

# RFR Compounding Calculator

**Reduce the effort in computing backward-looking risk-free rates (RFRs)**

[Navigate the complex transition from interbank offered rates \(IBORs\) to RFRs with Refinitiv's Compounding Calculator](#)

While the London Interbank Offered Rate (LIBOR) transition is well underway, the pending shift from LIBOR to the Secured Overnight Financing Rate (SOFR) is a huge undertaking for the US dollar (USD) interest rate derivatives market, the world's largest such market.

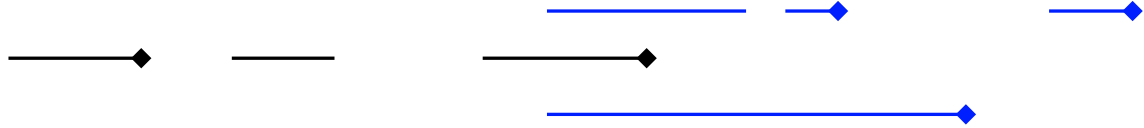
Unlike LIBOR, SOFR is a backward-looking overnight rate, and is based on actual transaction data, resulting in challenges with compounding RFRs. This is common across other RFRs, including the Sterling Overnight Index Average (SONIA) for GBP, Secured Overnight Financing Rate (SOFR) for USD and Tokyo Overnight Index Average (TONA) JPY.

Beyond major markets, new RFRs continue to be announced around the world. However, current infrastructure at financial institutions is not equipped to churn out the required computations as they transition. Financial institutions of all sizes need to put in place a solution for compounding RFRs.

**Calculate rates for integration into derivatives and loans operational infrastructure**

Banks and asset managers who issue or hold securities and loans linked to RFRs are required to calculate the applicable interest rate based on a variety of input parameters, from dates, duration and lookback dates to margin, daily floor and holiday calendars.

Refinitiv has built a Compounding Calculator that helps banks in computing backward-looking RFRs and projects them to forward-looking interest rates – which can then be integrated into their banking and valuations systems using an API or FTP.



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**Compounding Calculator** Valuation Engine

Principal Amount:  Currency:  Start Date:  End Date:  Days:

Rounding:  Lookback(Days):   Observation Shift  Lockout(Days):  Yearly Basis:

Credit Adjustment Spread(%):  Margin(%):  Floor(%):  Currency Holiday Calendars:  Account Number:

The most recent published rate date for USD is 2022-07-14.

Annualized Compounded All-In Rate(%): **1.471500867653397**  
 Cumulative Total Interest Accrual: **1226.2507230444976**  
 Yearly Basis: **ACT/360**

Day	Start Date	Weekdz	End Date	Observatio Date	Effective Rate(%)	Day Count	Compound Factor	Annualized Compounded All In Rate (%)	Principal Amount	Margin (%)	Credit Adjustment Spread (%)	Daily All-In Rate (%)	Officially Published RFR (%)	Annualized Cumulative Compounded RFR (ACR) (%)	Unannualized Cumulative Compounded RFR (UCR)	Non Cumulative Compounded RFR (NCR) (%)	D In
1	2022-06-15	Wed	2022-06-15	2022-06-15	0.7	1	1.00001944...	0.6999999999965...	1,000,000	0	0	0.699999999...	0.7	0.6999999999965...	0.0000194444444...	0.6999999999965...	1
2	2022-06-16	Thu	2022-06-16	2022-06-16	1.45	1	1.00005972...	1.0750140972204...	1,000,000	0	0	1.45002819...	1.45	1.0750140972204...	0.0000597230054...	1.4500281944442...	4i
3	2022-06-17	Fri	2022-06-17	2022-06-17	1.45	4	1.00022084...	1.3250624313121...	1,000,000	0	0	1.45008659...	1.45	1.3250624313121...	0.0002208437385...	1.4500865983579...	1i
4	2022-06-18	Sat	2022-06-18	2022-06-17	1.45	0	1.00022084...	1.3250624313121...	1,000,000	0	0	1.45008659...	1.45	1.3250624313121...	0.0002208437385...	1.4500865983579...	0
5	2022-06-19	Sun	2022-06-19	2022-06-17	1.45	0	1.00022084...	1.3250624313121...	1,000,000	0	0	1.45008659...	1.45	1.3250624313121...	0.0002208437385...	1.4500865983579...	0
6	2022-06-20	Mon	2022-06-20	2022-06-17	1.45	0	1.00022084...	1.3250624313121...	1,000,000	0	0	1.45008659...	1.45	1.3250624313121...	0.0002208437385...	1.4500865983579...	0
7	2022-06-21	Tue	2022-06-21	2022-06-21	1.45	1	1.00026113...	1.3429564016134...	1,000,000	0	0	1.45032022...	1.45	1.3429564016134...	0.0002611304114...	1.4503202234212...	4i
8	2022-06-22	Wed	2022-06-22	2022-06-22	1.45	1	1.00030141...	1.3563841812984...	1,000,000	0	0	1.45037863...	1.45	1.3563841812984...	0.0003014187069...	1.4503786390935...	4i
9	2022-06-23	Thu	2022-06-23	2022-06-23	1.44	1	1.00034143...	1.3657230548140...	1,000,000	0	0	1.44043404...	1.44	1.3657230548140...	0.0003414307637...	1.4404340429390...	4i
10	2022-06-24	Fri	2022-06-24	2022-06-24	1.46	3	1.00046313...	1.3894169133388...	1,000,000	0	0	1.46049848...	1.46	1.3894169133388...	0.0004631389711...	1.46049848889130...	1
11	2022-06-25	Sat	2022-06-25	2022-06-24	1.46	0	1.00046313...	1.3894169133388...	1,000,000	0	0	1.46049848...	1.46	1.3894169133388...	0.0004631389711...	1.46049848889130...	0
12	2022-06-26	Sun	2022-06-26	2022-06-24	1.46	0	1.00046313...	1.3894169133388...	1,000,000	0	0	1.46049848...	1.46	1.3894169133388...	0.0004631389711...	1.46049848889130...	0
13	2022-06-27	Mon	2022-06-27	2022-06-27	1.5	1	1.00050482...	1.3979767437328...	1,000,000	0	0	1.50069470...	1.5	1.3979767437328...	0.0005048249352...	1.5006947084605...	4
14	2022-06-28	Tue	2022-06-28	2022-06-28	1.52	1	1.00054706...	1.4067475001734...	1,000,000	0	0	1.52076733...	1.52	1.4067475001734...	0.0005470684722...	1.5207673339023...	4

### Compounding Calculator highlights

The Compounding Calculator enables financial institutions to obtain rates and price securities using new RFRs for multiple markets and conventions. It also provides an opportunity to rebuild internal pricing systems for loans and derivatives that may not been updated for years.

- Incorporate compounding factors for several risk-free reference rates and identify how they are calculated over the interest period
- Supports lookback with and without observation shift and lockout methodologies, with one to 10 shift days applied
- Depending on client requirements, input fields can be made to allow you to enter a principal amount, credit adjustment spread, margin, floor, ACR, rounding to specified number of decimals and custom holiday calendars
- Results are available via Microsoft® Excel®, GUI, API or bulk delivery

### Convert interest rate and cross currency swaps to RFR exposures

Our service also provides a valuation engine that supports LIBOR transition pricing for derivatives for existing portfolios and new transactions. Simply upload derivative records, and the valuation engine calculates market value and DV01 under the current and new benchmarks.

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