBOR;

(IV) If the Relevant IBOR which is required for that determination is U.S. dollar LIBOR, the Federal Reserve Board or the Federal Reserve Bank of New York or any other supervisor which is responsible for supervising the Relevant IBOR or the administrator of the Relevant IBOR; and

(V) If the Relevant IBOR which is required for that determination is the bank bill swap rate, the Australian Securities and Investments Commission (or any successor to the Australian Securities and Investments Commission in its role as supervisor of the bank bill swap rate),

In each case, during the period of non-publication of the Relevant IBOR and for so long as an Index Cessation Effective Date has not occurred. If a rate described in subparagraph (A) above is available, that rate shall apply. If no such rate is available but, in respect of the Relevant IBOR, a rate described in subparagraph (B) above, if applicable, is available, that rate shall apply. If neither a rate described in subparagraph (A) above is available nor a rate described in subparagraph (B) above, if applicable, is available, then the Calculation Agent shall determine a commercially reasonable alternative for the Relevant IBOR, taking into account any rate implemented by central counterparties and/or futures exchanges, in each case with trading volumes in derivatives or futures referencing the Relevant IBOR that the Calculation Agent considers sufficient for that rate to be a representative alternative rate.

If the Relevant IBOR is the Hong Kong interbank offered rate and the Protocol Covered Document provides that the Hong Kong Association of Banks’ (or any successor’s) typhoon and rainstorm arrangements (as published on the Hong Kong Association of Banks’ website or on any successor website) apply, then those typhoon and rainstorm arrangements shall continue to apply and shall take precedence over the provisions of this paragraph 6(a);

(b) (i) The Relevant IBOR which is required for that determination is the Singapore dollar swap offer rate, (ii) the Singapore dollar swap offer rate has not been published by the source that is specified or otherwise

ordinarily used to determine the level of the Singapore dollar swap offer rate on the day on which it is required and (iii) an Index Cessation Effective Date with respect to U.S. dollar LIBOR has not occurred, then the reference to the Singapore dollar swap offer rate will be deemed to be a reference to the substitute rate announced by ABS Benchmarks Administration Co Pte. Ltd. (or its successor as administrator or sponsor of that rate) in respect of the Singapore dollar swap offer rate.

If ABS Benchmarks Administration Co Pte. Ltd. (or its successor as administrator or sponsor of that rate) has not announced a substitute rate by 9:00 p.m., Singapore time, on the Relevant Original Fixing Date and an Index Cessation Effective Date with respect to U.S. dollar LIBOR has not occurred, then, unless otherwise agreed by the parties, the reference to the Singapore dollar swap offer rate will be deemed to be a reference to:

(A) A rate formally recommended for use by the administrator of the Singapore dollar swap offer rate; or

(B) A rate formally recommended for use by the Monetary Authority of Singapore (or any other supervisor which is responsible for supervising the Singapore dollar swap offer rate or the administrator of the Singapore dollar swap offer rate) or a committee officially endorsed or convened by the Monetary Authority of Singapore (or any other supervisor which is responsible for supervising the Singapore dollar swap offer rate or the administrator of the Singapore dollar swap offer rate), in each case, during the period of non-publication of the Singapore dollar swap offer rate and for so long as an Index Cessation Effective Date with respect to U.S. dollar LIBOR has not occurred. If a rate described in subparagraph (A) above is available, that rate shall apply. If no such rate is available but a rate described in subparagraph (B) above is available, that rate shall apply. If neither a rate described in subparagraph (A) above nor a rate described in subparagraph (B) above is available, then the Calculation Agent shall determine a commercially reasonable alternative for the Singapore dollar swap offer rate, taking into account any rate implemented by central counterparties and/or futures exchanges, in each case with trading volumes in derivatives or futures referencing the Singapore dollar swap offer rate that the Calculation Agent considers sufficient for that rate to be a representative alternative rate;

(c) (i) the Relevant IBOR which is required for that determination is the Thai baht interest rate fixing, (ii) the Thai baht interest rate fixing has not been published by the source that is specified or otherwise ordinarily used to determine the level of the Thai baht interest rate fixing on the day on which it is required and (iii) an Index Cessation Effective Date with respect to U.S. dollar LIBOR has not occurred, then the reference to the Thai baht interest rate fixing will be deemed to be a reference to “THB–THBFX–Reference Banks” (as defined in the 2006 ISDA Definitions) but with the references to (A) “Reset Date” being replaced by “the day on which the rate is required”; (B) “Designated Maturity” being replaced by

“the period of time in respect of which the Thai baht interest rate fixing is to be determined”; (C) “Calculation Period” being replaced by “period”; and (D) “Representative Amount” being replaced by “an amount that is representative for a single transaction in the relevant market at the relevant time”. If the rate cannot be determined pursuant to “THB–THBFX–Reference Banks” (as defined in the 2006 ISDA Definitions) and an Index Cessation Effective Date with respect to U.S. dollar LIBOR has not occurred, the rate will be determined by the Calculation Agent taking into consideration all available information that in good faith it deems relevant;

(d) Subject to paragraphs 6(e), (f) and (g) below, an Index Cessation Event has occurred with respect to the Relevant IBOR (or, if the Relevant IBOR is either the Singapore dollar swap offer rate or the Thai baht interest rate fixing, with respect to U.S. dollar LIBOR), then the reference to the Relevant IBOR will be deemed to be a reference to the Applicable Fallback Rate from and including either the Index Cessation Effective Date or, if the Relevant IBOR is observed on a day that is a period of time prior to the date for which the Relevant IBOR is set, such period of time following the Index Cessation Effective Date, provided that:

(i) If the Applicable Fallback Rate is Fallback Rate (SONIA), Fallback Rate (SARON), Fallback Rate (SOFR), Fallback Rate (EuroSTR), Fallback Rate (TONA), Fallback Rate (AONIA), Fallback Rate (CORRA), Fallback Rate (HONIA), Fallback Rate (SOR) or Fallback Rate (THBFX), then the rate for the Relevant Original Fixing Date will be the Applicable Fallback Rate for the ‘Original IBOR Rate Record Day’ (or, if Fallback Rate (SOR) or Fallback Rate (THBFX) is the Applicable Fallback Rate, for the ‘Original SOR Rate Record Day’ or ‘Original THBFX Rate Record Day’, as applicable) that corresponds to the Relevant Original Fixing Date, as most recently provided or published as at the Applicable Cut-off Time. If neither the provider of the Applicable Fallback Rate (or a successor provider, which, if the Applicable Fallback Rate is Fallback Rate (SONIA), Fallback Rate (SARON), Fallback Rate (SOFR), Fallback Rate (EuroSTR), Fallback Rate (TONA), Fallback Rate (AONIA), Fallback Rate (CORRA) or Fallback Rate (HONIA), is approved and/or appointed by ISDA from time to time) provides, nor any authorized distributors publish, the Applicable Fallback Rate for that ‘Original IBOR Rate Record Day’ (or that ‘Original SOR Rate Record Day’ or ‘Original THBFX Rate Record Day’, as applicable) at, or prior to, the Applicable Cut-off Time and a Fallback Index Cessation Effective Date with respect to that Applicable Fallback Rate has not occurred, then the rate for the Relevant Original Fixing Date will be the Applicable Fallback Rate as most recently provided or published at the Applicable Cut-off Time for the most recent ‘Original IBOR Rate Record Day’ (or ‘Original SOR Rate Record Day’ or ‘Original THBFX Rate Record Day’, as applicable), notwithstanding that such day does not correspond to the Relevant Original Fixing Date;

(ii) If (A) the Applicable Fallback Rate is SONIA, the GBP Recommended Rate, SARON, the NWG Recommended Rate, the Modified SNB Policy Rate, SOFR, the Fed Recommended Rate, OBFR, the FOMC Target Rate, EuroSTR, the ECB Recommended Rate, Modified EDRF, TONA, the JPY Recommended Rate, AONIA, the RBA Recommended Rate, CORRA, the CAD Recommended Rate, the BOC Target Rate, HONIA, the HKD Recommended Rate, the MAS Recommended Rate, SORA, the BOT Recommended Rate or THOR, (B) neither the administrator provides nor authorized distributors publish that Applicable Fallback Rate (or if the Applicable Fallback Rate is the Modified SNB Policy Rate or Modified EDRF, the index, benchmark or other price source that is referred to in the definition thereof) and (C) a Fallback Index Cessation Effective Date with respect to that Applicable Fallback Rate has not occurred, then, in respect of any day for which that Applicable Fallback Rate is required, references to that Applicable Fallback Rate will be deemed to be references to the last provided or published Applicable Fallback Rate. If the Applicable Fallback Rate is the Modified SNB Policy Rate or Modified EDRF, references to that Applicable Fallback Rate in subparagraph 6(d)(ii)(C) above shall be deemed to be references to the index, benchmark or other price source that is referred to in the definition of Modified SNB Policy Rate or Modified EDRF, as applicable; and

(iii) If the Applicable Fallback Rate is UK Bank Rate, in respect of any day for which the UK Bank Rate is required, references to the UK Bank Rate will be deemed to be references to the last provided or published UK Bank Rate as at close of business in London on that day.

