

BVIV-US Fixing Indices (BVUSF & BVUSFL)

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1 Overview

The BVIV-US Fixing Index (BVUSF) and BVIV-US Fixing Index London Variant (BVUSFL) are daily reference rates derived from the BVIV-US Index (Volmex Bitcoin ETF Volatility; symbol: BVUS) which is real-time. BVUSF is observed near the close of the U.S. equity options trading session at approximately 4:00 pm New York time; BVUSFL is observed at approximately 4:00 pm London time. Both fixings are designed to provide robust and transparent benchmarks of forward-looking Bitcoin ETF implied volatility at their respective reference times.

The methodology is intended to support a variety of applications including:

- Settlement of volatility-linked financial products;
- Valuation of structured products and OTC transactions;
- Portfolio benchmarking;
- Risk management and reporting;
- Historical analysis of Bitcoin ETF implied volatility.

BVUSF and BVUSFL are calculated solely from published BVUS Real-Time Index values and do not directly consume options market data.

2 Definitions

The following definitions apply throughout this methodology.

Effective Time (BVUSF) 4:00 pm New York time

Effective Time (BVUSFL) 4:00 pm London time

Primary Observation Window (BVUSF) The ten-minute period immediately preceding the BVUSF Effective Time, from 3:50:00 to 4:00:00 PM New York Time.

Primary Observation Window (BVUSFL) The ten-minute period immediately preceding the BVUSFL Effective Time, from 3:50:00 to 4:00:00 PM London Time.

Observation Window The ten-minute period from which a fixing is calculated. By default this is the Primary Observation Window of the relevant fixing; under the roll-back procedure of Section 8.3 it may instead be an earlier ten-minute window.

BVUS Observation Any published BVIV-US Index value timestamped during the Observation Window.

Partition One of twenty consecutive thirty-second intervals comprising the Observation Window.

Partition Median The median BVUS Observation value contained within a valid Partition.

Valid Partition A Partition containing at least three BVUS Observations.

Earliest Permissible Window The earliest ten-minute Observation Window to which the roll-back procedure of Section 8.3 may extend; for both BVUSF and BVUSFL, the ten-minute window beginning at the U.S. regular session open, 09:30:00 AM New York Time.

Calculation Day (BVUSF) Any day on which U.S. equity markets are open for regular trading.

Calculation Day (BVUSFL) Any day on which U.S. equity options markets are open for regular trading.

Early Close Day A BVUSF Calculation Day on which U.S. equity markets close before their regularly scheduled closing time. The BVUSFL Effective Time and Primary Observation Window are not affected by Early Close Days.

3 Observation Window

3.1 BVUSF

The BVUSF Effective Time is the scheduled regular close of the U.S. equity market.

On standard trading days, the BVUSF Primary Observation Window is from 3:50:00 to 4:00:00 PM New York Time.

On Early Close Days, the BVUSF Primary Observation Window shall consist of the final ten minutes preceding the scheduled market close.

The BVUSF Effective Time is based on the scheduled market close and shall not be modified due to unscheduled extensions of trading hours, trading halts, or exchange-specific operational events.

3.2 BVUSFL

The BVUSFL Effective Time is 4:00:00 PM London Time.

The BVUSFL Primary Observation Window is from 3:50:00 to 4:00:00 PM London Time on every BVUSFL Calculation Day.

The BVUSFL Effective Time and Primary Observation Window are defined in London civil time as observed and are not adjusted for U.S. early closes, daylight saving time transitions, or any divergence between U.S. and London civil-time schedules. The BVUSFL Effective Time shall not be modified due to unscheduled extensions of trading hours, trading halts, or exchange-specific operational events.

4 Partition Construction

The Observation Window is divided into twenty consecutive thirty-second Partitions.

Let P_k denote the set of BVUS Observations contained in Partition k , where

$$k = 1, 2, \dots, 20.$$

A Partition is considered valid if it contains at least three BVUS Observations.

A Partition containing fewer than three BVUS Observations is considered invalid and is excluded from the calculation.

5 Partition Median Calculation

For each valid Partition k , the Partition Median M_k is calculated as:

$$M_k = \text{median}(P_k).$$

The use of Partition Medians reduces sensitivity to isolated anomalous observations, temporary quote disturbances, and short-duration market dislocations.

6 Fixing Calculation

Let $F \in \{\text{BVUSF}, \text{BVUSFL}\}$ denote the fixing being calculated, and let K denote the number of valid Partitions in the Observation Window of F .

