

BTC Calendar Spread Straddle – live trade recap

31-July-2022

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I researched & executed this trade on behalf of a client proprietary digital option trading account on Paradigm (an institutional platform on top of Deribit exchange) on 1-Jul-22.

Trade Rationale

1. Based on last month Jun22 BTC volatile px action between 10Jun22 (US CPI) & 15Jun22 (FOMC) release dates, position via short/long calendar straddles to benefit from expected similar Option Implied Volatility behaviour during Jul22.
2. Jul22 release dates: 13Jul22 (US CPI) & 27Jul22 (FOMC). Expectation is a BTC IV spike during this 15-day window.
3. To cheaper overall premium payable, partially offset net premium payable for longer-dated (29Jul22 expiry) straddle via selling a shorter-dated (8Jul22) straddle.
4. Shorter-dated straddle will expiry prior to start of the above window & is simply implemented to help cheapen overall structure cost.
5. Although not using exactly same strikes, Volatility TS is backwardated (check below IVs & see Fig3 below) so we benefit from being able to sell (from our trade viewpoint) "mistakenly" elevated short-term IVs.
6. Noting the straddle payouts diagrams below - we are "hedged" in the sense the short straddle expiration < long straddle expiration.

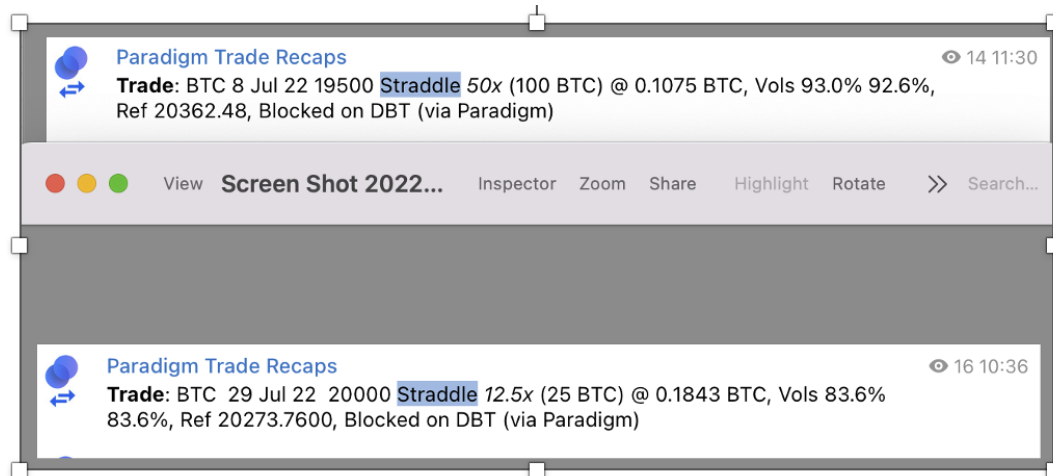
Fig1. Traded levels & PnL

Strategy: BTC Calendar Spread Straddle		01-Jul-22 From Paradigm		14-Jul-22 From Paradigm		19-Jul-22 No Paradigm trades, Premium from Amber OTC		21-Jul-22 No Paradigm trades, Premium from Deribit		% Return (unannualized). Calc'd as current (21Jul22) straddle close out px (0.14400) - Net Premium Payable on 1Jul22 (0.0768)
		Premium	IV	Premium	IV	Premium	IV	Premium	IV	
Sell	BTC 8Jul22 19.5k Straddle	0.10750	93.0%/92.6%	n/a	n/a	n/a	n/a	n/a	n/a	Expired
Buy	BTC 29Jul22 20k Straddle	0.18430	83.6%/83.6%	0.12000	74.8%/73.2%	0.11800	78%/78%	0.14400	79%/79%	
Net Premium Payable		0.07680								88%
ie. Long Straddle Premium paid - Short Straddle Premium rec'd										

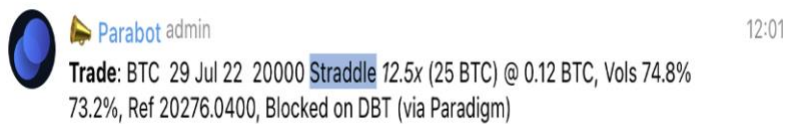
Fig2. Straddle initial trade levels & snaps.

2 straddles executed on 1Jul22 & periodic updates on 14Jul22, 19Jul22 & 21Jul22 (when 2nd trade leg closed out).

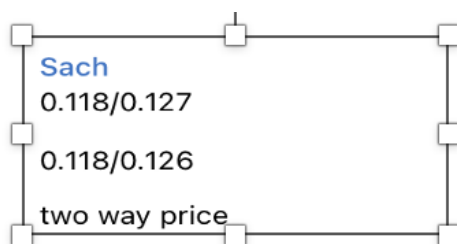
1Jul22



14Jul22



19Jul22



21Jul22 - Straddle Leg 2/2 closed out.