If the Relevant IBOR is the Singapore dollar swap offer rate or the Thai baht interest rate fixing, an Index Cessation Event with respect to U.S. dollar LIBOR will also occur if the Relevant IBOR in the relevant tenor (which under the 2006 ISDA Definitions would be equivalent to the “Designated Maturity”) has not been published by the source that is specified or otherwise ordinarily used to determine the level of the Relevant IBOR and, as of the Relevant Original Fixing Date, U.S. dollar LIBOR in the relevant tenor (which under the 2006 ISDA Definitions would be equivalent to the “Designated Maturity”) has been permanently discontinued or is Non-Representative and there is either no U.S. dollar LIBOR which has not been permanently discontinued and which is not Non-Representative for a period which is longer than that relevant tenor or no U.S. dollar LIBOR which has not been permanently discontinued and which is not Non-Representative for a period which is shorter than that relevant tenor. The related Index Cessation Effective Date shall be the first date on which there is no such longer or shorter rate or, if later, the first date on which U.S. dollar LIBOR in the relevant tenor (which under the 2006 ISDA Definitions would be equivalent to the “Designated Maturity”) is permanently unavailable or Non-Representative.

For the purposes of this paragraph 6(d), references to an “Original IBOR Rate Record

Day”, “Original SOR Rate Record Day” and “Original THBFX Rate Record Day” are to that term as used on the Fallback Rate Screen. For the purposes of the immediately preceding paragraph above, (A) references to a rate being “permanently discontinued” or “permanently unavailable” shall be deemed to be references to such rate being permanently discontinued or permanently unavailable following a public statement or publication of information which would constitute an Index Cessation Event in accordance with subparagraphs (a) and (b) of the definition thereof in respect of that rate in the relevant tenor and (B) references to “U.S. dollar LIBOR” in the definition of “Non-Representative” shall be deemed to be references to the relevant tenor of U.S. dollar LIBOR;

(e) If the Relevant IBOR which is required for that determination is neither the Singapore dollar swap offer rate nor the Thai baht interest rate fixing and:

(i) The determination for which the Relevant IBOR is required is ordinarily made by reference to linear interpolation between two rates, each of which is based on the Relevant IBOR, then (notwithstanding paragraph 6(d) above) the provisions of Section 7.9(a) of the 2006 ISDA Definitions shall be deemed to apply, provided that the Calculation Agent shall make such adaptations as are reasonable and necessary to the provisions of Section 7.9(a) of the 2006 ISDA Definitions in order to apply them to the relevant Protocol Covered Document;

(ii) The Relevant IBOR which is required for that determination is to be determined by reference to one or more rates, either (A) at least one of which has been permanently discontinued, or (B) if the Relevant IBOR is a Relevant LIBOR, at least one of which is Non-Representative, and, in either case, at least two Relevant IBOR tenors, at least one of which is shorter than the period of time in respect of which the Relevant IBOR is to be determined and at least one of which is longer than the period of time in respect of which the Relevant IBOR is to be determined, have not been permanently discontinued (and, if the Relevant IBOR is a Relevant LIBOR, are not Non-Representative), then the provisions of Section 8.5 and Section 8.6 of the 2006 ISDA Definitions shall be deemed to apply, provided that the Calculation Agent shall make such adaptations as are reasonable and necessary to the provisions of Sections 8.5 and 8.6 of the 2006 ISDA Definitions in order to apply them to the relevant Protocol Covered Document;

(iii) The Relevant IBOR which is required for that determination is to be determined by reference to a tenor of the Relevant IBOR which has been permanently discontinued (or, if the Relevant IBOR is a Relevant LIBOR, which is Non-Representative), and there are either no shorter or no longer tenors in respect of the Relevant IBOR which have not been permanently discontinued (or, if the Relevant IBOR is a Relevant LIBOR, which are not Non-Representative), then an Index Cessation Event shall be deemed to have occurred with respect to the Relevant IBOR and the Index Cessation Effective Date shall be the first date on which there is either no such shorter or no such longer tenor or, if

later, the first date on which the Relevant IBOR in the relevant tenor is permanently unavailable (or, if the Relevant IBOR is a Relevant LIBOR, Non-Representative);

(iv) In the event of any inconsistency between the provisions of subparagraph 6(e)(ii) or subparagraph 6(e)(iii) above and the provisions of subparagraph 6(e)(i) above, subparagraph 6(e)(i) above shall prevail; and

(v) In the event of any inconsistency between the provisions of subparagraph 6(e)(ii) or subparagraph 6(e)(iii) above and paragraph 6(d) above (including any terms used in paragraph 6(d) above and defined below), subparagraph 6(e)(ii) or subparagraph 6(e)(iii) above (as applicable) shall prevail,

For the purposes of this paragraph 6(e), (A) references to a rate being “permanently discontinued” shall be deemed to be references to such rate being permanently discontinued following a public statement or publication of information which would constitute an Index Cessation Event in accordance with subparagraphs (a) and (b) of the definition thereof in respect of that rate in the relevant tenor, (B) references to the “Relevant LIBOR” in the definition of “Non-Representative” shall be deemed to be references to the relevant tenor of the Relevant LIBOR and (C) Section 7.9(a), 8.5 and 8.6 of the 2006 ISDA Definitions shall be construed in accordance with Sections 7.3(r) and 7.3(s) of the 2006 ISDA Definitions;

(f) If the Relevant IBOR which is required for that determination is the Singapore dollar swap offer rate or the Thai baht interest rate fixing and the determination for which the Relevant IBOR is required is ordinarily made by reference to linear interpolation between two rates, each of which is based on the Relevant IBOR, then (notwithstanding paragraph 6(d) above) the provisions of Section 7.10(a) of the 2006 ISDA Definitions shall be deemed to apply, provided that the Calculation Agent shall make such adaptations as are reasonable and necessary to the provisions of Section 7.10(a) of the 2006 ISDA Definitions in order to apply them to the relevant Protocol Covered Document.

For the purposes of this paragraph 6(f), Section 7.10(a) of the 2006 ISDA Definitions shall be construed in accordance with Sections 7.3(r) and 7.3(s) of the 2006 ISDA Definitions;

(g) If (i) the Relevant IBOR which is required for that determination is the Singapore dollar swap offer rate or the Thai baht interest rate fixing and the Applicable Fallback Rate is Fallback Rate (SOR) or Fallback Rate (THBFX), as applicable, (ii) the determination for which the Relevant IBOR is required is not ordinarily made by reference to linear interpolation between two rates and (iii) the period of time for which the rate is required (which under the 2006 ISDA Definitions would be the “Calculation Period”) is shorter than the Relevant IBOR in the relevant tenor (which under the 2006 ISDA Definitions would be the “Designated Maturity”), then (notwithstanding paragraph 6(d) above) the provisions of Section 7.11(a) of the 2006 ISDA Definitions shall be deemed to apply, provided that the Calculation Agent shall make such adaptations as are reasonable and necessary to the provisions of Section 7.11(a) of the 2006 ISDA Definitions

in order to apply them to the relevant Protocol Covered Document; and

(h) If the definition, methodology, formula or other means of calculating the Relevant IBOR or the Applicable Fallback Rate (or, if applicable, the index, benchmark or other price source that is referred to in the Relevant IBOR or the Applicable Fallback Rate) is modified, each party acknowledges that, unless otherwise specified or agreed, references to that Relevant IBOR or the Applicable Fallback Rate (or the index, benchmark or other price source that is referred to in the Relevant IBOR or the Applicable Fallback Rate) shall be to the Relevant IBOR or the Applicable Fallback Rate (or the index, benchmark or other price source that is referred to in the Relevant IBOR or the Applicable Fallback Rate) as modified. In the event of any inconsistency between this paragraph 6(h) and paragraphs 6(a) through 6(d) above (including any terms used in those paragraphs and defined below and including subparagraphs 6(e)(ii) and 6(e)(iii) above as they apply in priority to paragraph 6(d) above), paragraphs 6(a) through 6(d) above including subparagraphs 6(e)(ii) and 6(e)(iii) as they apply in priority to paragraph 6(d) above shall prevail.

If the Relevant IBOR referenced in the Protocol Covered Document is LIBOR with no reference to, or indication of, the currency of the relevant LIBOR (including, for the avoidance of doubt, the reference in Section 7.3 (*Corrections to Published Prices*) of the 2005 ISDA Commodity Definitions to “the spot offered rate for deposits in the payment currency in the London interbank market as at approximately 11:00 a.m., London time”), then the reference to LIBOR (howsoever defined or described) in the Protocol Covered Document will be deemed to be a reference to LIBOR in the currency of the related payment for which LIBOR is required pursuant to the terms of the Protocol Covered Document and paragraphs 6(a), 6(d) and 6(e) above, and the related definitions below, shall be construed accordingly.

