

Life Actuarial (A) Task Force
Updated Exposure of APF 2022-04

Swap Spreads and London Inter-Bank Offered Rate (LIBOR)
Transition to the Secured Overnight Financing Rate (SOFR)

Note this revised APF is complemented by a May 26, 2022 memo from NAIC staff to LATF on a recommended replacement to LIBOR swap spreads effective [TBD, potentially June 30, 2022].

Please send comments to Reggie Mazyck @ RMazyck@NAIC.Org by close of business on June 1, 2022.

Dates: Received	Reviewed by Staff	Distributed	Considered
03/08/22	RM	03/08/22	03/10/22
Notes: APF 2022-04			

Life Actuarial (A) Task Force/ Health Actuarial (B) Task Force Amendment Proposal Form

1. Identify yourself, your affiliation and a very brief description (title) of the issue.

Identification:

Alan Routhenstein, on behalf of the American Academy of Actuaries' Life Reserves Work Group, Annuity Reserves and Capital Work Group, and Variable Annuity Reserves and Capital Work Group

Pat Allison, NAIC staff

Title of the Issue:

Swap Spreads and London Inter-Bank Offered Rate (LIBOR) transition to the Secured Overnight Financing Rate (SOFR) - Updated VM-20 prescribed swap spreads guidance in light of the LIBOR transition to SOFR.

2. Identify the document, including the date if the document is "released for comment," and the location in the document where the amendment is proposed:

VM-20 Section 9.F.8.d, VM-20 Appendix 2.F, VM-20 Appendix 2.G
January 1, 2022 NAIC *Valuation Manual*

3. Show what changes are needed by providing a red-line version of the original verbiage with deletions and identify the verbiage to be deleted, inserted or changed by providing a red-line (turn on "track changes" in Word®) version of the verbiage. (You may do this through an attachment.)

Proposed edits to VM-20 for LIBOR transition to SOFR are shown in the attached Appendix

4. State the reason for the proposed amendment? (You may do this through an attachment.)
 - a. Bank regulators and a group of swap market participants have agreed that for interbank interest rate swaps executed after 2021, the floating rate needs to be based on an index other than LIBOR.
 - b. During 2021 the swap market evolved such that the definition of a standard n-year interest rate swap changed in January 2022 to be a SOFR swap (for which the floating rate is based on SOFR) from the historical LIBOR swap (for which the floating rate is LIBOR).
 - c. As a result, VM-20 instructions for how the NAIC will calculate and publish swap spreads needs to be updated for:
 - i. Current Benchmark swap spreads (as of each month end); and
 - ii. Long-Term Benchmark swap spreads (as of each quarter end)
 - d. The associated presentation provides further background and rationale for this proposal.

NAIC Staff Comments:

Appendix

Proposed amendments to VM-20 for APF 2022-04 on Swap Spreads and LIBOR transition to SOFR

VM-20 Section 9.F.8.d Procedure for Setting Prescribed Gross Asset Spreads.....:

d. Interest rate swap spreads over Treasuries shall be prescribed by the NAIC for use throughout the cash-flow model wherever appropriate for transactions and operations including, but not limited to, purchase, sale, settlement, cash flows of derivative positions and reset of floating rate investments. A current and long-term swap spread curve shall be prescribed for year one and years four and after, respectively, with yearly grading in between. ~~The three-month and six-month points on the swap spread curves shall be the market observable values for these tenors. Currently, this shall be the corresponding London Interbank Offered Rate (LIBOR) spreads over Treasuries. When the NAIC determines LIBOR is no longer effective, the NAIC shall recommend a replacement to the Life Actuarial (A) Task Force which shall be effective upon adoption by the Task Force.~~

- i. ~~The current prescribed swap spread curve shall be the Secured Overnight Financing Rate (SOFR) swap curve.~~
- ii. ~~The long term SOFR swap spread curve, given that the SOFR swap market did not emerge before late 2021 and that SOFR is an index for which there is no official data before April 2, 2018, shall be calculated based on 15 year moving averages of prescribed estimates of historical current SOFR swap spreads.~~

Commented [A1]: To improve clarity, after "shall" insert "for valuation dates prior to June 30, 2037"

Commented [A2]: Insert a **[Guidance Note:** Actuarial judgment may be required in the use of prescribed swap spreads (for example, in the case where companies have a financial instrument with floating rate payments based on an index that is not prescribed by the NAIC (e.g., 1-month SOFR or 3-month LIBOR)).]