Strategy			
Instruments	Size	Option Combo Price	Side
+1 BTC-29JUL22-20000-C +1 BTC-29JUL22-20000-P	1	0.144	sell
Ref price		Strategy name	Straddle
USD		Net Delta	-0.5711
Mark Price of Combo		Gamma	-0.0002
0.1430		Vega	-15.2818

Fig3. BTC Vol Term Structure snaps.

Trade Inception (yellow line) (1Jul22) vs. Current (14Jul22).

Initially we benefitted from the fact that we could sell short-dated volatility at higher IV than buying longer-dated vol. Overall IVs have softened over the period, with our existing long straddle IVs down 9%. Net-net pnl positive as noted above with short-straddle expiring OTM. Expectation is still IV uptick leading up to 27Jul22 (FOMC).

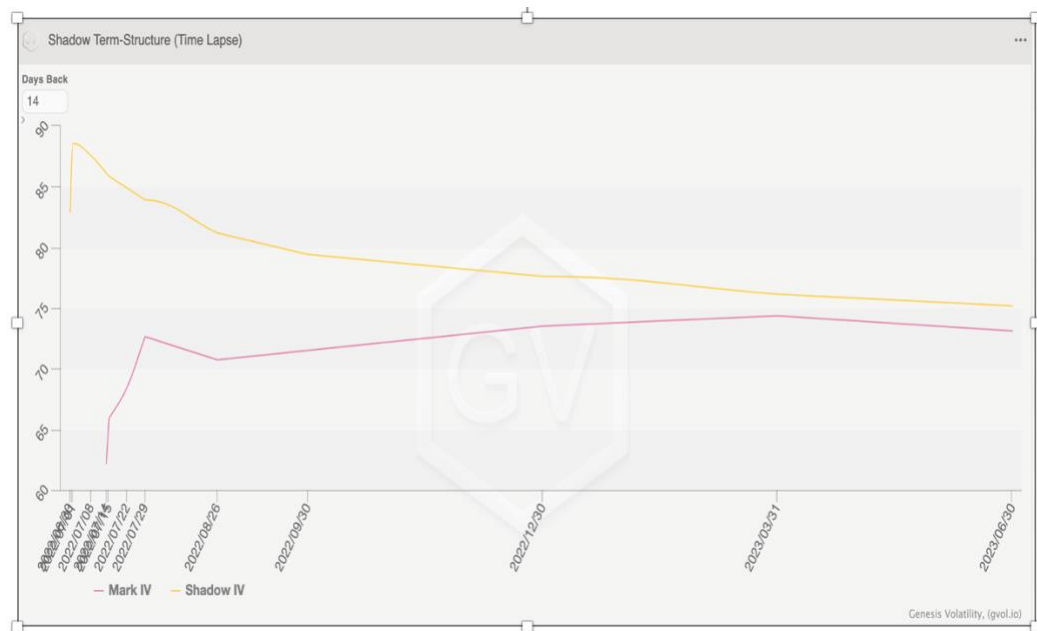


Fig4. BTC Vol Term Structure snaps.

Snap (yellow line) (14Jul22) vs. Current (21Jul22).

Vols have spiked up particularly in the short-end as expected since CPI release (13Jul22).

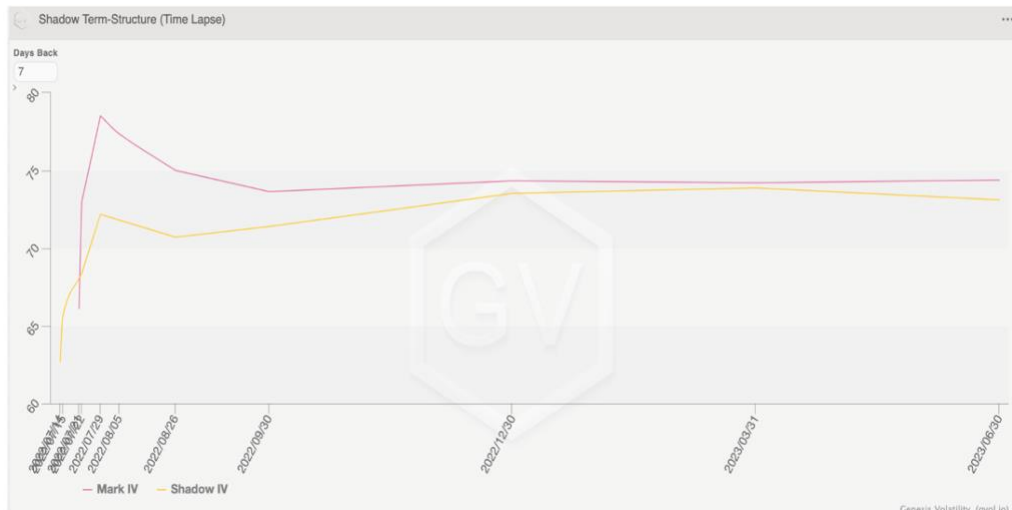


Fig5. Long & Short Straddle Payout Profiles

Long Straddle Max Risk: Net Premium Payable, Max Return: Unlimited.

Short Straddle Max Risk: Unlimited, Max Return: Net Premium Received.