For the purposes of any Protocol Covered Document which does not include a definition of “Calculation Agent”, the term “Calculation Agent” shall be deemed to be a reference to a party or parties who would ordinarily be responsible for calculating or determining any rates or amounts payable under the relevant Protocol Covered Document and performing any associated duties.

If the Protocol Covered Document to which this paragraph 6 applies is a Protocol Covered Master Agreement, the Relevant IBOR is defined in the Protocol Covered Master Agreement and that definition is referenced in a Confirmation that supplements, forms part of and is subject to that Protocol Covered Master Agreement, then the reference in the Protocol Covered Master Agreement to the Relevant IBOR as amended by this paragraph 6 will also apply to the reference to the Relevant IBOR in that Confirmation.

For these purposes:

“*Applicable Banking Days*” means, if the Relevant IBOR is:

(a) Swiss franc LIBOR, U.S. dollar LIBOR or Japanese yen LIBOR, London Banking

Days (as defined in the 2006 ISDA Definitions);

(b) Euro LIBOR or the euro interbank offered rate, TARGET Settlement Days (as defined in the 2006 ISDA Definitions);

(c) The Japanese yen Tokyo interbank offered rate or the euroyen Tokyo interbank offered rate, Tokyo Banking Days (as defined in the 2006 ISDA Definitions);

(d) The Singapore dollar swap offer rate, Singapore and London Banking Days (as defined in the 2006 ISDA Definitions); and

(e) The Thai baht interest rate fixing, Bangkok Banking Days (as defined in the 2006 ISDA Definitions).

“*Applicable Cut-off Time*” means:

(a) for Fallback Rate (SONIA), 11:30 a.m., London time;

(b) for Fallback Rate (SARON), 8:30 p.m., Zurich time;

(c) for Fallback Rate (SOFR), 10:30 a.m., New York City time;

(d) for Fallback Rate (EuroSTR), 11:30 a.m., Frankfurt time;

(e) for Fallback Rate (TONA), 12:30 p.m., Tokyo time;

(f) for Fallback Rate (AONIA), 11:30 a.m., Sydney time;

(g) for Fallback Rate (CORRA), 11:30 a.m., Toronto time;

(h) for Fallback Rate (HONIA), 7:30 p.m., Hong Kong time;

(i) for Fallback Rate (SOR), 11:30 a.m., New York City time; and

(j) for Fallback Rate (THBFX), 10:00 a.m., Bangkok time, in each case, on the Fallback Observation Day.

“*Applicable Fallback Rate*” means, in respect of a Relevant IBOR, for the purposes of:

(a) Sterling LIBOR, Fallback Rate (SONIA) or if a Fallback Index Cessation Event has occurred with respect to Fallback Rate (SONIA), then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (SONIA) will be the Sterling Overnight Index Average (“SONIA”) rate administered by the Bank of England (or any successor administrator), to which the Calculation Agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to Fallback Rate (SONIA), referred to in the definition of “Fallback Rate (SONIA)” after making such adjustments to SONIA as are necessary to account for any difference in term structure or tenor of SONIA by comparison to Fallback Rate (SONIA) and by reference to the Bloomberg IBOR Fallback Rate Adjustments Rule Book. If a Fallback Index Cessation Effective Date occurs with respect to each of Fallback Rate (SONIA) and SONIA, then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (SONIA) (or, if later, the Fallback Index Cessation Effective Date with respect to SONIA) will be the GBP Recommended Rate, to which the Calculation Agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to Fallback Rate (SONIA), referred to in the definition of “Fallback Rate (SONIA)” after

making such adjustments to the GBP Recommended Rate as are necessary to account for any difference in term structure or tenor of the GBP Recommended Rate by comparison to Fallback Rate (SONIA) and by reference to the Bloomberg IBOR Fallback Rate Adjustments Rule Book. If there is no GBP Recommended Rate before the end of the first London Banking Day (as defined in the 2006 ISDA Definitions) following the Fallback Index Cessation Effective Date with respect to Fallback Rate (SONIA) (or, if later, the end of the first London Banking Day following the Fallback Index Cessation Effective Date with respect to SONIA), or there is a GBP Recommended Rate and a Fallback Index Cessation Effective Date subsequently occurs with respect to it, then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (SONIA) (or, if later, the Fallback Index Cessation Effective Date with respect to SONIA) or the Fallback Index Cessation Effective Date with respect to the GBP Recommended Rate (as applicable) will be the UK Bank Rate, to which the Calculation Agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to Fallback Rate (SONIA), referred to in the definition of "Fallback Rate (SONIA)" after making such adjustments to the UK Bank Rate as are necessary to account for any difference in term structure or tenor of the UK Bank Rate by comparison to Fallback Rate (SONIA) and by reference to the Bloomberg IBOR Fallback Rate Adjustments Rule Book;

(b) Swiss franc LIBOR, Fallback Rate (SARON) or if a Fallback Index Cessation Event has occurred with respect to Fallback Rate (SARON), then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (SARON) will be the Swiss Average Rate Overnight ("SARON") administered by SIX Swiss Exchange AG (or any successor administrator), to which the Calculation Agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to Fallback Rate (SARON), referred to in the definition of "Fallback Rate (SARON)" after making such adjustments to SARON as are necessary to account for any difference in term structure or tenor of SARON by comparison to Fallback Rate (SARON) and by reference to the Bloomberg IBOR Fallback Rate Adjustments Rule Book.

If a Fallback Index Cessation Effective Date occurs with respect to each of Fallback Rate (SARON) and SARON, then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (SARON) (or, if later, the Fallback Index Cessation Effective Date with respect to SARON) will be the NWG Recommended Rate, to which the Calculation Agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to Fallback Rate (SARON), referred to in the definition of "Fallback Rate (SARON)" after

making such adjustments to the NWG Recommended Rate as are necessary to account for any difference in term structure or tenor of the NWG Recommended Rate by comparison to Fallback Rate (SARON) and by reference to the Bloomberg IBOR Fallback Rate Adjustments Rule Book.

If there is no NWG Recommended Rate before the end of the first Zurich Banking Day (as defined in the 2006 ISDA Definitions) following the Fallback Index Cessation Effective Date with respect to Fallback Rate (SARON) (or, if later, the end of the first Zurich Banking Day following the Fallback Index Cessation Effective Date with respect to SARON), then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (SARON) (or, if later, the Fallback Index Cessation Effective Date with respect to SARON) will be the Modified SNB Policy Rate, to which the Calculation Agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to Fallback Rate (SARON), referred to in the definition of "Fallback Rate (SARON)" after making such adjustments to the Modified SNB Policy Rate as are necessary to account for any difference in term structure or tenor of the Modified SNB Policy Rate by comparison to Fallback Rate (SARON) and by reference to the Bloomberg IBOR Fallback Rate Adjustments Rule Book;

(c) U.S. dollar LIBOR, Fallback Rate (SOFR) or if a Fallback Index Cessation Event has occurred with respect to Fallback Rate (SOFR), then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (SOFR) will be the Secured Overnight Financing Rate ("SOFR") administered by the Federal Reserve Bank of New York (or any successor administrator), to which the Calculation Agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to Fallback Rate (SOFR), referred to in the definition of "Fallback Rate (SOFR)" after making such adjustments to SOFR as are necessary to account for any difference in term structure or tenor of SOFR by comparison to Fallback Rate (SOFR) and by reference to the Bloomberg IBOR Fallback Rate Adjustments Rule Book.

If a Fallback Index Cessation Effective Date occurs with respect to each of Fallback Rate (SOFR) and SOFR, then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (SOFR) (or, if later, the Fallback Index Cessation Effective Date with respect to SOFR) will be the Fed Recommended Rate, to which the Calculation Agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to Fallback Rate (SOFR), referred to in the definition of "Fallback Rate (SOFR)" after making such adjustments to the Fed Recommended Rate as are necessary to account for any difference in term structure or tenor of the Fed Recommended Rate by comparison to Fallback Rate (SOFR) and by

reference to the Bloomberg IBOR Fallback Rate Adjustments Rule Book. If there is no Fed Recommended Rate before the end of the first U.S. Government Securities Business Day (as defined in the 2006 ISDA Definitions) following the Fallback Index Cessation Effective Date with respect to Fallback Rate (SOFR) (or, if later, the end of the first U.S. Government Securities Business Day following the Fallback Index Cessation Effective Date with respect to SOFR), or there is a Fed Recommended Rate and a Fallback Index Cessation Effective Date subsequently occurs with respect to it, then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (SOFR) (or, if later, the Fallback Index Cessation Effective Date with respect to SOFR) or the Fallback Index Cessation Effective Date with respect to the Fed Recommended Rate (as applicable) will be OBFR, to which the Calculation Agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to Fallback Rate (SOFR), referred to in the definition of "Fallback Rate (SOFR)" after making such adjustments to OBFR as are necessary to account for any difference in term structure or tenor of OBFR by comparison to Fallback Rate (SOFR) and by reference to the Bloomberg IBOR Fallback Rate Adjustments Rule Book.

