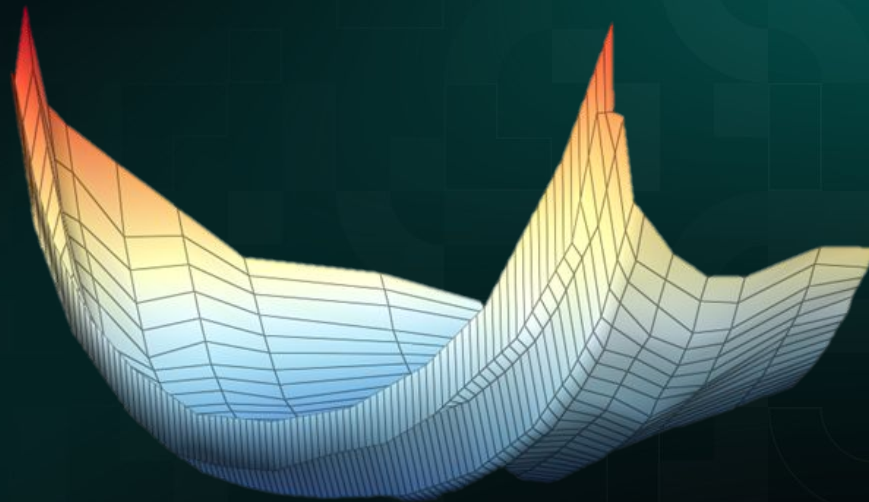


Deribit DVOL Futures

A brief overview



DVOL Futures

The impact of Volatility

Impact of Volatility



The importance of volatility for options pricing:

When volatility would double, the value of an at the money option will also double.

Heavily dependant on Volatility & Time to Expiry.

DVOL Futures

Why?

Much easier to create volatility exposure.

Hedging instrument for vega positions.

Tool for Risk Management.

Portfolio Diversification.

DVOL Futures

What?

“Fear and Greed Gauge”.

Measurement of 30-day Implied Volatility.

Indication of market expectations.

Traders’ views on volatility development.

DVOL Futures

No risk of losing Volatility Exposure

Volatility Exposure



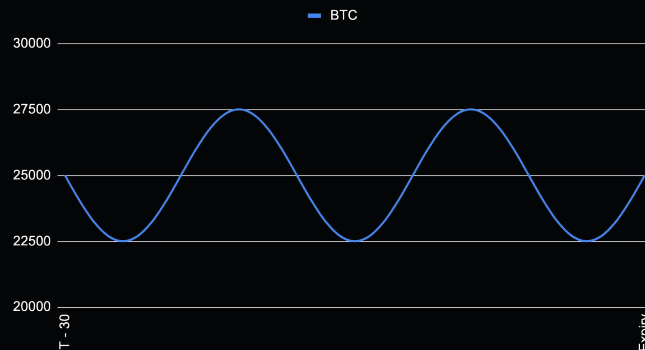
Example:

- Long position via options: 25000 strike.
- When market would "run away" from 25000 towards 35000.
- The 25000 strike almost lost its optionality.
- The Volatility exposure will be heavily reduced (from 30 initially to less than 5).
- With DVOL Futures you will stay in the game

DVOL Futures

No hassle in managing the
“Greeks” like Delta & Gamma

Increasing Market Volatility



Example:

- Trader is long options in the 25000 strike at 60% volatility
- Market moved a lot: volatility went up to 80%
- No profits were generated; the trader didn't perform delta/gamma hedges and the loss of time decay > profit of volatility (vega).

DVOL Calculation

Basis

2 Expiries closest to 30 days

Determine fair options prices

Most of the strikes (cutoff at 5% delta for calls & puts)

Discard in the money options

Calculate the Variance of the two expiries

Interpolate time to get the 30- day IV

Contract Specs

Contract Name:	BTCDVOL_USDC-31MAY23 (example)
Description:	Deribit Volatility Index Futures (DVOL Whitepaper)
Type:	Linear Futures
Contract Expirations:	Initial listing of 1 expiry, gradually expanding towards 5 expiries, tradeable at the same time
Underlying Index:	USDC
Trading Fees:	BTCDVOL and later ETHDVOL
Liquidation Fees:	0.75%
Max Leverage:	10 x
IM for SM user:	$10\% + (\text{Pos Size USDC}) * 0.00001\%$
MM for SM user:	$5\% + (\text{Pos Size USDC}) * 0.00001\%$
Tick size (block and screen):	USDC 0.1
Min order size:	DVOL 0.1
Min Block size:	USDC 200K
Contract size:	DVOL 0.1
Settlement Date:	The final settlement date, which is reflected in the instrument name, is on the wednesday 30 days prior to the regular options expiry date of the calendar month immediately following the month in which the contract expires. (in some rare cases, when a regular monthly options expiry is on friday the 31st, settlement date will be on the 1st of that month)
Settlement Price:	Time-weighted average of Deribit DVOL Index as measured between 07:00 and 08:00 UTC

DVOL Calculation

Formulas

$$Strikecontribution_i = Strikeprice_i \times \frac{Strikewidth_i}{Strike_i^2} \times Forward$$

$$Variance = \frac{2 \sum Strikecontribution - \left(\frac{Forward}{StrikeCutoff} - 1 \right)^2}{t}$$

$$VOL.Raw = 100 \times \sqrt{Variance}$$

$$DVOL.Raw = 100 \times \sqrt{\left\{ t_1 \times Variance_1 \times \frac{t_2 - 30}{t_2 - t_1} + t_2 \times Variance_2 \times \frac{30 - t_1}{t_2 - t_1} \right\} \times \frac{365}{30}}$$

$$DVOL = EMA[240]DVOL.Raw$$