VM-20 Appendix 2.F Current Benchmark Swap Spreads:

F. Current Benchmark Swap Spreads

1. For tenors of 3 months, 6 months, and one year to 30 years, extract swap spread data determined as of the last business day of the month by maturity from at least two reputable data sources. For Bank of America data, if the data source provides swap rates rather than swap spreads, convert the swap rate for each maturity to a swap spread by subtracting the corresponding maturity Treasury yield from the swap rate. For JP Morgan, the swap spread is provided for each maturity.
2. Average the Bank of America swap spread with the JP Morgan swap spreads from the data sources by maturity determined as of the last business day of the month.
3. Publish the Current Benchmark Swap Spreads by maturity in a table.

[Drafting Note: The tables will be labeled to indicate they contain SOFR swap spreads.]

VM-20 Appendix 2.G Long-Term Benchmark Swap Spreads:

G. Long-Term Benchmark Swap Spreads

1. Extract daily swap spread data over the prescribed observation period (rolling 15-year period) ending on the last business day of the quarter from at least two reputable data sources. For Bank of America data, if the data source provides swap rates rather than swap spreads, convert the daily swap rate for each maturity to a swap spread by subtracting the corresponding maturity Treasury yield from the swap rate. For JP Morgan, the daily swap spread is provided for each maturity.
2. Starting in 2023 and before 2037, calculate SOFR swap spreads as follows for each business day "u" on or after the effective date of the adoption by the Life Actuarial (A) Task Force of SOFR swap spreads as the replacement for swap spreads previously prescribed:
 - a. For each maturity "m" = 0.25, 0.5, 1 ... 30 years, and business day "u":
$$\text{SOFR swap spread}(m,u) = \text{SOFR swap rate}(m,u) - \text{Treasury yield}(m,u).$$
3. For each business day before the effective date of the adoption by the Life Actuarial (A) Task Force of SOFR swap spreads as the replacement for swap spreads previously prescribed, utilize Bloomberg's 2021-03-05 published USD Spread Adjustments as follows:
 - a. For each maturity "m" = 3 or 6 months, and business day "u":
 - i. $\text{SOFR swap spread}(3 \text{ months},u) = \text{LIBOR swap spread}(3 \text{ months},u) - 0.26161\%$
(the USD 3-month Spread Adjustment)
 - ii. $\text{SOFR swap spread}(6 \text{ months},u) = \text{LIBOR swap spread}(6 \text{ months},u) - 0.42826\%$
(the USD 6-month Spread Adjustment)
 - b. For each maturity "m" = 1 ... 30 years, and business day "u":
$$\text{SOFR swap spread}(m,u) = \text{LIBOR swap spread}(m,u) - 0.26161\% \text{ (the USD 3-month Spread Adjustment)}$$
4. During and after 2037, calculate SOFR swap spreads as follows for each maturity "m" = 0.25, 0.5, 1 ... 30 years:
$$\text{SOFR swap spread}(m,u) = \text{SOFR swap rate}(m,u) - \text{Treasury yield}(m,u).$$

Commented [A3]: To improve clarity, reinsert this Drafting Note from the 2022-03-10 exposure, and replace "Drafting Note" with "Guidance Note": **[Guidance Note:** 3-month and 6-month SOFR swap rates are defined herein as the fixed rate one party pays at the end of three months or six months in exchange for receiving at such time 3-month SOFR or 6-month SOFR, calculated on a compounded in arrears basis.]

Commented [A4]: To improve clarity, delete "Starting in" and insert "For a valuation date during or after"

Commented [A5]: To improve concision, delete "u" here because it is defined in 2.a below

Commented [A6]: To improve clarity, after "For" insert "a valuation date during or after 2023 and before 2037, for"

Commented [A7]: To improve clarity,
- delete "During and" and insert "For a valuation date during or"
- refine the latter two-thirds of this paragraph, starting with "for each maturity" to replicate 2a above, including the insertion after "30 years" of the following:
, and business day "u"

~~4.5.2~~ Average the ~~daily Bank of America~~ swap spread data from the data sources with the daily JP Morgan swap spread data by maturity over the prescribed observation (rolling 15-year period).

6. ~~3~~ Calculate the Long-Term Benchmark Swap Spreads as the 85% conditional mean for each of the 32 maturity categories (three-month, six-month, one-year, two-year, ... 30-year) using the same business trading days as were used in the 85% conditional mean for long-term bonds spreads.

7. ~~4~~ Publish the Long-Term Benchmark Swap Spreads in a table. Among tables published on the NAIC website (See Subsection H) ~~Table J~~ shows Long-Term Benchmark Swap Spreads.