If there is no Fed Recommended Rate, or there is a Fed Recommended Rate and a Fallback Index Cessation Effective Date subsequently occurs with respect to it, and a Fallback Index Cessation Effective Date also occurs with respect to OBFR, then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to OBFR (or, if later, the Fallback Index Cessation Effective Date with respect to the Fed Recommended Rate, SOFR or Fallback Rate (SOFR), as applicable) will be the FOMC Target Rate, to which the Calculation Agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to Fallback Rate (SOFR), referred to in the definition of "Fallback Rate (SOFR)" after making such adjustments to the FOMC Target Rate as are necessary to account for any difference in term structure or tenor of the FOMC Target Rate by comparison to Fallback Rate (SOFR) and by reference to the Bloomberg IBOR Fallback Rate Adjustments Rule Book;

(d) Euro LIBOR and the euro interbank offered rate, Fallback Rate (EuroSTR) or if a Fallback Index Cessation Event has occurred with respect to Fallback Rate (EuroSTR), then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (EuroSTR) will be the Euro Short-Term Rate ("EuroSTR") administered by the European Central Bank (or any successor administrator), to which the Calculation Agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to Fallback Rate (EuroSTR), referred to in the definition of "Fallback Rate (EuroSTR)" after

making such adjustments to EuroSTR as are necessary to account for any difference in term structure or tenor of EuroSTR by comparison to Fallback Rate (EuroSTR) and by reference to the Bloomberg IBOR Fallback Rate Adjustments Rule Book. If a Fallback Index Cessation Effective Date occurs with respect to each of Fallback Rate (EuroSTR) and EuroSTR, then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (EuroSTR) (or, if later, the Fallback Index Cessation Effective Date with respect to EuroSTR) will be the ECB Recommended Rate, to which the Calculation Agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to Fallback Rate (EuroSTR), referred to in the definition of "Fallback Rate (EuroSTR)" after making such adjustments to the ECB Recommended Rate as are necessary to account for any difference in term structure or tenor of the ECB Recommended Rate by comparison to Fallback Rate (EuroSTR) and by reference to the Bloomberg IBOR Fallback Rate Adjustments Rule Book.

If no ECB Recommended Rate is recommended before the end of the first TARGET Settlement Day (as defined in the 2006 ISDA Definitions) following the Fallback Index Cessation Effective Date with respect to Fallback Rate (EuroSTR) (or, if later, the end of the first TARGET Settlement Day following the Fallback Index Cessation Effective Date with respect to EuroSTR), or a Fallback Index Cessation Effective Date with respect to the ECB Recommended Rate subsequently occurs, then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (EuroSTR) (or, if later, the Fallback Index Cessation Effective Date with respect to EuroSTR) or the Fallback Index Cessation Effective Date with respect to the ECB Recommended Rate (as applicable) will be Modified EDFR, to which the Calculation Agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to Fallback Rate (EuroSTR), referred to in the definition of "Fallback Rate (EuroSTR)" after making such adjustments to Modified EDFR as are necessary to account for any difference in term structure or tenor of Modified EDFR by comparison to Fallback Rate (EuroSTR) and by reference to the Bloomberg IBOR Fallback Rate Adjustments Rule Book;

(e) Japanese yen LIBOR, the Japanese yen Tokyo interbank offered rate and the euroyen Tokyo interbank offered rate, Fallback Rate (TONA) or if a Fallback Index Cessation Event has occurred with respect to Fallback Rate (TONA), then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (TONA) will be the Tokyo Overnight Average Rate ("TONA") administered by the Bank of Japan (or any successor administrator), to which the Calculation Agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to

Fallback Rate (TONA), referred to in the definition of "Fallback Rate (TONA)" after making such adjustments to TONA as are necessary to account for any difference in term structure or tenor of TONA by comparison to Fallback Rate (TONA) and by reference to the Bloomberg IBOR Fallback Rate Adjustments Rule Book. If a Fallback Index Cessation Effective Date occurs with respect to each of Fallback Rate (TONA) and TONA, then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (TONA) (or, if later, the Fallback Index Cessation Effective Date with respect to TONA) will be the JPY Recommended Rate, to which the Calculation Agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to Fallback Rate (TONA), referred to in the definition of "Fallback Rate (TONA)" after making such adjustments to the JPY Recommended Rate as are necessary to account for any difference in term structure or tenor of the JPY Recommended Rate by comparison to Fallback Rate (TONA) and by reference to the Bloomberg IBOR Fallback Rate Adjustments Rule Book;

(f) The bank bill swap rate, Fallback Rate (AONIA) or if a Fallback Index Cessation Event has occurred with respect to Fallback Rate (AONIA), then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (AONIA) will be the interbank overnight cash rate ("AONIA") administered by the Reserve Bank of Australia (or any successor administrator), to which the Calculation Agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to Fallback Rate (AONIA), referred to in the definition of "Fallback Rate (AONIA)" after making such adjustments to AONIA as are necessary to account for any difference in term structure or tenor of AONIA by comparison to Fallback Rate (AONIA) and by reference to the Bloomberg IBOR Fallback Rate Adjustments Rule Book. If a Fallback Index Cessation Effective Date occurs with respect to each of Fallback Rate (AONIA) and AONIA, then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (AONIA) (or, if later, the Fallback Index Cessation Effective Date with respect to AONIA) will be the RBA Recommended Rate, to which the Calculation Agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to Fallback Rate (AONIA), referred to in the definition of "Fallback Rate (AONIA)" after making such adjustments to the RBA Recommended Rate as are necessary to account for any difference in term structure or tenor of the RBA Recommended Rate by comparison to Fallback Rate (AONIA) and by reference to the Bloomberg IBOR Fallback Rate Adjustments Rule Book;

(g) The Canadian dollar offered rate, Fallback Rate (CORRA) or if a Fallback Index Cessation Event has occurred with respect to Fallback Rate (CORRA), then the Applicable

Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (CORRA) will be the Canadian Overnight Repo Rate Average ("CORRA") administered by the Bank of Canada (or any successor administrator), to which the Calculation Agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to Fallback Rate (CORRA), referred to in the definition of "Fallback Rate (CORRA)" after making such adjustments to CORRA as are necessary to account for any difference in term structure or tenor of CORRA by comparison to Fallback Rate (CORRA) and by reference to the Bloomberg IBOR Fallback Rate Adjustments Rule Book. If a Fallback Index Cessation Effective Date occurs with respect to each of Fallback Rate (CORRA) and CORRA, then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (CORRA) (or, if later, the Fallback Index Cessation Effective Date with respect to CORRA) will be the CAD Recommended Rate, to which the Calculation Agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to Fallback Rate (CORRA), referred to in the definition of "Fallback Rate (CORRA)" after making such adjustments to the CAD Recommended Rate as are necessary to account for any difference in term structure or tenor of the CAD Recommended Rate by comparison to Fallback Rate (CORRA) and by reference to the Bloomberg IBOR Fallback Rate Adjustments Rule Book. If there is no CAD Recommended Rate before the end of the first Toronto Banking Day (as defined in the 2006 ISDA Definitions) following the Fallback Index Cessation Effective Date with respect to Fallback Rate (CORRA) (or, if later, the end of the first Toronto Banking Day following the Fallback Index Cessation Effective Date with respect to CORRA), or there is a CAD Recommended Rate and a Fallback Index Cessation Effective Date subsequently occurs with respect to it, then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (CORRA) (or, if later, the Fallback Index Cessation Effective Date with respect to CORRA) or the Fallback Index Cessation Effective Date with respect to the CAD Recommended Rate (as applicable) will be the BOC Target Rate, to which the Calculation Agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to Fallback Rate (CORRA), referred to in the definition of "Fallback Rate (CORRA)" after making such adjustments to the BOC Target Rate as are necessary to account for any difference in term structure or tenor of the BOC Target Rate by comparison to Fallback Rate (CORRA) and by reference to the Bloomberg IBOR Fallback Rate Adjustments Rule Book;

(h) The Hong Kong interbank offered rate, Fallback Rate (HONIA) or if a Fallback Index Cessation Event has occurred with respect to Fallback Rate (HONIA), then the Applicable Fallback Rate for any Fallback Observation

Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (HONIA) will be the Hong Kong Dollar Overnight Index Average ("HONIA") rate administered by the Treasury Markets Association (or any successor administrator), to which the Calculation Agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to Fallback Rate (HONIA), referred to in the definition of "Fallback Rate (HONIA)" after making such adjustments to HONIA as are necessary to account for any difference in term structure or tenor of HONIA by comparison to Fallback Rate (HONIA) and by reference to the Bloomberg IBOR Fallback Rate Adjustments Rule Book. If a Fallback Index Cessation Effective Date occurs with respect to each of Fallback Rate (HONIA) and HONIA, then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (HONIA) (or, if later, the Fallback Index Cessation Effective Date with respect to HONIA) will be the HKD Recommended Rate, to which the Calculation Agent shall apply the most recently published spread, as at the Fallback Index Cessation Effective Date with respect to Fallback Rate (HONIA), referred to in the definition of "Fallback Rate (HONIA)" after making such adjustments to the HKD Recommended Rate as are necessary to account for any difference in term structure or tenor of the HKD Recommended Rate by comparison to Fallback Rate (HONIA) and by reference to the Bloomberg IBOR Fallback Rate Adjustments Rule Book; the Singapore dollar swap offer rate, Fallback Rate (SOR) or if a Fallback Index Cessation Event has occurred with respect to Fallback Rate (SOR), then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (SOR) will be the MAS Recommended Rate or, if there is no MAS Recommended Rate before the end of the first Singapore Banking Day (as defined in the 2006 ISDA Definitions) following the Fallback Index Cessation Effective Date with respect to Fallback Rate (SOR), or there is a MAS Recommended Rate and a Fallback Index Cessation Effective Date subsequently occurs with respect to it, then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (SOR) or the Fallback Index Cessation Effective Date with respect to the MAS Recommended Rate (as applicable) will be SORA, to which the Calculation Agent shall make such adjustments as are necessary to account for any difference in term structure or tenor of SORA by comparison to Fallback Rate (SOR) and by reference to the Calculation Methodology for Fallback Rate (SOR); and

(i) The Thai baht interest rate fixing, Fallback Rate (THBFX) or if a Fallback Index Cessation Event has occurred with respect to Fallback Rate (THBFX), then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to

Fallback Rate (THBFX) will be the BOT Recommended Rate or, if there is no BOT Recommended Rate before the end of the first Bangkok Banking Day (as defined in the 2006 ISDA Definitions) following the Fallback Index Cessation Effective Date with respect to Fallback Rate (THBFX), or there is a BOT Recommended Rate and a Fallback Index Cessation Effective Date subsequently occurs with respect to it, then the Applicable Fallback Rate for any Fallback Observation Day that occurs on or after the Fallback Index Cessation Effective Date with respect to Fallback Rate (THBFX) or the Fallback Index Cessation Effective Date with respect to the BOT Recommended Rate (as applicable) will be THOR, to which the Calculation Agent shall make such adjustments as are necessary to account for any difference in term structure or tenor of THOR by comparison to Fallback Rate (THBFX) and by reference to the Bank of Thailand THBFX Fallback Rate Adjustments Rule Book.

"*Bank of Thailand THBFX Fallback Rate Adjustments Rule Book*" means the THBFX Fallback Rate Adjustments Rule Book published by the Bank of Thailand as updated from time to time.

"*Bloomberg IBOR Fallback Rate Adjustments Rule Book*" means the IBOR Fallback Rate Adjustments Rule Book published by Bloomberg Index Services Limited (or a successor provider as approved and/or appointed by ISDA from time to time) as updated from time to time in accordance with its terms.

"*BOC Target Rate*" means the Bank of Canada's Target for the Overnight Rate as set by the Bank of Canada and published on the Bank of Canada's website (as defined in the 2006 ISDA Definitions).

"*BOT Recommended Rate*" means the rate (inclusive of any spreads or adjustments) recommended as the replacement for Fallback Rate (THBFX) by the Bank of Thailand or by a committee officially endorsed or convened by the Bank of Thailand (which rate may be produced by the Bank of Thailand or another administrator) and as provided by the administrator of that rate in respect of the day for which that rate is required (which under the 2006 ISDA Definitions would be the "Reset Date") or, if that rate is not provided by the administrator of that rate (or a successor administrator), published by an authorized distributor.

"*CAD Recommended Rate*" means the rate (inclusive of any spreads or adjustments) recommended as the replacement for CORRA by a committee officially endorsed or convened by the Bank of Canada for the purpose of recommending a replacement for CORRA (which rate may be produced by the Bank of Canada or another administrator) and as provided by the administrator of that rate or, if that rate is not provided by the administrator thereof (or a successor administrator), published by an authorized distributor. "Calculation Methodology for Fallback Rate (SOR)" means the Calculation Methodology for Fallback Rate (SOR) published by ABS Benchmarks Administration Co Pte. Ltd. as updated from time to time.

"*ECB Recommended Rate*" means the rate (inclusive of any spreads or adjustments)

recommended as the replacement for EuroSTR by the European Central Bank (or any successor administrator of EuroSTR) and/or by a committee officially endorsed or convened by the European Central Bank (or any successor administrator of EuroSTR) for the purpose of recommending a replacement for EuroSTR (which rate may be produced by the European Central Bank or another administrator) and as provided by the administrator of that rate or, if that rate is not provided by the administrator thereof (or a successor administrator), published by an authorized distributor.

"*EDFR Spread*" means:

(a) If no ECB Recommended Rate is recommended before the end of the first TARGET Settlement Day (as defined in the 2006 ISDA Definitions) following the Fallback Index Cessation Effective Date with respect to Fallback Rate (EuroSTR) (or, if later, before the end of the first TARGET Settlement Day following the Fallback Index Cessation Effective Date with respect to EuroSTR), the arithmetic mean of the daily difference between EuroSTR and the Eurosystem Deposit Facility Rate over an observation period of 30 TARGET Settlement Days starting 30 TARGET Settlement Days prior to the day on which the Fallback Index Cessation Event with respect to Fallback Rate (EuroSTR) occurs (or, if later, 30 TARGET Settlement Days prior to the day on which the first Fallback Index Cessation Event with respect to EuroSTR occurs) and ending on the TARGET Settlement Day immediately preceding the day on which the Fallback Index Cessation Event with respect to Fallback Rate (EuroSTR) occurs (or, if later, the TARGET Settlement Day immediately preceding the day on which the first Fallback Index Cessation Event with respect to EuroSTR occurs); or

(b) If a Fallback Index Cessation Event with respect to the ECB Recommended Rate occurs, the arithmetic mean of the daily difference between the ECB Recommended Rate and the Eurosystem Deposit Facility Rate over an observation period of 30 TARGET Settlement Days starting 30 TARGET Settlement Days prior to the day on which the Fallback Index Cessation Event with respect to the ECB Recommended Rate occurs and ending on the TARGET Settlement Day immediately preceding the day on which that Fallback Index Cessation Event occurs.

"*Eurosystem Deposit Facility Rate*" means the rate on the deposit facility, which banks may use to make overnight deposits with the Eurosystem and which is published on the ECB's website (as defined in the 2006 ISDA Definitions).

"*Fallback Index Cessation Effective Date*" means, in respect of a Fallback Index Cessation Event, the first date on which the Applicable Fallback Rate is no longer provided. If the Applicable Fallback Rate ceases to be provided on the same day that it would have been observed but it was provided at the time at which it is ordinarily observed (or, if no such time is specified, at the time at which it is ordinarily published), then the Fallback Index Cessation Effective Date will be the next day on which the rate would ordinarily have been published. If the

Applicable Fallback Rate is the Modified SNB Policy Rate or Modified EDFR, references to the Applicable Fallback Rate in this definition of “Fallback Index Cessation Effective Date” shall be deemed to be references to the index, benchmark or other price source that is referred to in the definition of Modified SNB Policy Rate or Modified EDFR, as applicable.