The fixing value is calculated as the arithmetic average of all valid Partition Medians:

$$F = \frac{1}{K} \sum_{k=1}^K M_k.$$

A fixing value is calculated only if:

$$K \geq 15.$$

If fewer than fifteen valid Partitions are available for the current Observation Window, the roll-back procedure of Section 8.3 shall apply.

BVUSF and BVUSFL are calculated independently from their respective Observation Windows. The validity condition, roll-back procedure, and contingency rules are applied separately to each fixing.

7 Publication

BVUSF and BVUSFL are each calculated once per their respective Calculation Day.

BVUSF is published at approximately 4:00 PM New York Time. BVUSFL is published at approximately 4:00 PM London Time.

Published values are rounded to two decimal places.

8 Contingency Rules

8.1 Missing Data

A Partition containing fewer than three BVUS Observations shall be deemed invalid.

Invalid Partitions do not contribute to the fixing calculation. No interpolation or estimation technique shall be applied to invalid Partitions.

8.2 Empty Partitions

A Partition containing no BVUS Observations is considered invalid and is excluded from the calculation.

8.3 Window Roll-Back

If the validity condition of Section 6 ($K \geq 15$) is not satisfied for the current Observation Window, the Observation Window is shifted earlier by ten minutes and the fixing calculation is repeated in full, applying the same Partition, Partition Median, and validity rules to the new window.

This roll-back is applied successively, in ten-minute steps, until either:

- (i) a window satisfying $K \geq 15$ is obtained, in which case the fixing is calculated from that window; or
- (ii) the Earliest Permissible Window has been evaluated without producing a valid fixing, in which case a Calculation Failure is declared under Section 8.4.

The Effective Time of the fixing remains as defined in Section 2 irrespective of the window ultimately used. Where a fixing is produced from any window other than the Primary Observation Window, the actual Observation Window used is recorded and disclosed alongside the published value.

8.4 Calculation Failure and Carry-Forward

A Calculation Failure occurs, with respect to a given fixing, if:

- No window from the Primary Observation Window down to and including the Earliest Permissible Window satisfies $K \geq 15$;
- BVUS publication is interrupted for a substantial portion of the trading session;
- Extraordinary market conditions prevent orderly calculation of the fixing.

In the event of a Calculation Failure, the affected fixing (BVUSF or BVUSFL) for that Calculation Day shall be set equal to the most recently published value of the same fixing. BVUSF and BVUSFL carry forward independently; a Calculation Failure in one fixing does not affect the calculation or publication of the other.

8.5 Extraordinary Market Conditions

Volmex reserves the right to delay publication or declare a Calculation Failure for either fixing if extraordinary circumstances materially impair the orderly calculation of BVUSF or BVUSFL.

Examples may include:

- Exchange-wide trading disruptions;
- Significant market data outages;
- Technology failures affecting BVUS publication;
- Regulatory or operational events preventing orderly calculation.

9 Underlying Instrument Adjustments

Adjustments arising from stock splits, reverse stock splits, ticker changes, option contract adjustments, or other structural changes affecting IBIT or its listed options shall be addressed through the BVUS Real-Time methodology.

No additional adjustments are applied within the BVUSF or BVUSFL methodology.

10 Parameters

Parameter	BVUSF	BVUSFL
Observation Window Length	10 minutes	10 minutes
Primary Observation Window	3:50:00–4:00:00 PM New York Time	3:50:00–4:00:00 PM London Time
Partition Length	30 seconds	30 seconds
Number of Partitions	20	20
Partition Statistic	Median	Median
Final Statistic	Arithmetic Average	Arithmetic Average
Min. Observations per Partition	3	3
Minimum Valid Partitions	15	15
Roll-Back Increment	10 minutes	10 minutes
Earliest Permissible Window	9:30:00–9:40:00 AM New York Time	9:30:00–9:40:00 AM London Time
Publication Time	Approx. 4:00 PM New York Time	Approx. 4:00 PM London Time
Publication Frequency	Once Daily	Once Daily
Rounding Precision	2 decimal places	2 decimal places

11 Methodology Governance

This methodology shall be reviewed periodically by Volmex.

Volmex may amend the methodology when necessary to maintain the integrity, representativeness, robustness, and operational reliability of the benchmark.

Material methodology changes should be communicated to benchmark users prior to implementation whenever reasonably practicable.

12 Disclaimer

BVUSF and BVUSFL are provided for informational and benchmarking purposes.

Volmex makes no representation regarding the suitability of BVUSF or BVUSFL for any specific investment, trading, valuation, or risk management purpose.

Past values are not indicative of future results.

Volmex reserves the right to revise, suspend, or discontinue publication of BVUSF or BVUSFL in accordance with its governance procedures.