“*Fallback Index Cessation Event*” means, in respect of an Applicable Fallback Rate:

(a) A public statement or publication of information by or on behalf of the administrator or provider of the Applicable Fallback Rate announcing that it has ceased or will cease to provide the Applicable Fallback Rate permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator or provider that will continue to provide the Applicable Fallback Rate; or

(b) If the Applicable Fallback Rate is:

(i) Fallback Rate (SONIA), Fallback Rate (SARON), Fallback Rate (SOFR), Fallback Rate (EuroSTR), Fallback Rate (TONA), Fallback Rate (AONIA), Fallback Rate (CORRA) or Fallback Rate (HONIA), a public statement or publication of information by the regulatory supervisor for the administrator of the Underlying Rate, the central bank for the currency of the Underlying Rate, an insolvency official with jurisdiction over the administrator for the Underlying Rate, a resolution authority with jurisdiction over the administrator for the Underlying Rate or a court or an entity with similar insolvency or resolution authority over the administrator for the Underlying Rate, which states that the administrator of the Underlying Rate has ceased or will cease to provide the Underlying Rate permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator that will continue to provide the Underlying Rate; or

(ii) SONIA, the GBP Recommended Rate, SARON, the NWG Recommended Rate, the Modified SNB Policy Rate, SOFR, the Fed Recommended Rate, OBFR, the FOMC Target Rate, EuroSTR, the ECB Recommended Rate, Modified EDFR, TONA, the JPY Recommended Rate, AONIA, the RBA Recommended Rate, CORRA, the CAD Recommended Rate, the BOC Target Rate, HONIA, the HKD Recommended Rate, Fallback Rate (SOR), the MAS Recommended Rate, SORA, Fallback Rate (THBFX), the BOT Recommended Rate or THOR, a public statement or publication of information by the regulatory supervisor for the administrator or provider of the Applicable Fallback Rate, the central bank for the currency of the Applicable Fallback Rate, an insolvency official with jurisdiction over the administrator or provider for the Applicable Fallback Rate, a resolution authority with jurisdiction over the administrator or provider for the Applicable Fallback Rate or a court or an entity with similar insolvency or resolution authority over the administrator or provider for the Applicable Fallback Rate, which states that the administrator or provider of the Applicable Fallback Rate has ceased or will cease to provide the Applicable Fallback Rate permanently or indefinitely, provided that, at the time of the

statement or publication, there is no successor administrator or provider that will continue to provide the Applicable Fallback Rate.

If the Applicable Fallback Rate is the Modified SNB Policy Rate or Modified EDFR, references to the administrator or provider of such rate in this definition of “Fallback Index Cessation Event” shall be deemed to be references to the administrator or provider of the index, benchmark or other price source that is referred to in the definition of Modified SNB Policy Rate or Modified EDFR, as applicable.

“*Fallback Observation Day*” means, in respect of an Applicable Fallback Rate and unless otherwise agreed, the day that is two Business Days (as defined in the relevant Protocol Covered Document or, if that term is not defined therein, as defined in the 2006 ISDA Definitions and, in each case, for the purposes of the payment which is calculated by reference to that Applicable Fallback Rate) preceding the day on which payment by reference to that rate is due (which under the 2006 ISDA Definitions would be equivalent to the “Payment Date”).

“*Fallback Rate (AONIA)*” means the term adjusted AONIA plus the spread relating to the bank bill swap rate, in each case, for the period of time in respect of which the Relevant IBOR is to be determined provided by Bloomberg Index Services Limited (or a successor provider as approved and/or appointed by ISDA from time to time), as the provider of term adjusted AONIA and the spread, on the Fallback Rate (AONIA) Screen (or by other means) or provided to, and published by, authorized distributors at, or prior to, the Applicable Cut-off Time.

“*Fallback Rate (AONIA) Screen*” means the Bloomberg Screen (as defined in the 2006 ISDA Definitions) corresponding to the Bloomberg ticker for the fallback for the bank bill swap rate for the period of time in respect of which the Relevant IBOR is to be determined accessed via the Bloomberg Screen <FBAK> <GO> Page (or, if applicable, accessed via the Bloomberg Screen <HP> <GO>) or any other published source designated by Bloomberg Index Services Limited (or a successor provider as approved and/or appointed by ISDA from time to time).

“*Fallback Rate (CORRA)*” means the term adjusted CORRA plus the spread relating to the Canadian dollar offered rate, in each case, for the period of time in respect of which the Relevant IBOR is to be determined provided by Bloomberg Index Services Limited (or a successor provider as approved and/or appointed by ISDA from time to time), as the provider of term adjusted CORRA and the spread, on the Fallback Rate (CORRA) Screen (or by other means) or provided to, and published by, authorized distributors at, or prior to, the Applicable Cut-off Time.

“*Fallback Rate (CORRA) Screen*” means the Bloomberg Screen (as defined in the 2006 ISDA Definitions) corresponding to the Bloomberg ticker for the fallback for the Canadian dollar offered rate for the period of time in respect of which the Relevant IBOR is to be determined accessed via the Bloomberg Screen <FBAK> <GO> Page (or, if applicable, accessed via the Bloomberg Screen <HP> <GO>) or any other published

source designated by Bloomberg Index Services Limited (or a successor provider as approved and/or appointed by ISDA from time to time).

“*Fallback Rate (EuroSTR)*” means:

(a) The term adjusted EuroSTR; plus

(b) If the Relevant IBOR is:

(i) Euro LIBOR, the spread relating to euro LIBOR; or

(ii) The euro interbank offered rate, the spread relating to the euro interbank offered rate, in each case, for the period of time in respect of which the Relevant IBOR is to be determined provided by Bloomberg Index Services Limited (or a successor provider as approved and/or appointed by ISDA from time to time), as the provider of term adjusted EuroSTR and the spread, on the Fallback Rate (EuroSTR) Screen (or by other means) or provided to, and published by, authorized distributors at, or prior to, the Applicable Cut-off Time.

“*Fallback Rate (EuroSTR) Screen*” means the Bloomberg Screen (as defined in the 2006 ISDA Definitions) corresponding to the Bloomberg ticker for the fallback for euro LIBOR or the euro interbank offered rate, as applicable, for the period of time in respect of which the Relevant IBOR is to be determined accessed via the Bloomberg Screen <FBAK> <GO> Page (or, if applicable, accessed via the Bloomberg Screen <HP> <GO>) or any other published source designated by Bloomberg Index Services Limited (or a successor provider as approved and/or appointed by ISDA from time to time).

“*Fallback Rate (HONIA)*” means the term adjusted HONIA rate plus the spread relating to the Hong Kong interbank offered rate, in each case, for the period of time in respect of which the Relevant IBOR is to be determined provided by Bloomberg Index Services Limited (or a successor provider as approved and/or appointed by ISDA from time to time), as the provider of term adjusted HONIA and the spread, on the Fallback Rate (HONIA) Screen (or by other means) or provided to, and published by, authorized distributors at, or prior to, the Applicable Cut-off Time.

“*Fallback Rate (HONIA) Screen*” means the Bloomberg Screen (as defined in the 2006 ISDA Definitions) corresponding to the Bloomberg ticker for the fallback for the Hong Kong interbank offered rate for the period of time in respect of which the Relevant IBOR is to be determined accessed via the Bloomberg Screen <FBAK> <GO> Page (or, if applicable, accessed via the Bloomberg Screen <HP> <GO>) or any other published source designated by Bloomberg Index Services Limited (or a successor provider as approved and/or appointed by ISDA from time to time).

“*Fallback Rate (SARON)*” means the term adjusted SARON plus the spread relating to Swiss franc LIBOR, in each case, for the period of time in respect of which the Relevant IBOR is to be determined provided by Bloomberg Index Services Limited (or a successor provider as approved and/or appointed by ISDA from time to time), as the provider of term adjusted SARON and the spread, on the Fallback Rate (SARON) Screen (or by other means) or provided to, and published by, authorized distributors at, or prior to, the Applicable Cut-off Time.

“*Fallback Rate (SARON) Screen*” means the Bloomberg Screen (as defined in the 2006 ISDA Definitions) corresponding to the Bloomberg ticker for the fallback for Swiss franc LIBOR for the period of time in respect of which the Relevant IBOR is to be determined accessed via the Bloomberg Screen <FBAK> <GO> Page (or, if applicable, accessed via the Bloomberg Screen <HP> <GO>) or any other published source designated by Bloomberg Index Services Limited (or a successor provider as approved and/or appointed by ISDA from time to time).

“*Fallback Rate Screen*” means, if the Applicable Fallback Rate is: (a) Fallback Rate (SONIA), the Fallback Rate (SONIA) Screen; (b) Fallback Rate (SARON), the Fallback Rate (SARON) Screen; (c) Fallback Rate (SOFR), the Fallback Rate (SOFR) Screen; (d) Fallback Rate (EuroSTR), the Fallback Rate (EuroSTR) Screen; (e) Fallback Rate (TONA), the Fallback Rate (TONA) Screen; (f) Fallback Rate (AONIA), the Fallback Rate (AONIA) Screen; (g) Fallback Rate (CORRA), the Fallback Rate (CORRA) Screen; (h) Fallback Rate (HONIA), the Fallback Rate (HONIA) Screen; (i) Fallback Rate (SOR), the Fallback Rate (SOR) Screen; and (j) Fallback Rate (THBFX), the Fallback Rate (THBFX) Screen.

“*Fallback Rate (SOFR)*” means the term adjusted SOFR plus the spread relating to U.S. dollar LIBOR, in each case, for the period of time in respect of which the Relevant IBOR is to be determined provided by Bloomberg Index Services Limited (or a successor provider as approved and/or appointed by ISDA from time to time), as the provider of term adjusted SOFR and the spread, on the Fallback Rate (SOFR) Screen (or by other means) or provided to, and published by, authorized distributors at, or prior to, the Applicable Cut-off Time.

“*Fallback Rate (SOFR) Screen*” means the Bloomberg Screen (as defined in the 2006 ISDA Definitions) corresponding to the Bloomberg ticker for the fallback for U.S. dollar LIBOR for the period of time in respect of which the Relevant IBOR is to be determined accessed via the Bloomberg Screen <FBAK> <GO> Page (or, if applicable, accessed via the Bloomberg Screen <HP> <GO>) or any other published source designated by Bloomberg Index Services Limited (or a successor provider as approved and/or appointed by ISDA from time to time).

“*Fallback Rate (SONIA)*” means the term adjusted SONIA rate plus the spread relating to sterling LIBOR, in each case, for the period of time in respect of which the Relevant IBOR is to be determined provided by Bloomberg Index Services Limited (or a successor provider as approved and/or appointed by ISDA from time to time), as the provider of term adjusted SONIA and the spread, on the Fallback Rate (SONIA) Screen (or by other means) or provided to, and published by, authorized distributors at, or prior to, the Applicable Cut-off Time.

“*Fallback Rate (SONIA) Screen*” means the Bloomberg Screen (as defined in the 2006 ISDA Definitions) corresponding to the Bloomberg ticker for the fallback for sterling LIBOR for the period of time in respect of which the Relevant IBOR is to be determined accessed via the Bloomberg Screen <FBAK>

<GO> Page (or, if applicable, accessed via the Bloomberg Screen <HP> <GO>) or any other published source designated by Bloomberg Index Services Limited (or a successor provider as approved and/or appointed by ISDA from time to time).

“*Fallback Rate (SOR)*” means the rate based on actual transactions in the U.S. dollar/Singapore dollar foreign exchange swap market and a U.S. dollar interest rate calculated by reference to “Fallback Rate (SOFR)” as defined above and including any fallback rate that may apply pursuant to subparagraph (c) of the definition of “Applicable Fallback Rate” above for the period of time in respect of which the Relevant IBOR is to be determined provided by ABS Benchmarks Administration Co Pte. Ltd. (or a successor provider), as the provider of Fallback Rate (SOR), on the Fallback Rate (SOR) Screen (or by other means) or provided to, and published by, authorized distributors at, or prior to, the Applicable Cut-off Time.

“*Fallback Rate (SOR) Screen*” means the Refinitiv Screen (as defined in the 2006 ISDA Definitions) corresponding to the Refinitiv ticker for the fallback for the Singapore dollar swap offer rate for the period of time in respect of which the Relevant IBOR is to be determined accessed via the Refinitiv Screen <FBKSORFIX> (or, if applicable, accessed via the relevant Refinitiv Screen for ‘price history’) or any other published source designated by ABS Benchmarks Administration Co Pte. Ltd. (or a successor provider).

“*Fallback Rate (THBFX)*” means the rate based on actual transactions in the U.S. dollar/Thai baht foreign exchange swap market and a U.S. dollar interest rate calculated by reference to “Fallback Rate (SOFR)” as defined above and including any fallback rate that may apply pursuant to subparagraph (c) of the definition of “Applicable Fallback Rate” above for the period of time in respect of which the Relevant IBOR is to be determined provided by the Bank of Thailand (or a successor provider), as the provider of Fallback Rate (THBFX), on the Fallback Rate (THBFX) Screen (or by other means) or provided to, and published by, authorized distributors at, or prior to, the Applicable Cut-off Time.

“*Fallback Rate (THBFX) Screen*” means the Refinitiv Screen (as defined in the 2006 ISDA Definitions) corresponding to the Refinitiv ticker for the fallback for the Thai baht interest rate fixing for the period of time in respect of which the Relevant IBOR is to be determined accessed via the Refinitiv Screen <FBKTHBFX> (or, if applicable, accessed via the relevant Refinitiv Screen for ‘price history’) or any other published source designated by the Bank of Thailand (or a successor provider).

“*Fallback Rate (TONA)*” means:

(a) The term adjusted TONA; plus

(b) If the Relevant IBOR is:

(i) Japanese yen LIBOR, the spread relating to Japanese yen LIBOR;

(ii) The Japanese yen Tokyo interbank offered rate, the spread relating to the Japanese yen Tokyo interbank offered rate; or the euroyen Tokyo interbank offered rate, the spread relating to the euroyen Tokyo interbank offered rate, in each case, for the

period of time in respect of which the Relevant IBOR is to be determined provided by Bloomberg Index Services Limited (or a successor provider as approved and/or appointed by ISDA from time to time), as the provider of term adjusted TONA and the spread, on the Fallback Rate (TONA) Screen (or by other means) or provided to, and published by, authorized distributors at, or prior to, the Applicable Cut-off Time.

“*Fallback Rate (TONA) Screen*” means the Bloomberg Screen (as defined in the 2006 ISDA Definitions) corresponding to the Bloomberg ticker for the fallback for Japanese yen LIBOR, the Japanese yen Tokyo interbank offered rate or the euroyen Tokyo interbank offered rate, as applicable, for the period of time in respect of which the Relevant IBOR is to be determined accessed via the Bloomberg Screen <FBAK> <GO> Page (or, if applicable, accessed via the Bloomberg Screen <HP> <GO>) or any other published source designated by Bloomberg Index Services Limited (or a successor provider as approved and/or appointed by ISDA from time to time).

“*Fed Recommended Rate*” means the rate (inclusive of any spreads or adjustments) recommended as the replacement for SOFR by the Federal Reserve Board or the Federal Reserve Bank of New York, or by a committee officially endorsed or convened by the Federal Reserve Board or the Federal Reserve Bank of New York for the purpose of recommending a replacement for SOFR (which rate may be produced by the Federal Reserve Bank of New York or another administrator) and as provided by the administrator of that rate or, if that rate is not provided by the administrator thereof (or a successor administrator), published by an authorized distributor.

“*FOMC Target Rate*” means the short-term interest rate target set by the Federal Open Market Committee and published on the Federal Reserve’s website (as defined in the 2006 ISDA Definitions) or, if the Federal Open Market Committee does not target a single rate, the mid-point of the short-term interest rate target range set by the Federal Open Market Committee and published on the Federal Reserve’s website (calculated as the arithmetic average of the upper bound of the target range and the lower bound of the target range, rounded, if necessary, in accordance with the method set forth in Section 8.1(c) of the 2006 ISDA Definitions).

“*GBP Recommended Rate*” means the rate (inclusive of any spreads or adjustments) recommended as the replacement for SONIA by (a) the administrator of SONIA if the administrator of SONIA is a national central bank, or (b) if the national central bank administrator of SONIA does not make a recommendation or the administrator of SONIA is not a national central bank, a committee designated for this purpose by one or both of the Financial Conduct Authority (or any successor thereto) and the Bank of England and as provided by the then administrator of that rate (or a successor administrator) or, if that rate is not provided by the administrator thereof (or a successor administrator), published by an authorized distributor.

“*HKD Recommended Rate*” means the rate (inclusive of any spreads or adjustments)

recommended as the replacement for HONIA by the administrator of HONIA or by a committee officially endorsed or convened by the administrator of HONIA for the purpose of recommending a replacement for HONIA (which rate may be produced by the administrator of HONIA or another administrator) and as provided by the administrator of that rate or, if that rate is not provided by the administrator thereof (or a successor administrator), published by an authorized distributor.

“Index Cessation Effective Date” means, in respect of a Relevant IBOR (or, if either the Singapore dollar swap offer rate or the Thai baht interest rate fixing is the Relevant IBOR, U.S. dollar LIBOR) and one or more Index Cessation Events, the first date on which the Relevant IBOR (or, if either the Singapore dollar swap offer rate or the Thai baht interest rate fixing is the Relevant IBOR, U.S. dollar LIBOR) is either (a) in respect of a Relevant LIBOR (or, if the Relevant IBOR is the Singapore dollar swap offer rate or the Thai baht interest rate fixing, in respect of U.S. dollar LIBOR), Non-Representative by reference to the most recent statement or publication contemplated in subparagraph (c) of the definition of “Index Cessation Event” below and even if such rate continues to be provided on such date or (b) no longer provided. If the Relevant IBOR (or, if either the Singapore dollar swap offer rate or the Thai baht interest rate fixing is the Relevant IBOR, U.S. dollar LIBOR) ceases to be provided on the Relevant Original Fixing Date but it was provided (and, in respect of a Relevant LIBOR (or, if the Relevant IBOR is the Singapore dollar swap offer rate or the Thai baht interest rate fixing, in respect of U.S. dollar LIBOR), is not Non-Representative) at the time at which it is ordinarily observed, then the Index Cessation Effective Date will be the next day on which the rate would ordinarily have been published. An Index Cessation Effective Date may also occur in accordance with paragraph 6(d), subparagraph 6(e)(ii) or subparagraph 6(e)(iii) above.

“Index Cessation Event” means, in respect of a Relevant IBOR:

(a) A public statement or publication of information by or on behalf of the administrator of the Relevant IBOR announcing that it has ceased or will cease to provide the Relevant IBOR permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor administrator that will continue to provide the Relevant IBOR;

(b) A public statement or publication of information by the regulatory supervisor for the administrator of the Relevant IBOR, the central bank for the currency of the Relevant IBOR, an insolvency official with jurisdiction over the administrator for the Relevant IBOR, a resolution authority with jurisdiction over the administrator for the Relevant IBOR or a court or an entity with similar insolvency or resolution authority over the administrator for the Relevant IBOR, which states that the administrator of the Relevant IBOR has ceased or will cease to provide the Relevant IBOR permanently or indefinitely, provided that, at the time of the statement or publication, there is no successor

administrator that will continue to provide the Relevant IBOR; or

(c) If the Relevant IBOR is sterling LIBOR, Swiss franc LIBOR, U.S. dollar LIBOR, euro LIBOR, Japanese yen LIBOR, the Singapore dollar swap offer rate or the Thai baht interest rate fixing, a public statement or publication of information by the regulatory supervisor for the administrator of such Relevant IBOR (or, if the Relevant IBOR is the Singapore dollar swap offer rate or the Thai baht interest rate fixing, by the regulatory supervisor for the administrator of U.S. dollar LIBOR) announcing that (i) the regulatory supervisor has determined that such Relevant IBOR is no longer, or as of a specified future date will no longer be, representative of the underlying market and economic reality that such Relevant IBOR is intended to measure and that representativeness will not be restored and (ii) it is being made in the awareness that the statement or publication will engage certain contractual triggers for fallbacks activated by pre-cessation announcements by such supervisor (howsoever described) in contracts, provided that, if either the Singapore dollar swap offer rate or the Thai baht interest rate fixing is the Relevant IBOR, references to the “Relevant IBOR” in subparagraphs (a), (b) and (c)(i) above of this definition of “Index Cessation Event” will be deemed to be references to U.S. dollar LIBOR.

An Index Cessation Event may also occur in accordance with paragraph 6(d), subparagraph 6(e)(ii) or subparagraph 6(e)(iii) above.

“JPY Recommended Rate” means the rate (inclusive of any spreads or adjustments) recommended as the replacement for TONA by a committee officially endorsed or convened by the Bank of Japan for the purpose of recommending a replacement for TONA (which rate may be produced by the Bank of Japan or another administrator) and as provided by the administrator of that rate or, if that rate is not provided by the administrator thereof (or a successor administrator), published by an authorized distributor.

“MAS Recommended Rate” means the rate (inclusive of any spreads or adjustments) recommended as the replacement for Fallback Rate (SOR) by the Monetary Authority of Singapore or by a committee officially endorsed or convened by the Monetary Authority of Singapore (which rate may be produced by the Monetary Authority of Singapore or another administrator) and as provided by the administrator of that rate in respect of the day for which that rate is required (which under the 2006 ISDA Definitions would be the “Reset Date”) or, if that rate is not provided by the administrator of that rate (or a successor administrator), published by an authorized distributor.

“Modified EDRF” means a rate equal to the Eurosystem Deposit Facility Rate plus the EDRF Spread.

“Modified SNB Policy Rate” means a rate equal to the SNB Policy Rate plus the SNB Spread.

“Non-Representative” means, in respect of a Relevant LIBOR (or, if the Relevant IBOR is the Singapore dollar swap offer rate or the Thai baht interest rate fixing, in respect of

U.S. dollar LIBOR), the regulatory supervisor for the administrator of the Relevant LIBOR (or, if the Relevant IBOR is the Singapore dollar swap offer rate or the Thai baht interest rate fixing, U.S. dollar LIBOR):

(a) Has determined and announced that the Relevant LIBOR (or, if the Relevant IBOR is the Singapore dollar swap offer rate or the Thai baht interest rate fixing, U.S. dollar LIBOR) is no longer representative of the underlying market and economic reality it is intended to measure and representativeness will not be restored; and

(b) Is aware that certain contractual triggers for fallbacks activated by pre-cessation announcements by such supervisor (howsoever described) in contracts have been or are engaged, provided that such Relevant LIBOR (or, if the Relevant IBOR is the Singapore dollar swap offer rate or the Thai baht interest rate fixing, U.S. dollar LIBOR) will be ‘Non-Representative’ by reference to the date indicated in the most recent statement or publication contemplated in subparagraph (c) of the definition of “Index Cessation Event” above.

“NWG Recommended Rate” means the rate (inclusive of any spreads or adjustments) recommended as the replacement for SARON by any working group or committee in Switzerland organized in the same or a similar manner as the National Working Group on Swiss Franc Reference Rates that was founded in 2013 for purposes of, among other things, considering proposals to reform reference interest rates in Switzerland, and as provided by the administrator of that rate or, if that rate is not provided by the administrator thereof (or a successor administrator), published by an authorized distributor.

“OBRF” means the Overnight Bank Funding Rate, as provided by the Federal Reserve Bank of New York (or a successor administrator) on the New York Fed’s website (as defined in the 2006 ISDA Definitions) or, if that rate is not provided by the Federal Reserve Bank of New York (or a successor administrator), published by an authorized distributor.

“RBA Recommended Rate” means the rate (inclusive of any spreads or adjustments) recommended as the replacement for AONIA by the Reserve Bank of Australia (which rate may be produced by the Reserve Bank of Australia or another administrator) and as provided by the administrator of that rate or, if that rate is not provided by the administrator thereof (or a successor administrator), published by an authorized distributor.

“Relevant LIBOR” means sterling LIBOR, Swiss franc LIBOR, U.S. dollar LIBOR, euro LIBOR and Japanese yen LIBOR.

“Relevant Original Fixing Date” means, in respect of a Relevant IBOR and unless otherwise agreed, the day on which that Relevant IBOR would have been observed (which under the 2006 ISDA Definitions would be the “Reset Date”) or, if the Relevant IBOR is Swiss franc LIBOR, U.S. dollar LIBOR, euro LIBOR, the euro interbank offered rate, Japanese yen LIBOR, the Japanese yen Tokyo interbank offered rate, the euroyen Tokyo interbank offered rate, the Singapore dollar swap offer rate or the Thai

baht interest rate fixing, the day that is two Applicable Banking Days preceding a relevant “Reset Date”, as applicable).

“*SNB Policy Rate*” means the policy rate of the Swiss National Bank.

“*SNB Spread*” means the historical median between SARON and the SNB Policy Rate over an observation period of two years starting two years prior to the day on which the Fallback Index Cessation Event with respect to Fallback Rate (SARON) occurs (or, if later, two years prior to the day on which the first Fallback Index Cessation Event with respect to SARON occurs) and ending on the Zurich Banking Day (as defined in the 2006 ISDA Definitions) immediately preceding the day on which the Fallback Index Cessation Event with respect to Fallback Rate (SARON) occurs (or, if later, the Zurich Banking Day immediately preceding the day on which the first Fallback Index Cessation Event with respect to SARON occurs), as determined by the Calculation Agent.

“*SORA*” means the Singapore Overnight Rate Average as provided by the Monetary Authority of Singapore (or a successor

administrator) on the Monetary Authority of Singapore’s website (as defined in the 2006 ISDA Definitions) (or as published by its authorized distributors).

“*THOR*” means the Thai Overnight Repurchase Rate as provided by the Bank of Thailand as administrator of the benchmark (or a successor administrator) on the Bank of Thailand’s website (as defined in the 2006 ISDA Definitions) (or as published by its authorized distributors).

“*UK Bank Rate*” means the official bank rate as determined by the Monetary Policy Committee of the Bank of England and published by the Bank of England from time to time.

“*Underlying Rate*” means, if the Applicable Fallback Rate is: (a) Fallback Rate (SONIA), SONIA; (b) Fallback Rate (SARON), SARON; (c) Fallback Rate (SOFR), SOFR; (d) Fallback Rate (EuroSTR), EuroSTR; (e) Fallback Rate (TONA), TONA; (f) Fallback Rate (AONIA), AONIA; (g) Fallback Rate (CORRA), CORRA; and (h) Fallback Rate (HONIA), HONIA.

7. Negative Interest Protocol

The parties agree that the amendments made by this Protocol do not constitute a “Spread Provision” (as defined in the ISDA 2014 Collateral Agreement Negative Interest Protocol published on May 12, 2014 by ISDA).

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By order of the Board of Governors of the Federal Reserve System.

Ann E. Misback,

Secretary of the Board.

[FR Doc. 2023–00213 Filed 1–25–23; 8:45 am]

BILLING CODE P